WESTPARK

Draft Environmental Impact Statement

CITY OF BREMERTON

Bremerton Housing Authority

MARCH 2007

March 6, 2007

Dear Affected Agencies, Tribes, Organizations and Interested Parties:

Enclosed is the Draft Environmental Impact Statement (Draft EIS) for the Westpark Master Plan. This document has been prepared jointly by the City of Bremerton and Bremerton Housing Authority to comply with the requirements of the National Environmental Policy Act (NEPA) and State Environmental Policy Act (SEPA).

The proposed Westpark Master Plan would redevelop the approximate 82-acre site to create a mixed-use, mixed-income pedestrian oriented community containing housing, parks and open space, retail and commercial uses, community facilities, and new infrastructure. All existing low income housing units would be demolished and replaced on-site or off-site.

The Westpark Master Plan would provide 759 units of rental and for sale housing in a variety of detached and attached forms to meet a range of needs. Non-residential development would include approximately 50,000 square feet of commercial and retail uses in a 5-acre Village Center designed to provide everyday services to residents of Westpark and adjacent neighborhoods. An additional 10,000 square feet of retail or commercial uses could be included in mixed use buildings. The existing community center would be retained and renovated. Parks and open space would comprise approximately 28 acres (34 percent) of the site. All existing streets would be vacated and replatted and a new street grid created. All existing utilities would be replaced, including a modern stormwater system with detention and water quality facilities. The existing stormwater outfall in Oyster Bay would be replaced by constructing, jointly by the City and BHA, a baffled outfall on the shoreline. The existing outfall could be removed or left in place. Redevelopment would occur in four phases, approximately beginning in 2007 and ending in 2010. Demolition and construction would occur in phase with relocation of existing tenants; a relocation plan is currently being developed.

Two alternatives are considered in the EIS. The *Design Alternative Master Plan* would construct the same number of housing units but with more apartment and condominium units at higher densities. The Village Center would be expanded to include approximately 12 acres (up to 120,000 square feet) of retail and commercial uses (plus an additional 10,000 square feet in mixed-use buildings). The expanded parking area serving the additional retail area would use a stormwater infiltration system. All other features of the alternative would be the same as the proposal.

The *No Action* alternative assumes that the site would not be redeveloped and would continue to operate, function and appear as it does currently. Existing buildings would be maintained to the extent possible but would continue to deteriorate over time.

The Draft EIS evaluates the direct, indirect and cumulative impacts of the proposal and alternatives, as well as construction-related impacts. The environmental elements that are considered in the Draft EIS were determined as a result of a formal scoping process that occurred in June 2007 pursuant to published notice in the Federal Register and Bremerton Sun. A public meeting was also held to receive comments on the scope of the EIS. The Bremerton Housing Authority, Lead Agency for SEPA compliance, and the City of Bremerton, the Responsible Entity for NEPA compliance, considered all comments received in determining the issues and alternatives to be analyzed in the Draft EIS.

The following broad areas of environmental concern are considered in the Draft EIS:

Earth	Air Quality	Water Resources
Plants & Animals	Fish Resources	Noise
Environmental Health	Land Use	Socioeconomics (Population, Housing & Employment)
Environmental Justice	Historic & Cultural Resources	Aesthetics, Light & Glare
Transportation	Public Services	Utilities

The Draft EIS has been distributed to agencies, tribes and organizations noted on the Distribution List. The Draft EIS and background information concerning the proposal may be reviewed at the following locations between the hours of 8:30 AM and 4:30 PM:

City of Bremerton
Department of Community Development
345 6th Street, 6th Floor
Bremerton, WA 98337

Bremerton Housing Authority
345 6th Street, Suite 200
Bremerton, WA 98337

The document is also available for review at the following local libraries:
Downtown Bremerton Library, 612 5th Street N
Sylvan Way Library, 1301 Sylvan Way
Silverdale Library, 3450 NW Carlton
Port Orchard Library, 87 Sidney Avenue

Printed and CD copies of the Draft EIS may also be purchased at the City of Bremerton Community Development Department or the Bremerton Housing Authority at the addresses listed above. The Draft EIS is also available on the internet and can be viewed or downloaded at http://ci.bremerton.wa.us; http://bremertonhousing.org; or http://newwwestpark.com.

Comments Invited: The public comment period for this Draft EIS is **March 6 through April 20, 2007**. Comments should be addressed to either of the following individuals, who may also be contacted for additional information:

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Thank you for your interest in the Westpark Master Plan.

NEPA Responsible Entity:

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SEPA Responsible Official:

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FACT SHEET

Name of Proposal Westpark Master Plan

Proponent Bremerton Housing Authority

Proposed Master Plan The proposed Westpark Master Plan would redevelop the 82-acre site to create a mixed-use, mixed-income pedestrian oriented urban community containing housing, parks and open space, retail and commercial uses, community facilities, and new infrastructure. All existing low income housing units would be demolished and replaced on-site or off-site.

The Westpark Master Plan would provide 759 units of rental and for sale housing in a variety of detached and attached forms to meet a range of needs. Types of units would include market rate condominiums and apartments, townhouses, row houses, duplexes, cluster cottages and single family units.

Non-residential development would include approximately 50,000 square feet of commercial and retail uses in a 5-acre Village Center designed to provide everyday services to residents of Westpark and adjacent neighborhoods. An additional 10,000 square feet of retail or commercial uses could be included in mixed use buildings. The existing community center would be retained and renovated.

Parks and open space would comprise approximately 28 acres (34 percent) of the site, and would include a large community park (approximately 12 acres), two smaller neighborhood parks, urban open spaces and natural areas. Almost 11 miles (57,000 linear feet) of pedestrian trails and paths would be constructed to connect neighborhoods. Additional landscaping would be provided along streets, along site boundaries and adjacent to the Village Center enhance the pedestrian environment, to provide screening and to create land use transitions.

All existing streets would be vacated and replatted. New streets -- Baer Boulevard, neighborhood streets and “green streets” -- would be 25 to 36 feet wide (depending on type), lined with trees and include sidewalks. On-street parking would be provided on all streets. Alleys would provide access to garages for some types of units.

All existing utilities would be replaced. The conceptual stormwater management system includes detention and water quality treatment (using biofiltration swales).

As a joint City/BHA project, the existing stormwater outfall in Oyster Bay would be replaced by a baffled outfall structure on the shoreline. The existing outfall could be removed or left in place.

Redevelopment would occur in four phases, approximately beginning in 2007 and ending in 2010. Demolition and construction would occur in phase with relocation of existing tenants; a relocation plan is currently being developed.

Two alternatives are considered in the EIS. The Design Alternative would construct the same number of housing units in a mix involving more apartment and condominium units at higher densities. The Village Center would be expanded to include approximately 12 acres (up to 120,000 square feet) of retail and commercial uses (plus an additional 10,000 square feet in mixed-use buildings). The expanded parking area serving the additional retail area would use a stormwater infiltration system. All other features of the alternative would be the same as the proposal.

The No Action alternative assumes that the site would not be redeveloped and would continue to operate, function and appear as it does currently. Existing buildings would be maintained to the extent possible but would continue to deteriorate over time.

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Required permits & Approvals

Preliminary investigation indicates that the following permits, approvals or actions would be required for the proposal. Additional permits or approvals may be identified as environmental review and project design progress.

Federal Agencies

Department of Housing & Urban Development

- Record of Decision
- Approval of Request for Release of Funds
- Approval of project-related certifications

Fish & Wildlife Service

- Endangered Species Act Consultation

National Marine Fisheries Service

- Endangered Species Act Consultation

Corps of Engineers

- Section 10 Permit (for outfall construction)

State Agencies

Department of Fish & Wildlife

- Hydraulic Project Approval (for outfall construction)

Department of Ecology

- Model Toxics Act Compliance (possible)
- NPDES/Stormwater General Permit
- 401 Water Quality Certification
- Coastal Zone consistency determination

Office of Historic Preservation

- Historic and cultural resources consultation

Department of Natural Resources

- Aquatic Lands lease (for stormwater outfall)
- Forest Practice Permit (possible)

Regional Agencies

Puget Sound Clean Air Agency
- Asbestos surveys
- Demolition permits

Kitsap County Health District
- Landfill closure

City of Bremerton
- Site plan approval
- Site development permit
- Shoreline substantial development permit
- Subdivision approval (subsequent)
- Building permits

Authors & Principal Contributors to the EIS

The Westpark Master Plan EIS has been prepared under the direction of the Bremerton Housing Authority and the City of Bremerton. Research and analysis were provided by the following consulting firms and individuals:

Weinman Consulting, LLC – Lead EIS consultant; document preparation; analysis of land use/plans and policies, aesthetics, parks and recreation, public services and utilities.

Susan Millan Community Planning – housing and socioeconomics.

Associated Earth Sciences, Inc. – geology, environmental health.

Geomatrix – air quality and noise.

NW Archaeological Associates, Inc. – historic and cultural resources.

Parametrix – transportation.

Raedeke Associates – plants and animals/wetlands.

Rice Fergus Miller Architects – graphics, document production.

The Watershed Company – fisheries resources.

Location of Background Data	Bremerton Housing Authority 345 6th Street, Suite 200 Bremerton, WA 98337	City of Bremerton Community Development Dept. 345 6th Street, 6th Floor Bremerton, WA 98337
Documents Adopted and/or Incorporated by Reference	City of Bremerton Comprehensive Plan Update SEIS Westpark Master Plan EIS Addendum	
Date of Issuance of Draft EIS	March 6, 2007	
Date Comments Due	April 20, 2007	
Draft EIS Public Meeting/Open House	March 22, 2007, 5:30-7:30 PM, Westpark Community Center, 79 Russell Road, Bremerton.	
Cost & Availability of the Draft EIS	Printed or CD copies are available for the cost of reproduction at the following locations: Bremerton Housing Authority 345 6th Street, Suite 200, Bremerton, WA City of Bremerton, Community Development Department 345 6th Street, 6th Floor, Bremerton, WA The Draft EIS is also available for review at the Downtown Bremerton, Sylvan Way, Silverdale and Port Orchard public libraries.	

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1. SUMMARY

1. SUMMARY

1.1 PROPONENT, PROJECT LOCATION, & EXISTING SITE CONDITIONS

Westpark is sponsored by the Bremerton Housing Authority (BHA), a Washington municipal corporation.

The project site is located in the western portion of the City of Bremerton, in Kitsap County, Washington. The site encompasses an area of approximately 82 acres and is triangular in shape. The project site is generally bounded by Kitsap Way on the North, Oyster Bay Avenue on the east, Arsenal Way on the south, and SR 3 on the west. Oyster Bay lies approximately ¼ mile north of the site, across Kitsap Way. Bremerton's City Center is located approximately 3 miles to the east. An aerial photo of the site and surrounding area is shown in Figure 2-1.

The surrounding area is a mixture of residential neighborhoods (to the east), commercial and retail uses (along Kitsap Way), and light industrial uses (south of SR 3).

The existing Westpark public housing community was built in 1941 and is the remnant of a larger World War II-era housing project that was built as temporary housing for shipyard workers. The site currently contains 631 residential units: 571 public housing units, located in one-story duplex and four-plex structures, and the Firs, a 60-unit apartment building for elderly and disabled residents. All units are rental housing. A 72-unit assisted living facility (Bay Vista Commons, formerly the Firs II) is currently under construction. The BHA's administrative offices are also located on Russell Road, which provides entry to the site from Oyster Bay Avenue.

Existing units are located in one-story structures that each contains one to two residential dwelling units. Ninety percent or more of existing units are for low income families and individuals.

The Westpark site also contains several buildings that contain non-residential uses (approximately 58,960 square feet total). These include the community center, BHA's administrative offices, a senior center, two Head Start buildings, a Teen Center a maintenance building, storage building and four laundry facilities. The community center (18,000 square feet) accommodates a broad range of community activities and services for youth and adults, some of which are funded by HUD. The Community Center would undergo some remodeling as part of the redevelopment. Ball fields are located contiguous to the community center.

A topographic ridge crosses the site in a north-south direction, resulting in an elevation difference of approximately 125 feet. Views of Oyster Bay and Ostrich Bay exist from several locations on the site. No wetlands, streams or critical habitat have been identified on the site. The site does contain stands of second growth trees.

Westpark's buildings and infrastructure are in need of rehabilitation, and the site has been designated as blighted. Existing buildings and systems have reached the end of their normal life-cycles and redevelopment is more cost-effective and desirable than rehabilitation.

1.2 PROJECT OVERVIEW

The *Proposed Master Plan* would involve redevelopment and revitalization of the existing Westpark public housing community. It would be redeveloped into a mixed-use, mixed-income, pedestrian oriented community. The Master Plan, shown in Figure 2-2, is still conceptual in nature and subject to change and refinement as a result of ongoing planning.

The *Proposed Master Plan* would result in redevelopment of all existing residential units on the site. A total of 759 units are proposed for the site. Housing would include approximately 110 market rate/rental apartment units, 150 multi-family condominium units, 97 detached single-family units, and 442 units of attached duplexes, townhouses, and cluster cottages in a variety of sizes and styles. Of the latter, approximately 100 units would be rental and the balance for sale. A total of 190 public housing units are proposed to be developed on site; these would be located in a variety of housing types throughout the site. Existing low income housing units not replaced on site (441 units) would be replaced off-site, in Bremerton and other locations in Kitsap County.

Proposed residential densities would range from a low of 8-12 dwelling units per acre for single family attached units, to a maximum of 65 dwelling units per acre for the apartment building. Gross residential density for the site would be approximately 9 du's per acre, and net density approximately 20 du per acre.

In addition to housing, the *Proposed Master Plan* contains approximately 5 acres/50,000 square feet (gross leasable area) of retail activity located in a village center in the northwestern portion of the site. An additional approximate 10,000 square feet of neighborhood-scale retail and commercial uses would be located in mixed-use buildings in different areas of the site. An EIS alternative, described further below, generally considers the impacts of including a larger retail center (approximately 10-12 acres, up to 130,000 square feet).

The *Proposed Master Plan* includes approximately 28 acres of parks and open space, including a community park, neighborhood parks and urban open spaces plazas. The Proposed Master Plan has been designed to preserve as many of the existing trees as feasible and provide additional landscaping. Approximately 57,000 linear feet of pathways and trails would provide pedestrian connections between neighborhoods.

The *Proposed Master Plan* includes demolition and redevelopment of all existing buildings on site (except the community center), and replacement of all utilities (sewer, water, drainage, electricity/gas and telecommunications). All existing streets would be vacated and re-platted to create the system of streets.

Redevelopment would occur in four phases over an approximate three year period beginning in 2007. All existing buildings except the community center, and all existing infrastructure would be demolished or abandoned and replaced. Development would involve staged relocation of all tenants. Relocated tenants in good standing with BHA would be eligible to return to the new development when it is completed.

1.3 BACKGROUND INFORMATION

Comprehensive Plan & Zoning

In September 2003, the City amended its Community Renewal Plan, pursuant to the state Community Renewal Law (RCW 35.81), to incorporate the Westpark site as a “blighted” area for purposes of community renewal efforts (Ordinance No. 4830 and 4870). The designation was supported by findings that the site was isolated from adjacent areas that building size and design were deficient, and that physical deterioration was a contributing factor to disinvestment in the area. These actions also reaffirmed the City’s intent to cooperate and assist the Bremerton Housing Authority in the redevelopment of Westpark, (pursuant to RCW 35.83), and to provide a framework for redevelopment in the Comprehensive Plan and zoning regulations. This framework is described below.

The *Comprehensive Plan Land Use Map* designates Westpark as a Public Sector Redevelopment Site (PSRS). These are special, large-scale sites with high potential for development that is innovative or that meets a unique community need. They should be developed consistent with specific district planning efforts that address the site, compatibility with surrounding uses, and consistency with the Comp Plan. A PSRS must have a clearly defined community benefit, such as meeting a public housing need. They may include mixed type residential development with an open space component and secondary commercial or office development. The Comprehensive Plan also designates a neighborhood center for the Oyster Bay Area adjacent to the Westpark site, on both sides of Kitsap Way. This 37-acre center is seen as redeveloping over time -- in conjunction with, but slower than Westpark -- into an urban, pedestrian-friendly area connected with the surrounding area by trails and open space, including access to the shoreline.

Westpark Sub-Area Plan & Development Regulations

On February 7, 2007, following a public hearing, the Bremerton City Council adopted the Westpark Sub-Area Plan. The Sub-Area Plan provides a land use plan, zoning and development standards, and design guidelines which will guide future development of Westpark The Comprehensive Plan requires such area-specific plans for sites designated as Public Sector Redevelopment Sites. The plan was developed using a process that involved the community, and was determined to be consistent with the Comprehensive Plan goals and policies.

Project Planning and Community Involvement

Development of the Proposed Master Plan involved approximately 57 meetings and workshops involving residents of Westpark and surrounding neighborhoods, community stakeholders, representatives of the City of Bremerton, and the Planning Commission and City Council. Key master planning meetings that occurred in the course of developing the Master Plan included nine public community meetings; a week-long design charrette; two stakeholder’s meetings; six resident Council meetings; 10 resident presentations; a joint SEPA/NEPA scoping meeting; Bremerton Planning Commission workshops and public hearing; and Bremerton City Council workshop and public hearing.

Environmental Analysis and Review: SEPA and NEPA

This document has been prepared to comply with the requirements of both the State Environmental Policy Act (SEPA) and the National Environmental Policy Act (NEPA). This Draft EIS has also been prepared consistent with State and BHA regulations implementing SEPA, and with HUD's adopted NEPA policies and procedures. It is also being coordinated with requirements and procedures of the National Historic Preservation Act (NHPA, Section 106) and the Endangered Species Act (ESA).

SEPA and NEPA procedures have also been coordinated. Scoping notices were published pursuant to SEPA and NEPA requirements. A public EIS scoping meeting, consistent with the procedures of SEPA and NEPA, was held at the Community Center on June 22, 2006. This public meeting provided an opportunity for public comment, in addition to the submittal of written comments. Comments received were considered by the BHA and City of Bremerton in determining the issues and alternatives to be analyzed in this Draft EIS.

As noted in the *Fact Sheet*, this document is being circulated to agencies, organizations and individuals for a 45-day public comment period. At the conclusion of that period, BHA and the City will prepare the Final EIS. The Final EIS will incorporate any refinements to the project subsequent to issuance of the Draft EIS; revisions and clarifications to text contained in the Draft EIS in response to public comments; and responses to written comments and public testimony. The Final EIS will be the environmental document that accompanies Westpark through the development review and permitting processes noted in the *Fact Sheet* of this Draft EIS.

A course of phased/tiered review is being used to evaluate the environmental impacts of the Westpark Master Plan. Redevelopment of the site was initially evaluated in the Supplemental EIS (SEIS) prepared for the City of Bremerton's Comprehensive Plan (2004). An addendum to that SEIS was also prepared (City of Bremerton, 2006) in connection with the City's review and adoption of the Westpark Sub-Area Plan.

The BHA and City are also using SEPA's provisions for early environmental review (WAC 197-11-406). This encourages preparation of an EIS as early as possible, and prior to submittal of a development application, so it can practically be used as an important contribution to project design and agency decision making.

1.4 PROJECT PURPOSE & NEED/GOALS & OBJECTIVES

Westpark was built in the early 1940's to provide temporary homes for defense workers and their families during World War II. The community has endured for more than 60 years, through the careful stewardship of BHA. In 2003, however, the site was designated as a "blighted" area for purposes of community renewal efforts pursuant to the state Community Renewal Law (RCW 35.81). The existing site is considered to be isolated from adjacent areas, characterized by deficient building size and design, physically deteriorated, which is contributing to disinvestment in the area. Rehabilitation is not an economically viable option, given the age and condition of facilities. This situation provides the framework for the present master planning and proposed redevelopment.

Initial conceptual master planning for Westpark began in 2002, and included community involvement, site analysis, and conceptual land use planning. The resulting *Strategic Master*

Plan (2003) provided broad goals for redevelopment and subsequent master planning of the site, including the following:

- Produce a positive impact on the surrounding community, and on long term economic and housing development in Bremerton;
- Maximize the value of the property;
- Achieve no net loss of public housing units;
- Improve the quality of public housing, and blend it with surrounding housing;
- Deconcentrate public housing and create mixed-income neighborhoods;
- Meet outdoor recreational needs;
- Improve community services; and
- Address local urban growth goals.

The *Proposed Master Plan* incorporates these broad goals along with more specific design objectives into a vision of a new urban mixed-use, mixed-income, pedestrian-oriented community.

1.5 DESCRIPTION OF THE WESTPARK PROPOSAL

The *Proposed Master Plan* would redevelop the site with a mix of urban density uses, integrated with new utilities and infrastructure, and a system of parks and open spaces. The community would provide a mix of housing types to meet the needs of a variety of income groups, including units for low income residents. Land uses, summarized in Table 1.2-1, would be more diverse than what currently exists. Residential uses would predominate, and would occur in a variety of types, forms and sizes. Commercial and retail uses to meet residents' everyday needs would also be included. These would be located both in a small commercial village, and on the ground floor of mixed-use buildings in various portions of the site.

The *Proposed Master Plan* indicates the approximate location of all proposed improvements and facilities. The Master Plan is still conceptual in nature and is subject to change or refinement as a result of ongoing planning. As with master plans for large, phased projects in general, locations of uses or buildings are not intended to be exact or absolute. Building footprints, for example, could be refined as a result of environmental review, more detailed planning, and the land use approval process. Similarly, the *Proposed Master Plan* indicates the relative size and type of residential buildings. Subject to environmental parameters identified in this Draft EIS, and to the Westpark Sub-Area Plan's zoning and regulatory requirements, the *Proposed Master Plan* is intended to provide flexibility in regard to the types of units and/or the size of buildings that may be developed in response to market and economic conditions.

Table 1.2-1.
Westpark Land Uses

Land Use	Acres	Units/Square Feet
Residential:		759 du's
- Single family [1]	31.5	499 du's
- Multi-family [2]	5.6	260 du's
Retail/Commercial:		60,000 sf
- Village Center	5.0 [3]	approx. 50,000 sf
- Mixed-Use Buildings		approx. 10,000 sf
Community/Civic	1.04	44,749 sf [4]
Open Space & Parks	28.0	Community & neighborhood parks and open spaces
Trails		57,000 linear feet
Streets/Infrastructure	14.05	611,977

Notes:
1. Single family includes attached townhouses, duplexes and cottages, and detached units.
2. Multi-family includes apartments and condo units. Some multi-family units will be included in mixed-use buildings (e.g., with retail or commercial uses).
3. A 10-12 acre retail option is evaluated in the *Design Alternative* included in the Draft EIS.
4. Reflects the site area of community center.

Housing

The *Proposed Master Plan* provides 759 rental and for-sale housing units; 759 is considered the maximum for EIS analysis. All existing low income dwelling units would be replaced, either on-site or off-site. Further discussion concerning replacement housing is contained in Section 4.9 of this Draft EIS. Table 1-2 provides an overview of the proposed housing development program and the types of units within each category.

Dispersing public housing would accomplish a number of goals, including the revitalization of dilapidated housing and distressed communities, creation of diverse neighborhoods, and the promotion of housing choice.

Housing Relocation Plan. Implementation of the *Proposed Master Plan* would require the demolition of all existing housing units and necessitate the relocation of all residents during construction. All residents would receive relocation benefits as prescribed by the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (URA). The BHA, with the involvement of residents, is developing a detailed Relocation Plan that describes relocation benefits and choices.

Table 1.2-2.
Proposed Housing Program

Unit Type Distribution by Phase *	# Units per Phase				# Units
	II	III	IV	V	Total
Market Rate Apartments	0	110	0	0	110
Urban/Loft Condominium	0	65	0	0	65
Condominium	0	85	0	0	85
16' Townhouse	24	27	20	9	80
22' Townhouse and/or Row Home, Alley Load	30	21	26	17	94
24' Townhouse - 2 and 3 Story	2	28	12	18	60
Duplexes (Rental)	14	50	18	18	100
Duplexes (Market Rate)	2	8	6	14	30
Cluster Cottages	10	18	10	0	38
Single Family - 3,500 sq ft Lot	17	30	12	0	59
Single Family - 4,500 sq ft Lot	7	27	4	0	38
Total Units	106	469	108	76	759
Lots per Phase	106	209	108	76	499
Public Housing Units	38	87	38	27	190
% Public Housing Units per Phase	35.8%	18.6%	35.2%	35.5%	25.0%
PHU's as % of Total PHU per Phase	20.0%	45.8%	20.0%	14.2%	100.0%

* Units are approximate, based on the proposed program of 759 total units, and assuming 25% Public Housing Units

Parks, Recreational Facilities, Open Space & Trails, and Landscaping

Parks, Open Space& Recreation. The *Proposed Master Plan* would provide approximately 28 acres of parks and open space providing opportunities for active recreation (12 acres) and passive enjoyment (4.5 acres), and including significant preserved trees (approximately 11.5 acres). Proposed facilities include a 12-acre community park, two neighborhood parks, urban open spaces, and natural areas. Parks and open spaces would be linked by the internal trail network and street system.

Proposed parks – both the new Summit Park and the remodeled Community Center -- would provide facilities for organized sports (e.g., baseball, softball, soccer, football, etc.). The *Summit Park* is an approximate 12-acre, multi-faceted green space at the center of the site. It will function as a recreation space, view corridor and central community space. The center of the park will be a grass recreation area with picnicking facilities. A plaza area will also be created, with benches and a water or art feature. The park will provide views over Oyster Bay and Dyes Inlet.

Trails. An approximate 11-mile long (57,000 linear feet) interconnected system of pedestrian sidewalks, paths and trails is proposed. This system would connect neighborhoods, open spaces and commercial facilities, with a planned connection to the Oyster Bay Neighborhood Center. Trails and sidewalks would generally be 5 ft. wide, paved, with trees and benches located conveniently.

Landscaping. Landscaping will be focused along streets, to enhance the pedestrian environment, along the site's boundaries with arterials, to provide screening, and adjacent to the commercial area, to provide land use transitions. In some areas, such as the retail village and the neighborhood square, hard-scape and green features will be mixed.

A tree survey will be conducted in conjunction with a subsequent subdivision application; detailed information is not available at this time. Existing significant trees would be retained where possible. The majority of retained trees will be located in Westpark's parks and open spaces.

Village Center

The *Proposed Master Plan* provides approximately 50,000 sq.ft. of commercial service and neighborhood retail space in a 5-acre Village Center, plus an additional potential 10,000 square feet of commercial uses located in mixed-use buildings. Uses would be consistent with the Westpark Sub-Area Plan's development regulations, and would be focused on providing convenient everyday services to residents of Westpark and adjacent neighborhoods. In general, commercial and retail services would be planned and designed to preserve the pedestrian-orientation of Westpark, and to maintain a high quality of design.

An alternative site plan containing a greater amount of commercial/retail uses is considered in the *Design Alternative*.

Community Facilities

The Community Center would be remodeled and would continue to provide a variety of programs for all age groups in Westpark and the surrounding community. Program ideas are still being developed, but will likely include a combination of health and fitness, education and career development, culture and arts, life skills, and social/recreational programs.

Circulation, Access and Parking

Major streets that would provide access to Westpark include Kitsap Way, Oyster Bay Road, and Arsenal Way. An important design focus of the Proposed Master Plan is inclusion of principles of new urbanism, including pedestrian orientation and transit support. It would contain a mix of uses and level of density that locates housing in proximity to neighborhood shopping/services and transit facilities to encourage pedestrian activity and decrease individual auto use. Consistent with these principles, neighborhood streets are organized in a grid pattern, which would promote a more pedestrian-oriented streetscape and improve circulation.

The *Proposed Master Plan* includes approximately 14 acres of streets. All existing streets will be vacated and re-platted. Major street types associated with the *Proposed Master Plan* include the following:

Neighborhood Streets, which are one-lane or two-lane roads (varying among neighborhoods) with on-street parking. Sidewalks of varying width are provided on both sides of the street. These streets are lined with trees and include landscaping between the street and the sidewalk. Figure 2-6 shows a typical residential street section.

Baer Boulevard, which will provide access to the regional transportation system, is designed as a wider, tree-lined street with two traffic lanes, on-street parking and sidewalks on both sides.

Alleys, will provide access to garages for parking and for deliveries and services for Single Family Attached, Single Family Detached, and other unit types as indicated on the Thoroughfare Plan.

"Green streets" are pedestrian paths which are separated from vehicle traffic and provide connections between Westpark neighborhoods, parks and open spaces, retail activities and services. These paths will also connect to the off-site regional trail system.

Depending on the type of street, travel lanes would vary between 11 feet and 18 feet in width, and parking would be provided on one or both sides of most streets. Narrower roads are intended to slow traffic and promote pedestrian circulation. All streets would contain 5-foot wide sidewalks and would be landscaped with trees,

The *Proposed Master Plan* would provide between approximately 1,015 (minimum) and 1,824 off-street parking spaces. An additional 1,100 spaces would be provided on-street. A parking garage could be constructed adjacent to the apartment building (See Figure 2-2).

Stormwater and Utilities

The *Proposed Master Plan* involves replacement of all existing utilities on-site, including water, sanitary sewer, storm drainage, electrical/telephone/cable, and natural gas. The availability of all utility services has been verified by applicable service providers. Electrical and telecommunication cables may be placed underground. Sanitary sewer and water lines would tie into existing systems along Oyster Bay Avenue and Kitsap Way. Detailed engineering and design for sewer, water and stormwater systems would occur in conjunction future development permit applications.

Stormwater Management. An integrated storm drainage plan would provide collection, conveyance and water quality treatment. The drainage plan is still conceptual in nature; final size, type and location of stormwater management measures will be refined as Westpark progresses through environmental review and design. Basin areas and facility types, sizes and locations could also change as a result of ongoing design. As part of this process, and consistent with the Westpark Sub-Area Plan (Ordinance No. 4998), BHA will also consider incorporating additional low impact development (LID) techniques, such as bioswales, rain gardens, and/or use of pervious surfaces. However, due to soil conditions, topography and other factors, additional LID techniques may be difficult to implement and are not expected to substantially reduce stormwater volumes.

The storm conveyance system would be located within streets and alleys to provide drainage of the streets, alleys, and sidewalks, allow for storm drain connections from adjacent developments, and convey stormwater from upper portions of the basin to stormwater management facilities. The stormwater conveyance system would be designed based on requirements in Chapter 4 of the City of Bremerton Public Works (City) *Design and Construction Standards*, and King County's *Surface Water Design Manual,* as referenced by City standards.

The primary elements of the proposed system are water quality treatment, flow control (e.g. detention facilities), and replacement of the existing outfall in Oyster Bay. Basic water quality treatment best management practices (BMPs) will be used to treat stormwater for pollutants prior to discharging into downstream receiving waterbodies. Basic water quality treatment BMPs include construction of biofiltration swales, open wet ponds, and underground vaults.

Flow control includes an open pond with a flow control structure to control the flow rate that is released to downstream drainage systems. Flow control is proposed for the Ostrich Bay Creek (OBC) basin because its discharge ultimately enters Ostrich Bay Creek.

Stormwater Outfall. Replacement of the existing outfall in Oyster Bay, located at the projection of Oyster Bay Avenue north of Kitsap Way, is proposed as a joint City/BHA project. It is intended both to address pre-existing limitations in the outfall's capacity and to accommodate the projected increase in stormwater flow rates from Westpark. Replacement would also eliminate the need for on-site flow control for the project-area basins discharging into Oyster Bay.

The existing outfall pipe will likely be removed landward of the Mean Lower Low Water (MLLW) elevation, and abandoned in place below MLLW. A baffled outlet structure would be constructed on the shoreline; the furthermost part of the new structure, including riprap armoring, would be located approximately 12.5 feet waterward of mean high water (MHW) at elevation 8.34 feet. The baffled outlet structure, in combination with riprap placed downslope of it, would reduce stormwater velocities associated with discharge from the site and surrounding area. The structure would be concrete and approximately 13 feet wide, 19 feet long and 11 feet tall. Water would flow out of the structure and onto adjacent/downstream riprap, which would help to reduce downstream erosion potential.

A number of conceptual options for providing public access to the shoreline are being considered in conjunction with replacement of the outfall.

Clearing, Grading and Impervious Surface Coverage

Approximately 90 percent of the site would be cleared, including demolition of existing buildings. Impervious surfaces would comprise approximately 74 percent of the overall site (61 acres).

The intent of the proposed grading plan is to minimize mass earthwork, retain significant trees and protect steep slopes. Estimated grading quantities are 294,000 cubic yards of cut, and 306,000 cubic yards of fill. Imported fill material would comprise 12,000 cubic yards.

Tenant Relocation, Demolition, and Construction

Tenant relocation, demolition and construction would occur in a phased and coordinated manner. Four phases (II-V) are planned, each lasting approximately 9 months and beginning in 2007. Construction would be completed in 2010. [Note that Bay Vista Commons (formerly the Firs II) assisted living facility, an independent project that was previously approved and is currently under construction, is considered as Phase I].

Phase II would begin in the southern corner of the site and includes elements of the major park and open space system, and approximately 106 single family and multi-family units. Phase III, the largest, would consist of approximately 469 units including most of the site's multi-family units. Phases IV and V would consist of 108 and 76 units respectively.

Relocation of existing residents will occur just prior to and in phase with demolition. All residents will receive a Housing Choice Voucher that would allow them to move to areas within or outside Kitsap County. Any resident in good standing wanting to return to Westpark would be offered the opportunity to return. The BHA is currently conducting a survey that will indicate how many existing residents wish to return after redevelopment. If there are more residents wishing to return than available units, a lottery would be held to select future residents.

1.6 ALTERNATIVES

Design Alternative Master Plan

The *Design Alternative Master Plan* is similar in layout to the *Proposed Master Plan* but provides increased area for retail development and the same number of housing units, in a somewhat different mix and density. It also takes a modified approach to stormwater management. A conceptual site plan is shown in Figure 2.10. Major features of the alternative are described below.

Housing. The *Design Alternative Master Plan* would provide 759 housing units, which is the same number of units for the *Proposed Master Plan*. The same number of replacement public housing would be provided on-site (190); all existing public units would be replaced on-site or off-site.

The overall mix of units and density of housing would be somewhat different. In general, there would be fewer townhouse units (-4), fewer duplexes (-30) and fewer single family units (-23) compared to the *Proposed Master Plan*, and more higher density multi-family housing located in the apartment and condominium buildings (+55). The apartment and condominium building would each be increased in height, up to approximately 65 feet, to accommodate additional units and structured parking. This would exceed the applicable height limit in the Westpark Sub-Area Plan and would require a variance or a revision to the plan. These two buildings would contain almost 42 percent of Westpark's total housing units. While gross density of the site would remain the same (approximately 9.25 dwelling units per acre), net density would increase to slightly more than 25 dwelling units per acre (compared to 20.5 dwelling units per acre for the *Proposed Master Plan*).

Parks and Open Space. The amount and location of parks and open space (28 acres) and trails (57,000 linear feet) would be the same as for the *Proposed Master Plan*.

Village Center. The Village Center, located in the northwestern portion of the site, would be expanded to 12 acres and 120,000 square feet; an additional 10,000 square feet of commercial uses are assumed to occur in mixed-use areas of the site. The center would offer a broader variety of commercial goods and services that would be marketed to the broader community rather than focused on the Westpark site. The larger site could also attract larger-footprint retail users. The Westpark Sub-Area Plan establishes size limits for most individual commercial uses and provides criteria for exceeding the applicable maximums.

Community Facilities. As with the *Proposed Master Plan*, the Community Center would be remodeled and would continue to provide a variety of programs for all age groups in Westpark and the surrounding community. Programs would likely include a combination of health and fitness, education and career development, culture and arts, life skills, and social/recreational programs.

Circulation, Access and Parking. Access to the site and the on-site road system would generally be the same as for the Proposed Master Plan. A few neighborhood streets shown on the Proposed Master Plan in the expanded retail area would be eliminated. All existing streets would be vacated and re-platted to create a grid system.

Due to the increased size and greater parking demand associated with the larger Village Center, the commercial portion of the site would be less compact and less pedestrian-oriented. Compared to the *Proposed Master Plan*, an additional 200-300 parking spaces would be provided in surface parking areas adjacent to the Village Center (400-500 spaces total. Approximately the same number of parking spaces would be provided for residential units, but more would be located within or adjacent to high density residential buildings rather than in surface parking areas.

Stormwater & Utilities. An infiltration system would be constructed to return treated storm water to the ground water system for the additional approximate 7 acres of commercial/retail area included in the *Design Alternative*. The stormwater attributable to the increased commercial area, therefore, would not be routed to the Oyster Bay stormwater outfall. This approach would incrementally reduce runoff and discharge and maintain the same or incrementally improve water quality. Given the conceptual nature of the Design Alternative at this time, these changes have not been quantified. All other features of the stormwater system would be the same as for the *Proposed Master Plan*, including upgrading the stormwater Outfall in Oyster Bay.

The potential use of pervious surface material, an LID technique, in the parking area of the expanded commercial area. It was determined, however, that spill control BMPs would be difficult to implement with pervious material, which could negate some or all of the benefit of infiltrating storm water.

Clearing, Grading & Impervious Surface. The *Design Alternative* is intended to maintain the same clearing and impervious coverage as the *Proposed Master Plan*. The use of pervious surface material and an infiltration system in a majority of the Village Retail area would help compensate for the larger commercial area.

As for the *Proposed Master Plan*, approximately 90 percent of the site would be cleared, including demolition of existing buildings. Impervious surfaces would comprise approximately 74 percent of the overall site (61 acres).

Quantities of grading, filling and amount of clearing are approximately the same as for the *Proposed Master Plan*.

Phasing. Development would generally occur in the same time period and sequence as for the *Proposed Master Plan*.

No Action Alternative

The *No Action* Alternative would involve no redevelopment of Westpark in the immediate future. The existing public housing units, community facilities and infrastructure would remain. Housing would continue to be maintained to the extent possible; however, deterioration and loss of housing over time would likely occur. BHA could seek other funding sources to redevelop the property.

No additional open space or community facilities would be provided. Existing community facilities and programs would be maintained to the extent possible.

All existing infrastructure (sewer, water, stormwater, roads, etc) would remain and would not be upgraded. In addition, the street configuration and access would not be altered.

The *No Action* Alternative is included in the EIS to meet the requirements of SEPA and NEPA. It would not meet any of the proponent's goals for redevelopment of the site.

1.7 SIGNIFICANT IMPACTS

The following table (1.7-1) summarizes significant impacts associated with the proposal and alternatives. This information is provided for the convenience of the reader but is not intended to be a substitute for review of the complete analysis contained in each section of the Draft EIS.

Table 1.7-1 Summary of Impacts

Proposed Master Plan	**Design Alternative Master Plan**	**No Action Alternative**
EARTH		
An increase in erosion hazard potential would occur during construction. Unless otherwise mitigated, erosion would produce sediment that could be transported to stormwater conveyances or receiving waters. Uncontrolled gully and sheet erosion along slopes could lead to oversteepening of the slopes and subsequent slope instability hazards. Unless mitigated, increased stormwater discharge volume and flow rate in Oyster Bay and Ostrich Bay Creek could cause significant erosion at the discharge location. Increases in either surface or subsurface water flow on or near a slope could result in landslides. Improperly placed fill soils could fail due to inadequate compaction effort, use of organic material or soft, fine-grained soils, placement of material at over-steepened gradients or other factors. Cut slopes could also fail due to removing the toe support for a slope, or from improper drainage control. The landfill and immediately surrounding sloping area is considered a high potential landslide hazard area. Stormwater should not be directed on or near the landfill area or on slopes surrounding the landfill. Plans for regrading and placement of fill in this area should be reviewed and certified by the geotechnical engineer. Increased development would incrementally increase the risk of seismic damage. Ground motion caused by an earthquake of sufficient intensity could result in damage to buildings, roadways, and other structures including utilities. No evidence of surface	The *Design Alternative* involves a similar degree of site re-grading, involving similar potential for construction impacts related to erosion and landslide hazards. Practices to manage stormwater, which would avoid and minimize construction-related impacts, would also be similar. Potential erosion and landslide hazard impacts described for the *Proposed Master Plan* would also be applicable to the *Design Alternative*. Seismic hazards potential would also be similar under both alternatives.	The risks of an increase in the existing erosion and landslide potential could be less because of lower density, less impervious surface coverage, and less stormwater runoff. However, the existing stormwater drainage system does not include modern best management practices, such as wet ponds, wet vaults, biofiltration swales, properly sized stormwater conveyances and discharge points, or stormwater flow control for the Ostrich Bay Creek basin. *No Action* would incur no construction-related erosion or landslide impacts; however, on-going erosion caused by the existing stormwater conveyance system would continue. The seismic hazard potential would be similar under all alternatives; however, *No Action* would not increase the on-site seismic hazard.

Table 1.7-1 Summary of Impacts

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
ground rupture has been documented in the study area vicinity, however. The central to northern portion of the site and the landfill debris are considered to have a high potential of liquefaction during seismic shaking. Areas susceptible to seismically induced landsliding would correspond to liquefiable sediments on steeper gradients and the high landslide hazard areas.		
AIR QUALITY		
Construction could result in temporary minor, localized impacts to air quality due to emissions from construction-related sources and activities (e.g. dust). Construction contractor(s) would have to comply with PSCAA regulations requiring that all reasonable precautions be taken to minimize fugitive dust emissions. Demolition of existing structures would require the removal and disposal of building materials that contain asbestos. The demolition contractors would be required to comply with U.S. EPA and PSCAA regulations related to the safe removal and disposal of any asbestos-containing materials. Construction would require use of heavy trucks and smaller equipment such as generators and compressors. The engines on such equipment would emit air pollutants that would slightly degrade local air quality. Diesel emissions from on-site construction are unlikely to substantially affect air quality in the project vicinity. Some phases of construction would cause short-term odors detectable to some people in the area (e.g., paving operations	Same as *Proposed Master Plan.*	No construction related impacts would occur.

Table 1.7-1 Summary of Impacts

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
using asphalt). Construction contractor(s) would have to comply with PSCAA regulations when emitting odor bearing air contaminates. Construction equipment and material hauling could affect traffic flow in the project area. Scheduling haul traffic during off peak times (e.g., between 9 a.m. and 4 p.m.) would minimize indirect increases in traffic related emissions. There is a potential for dust to affect on-site residences during construction of the residential and commercial facilities. Any impacts from construction or equipment emissions would be temporary and probably minor after implementation of reasonable methods to control dust emissions. In general, construction activities that comply with applicable rules and regulations would not be expected to significantly affect air quality under either of the Westpark Development build alternatives. CO “hot spot” analysis of the Kitsap Way / Marine Dr./Adele Ave and Kitsap Way / Shorewood Dr./Arsenal Way intersections indicates that under worst-case traffic and meteorological conditions, the maximum-predicted CO levels are likely to remain far below the 1-hour and 8-hour ambient air quality standards. Therefore, project-related traffic would not be expected to significantly affect air quality under any of the alternatives.		
WATER RESOURCES		
Ground Water Quantity: The *Proposed Master Plan* will decrease pervious area at the site,	Impacts generally the same as for the	A minimal amount of recharge is

Table 1.7-1 Summary of Impacts

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
which will further limit recharge to the underlying ground water systems compared to existing conditions. There would be an insignificant loss of recharge to the underlying ground water systems. **Ground Water Quality:** Although the *Proposed Master Plan* will increase the volume of stormwater generated, it will be treated to applicable standards before offsite discharge to surface water bodies. A potential reduction in ground water contamination from stormwater could occur. No significant negative impact to ground water quality would occur. The landfill will be closed under applicable regulations, which should limit infiltration of precipitation into the landfill material and further limit mixing of leachate with infiltrated water. In addition, stormwater that is currently directed to the landfill area would be diverted to stormwater conveyance pipes and reduce the amount of precipitation/stormwater that enters the landfill material. A reduction in potential contamination from the landfill is anticipated, provided proper closure and regrading is performed under the proposed action. No significant negative impact over existing conditions to ground water quality would occur.	*Proposed Master Plan*, although some additional infiltration would occur in conjunction with the expanded retail center. Impacts generally the same as for the *Proposed Master Plan*.	expected to occur at the site under existing conditions due to the significant ground surface gradients and low-permeability, compacted soils. Under the existing conditions, stormwater is routed to offsite discharge points without onsite water quality treatment.
PLANTS & ANIMALS		
Clearing of Vegetation: Development would result in clearing and grading of the portions of the site identified as Urban (U), moderately vegetated habitat, and deciduous forest (Fd). The area identified as lowland grass/forb, mowed (Gm) is currently dominated by a baseball field, and would	Same impacts as for the *Proposed Master Plan*.	Existing conditions would continue.

Table 1.7-1 Summary of Impacts

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
be re-designed to include more landscaping and provide multiple recreational uses. A majority of the coniferous forest in the north-central portion of the site will be retained. The small patch of coniferous forest remaining in the eastern portion of the site would be cleared for redevelopment of the site. Most of the existing trees located within the developed portions of the site would be removed. Within the developed portions of the site, a large number of ornamental landscape trees would be planted. In addition, lawns and other landscape vegetation would be established where appropriate along streets and among buildings. A small area (approximately 2,000 square feet) of coniferous forest off site would be removed to replace the stormwater outfall along the edge of Oyster Bay. The *Proposed Master Plan* would not directly affect any wetland habitats, as none occur on site. Construction of the new stormwater outlet and removal of a portion of the existing pipe along the edge of Oyster Bay would temporarily disturb a small area (approx 2,000 square feet) of estuarine, intertidal, unconsolidated shore (mud and cobble substrate) wetland habitat. **Impacts to Wildlife:** Clearing, grading, and construction activities would remove habitat temporarily for urban-adapted species, many of which are non-native, invasive species. As the new site landscaping becomes established, habitat for these species would again be provided. The primary loss of shelter or cover would result from removal of		

Table 1.7-1 Summary of Impacts

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
some of the larger trees (primarily native species) that occur in developed areas among the existing housing and roads. Similarly, the re-development of the portion of the site currently identified as lowland grass/forb, mowed (Gm) would not be likely to impact wildlife, except during the construction phase of development. Much of the existing coniferous forest vegetation in the north-central portion of the site would be retained. Wildlife species that occupy this area would be largely unaffected by redevelopment. Removal of the majority of the small areas of deciduous forest in the western and eastern portions of the site could eliminate some species from the site. However, the acreage of this forest habitat is limited (approximately 3.75 acres) and these deciduous forest stands have limited value to native wildlife. Over time, the *Proposed Master Plan* would provide similar habitat for wildlife as that exists under current conditions on most of the site. This habitat is generally suited primarily to urban-adapted species. The potential for human disturbance of retained natural habitats would increase incrementally, but the area of human activity would remain essentially the same as under current conditions. Much of the existing vegetation (primarily coniferous forest) on site would be retained, and thus would continue to provide habitat similar to current conditions. Therefore, no significant adverse impacts to wildlife that inhabits the site are expected. **Impacts to Endangered, Threatened, Sensitive, and Other Priority Species:**		

Table 1.7-1 Summary of Impacts

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
No endangered, threatened, or sensitive plant species are known or likely to occur on-site and no adverse impacts to such species would occur. Similarly, development of the site is not expected to affect endangered, threatened, or sensitive animal species, as none have been documented on the site or along the edges of Oyster Bay, and suitable potential habitat is either lacking or very limited. No other priority animal species would be adversely affected by the *Proposed Master Plan*, because none are known or likely to inhabit the site.		
FISHERIES RESOURCES		
No lakes, ponds, or stream channels and no potential fish habitat occurs on or immediately adjacent to the Westpark site itself Run-off volumes and rates from the overall project site would increase due to the proposed increase in impervious surface coverage from redevelopment. Increased stormwater discharge to Oyster Bay would also result from the diversion of flows from a portion of Basin SE to Basin 3. The area immediately surrounding the proposed replacement stormwater outfall at Oyster Bay will be subject to direct construction impacts, as well as potential beach scour and salinity changes associated with discharging increased quantities of stormwater in a different manner and location than occurs presently.	Similar impacts as for the *Proposed Master Plan*. Stormwater flows could potentially be reduced incrementally at the Oyster Bay outfall through the application of infiltration technologies.	No benefits to downstream fish and fish habitat of improved water quality and water quantity controls would occur. Expected, non-significant impacts associated with Oyster Bay stormwater outfall replacement and operation, would similarly not occur.

Table 1.7-1 Summary of Impacts

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
Downstream construction-related impacts to fish and/or fish habitat are not expected to be significant. Construction is not expected to result in significant impacts to the abilities of local aquatic species to successfully complete their life histories through successful reproduction. In general, the project is not expected to significantly diminish habitat availability or food supplies, increase susceptibility to disease or predation, lower water quality, interfere with successful migration or reproduction, or otherwise diminish the survival and fitness of the aquatic species making use of Oyster Bay as habitat for the completion of all or a portion of their life histories. The construction impact area will be small and supports only low-level use by endangered or ecologically significant populations (such as sand lance, surf smelt, salmonids, etc.). No migration routes would be blocked and no passage impeded. The proposed redevelopment would significantly improve storm runoff water quality compared with existing site conditions (or the *No Action Alternative*), since the storm drainage system serving the existing development includes essentially no water quality controls.		
NOISE		
During construction, there would be temporary increases in sound levels near the site due to the use of heavy equipment and along roadways used for hauling construction materials. Excavation, grading, paving, and erecting would generate sounds audible on surrounding properties. Phased construction could result in some construction activities	Construction impacts would be the same as the *Proposed Master Plan*.	No construction noise would occur.

Table 1.7-1 Summary of Impacts

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
during later phases of the project occurring very near (i.e., within 50 to 100 feet of) new residential housing units constructed during earlier phases. Construction noise received in a residential district during daytime hours (7 a.m. to 10 p.m.) is exempt from Bremerton's maximum permissible sound levels.		
Noise from retail facilities (e.g. truck loading docks, garbage compactors, and building mechanical equipment) could affect nearby on-site residences near the retail center. Project-related traffic would have a minor overall effect on noise along area roadways and would not cause significant noise impacts. Traffic noise is also exempt from the City's noise ordinance. New residences, outdoor use/play areas, and a park would be constructed in locations currently exposed to high levels of traffic noise – along portions of SR 3 and Kitsap Way -- and expected to be exposed to similar and possibly higher levels in the future. According to HUD noise suitability criteria, noise levels at most of the proposed residential locations near SR-3 would be considered either "normally unacceptable" (i.e., > 65 dBA and <= 75 dBA) or "unacceptable" (i.e., > 75 dBA). At receptors in the northern portion of the site along SR-3, the Ldns at ground floor receptors generally fall within the "normally unacceptable" range, while exterior sound levels at the upper floor would be considered "unacceptable." Predicted future noise levels at most second-row receptors fall within the HUD "acceptable" range.	Overall, future noise levels and related noise impacts with the *Design Alternative* would be similar to those identified for the *Proposed Master Plan*. A greater number of high density housing units could result in additional residences being exposed to noise levels considered "normally unacceptable" or "unacceptable" under HUD guidelines. However, the degree of impacts (i.e., the predicted sound levels) would be similar to that identified for the *Proposed Master Plan*. A larger commercial area could result in additional commercial/retail noise sources, but noise from these sources would still be required to meet Bremerton's noise limits. Future design would also be required to be consistent with Westpark Sub-Area Plan development standards, which also address potential noise impacts.	On-site noise levels for some residences would likely remain "unsuitable" based on HUD noise criteria.

Table 1.7-1 Summary of Impacts

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
ENVIRONMENTAL HEALTH		
Demolition activities could involve potential releases of asbestos or lead-based paint in building materials. Federal, state and local regulations require removal of asbestos-containing materials by certified workers prior to demolition of affected buildings. Federal and state standards consider any detectable concentration of lead to be a hazard during construction; air monitoring and use of respirators is typically recommended. All materials must be disposed of at an appropriate facility, which varies depending on the concentrations of asbestos or lead materials. The low levels of lead are not likely to warrant additional testing or special disposal. The Phase I ESA did not identify any known or suspected releases of hazardous substances on the site. Such evidence could be encountered, however, in connection with future construction activities. An assessment of the playfield/landfill is currently being conducted to determine if methane gas is present. Additional geotechnical and archaeological investigations are also being coordinated with these activities. New information concerning the landfill, and recommendations regarding appropriate remediation, will be reported in the Final EIS. Conclusions about the status and nature of wastes in the landfill beneath the playfield are still pending. Closure and remediation of the landfill would likely be required to mitigate risks associated with this feature.	Impacts generally the same as for the *Proposed Master Plan*.	No impacts related to demolition would occur, but any health hazards related to asbestos or lead-based paint in existing units would remain.

Table 1.7-1 Summary of Impacts

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
The presence of gas at the off-site VIP Landfill is being evaluated, to determine if it could adversely affect structures on the Westpark site. Groundwater from the VIP Landfill would not affect the Westpark site.		
LAND USE & SOCIOECONOMICS		
Land Use: Construction of the *Proposed Master Plan* would result in temporary impacts to adjacent land uses from dust, emissions, noise and construction traffic. Most such impacts would be concentrated on the Westpark site. The phased approach to construction and relocation would minimize the number of on-site residents exposed to such impacts. There could also be sporadic interference with access for adjacent residents and businesses, and access to some on-site activities (e.g., the community center). Any such impacts would be short-term. Assuming implementation of appropriate mitigation measures, such as dust control and construction traffic management, construction would not cause significant adverse impacts. Use of the site would change from primarily detached single family units and community services, to a mix of residential, commercial and community services in a pedestrian-oriented pattern. The number and variety of housing units would increase (from 631 to 759) and would include a much broader variety of for-sale and for-rent unit types. Commercial services would be a new element of the site's land use pattern. Significant areas of the site (34 percent) would be retained in open space. Overall, the greatest land use	Impacts would generally be the same as the *Proposed Master Plan*. Commercial land uses would comprise a larger portion of the site, and would create more of a commercial character. residential buildings adjacent to SR 3 Two would be one-story higher.	Existing land uses would remain, and the site would remain blighted.

Table 1.7-1 Summary of Impacts

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
changes would be the addition of commercial land uses, redevelopment with a greater variety of residential housing types, and the pedestrian character of the site plan. Gross residential density would decrease from approximately 7.7 dwelling units per acre in a uniform pattern at present, to 7.1 dwelling units per acre. Average net density would be approximately 20 dwelling units per acre, and would range from 12 dwelling units per acre (for detached single family) to 65 dwelling units per acre (for high density apartments and condominiums). Locating a mix of uses at higher densities within walking distance of residents could promote pedestrian activity and use of transit and reduce vehicle use. Westpark's proximity to more extensive commercial uses along Kitsap Way could encourage walking and reduce auto dependence. The greatest potential for land use conflicts would occur where the contrast in uses or intensities are the greatest -- at the edges of the Village Center, where it is adjacent to residential activities, and near the high density apartment and condominium buildings (which could be up to 55 feet tall). Such contrasts in building height and scale are inherent in urban development, are not inherently incompatible, and are not considered significant land use conflicts. The *Proposed Master Plan* would create separations and transitions – using streets and buffering -- that would ameliorate the contrast. In addition, the Westpark Sub-Area Plan requires buffers and landscaping to address potential conflicts. <u>Adjacent Land Uses</u>. The Westpark site is somewhat isolated from		

Table 1.7-1 Summary of Impacts

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
adjacent land uses by its location adjacent to Kitsap Way on the north, and SR 3 on the west. Surrounding land uses are generally urban in character and intensity (urban residential to the east, industrial to the west, and commercial to the north). The gross density proposed for Westpark is generally consistent with, but higher than, existing densities in the surrounding neighborhood (typically 4 to 6 dwelling units per acre). The sites larger buildings and more intensive land uses (Village Center and high density residential buildings) would be located adjacent to Kitsap Way and SR 3. They would be separated from adjacent uses by arterials/highways. Adjacent uses are generally higher or similar in intensity and are not likely to be adversely affected by Westpark land uses. The Westpark site is currently considered "blighted" and has been found to be a disincentive to economic development in the surrounding area. Following redevelopment, the site would function as a modern, revitalized urban neighborhood. On-site commercial activity would provide new jobs. The *Proposed Master Plan* could generate some amount of spin-off development, particularly in the form of additional commercial redevelopment along Kitsap Way. Any such inducement of growth would be consistent with adopted City policy, compatible with the existing land use pattern, and would likely be positive in terms of economic development and changes to neighborhood character.		
Socioeconomics:		

Table 1.7-1 Summary of Impacts

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
Population & Employment: Population on-site would increase from an estimated 1,100 residents currently to approximately 1,973 residents at build-out. There would be an increase in higher-income households and market-rate housing. The number of units available on-site to low-income households would decrease. New middle-income residents would reduce the percentage of low-income residents in the area. The increase in housing types could tend to diversify the community economically. The extent of change in racial and ethnic diversity as a result of the *Proposed Master Plan* is unknown. The availability of market-rate rental and for-sale housing could influence the age distribution of residents on-site. With the shift in housing stock from all public housing to a mix of housing types, the age distribution within Westpark would reflect the surrounding area to a greater extent. Construction would result in generally positive impacts to employment, wages and income. Redevelopment would generate an estimated $51.25 million in direct income. Project construction employment could also indirectly increase the number of construction-related jobs in the surrounding area (e.g., materials manufacturing or delivery) and would result in increased purchases of construction materials. Relocation of residents during staged construction could result in temporary reduction in revenues to area merchants, as well as temporary disruption to the lives of residents. It is possible that all or part of this reduction in local business revenues could be offset	Impacts would generally be the same as for the *Proposed Master Plan*. On-site employment from retail and commercial activities would be incrementally higher (290 new jobs).	No change to population or employment would occur. The existing concentration of low income households would continue.

Table 1.7-1 Summary of Impacts

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
by spending from the temporary influx of construction workers. In so far as relocation to temporary housing occurs in a relatively even distribution to the surrounding area, there would be few, if any, adverse impacts to the existing surrounding infrastructure and community. Positive impacts could include an increase in local hiring, expansion of businesses, new business formation, and greater local tax revenues. Proposed commercial and retail facilities would result in the creation of an estimated 130 new jobs. Approximately 80 jobs currently exist on site and would continue. Average on-site annual income would likely increase as a result of the shift from all public housing units to a mix of public housing, and market-rate rentals and for-sale units. Increased income levels and increased spending by Westpark residents could result in a positive impact on area business and local tax revenues. Positive indirect impacts would include improvement to the character of the site, a more diverse housing stock and economically diverse population, and increased spending for goods and services within the area surrounding the site, as well as within the greater Bremerton area. Revitalization of the site, and removal of current blighted conditions, could also contribute to economic development in the surrounding area, including building renovation/expansion, new construction, and business start-ups. As a result, residents could enjoy increased employment opportunities. A potential increase in business development and in employment provided on-site could contribute		

Table 1.7-1 Summary of Impacts

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
to a decrease in unemployment in the immediate area. The *Proposed Master Plan* could have a favorable effect on real estate in the surrounding area. Residential properties could appear more desirable, resulting in an increase in demand for housing and increases in property values, and rental rates and taxes. This could decrease affordability for some residents, forcing them to relocate. Relocation of existing residents could result in temporary or permanent stresses to their social activities and/or affiliations.		
Housing: The *Proposed Master Plan* will further BHA's mission and City of Bremerton goals by redeveloping an area of concentrated poverty and replacing it with a new mixed-use, mixed- income community. It would also be consistent with the *Kitsap County Consolidated Plan*. Redevelopment would result in increases in both the number of units on the site (759), changes in unit and structure type, and changes in the tenure of residents. The number of rental units on the site would decrease (by 421 units). Almost three quarters of the 759 new units (549 units) would be for sale. The *Proposed Master Plan* includes 190 low income housing units, which represents a reduction of 441 public housing units. These will be replaced by BHA off-site; the location of these units is not known with certainty at this time. BHA plans to provide replacement housing by assigning vouchers to a variety of off-site units, which	Impacts would be the same as those identified for the *Proposed Master Plan*.	No changes to existing housing conditions would occur. Westpark would continue to be characterized by a concentration of old, small low-income housing units.

Table 1.7-1 Summary of Impacts

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
would broaden the regional choice of housing location for public housing applicants. All residents will be offered relocation assistance in compliance with the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (URA). Residents in good standing will also be given the right to return to the new community. Any rent differential incurred by the tenant would be paid by BHA in accordance with the URA. Some portion of new units will be affordable to households with 50 percent to 60 percent of the area median income which will increase the County's overall stock of affordable rental housing; this will result in a positive impact over and above the one-for-one replacement of the public housing units. The replacement of 441 low income housing units off-site will maintain, on a more dispersed basis, the current countywide supply of units affordable to housing tenants earning less than 30 percent of median income. The development of the 549 for-sale units would create new homeownership opportunities on the site. The creation of a mixed income community would help alleviate the social issues (e.g., physical isolation, low educational attainment, high unemployment) that have historically affected the neighborhood. The Proposed Master Plan would also be consistent with Kitsap County's *Consolidated Plan*, which supports the redevelopment of Westpark. No known projects are planned in the immediate area, although there are several redevelopment/revitalization projects underway by		

Table 1.7-1 Summary of Impacts

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
other proponents within a few mile radius of Westpark. No significant adverse cumulative housing impacts have been identified. The Bremerton Housing Authority has committed to one-for-one replacement, at like affordability, of all housing units demolished as a result of redevelopment of Westpark. Because all existing public housing units will be replaced with rent-comparable units, there will be no net loss of units. In addition, because the units will no longer be as concentrated in the Westpark community, households qualifying for public housing will have expanded choices of affordable housing locations. There would be no cumulative negative impact on the supply of public housing in Kitsap County.		
ENVIRONMENTAL JUSTICE		
The impacted area has a significant concentration of low-income, minority, and disabled individuals. The site has been designated as "blighted" for community renewal purposes by the City of Bremerton (Ordinances 4830 and 4870). Demolition and construction activities in connection with redevelopment will affect a disproportionately higher number of these individuals than if the project were located elsewhere. All residents would be relocated from the site in phases. All relocated residents would incur moving costs and the inconvenience associated with relocating from their homes and finding comparably affordable housing. BHA would provide a package of relocation benefits to displaced	Impacts would generally be the same as for the *Proposed Master Plan*.	The existing concentration of low income, minority and disabled individuals would continue.

Table 1.7-1 Summary of Impacts

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
residents, including options for payment of moving costs, assistance with the physical move, temporary or permanent relocation to units in other BHA-owned properties, and Section 8 Vouchers for either temporary or permanent relocation. Proposed relocation benefits would comply with the Uniform Relocation Assistance and Real Property Acquisition Polices Act (URA). All residents in good standing with BHA would have the right to return to a unit in the redeveloped community, but residents also have the option of moving permanently from the site. BHA proposes to replace all existing low income units on a one-for-one basis either on-site (190) or off-site within the City of Bremerton and throughout Kitsap County. In general, this dispersal is encouraged by City policy to alter the existing concentration of low income persons on the site. The location of off-site replacement units is not known at this time. There would be a substantial net increase in on-site employment associated with the proposed Village Center. BHA will help residents develop employable skills through pre-employment training programs, such as "Key to a Better Life". This program was developed as a part of the Westpark redevelopment process. It is intended to help residents develop skills that can be used to apply for many jobs, including construction and staffing of the Bay Vista Commons assisted living facility, currently under construction. <u>Community Cohesion</u>: The broad variety of residential unit types proposed is likely to attract a population reflecting a mix of incomes,		

Table 1.7-1 Summary of Impacts

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
and to change existing demographics. In the near term, a temporary disruption of community cohesion would likely occur from the staged relocation of residents during demolition and construction. <u>Access to Social Services</u>: Westpark residents are currently served by a number of on-site social services for low-income people. BHA's relocation plan will address the need to maintain service connections for residents as part of relocation assistance. <u>Public Health</u>: Redevelopment would eliminate some existing on-site health hazards, including potential exposure to lead-based paint and asbestos. Residents both on-site and in the surrounding area could be exposed to temporarily increased levels of air pollution and noise during construction. <u>Public Well Being</u>: An important objective of the *Proposed Master Plan's design* is enhancement of public well-being. This includes removing blighted conditions and altering the current social and physical isolation of Westpark. Many elements of the new community (i.e. street patterns, building design, open space, pedestrian and vehicular access) have been planned to promote a pedestrian orientation and improve public safety. In general, the variety of new housing, resulting economic and social diversity, and new job opportunities would all help to promote community stability and well-being.		
HISTORIC & CULTURAL RESOSOURCES		
Two archaeological sites were identified within the Area of Potential	Impacts would be the same as	No changes to the existing

Table 1.7-1 Summary of Impacts

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
Effect (APE): WPR-06-01***:*** Graham Way Housing, a collection of concrete foundations, parking areas, and the remnants of Graham Way. The site contains no intact subsurface deposits and is unlikely to yield information important in local or regional history. This site is not recommended eligible for the NRHP. WPR-06-02***:*** Section 16 Refuse Disposal Site is a dump from the 1930s. Although the general location and extent of the site is known, its contents are not well understood. Until this site is fully evaluated, it should be regarded as potentially eligible for the NRHP. The Section 16 Refuse Disposal site (WPR-06-02), is the only significant cultural resource within the APE. The *Proposed Master Plan* would not excavate into or otherwise disturb the deposits in WPR-06-02. The area will continue to be a playfield and therefore should not be affected by the project. Formal closure of the landfill may be required, however. The pervasive modifications to the natural surface by modern land use indicate there is low probability that intact significant archaeological resources are likely to be encountered during implementation of the proposed project. Furthermore, since Westpark is on drift upland composed of recessional glacial outwash, there is little probability for buried intact archaeological materials to be present. It is possible that intact archaeological deposits are buried along the shoreline of Oyster Bay. The 247 residential units, eight laundry buildings, landscaping, and	identified for the *Proposed Master Plan*.	development and no impacts to cultural or historic resources would occur.

Table 1.7-1 Summary of Impacts

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
Westpark plan are associated with several themes in American history; architecture/landscape architecture, community planning and development, and the military. However, the buildings within the APE lack integrity of design, materials, workmanship, and feeling and are not recommended eligible for the NRHP. Westpark as a district or site contains many of its original elements, particularly the plan for building locations, streets, and open space, and its stands of large evergreens. However, Westpark does not retain the design, materials, workmanship, and setting of the 1940s community and is not recommended eligible for the NRHP.		
AESTHETICS, LIGHT & GLARE		
Aesthetics: Demolition and construction activities would be visible from off-site locations and to on-site residents. Visual impacts would include dust, the presence of construction equipment, stockpiles of materials, and construction activity. These impacts would be temporary, would occur in phases, and would not be significant. Redevelopment of Westpark would result in significant and dramatic changes in visual character. Change would occur incrementally, as the site is redeveloped in phases. Change would primarily be related to an increase in the number, density, bulk, scale and design of new buildings, interspersed landscaping and open space, and changes in site topography. Architectural character would also change significantly. Many elements of this change would likely be considered to be positive by many viewers,	Impacts would be similar to the *Proposed Master Plan* with two significant differences: the Village Center would be larger, more intensive and more dominant in appearance; and the multi-family buildings adjacent to SR 3 would be larger in scale.	The site would maintain its existing appearance, and no changes to existing aesthetics would occur.

Table 1.7-1 Summary of Impacts

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
although some viewers could perceive it to be adverse. Larger, taller multi-family buildings would be concentrated on the western portion of the site adjacent to SR 3. Visual change to these viewers would be significant, as this portion of the site would be developed more intensively than at present. Landscaping would be located between the SR 3 right-of-way and the site boundary. It is possible that noise walls or berms could also be constructed in a portion of this area, to abate the effects of existing off-site noise on Westpark. These would also be visible to passing motorists. The Village Center, proposed in the northwestern portion of the site, would consist of larger-scale commercial buildings (up to 50 feet in height) and surface parking areas. As a result of proposed earthwork, this portion of the site would be higher in elevation and more prominent than at present; it is intended to function as an entry to Westpark and a “gateway” to the City. The commercial center would be visible from Kitsap Way/Arsenal Way and from SR 3. Open spaces would include a major park and open space on the northern/central portion of the site (the 12-acre Summit Park), along Kitsap Way, two neighborhood parks and dispersed common areas. The Summit Park location is currently devoted to open space and would not change significantly in appearance. Some improvements – including usable recreation spaces and other amenities -- would occur but would be internal to the site. The dense existing vegetation blocks visual access to the site in this area, and also provides a natural, park-like setting for motorists along Kitsap Way. This character would not change.		

Table 1.7-1 Summary of Impacts

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
The intersection of Kitsap Way and Oyster Bay Road is the northeastern gateway to the Westpark site. The visual character of this portion of the site has previously been altered by construction of Bay Vista Commons, a three-story (plus basement), 72-unit assisted living facility. This corner of the site is elevated and has greater visual prominence from adjacent streets and land uses. The *Proposed Master Plan* includes an office building in this location, which would increase the intensity and urban character of development visible at this gateway. Proposed changes in topography and increased building height will result in views of Oyster Bay from several locations on the Westpark site. This would be a positive change for residents and visitors. Potential removal of the existing drainage outfall in Oyster Bay, north of the Westpark site would enhance views of the water from the shoreline. The outfall proposal also includes a number of options for enhancing visual access of the shoreline for the public. **Light & Glare:** Light from streetlights, parking areas, vehicles headlights and buildings would increase with the number of residential units on-site. Glare could occur from larger scale buildings along SR 3 or Kitsap Way. However, the Westpark Sub-Area Plan's design standards and guidelines would limit the type and intensity of on-site lighting and building materials; use of reflective building materials is not anticipated. Light and glare impacts are not expected to be significant.		

Table 1.7-1 Summary of Impacts

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
TRANSPORTATION		
The Proposed Master Plan would result in a net traffic increase of 4,220 trips daily, and 324 trips during the PM peak hour. In general, approximately 50 percent is expected to travel west towards SR 3. Of that 50 percent, 25 percent would travel north on SR 3, 15 percent south on SR 3, and 10 percent is expected to continue west on Kitsap Way. Approximately 40 percent of the project-generated traffic is expected to travel east along Kitsap Way past National Avenue, with five percent destined to the north on Marine Drive, five percent south on Adele Avenue, and the remaining 30 percent continuing east along Kitsap Way towards downtown Bremerton. Roughly 10 percent of the project-generated trips are expected to travel east along W Arsenal Way.	The Design Alternative would result in a net traffic increase of 6,125 trips daily, and 472 trips during the PM peak hour.	Traffic delay would generally increase in the year 2010 compared to existing conditions, and the level of service would worsen at the intersection of Kitsap Way/National Avenue from LOS B to LOS C. However, all intersections would continue to operate at or above the City of Bremerton's LOS standards.
The majority of study intersections would have higher delay in the year 2010 with the project compared to the future conditions without the project. For the *Proposed Master Plan*, the increase in delay would result in a lower LOS at three intersections -- Kitsap Way/Adele Avenue, Kitsap Way/Shorewood Drive, and Kitsap Way/SR 3 northbound ramps) compared to No Action -- and the Kitsap Way/Adele Avenue would operate at LOS F, which exceeds the city's LOS E standard.	For the *Design Alternative*, the same intersections would experience a lower LOS grade. Two intersections -- Kitsap Way/Adele Avenue and Kitsap Way/Shorewood Drive -- would operate at LOS F.	In 2010, the Kitsap Way at Marine Drive/Adele Avenue intersection is estimated to operate at LOS E without the project, and would degrade to LOS F in the year 2010 under both alternatives without mitigation.
PUBLIC SERVICES & UTILITIES		
Public Services		

Table 1.7-1 Summary of Impacts

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
Police, Fire and EMS: During construction, some calls for service could be generated by construction site theft or trespass, and construction-related injuries, The incremental increase in population associated with redevelopment of Westpark (approximately 885 additional people) would increase the demand for police, fire and emergency medical service. Based on the City's existing level of service for police, Westpark would generate a need for 1.4 additional officers, and for the additional equipment, vehicles and facility space to support those officers. Commercial and retail development typically generates minor calls for police and fire services, and impacts associated with these uses are considered minor. Westpark has historically been associated with higher than average crime rates and demand for police service. It is possible that demand for service could decrease after redevelopment, based on potential changes in demographic and socioeconomic characteristics of a mixed-income community.	The *Design Alternative* would involve the same quantity of housing units and the same population as the *Proposed Master Plan*. Demand (and level of service) for City services are generally estimated based on residential population; therefore, impacts of the Design Alternative would generally be the same as for the *Proposed Master Plan*. The larger retail center could incrementally increase the minor service demand associated with non-residential uses.	Existing demand would continue, including the disproportionate demand for some City services.
Schools: Construction and phased redevelopment would result in the temporary and/or permanent relocation of some students. Some may relocate within the same school service area and attend the same school, while others would attend different schools and/or schools in different districts. This could affect existing capacity in other schools or districts to a minor degree. The additional population accommodated in Westpark after redevelopment could increase the number of families with school age children and the number of students attending Bremerton	Impacts would be the same as for the *Proposed Master Plan*.	No additional impacts would occur.

Table 1.7-1 Summary of Impacts

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
School District facilities. Some school district facilities are currently over capacity, particularly in the district's elementary schools, and additional student population would exacerbate exiting capacity problems. Impacts would be defined by the incremental increase in school age population after redevelopment. The number of additional students generated by Westpark would depend, among other factors, on the number of bedrooms constructed in new units; this is not known at this time.		
Parks & Recreation: The *Proposed Master Plan* would result in an increase in housing units and on-site population, which would also increase the demand for additional parks land and recreational services. The City's adopted level of service implies a need for approximately 3 acres of local parks, approximately 28 acres of regional parks, and 36 acres of open space. Total population is not certain and could vary depending on the mix of bedroom in the proposed units. The *Proposed Master Plan* includes 28 acres of parks and open space, which would meet the city-wide level of service standards for local and regional parks, but is slightly under the total level of service. The increased population would also increase demand on existing city park facilities. Demand generated by employees is expected to be minor and incidental.	Impacts would be the same as identified for the *Proposed Master Plan*.	No additional impacts would occur.
Community Services: The Community Center would be remodeled and would continue to provide a variety of programs for all age groups in Westpark and the surrounding community. Program ideas will likely include a combination of health and fitness, education and career development, culture and arts, life skills, and social/recreational		

Table 1.7-1 Summary of Impacts

Proposed Master Plan	**Design Alternative Master Plan**	**No Action Alternative**
programs. Some community programs currently provided at Westpark are funded by HUD and/or are associated with the existing concentration of low income families on-site. Redevelopment would result in a reduction of the number of public housing units on site, replacement in other locations in Bremerton and Kitsap County, and relocation of existing tenants. There could also be a reduction or change in on-site community services.	Impacts would be the same as identified for the *Proposed Master Plan*.	
Utilities ***Sewer and Water:*** The *Proposed Master Plan* would demolish and replace all existing on-site sewer and water systems. Utility infrastructure would be constructed within public road rights-of-way and would be connected to the existing distribution system. Some off-site sewer and water conveyance infrastructure (e.g., pump stations) may need to be upgraded as well, and would be determined in conjunction with preparation of more detailed development and engineering plans. The incremental increase in population (approximately 885) and jobs (approximately 130) would increase consumption of water for potable use and wastewater systems. Assuming an average consumption of 100 gallons per person per day, Westpark would consume an average of approximately 200,000 gallons per day (gpd). The incremental increase over existing residential usage would be approximately 88,500 gpd. Wastewater flows would be similar. Water would also be consumed by retail and commercial uses and for irrigation of landscaped areas.	Impacts would generally be the same as identified for the *Proposed Master Plan*. The additional employment associated with the expanded retail center would generate additional sewer and water demand.	Existing demand would continue.

Table 1.7-1 Summary of Impacts

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
Westpark's estimated population is included in the City's calculation of water demand/capacity and wastewater treatment capacity (City of Bremerton, 2004). Based on available information, the City has adequate capacity to serve the Proposed Master Plan. Sewer and water availability letters have been obtained from applicable service providers.		
Stormwater: The proposed stormwater system includes both detention and water quality treatment, both of which are absent in existing facilities. The system would be designed to meet applicable City requirements. Stormwater flows in the sub-area would increase as a result of higher density development and increased impervious surface. An overall improvement in the quality of stormwater discharged from the site is expected to occur. Stormwater from most of the site would be discharged via an upgraded outfall in Oyster Bay. The *Proposed Master Plan* includes a design concept for upgrading the outfall as a joint City/BHA project. The existing outfall could be removed or abandoned in place.	Impacts would generally be the same as identified for the Proposed Master Plan, except that some stormwater associated with the expanded retail center could be infiltrated.	The existing, primitive stormwater system would remain, and would provide no detention or water quality treatment.
Solid Waste: Solid waste would be generated from demolition and construction activities. Demolition waste typically consists of concrete, brick, wood, masonry, roofing, steel and other metals. Construction waste typically consists of scraps of building materials. Demolition debris from certain areas of the site may contain hazardous materials and is addressed in Section 3.7, *Environmental Health.*	Impacts would generally be the same as identified for the *Proposed Master Plan*.	No additional impact would occur.

Table 1.7-1 Summary of Impacts

Proposed Master Plan	Design Alternative Master Plan	No Action Alternative
Disposal of construction and demolition debris would occur at appropriate facilities. Generation of household waste would increase relative to existing conditions, as a result of the incremental increase in population associated with the *Proposed Master Plan*. Adequate capacity is present at area landfills.		
Electricity/Energy Use: The *Proposed Master Plan* would consume energy for demolition and construction activities, for typical household uses, and for proposed commercial services. The size of proposed units is not known at this time and estimates of energy use cannot be accurately quantified. Structures would be constructed to meet building and energy code requirements. No significant adverse impacts are anticipated.	Impacts would generally be the same as identified for the *Proposed Master Plan*.	Current levels of energy consumption associated with the existing energy-inefficient residential buildings at Westpark would continue.

1.8 MITIGATION MEASURES

The following summarizes mitigation measures identified in the Draft EIS for the *Proposed Master Plan* and the *Design Alternative*. This information is intended to be a summary of the discussion in each section of the EIS and is not a substitute a review of the full narrative.

EARTH

Erosion Hazards

With proper implementation of BMPs, the probable significant erosion hazard impacts can be mitigated to non-significant levels, even in areas where a high erosion hazard risk is present.

Standards contained in the City of Bremerton Design and Construction Standards, the King County Surface Water Design Manual, and Kitsap County Stormwater Design Manual would be implemented during construction. Specific BMPs that will be implemented during construction should be outlined in the temporary erosion and sediment control (TESC) plan submitted in conjunction with a site development permit application. Recommended BMPs should include.

- Source-control BMP mitigation measures for cleared areas, such as placement of straw mulch on exposed ground surfaces; seeding or covering of the exposed subgrade; track-walking exposed construction slopes to reduce runoff velocities; directing surface water away from exposed subgrades or into approved temporary stormwater conveyance systems.
- Storing stockpiled soils to minimize sheet, rill or gully erosion.
- Installing temporary sedimentation traps or ponds during construction. Using an energy dissipater to reduce the risk of erosion at stormwater discharge points.
- Establishing rock check dams along roadways and within drainage ditches constructed along sloping ground to reduce the water energy and the subsequent risk of channel incision.
- Establishing silt fences along wetlands, stream and river corridors, open space areas, and other sensitive areas in or adjacent to construction zones to reduce the risk of sediment transport.
- Collecting and treating all construction runoff by sediment ponds, turf-covered sand filters, temporary filtration, or other approved methods before release to any surface waters.
- Adopting a temporary erosion and sediment control plan (TESCP) during the design phase. TESCP measures should be in place and operating properly prior to beginning major clearing and earthwork activities.
- Disturbed areas beyond the permanent project footprint should be revegetated, using an appropriate seed mix, by the close of the construction period.

The following erosion mitigation measures should also be considered during the design and construction of the project.

- Surface water and domestic discharge should not be directed onto sloping areas. All devices used to collect surface runoff should be directed into tightlined systems that discharge into approved stormwater control facilities such as infiltration or detention ponds.
- Clearing, excavation and grading should be limited to the minimum areas necessary for construction and original vegetation should be retained as much as possible, including buffer strips between construction disturbance zones

and potential receiving waters.

- A geotechnical engineer should review the grading, erosion, and drainage plans prior to final plan design to further assist in mitigating erosion hazards during and after development.

The proposed redesign of the Oyster Bay outfall, included in the Proposed Master Plan, would mitigate potential erosion.

Landslide Hazards

With implementation of appropriate BMPs and the mitigation measures listed above, probable significant landslide hazard impacts can be mitigated to non-significant levels, even in areas where a high landslide hazard risk is present.

For the two areas designated as high landslide hazard areas on the project site, a minimum setback distance of 50 feet for structures or impervious surfaces (required by the Bremerton CAO) should be maintained from the top or toe of high geologic hazard slopes, unless reductions supported by a Geotechnical Report are approved. The Final Geotechnical Report could satisfy the Special Report requirements of BMC 20.14.660. It may also provide recommendation for setback reductions, and grading/regrading and drainage control as needed for these areas.

Plans for regrading and placement of fill in the landfill area should be reviewed and certified by the geotechnical engineer. Proper regrading and drainage control of this area may reduce the erosion and landslide hazard potential after construction and settlement is complete.

The northern-central steep slopes will remain undeveloped open space and significant vegetation will remain on the slope. If stormwater is conveyed in an enclosed pipe to the base of the slope, as proposed, potential landslide hazard would be reduced and no additional mitigation should be necessary.

The construction of the stormwater detention facility should be reviewed by the geotechnical engineer.

The remainder of the site has a low landslide hazard potential. By conforming to applicable CAO standards and implementing mitigation measures identified above for erosion hazards, the landslide hazard risk and potential impacts to the remaining project site would be reduced.

Seismic Hazards

Surface Ground Rupture: The potential of a ground surface rupture impacting the study area as a result of seismic activity is considered to be low, and no mitigation is required.

Ground Motion: All structures would be constructed in accordance with the International Building Code (IBC) guidelines and would be designed to be able to sustain some damage from ground motion during the design seismic event without causing life safety concerns.

Liquefaction: A quantitative liquefaction analysis is recommended for all areas with a “moderate” to “high” liquefaction potential prior to development. Mitigation measures for liquefaction will depend on the extent of the liquefaction hazard and would be designed by a geotechnical engineer. These could include soil improvement techniques (to reduce liquefaction hazard) and structural improvement techniques (to accommodate liquefaction effects).

Seismically Induced Landslides: Mitigation measures for reducing potential landslide impacts from earthquakes include the recommendations outlined in the *Landslide Hazard Mitigation* section above.

AIR QUALITY

Construction Impacts

Although significant air quality impacts related to construction are not anticipated, the construction contractor(s) would be required to comply with all relevant federal, state, and local air quality laws. They would be required to prepare a plan for minimizing dust and odors sufficiently to comply with PSCAA Regulation I, Sections 9.11 and 9.15. The Associated General Contractors of Washington's *Guide to Handling Fugitive Dust from Construction Projects* provides practical examples of best management practices that can be used to comply with construction-related air quality regulations.

Operational Impacts

The air quality analysis indicates that the Westpark alternatives would not result in any significant adverse air quality impacts due to off-site traffic. Consequently, no operational impact mitigation measures are warranted or proposed.

WATER RESOURCES

No significant adverse impacts to ground water recharge, supply or quality have been identified. Best management practices would be implemented to improve water quality through planned water quality treatment facilities. No further mitigation is necessary.

Closure of the landfill consistent with applicable regulations is recommended. No further significant impacts to ground water recharge or supply have been identified and no further mitigation is recommended.

PLANTS & ANIMALS

The *Proposed Master Plan* would retain most of the existing stands of native vegetation cover on site, and would provide approximately 28 acres of open space and parks, including retained trees and active and passive recreation areas.

The proposed design for replacement of the existing outfall in Oyster Bay would help protect remaining native habitats in the vicinity of the discharge site and farther off-site from adverse impacts of erosion or sediment deposition, and would help protect water quality in Oyster Bay.

The Westpark Sub-Area Plan, which the *Proposed Master Plan* will follow, also contains requirements or guidelines that would increase habitat values and mitigate wildlife impacts. These include landscaping with native plant species, and landscape and irrigation design concepts that encourage use water-conserving, low-volume irrigation, and discouraging the use of exotic ornamental plantings.

A tree survey should be conducted in conjunction with subdivision application. Existing significant trees would be retained where feasible, where they do not pose a safety hazard to future residents or facilities.

Other potential mitigation measures could include retention of existing deciduous forest vegetation in the eastern and western portions of the site. This might involve a conservation easement on the rear portions of the proposed lots in that area or designation of the forest itself as native open space.

Interpretive or educational materials could be made available to residents and visitors to foster an understanding and appreciation of the natural features of the property and surrounding area (e.g., the coniferous forest within the proposed Summit Park, stormwater management, and water quality treatment). Such an appreciation can help to limit unnecessary disturbance or destruction of remaining native vegetation or wildlife. Materials could include signs or materials available from public agencies or local conservation groups.

FISH RESOURCES

Proposed Mitigation

Mitigation measures that have been incorporated into the *Proposed Master Plan* include BMPs to improve and protect long-term water quality throughout the project site and water quantity controls for the on-site portion of the Ostrich Bay Creek basin. BMPs to address temporary sedimentation and erosion during construction are also incorporated into the proposal. These will be refined during the preparation of project development plans and applications. These measures will result in material improvements to water quality control parameters, to the benefit of fish and their habitat, downstream of the site in Ostrich Bay Creek, Ostrich Bay, Oyster Bay, and Sinclair Inlet.

The intertidal zone in the vicinity of the proposed stormwater outfall replacement location on Oyster Bay has a fine-grained, erodible substrate. Design of the proposed Oyster Bay stormwater outfall includes an open, relatively narrow, armored channel across the intertidal zone which avoid the potential impacts associated with allowing discharged stormwater to scour a new channel across the intertidal zone.

Potential Additional Mitigation

Infiltration technologies and methodologies could be incorporated in the *Proposed Master Plan*. However, on-site soils are not generally conducive to widespread infiltration, so this approach could be problematic and prohibitively expensive to apply on a widespread basis. Other low impact development techniques would be evaluated and incorporated where possible, consistent with requirements of the Westpark Sub-Area Plan.

The Oyster Bay outfall will be a joint City/BHA project, and final design is subject to future decisions by the City. Approximately 200 linear feet of pipe and related structures associated with the outfall are proposed for removal. It is presumed that the various sections of the outfall could be cable yarded or otherwise hauled back up the beach during periods of low tide, with only shallow and low-pressure impacts to the subtidal substrate and the organisms it contains. There would be little erosion or sedimentation if outfall removal was done at low tide in this manner. As an alternative, steel plates or other methods to reduce heavy equipment impacts to beach soils and related habitat could be deployed if heavy equipment is necessary to remove the large in-line catch basin or other associated structures.

Some shoreline buffer areas within the project area would likely be disturbed by construction of the replacement outfall at Oyster Bay; other buffer areas in the project vicinity have been previously degraded. An anticipated mitigation element of proposed outfall replacement/reconstruction would be to develop a native revegetation plan for these areas along with long term monitoring, maintenance, and implementation of contingencies and other remedial measures as needed to achieve established performance standards.

NOISE

Construction Noise

Construction activities could result in noise that would often be audible and could occasionally be disruptive. Redevelopment would occur in phases and could result in the exposure of remaining residences to elevated construction noise levels. A number of construction noise abatement methods could be used to limit construction noise and potential disturbances.

Construction noise could be reduced with properly sized and maintained mufflers, engine intake silencers, engine enclosures, turning off idle equipment, and confining activities to daytime hours.

Construction staging areas and stationary equipment should be placed as far away from existing and new residences as possible. Where this is infeasible, portable noise barriers could be placed around the equipment with the opening directed away from the residential property.

Substituting hydraulic or electric models for impact tools such as jack hammers, rock drills and pavement breakers could also reduce construction and demolition noise. Although back-up alarms are exempt from the noise ordinances, noises from such devices are among the most annoying sounds from a construction site. Where feasible, equipment operators could drive forward rather than backward to minimize this noise. Noise from material handling could also be minimized by requiring operators to lift rather than drag materials wherever feasible.

Operation
Retail Center
The proposed project is not expected to result in any on-site operations that would cause substantial amounts of noise, as long as noise from potential retail sources is considered in the design of the retail center. Compliance with the Bremerton's noise limits and with Westpark Sub-Area Plan regulations would require noise sensitive design.

Site Suitability

Numerous residential locations would experience sound levels considered "normally unacceptable" or "unacceptable" according to HUD guidelines. The only source of noise causing these predicted sound levels is traffic along SR-3 and Kitsap Way. Therefore, some form(s) of noise mitigation will be required to reduce traffic noise received at on-site locations so that day-night sound levels at outdoor use locations and inside residences on the project site would be within the levels considered "acceptable" by HUD.

HUD guidance regarding the means to mitigate exterior sound levels suggests three approaches to reducing noise to acceptable levels: noise barriers, site design modifications, and/or acoustical construction. HUD suggests these methods be combined with acoustical construction whenever possible. Measures that reduce *both* exterior and interior levels are preferred. Acoustical construction (i.e., using special building materials and techniques to reduce interior sound level) by itself is the least preferred because this approach only affects interior levels. When feasible, every attempt should be made to reduce the exterior sound levels at least to levels considered "normally unacceptable" prior to focusing on reducing interior sound levels.

Noise Walls

In most cases, the most effective form of mitigation for traffic noise is using noise barriers that are long enough and tall enough to block the line-of-sight from the receiver to the noise source. To be effective, barriers must be solid and continuous, without openings.

Noise barriers were considered and analyzed along SR 3 and Kitsap Way. In each case, the modeling examined barriers at constant heights ranging from 6 to 16 feet tall (in 2-foot increments).

> SR-3/North: an 8-foot tall wall shielding residential locations in the northern portion of the site (receptors R1 through R9) would reduce traffic noise at all ground floor locations (except those represented by R1) to "acceptable" levels.
>
> If there are no outdoor use areas near the northern half of Barrier 1, a noise barrier may not be warranted. Instead, a combination of acoustical construction and site design modifications, described further below, could be effective at ensuring interior noise levels are within HUD guidelines.
>
> SR-3/South: At the southern residential locations near SR-3 (R10 through R17), a 12-foot tall wall would reduce traffic noise to "acceptable" levels at all ground-floor receivers and reduce noise at the upper floor locations to levels considered "normally unacceptable."
>
> Kitsap Way: Modeling indicates a 6-foot tall barrier would reduce sound levels at all first-floor receiving locations to levels considered "acceptable" under HUD criteria. However, second and third floor locations would receive little benefit and would still be subject to "normally unacceptable" levels. With a 10-foot tall barrier, second-floor sound levels would be reduced to "acceptable" levels but all first-row third-floor locations would still be exposed to "normally unacceptable" levels.

Site Design Modifications

On-site outdoor residential use areas facing SR-3 or Kitsap Way would be subject to potential noise impacts. Locating outdoor use areas on the sides of buildings opposite major roads would reduce noise levels at such outdoor areas. Proposed buildings could effectively act as noise barriers between SR-3 and Kitsap Way and the outdoor use areas.

Many of the homes planned along SR-3 or Kitsap Way would be attached in rows (four units per building) or would be in apartment or condominium buildings. Taller buildings and/or buildings constructed closer together would more effectively reduce traffic noise from SR-3 or Kitsap Way. Buildings more than four units long would include fewer breaks in the resulting "barrier," and such buildings would provide better noise shielding for outdoor use areas "behind" these units in relation to the major road. Some residential units in the southwestern portion of the site facing SR-3 and in the northwestern portion facing Kitsap Way might be constructed as single-family, unattached residences, and this configuration would likely provide less noise reduction at outdoor use areas behind the residences (i.e., on the opposite side from SR-3 or Kitsap Way).

Acoustical Construction

In the event that it is not feasible to reduce exterior sound levels to 65 dBA Ldn or less, special consideration should be given to using materials and construction techniques that would reduce interior sound levels in residential spaces to 45 dBA Ldn or less.

With careful, high quality construction meeting current building code construction requirements *and* active ventilation systems, interior sound levels could likely be reduced sufficiently to comply with the HUD suitability criteria. Effective control of interior sound levels (received from outside sources) would require that windows can remain closed (i.e., using alternative dynamic ventilation systems), that double-paned windows be installed, and that doors and windows be kept tightly closed. Properly installed sound-absorbing material in the walls of residential spaces facing either SR-3 or Kitsap Way would further help to ensure noise levels inside these units remain within HUD criteria.

For units in areas with exterior Ldns greater than 70 dBA, and especially for those units in areas with levels considered "unacceptable" by HUD (i.e., Ldns greater than 75 dBA), reducing interior sound levels to 45 dBA Ldn would require special noise reduction construction techniques and materials. Using careful construction techniques designed to ensure good thermal insulation would be a first step. Other techniques would include: (1) minimizing openings to the outside; (2) ensuring that gaps around doors, vents, and windows are caulked and sealed; and (3) requiring dynamic ventilation systems so windows and doors can remain closed. In addition, special construction techniques for exterior walls facing SR-3 or Kitsap Way would likely be required. The specific type(s) of exterior wall construction required would be based on the overall exterior sound levels. In addition, selecting windows with higher sound reduction abilities (i.e., 30 dBA or greater, depending on the exterior levels) and using fewer and smaller window openings on the sides of the houses facing the freeway would help to provide the necessary interior noise reductions of 26 to 31 dBA.

ENVIRONMENTAL HEALTH

The BHA will prepare a demolition plan that addresses the contaminants identified in the Phase I ESA and Asbestos and Lead-Based Paint Survey. Removal and disposal will follow the requirements of federal and state law.

The BHA is currently conducting detailed studies of the playfield, including geotechnical investigations, archaeological surveys, and gas monitoring. It will close the landfill consistent with applicable state and Kitsap County Health Department regulations.

LAND USE

No specific mitigation measures are required to address identified land use impacts. The *Proposed Master Plan* already includes a number of techniques that would avoid or mitigate potential impacts, including the following:

All components of a balanced, pedestrian-oriented community, including housing, commercial and community services, parks and open space.
Location of the most intensive uses on the periphery of the site, adjacent to roads with high traffic; and
Transitions in density on site, using topography and landscaping to buffer lower density uses.

Development would also incorporate the development and design standards of the *Westpark Sub-Area Plan*, which are also intended to achieve compatibility between land uses, consistency with the Bremerton Comprehensive Plan, and superior design.

SOCIOECONOMICS

Population & Employment

BHA would inform local businesses and merchants about opportunities to conduct business with the site development contractors (i.e., subcontracting, materials purchasing).

As part of BHA's relocation planning efforts, it would continue to work with residents to improve earning potential, income levels, family stability, and self-sufficiency through all available programs and support services (i.e., Key to a Better Life, Kitsap Community Resources Community Jobs Program, Kitsap Credit Union and BHA IDA program, WSU Cooperative Extension Service).

BHA would encourage construction contractors to hire residents and would coordinate with contractors to ensure the necessary training.

In order to create employment opportunities for new and returning residents, BHA would encourage new start-up and existing businesses in the surrounding area to hire Westpark residents.

Housing

Redevelopment would include mitigation for the impacts of housing demolition and construction activity on existing residents, and off-site replacement housing for the on-site reduction of 441 housing units with rents comparable to those of the current public housing units. BHA proposes to mitigate for these impacts by providing relocation assistance to residents, and through the one-for-one replacement of housing units affordable to public housing applicants. Mitigation measures included in the *Proposed Master Plan* are identified below.

Tenant Relocation Assistance

The Westpark redevelopment program requires that all residents receive relocation benefits as prescribed by the URA. BHA, with the extensive involvement of residents, has developed "*A Place to Call Home," the Bremerton Housing Authority Relocation Plan for the Redevelopment of Westpark* describing relocation benefits and choices. All residents would be relocated in phases off-site during construction the redevelopment. Any resident wanting to return to Westpark who remains in good standing with BHA would be offered the opportunity to return to a new unit in the redeveloped community. A lottery would be held if the number of resisdents wishing to return exceeds the total number of public housing units.

Overall, the proposed program would mitigate the financial and physical impacts of relocation on existing tenants.

Replacement Housing

The BHA is committed to the concept of one-for-one replacement of demolished public housing units. BHA will use a combination of relocation vouchers and Section 8 vouchers for permanent and temporary relocation of the families at Westpark. BHA would replace 190 units on-site and the remaining 441 would be replaced off-site.

ENVIRON-MENTAL JUSTICE

The long-term impacts of redevelopment on the resident low-income and minority populations at Westpark would be positive and would address the physical conditions and social issues that currently exist relative to Westpark. Mitigation measures identified for *Housing* above 9 would address the short-term impacts resulting from redevelopment.

HISTORIC & CULTURAL RESOURCES

Any subsurface excavation, including geotechnical borings, at the landfill and at the outfall along Oyster Bay should be monitored by a professional archaeologist. Monitoring should occur at the outfall if excavation extends beyond fill into native sediments. It is recommended that a monitoring and inadvertent discovery plan be developed in conjunction with development approval and made available onsite to construction and supervisory personnel. Such a document should provide the procedures to be followed in case archaeological materials or human remains are discovered during construction, a list of persons and agencies to be contacted, and instructions for contacting the responsible parties.

The BHA possesses a significant number of original blueprints and other documents associated with the construction, operation, and maintenance of Westpark and other defense housing complexes they manage. It is recommended that historical material, such as the blueprints, photographs, drawings, paintings, and models of Westpark, be donated or placed on long-term loan to a curation facility equipped to preserve these important documents. The Kitsap County Historical Society Museum, Washington State Archives, National Archives and Records Administration, and the University of Washington Special Collections are recommended facilities.

AESTHETICS, LIGHT & GLARE

Expected changes in visual quality are generally considered to be positive in nature and do not require mitigation. The development regulations, design standards and design guidelines contained in the Westpark Sub-Area Plan will apply to redevelopment of the site and would help to achieve positive visual and aesthetic change, and would reduce the potential for glare..

TRANSPORT-ATION

Level of Service Conditions

A proportional share approach is commonly used to identify project-specific mitigation responsibilities. Using this technique, Westpark's responsibility to contribute to an intersection's improvement would be based on the project's proportionate share, which is calculated by the project-generated volumes divided by the future total entering volumes.

The Kitsap Way at Marine Drive/Adele Avenue intersection is estimated to operate at LOS E in year 2010 without the project (No Action), and is expected to degrade to LOS F in the year 2010 under both alternatives without mitigation. Using a proportional share approach, this would equate to 3.2 percent for the *Proposed Master Plan* or 4.5 percent for the *Design Alternative*.

The Kitsap Way at Shorewood Drive/Arsenal Way intersection is expected to operate at LOS C in 2010 without the project (No Action), and LOS F under the *Design Alternative* without mitigation. For the *Proposed Master Plan*, this intersection is expected to operate at an acceptable LOS E and would not require mitigation. Using the proportionate share methodology, Westpark's mitigation responsibility would equate to 11.8 percent for this intersection.

Optimization of network signal cycle lengths and phase splits was also considered as mitigation and would result in acceptable LOS conditions for both alternatives in 2010. Network optimization would also improve travel times along Kitsap Way. For both optimized alternatives, one segment of Kitsap Way (eastbound between the SR 3 ramps) within the study area would operate at arterial LOS F, as would year 2010 with No Action; however the Kitsap Way corridor as a whole would operate at or above LOS D. As mentioned previously, the poor arterial performance of this segment is likely attributed to short intersection spacing.

Other possible mitigation measures that could further improve operation include:

Increased storage (lengthen turn pockets),
Restrict nearby driveway access movements (e.g. right-in, right-out), and
Limit number of driveways near intersection approaches.

Local Traffic Safety

Relatively high accident rates are a pre-existing condition, without the *Proposed Master Plan*. The high proportion of rear end collisions at the Kitsap Way at Oyster Bay Avenue and Kitsap Way at Pershing Avenue may be attributed to a number of existing factors unrelated to Westpark and mitigated by the following measures:

Hidden Intersections/Driveways

- Install advanced warning signs
- Remove potential sight obstructions
- Restrict nearby driveway access movements (e.g. right-in, right-out)
- Limit number of driveways near intersection approaches

Poor visibility of traffic signals

- Relocate signal heads
- Install large (12-inch) signal heads
- Use additional signal heads
- Install backplates, visors etc. on signals to improve contrast and visibility
- Install louvers to avoid confusion on intersection approaches

High dilemma zone frequency

- Place vehicle detector in dilemma zone that extends green time if vehicle presence is detected

Excessive Speeds

- Reduce speed limit on approaches if justified by spot speed study
- Provide police enforcement of the speed limit

High Traffic Volumes

- Add traffic signals if warranted (per MUTCD)
- Widen roadway approach and/or provide additional lanes
- Restrict nearby driveway access movements (e.g. right-in, right-out)
- Limit number of driveways near intersection approaches

PUBLIC SERVICES & UTILITIES

Public Services

Police, Fire & EMS

All new buildings would be constructed according to City building codes which address life and safety concerns. Sprinklers would be provided in larger buildings.

Security measures would be implemented during construction to reduce potential criminal activity. Measures would include on-site security, lighting and fencing to prevent public access.

Site planning, street layout and lighting are intended to promote visibility for residents and police.

Schools

No mitigation measures are required.

Parks & Recreation

Existing park and recreational facilities currently in Westpark are minimal compared to the amount and type of facilities included in the *Proposed Master Plan* and the *Design Alternative.* Measures that will mitigate potential impacts include provision of park and recreation facilities, trails and open space across the entire Westpark site, including the Summit Park and two neighborhood parks. These would provide opportunities for active recreation, passive enjoyment of open space, and facilities designed to accommodate a spectrum of age groups. Private open space would also be provided in individual yards, common areas, balconies. The existing playfield adjacent to the community center would be retained

Community Facilities

As part of its program planning, the BHA is evaluating potential changes to the range of programs provided at the Community Center. Program demand is likely to decrease as a result of economic diversification of Westpark residents and greater dispersal of low income housing.

Utilities

Sewer and Water

Sewer and water distribution systems would be designed consistent with applicable City and state engineering and construction requirements.

Hydraulic modeling of the water distribution system would be conducted prior to building permit issuance to verify that fire flows are adequate

Stormwater

To mitigate for potential stormwater impacts, the proposed system incorporates detention and water quality treatment including use of bio-filtration swales. The *Design Alternative* would also incorporate infiltration for a portion of the expanded retail/commercial site.

Additional low impact design concepts should be evaluated, including routing runoff in roof drain downspout systems.

The design concept for upgrading the outfall in Oyster Bay, which is proposed as a joint City/BHA project, would address the additional stormwater generated by Westpark, and the existing capacity and maintenance problems in this regional system.

Energy

Electric cables would be placed underground wherever possible. All connections to existing utilities along perimeter roadways would be coordinated with utility providers.

Newly constructed buildings would implement energy conservation measures included in applicable energy codes.

1.9 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

EARTH

Minor soil losses would be expected during the construction phase of the project. No significant unavoidable adverse impacts related to landslide hazards and seismic hazards have been identified.

AIR QUALITY

No significant unavoidable adverse air quality impacts have been identified related to the proposed Westpark Development Alternatives, and none would be anticipated.

WATER RESOURCES

No significant unavoidable adverse impacts to ground water supply have been identified. A minor amount of ground water recharge loss is expected from the *Proposed Master Plan*. The reduction is considered insignificant compared to existing conditions. Ground water quality improvements are expected from stormwater treatment. However, proper closure of the landfill may not prevent landfill leachate from reaching underlying ground water systems.

PLANTS & ANIMALS

Redevelopment of the site under the *Proposed Master Plan* or *Design Alternative* would unavoidably affect existing planted trees, lawns, buildings, and infrastructure on site. This would remove, at least temporarily, existing urban habitat from the site, which harbors primarily those species adapted to urban environments. However, most of the area of native vegetation on site would be retained, and upon completion, similar urban habitat would be created. Consequently, impacts to plants and animals of the site and vicinity are not considered significant.

FISH RESOURCES

With respect to fish and fish habitat, some minor, temporary, unavoidable adverse water quality impacts can be expected to occur during construction associated with the *Proposed Master Plan,* but these are expected to be less than significant. Furthermore, the completed development under the *Proposed Master Plan* would result in net improvements in stormwater runoff quality and, within the Ostrich Bay drainage area, water quantity controls, when compared to existing conditions.

Other fisheries-related impacts identified in this draft EIS section, primarily associated with proposed Oyster Bay stormwater outfall reconstruction, reconfiguration and operation with increased run-off rates and volumes, are not expected to be significant.

Similar to the *Proposed Master Plan*, some minor, unavoidable adverse impacts regarding water quality can be expected to occur during construction, but these are expected to be less than significant. Net improvements in stormwater runoff quality and, within the Ostrich Creek Basin, water quantity would also occur compared to existing conditions. Other identified fisheries-related impacts associated with proposed Oyster Bay stormwater outfall reconstruction, reconfiguration and operation are likewise not expected to be significant.

NOISE

The Proposed Master Plan would not cause significant adverse noise impacts. Significant impacts are associated with the site's location near a major highway and principal arterial and resulting (existing) of-site traffic noise. If noise mitigation is provided so that the sound levels at exterior use areas are reduced to 65 dBA Ldn or less, and/or the interior Ldns in residences are reduced to 45 dBA or less, no significant adverse noise impacts would be experienced by on-site residences.

ENVIRONMENTAL HEALTH

With implementation of applicable federal, state and local regulations, no significant unavoidable adverse impacts are anticipated.

LAND USE

Implementation of the Proposed Master Plan would unavoidably alter land use on the Westpark site. Land uses would intensify and become more varied. Redevelopment would be consistent with the Bremerton Comprehensive Plan and applicable zoning regulations and no significant adverse impacts would occur.

SOCIOECONOMICS

Population & Employment

No significant unavoidable adverse impacts related to socioeconomic conditions are anticipated.

Housing

Many impacts of the *Proposed Master Plan* and the *Design Alternative* would be either neutral or positive; adverse impacts would be mitigated by the planned relocation assistance to be provided to current residents and/or the planned one-for-one replacement of current public housing units with units of like affordability.

No Action, on the other hand, would produce several significant unavoidable adverse impacts. It would deter revitalization of the community. In addition, rehabilitation would neither address the long-term structural needs of the units and the failing infrastructure, nor the social and economic isolation of current residents.

ENVIRONMENTAL JUSTICE

No significant unavoidable adverse impacts are anticipated over the long-term. In the short-term, existing residents will experience the inconvenience attendant to relocation and construction, but will be provided with multiple types of moving and relocation assistance.

HISTORIC & CULTURAL RESOURCES

No significant unavoidable adverse impacts have been identified.

AESTHETICS, LIGHT & GLARE

No significant unavoidable adverse impacts to visual quality are anticipated.

TRANSPORTATION

Traffic and congestion would increase as a result of population growth, including the incremental growth associated with the Proposed Master Pan. As identified in the analysis, implementation of recommended mitigation measures would maintain adopted levels of service.

PUBLIC SERVICES & UTILITIES

Public Services

Demand for services will increase incrementally in conjunction with the additional population associated with Westpark. No significant unavoidable adverse impacts related to police, fire/EMS, schools, parks and recreation or community facilities are identified.
Utilities

Utilities

Demand for utility service would increase in conjunction with anticipated population growth. No significant unavoidable adverse impacts to utilities are anticipated.

2. PROJECT DESCRIPTION & ALTERNATIVES

2. PROJECT DESCRIPTION AND ALTERNATIVES

2.1 PROPONENT & PROJECT LOCATION

2.1.1 Proponent

Westpark is sponsored by the Bremerton Housing Authority (BHA), a Washington municipal corporation.

2.1.2 Project Location & General Site Conditions

The project site is located in the western portion of the City of Bremerton, in Kitsap County, Washington. The site encompasses an area of approximately 82 acres and is triangular in shape. The project site is generally bounded by Kitsap Way on the North, Oyster Bay Avenue on the east, Arsenal Way on the south, and SR 3 on the west. Oyster Bay lies approximately ¼ mile north of the site, across Kitsap Way. Bremerton's City Center is located approximately 3 miles to the east. An aerial photo of the site and surrounding area is shown in Figure 2-1.

The surrounding area is a mixture of residential neighborhoods (to the east), commercial and retail uses (along Kitsap Way), and light industrial uses (south of SR 3).

The site is currently developed with 631 housing units, primarily one-story duplex and four-plex in design, including a 60-unit apartment building for elderly and disabled persons, Other buildings and facilities include a community center (and ball fields), senior center, head start facility, two play areas, and some local services (laundry, storage facility, and maintenance shop). More than 90 percent of existing units are for low income families and individuals. A new 72-unit assisted-living facility is currently under construction on Russell Road. The BHA's administrative offices are also located on Russell Road, which provides entry to the site from Oyster Bay Avenue.

A topographic ridge crosses the site in a north-south direction, resulting in an elevation difference of approximately 125 feet. Views of Oyster Bay and Ostrich Bay exist from several locations on the site. No wetlands, streams or critical habitat have been identified on the site. The site does contain stands of second growth trees.

An existing outfall discharges stormwater into the Bay. No other constructed stormwater facilities exist on-site.

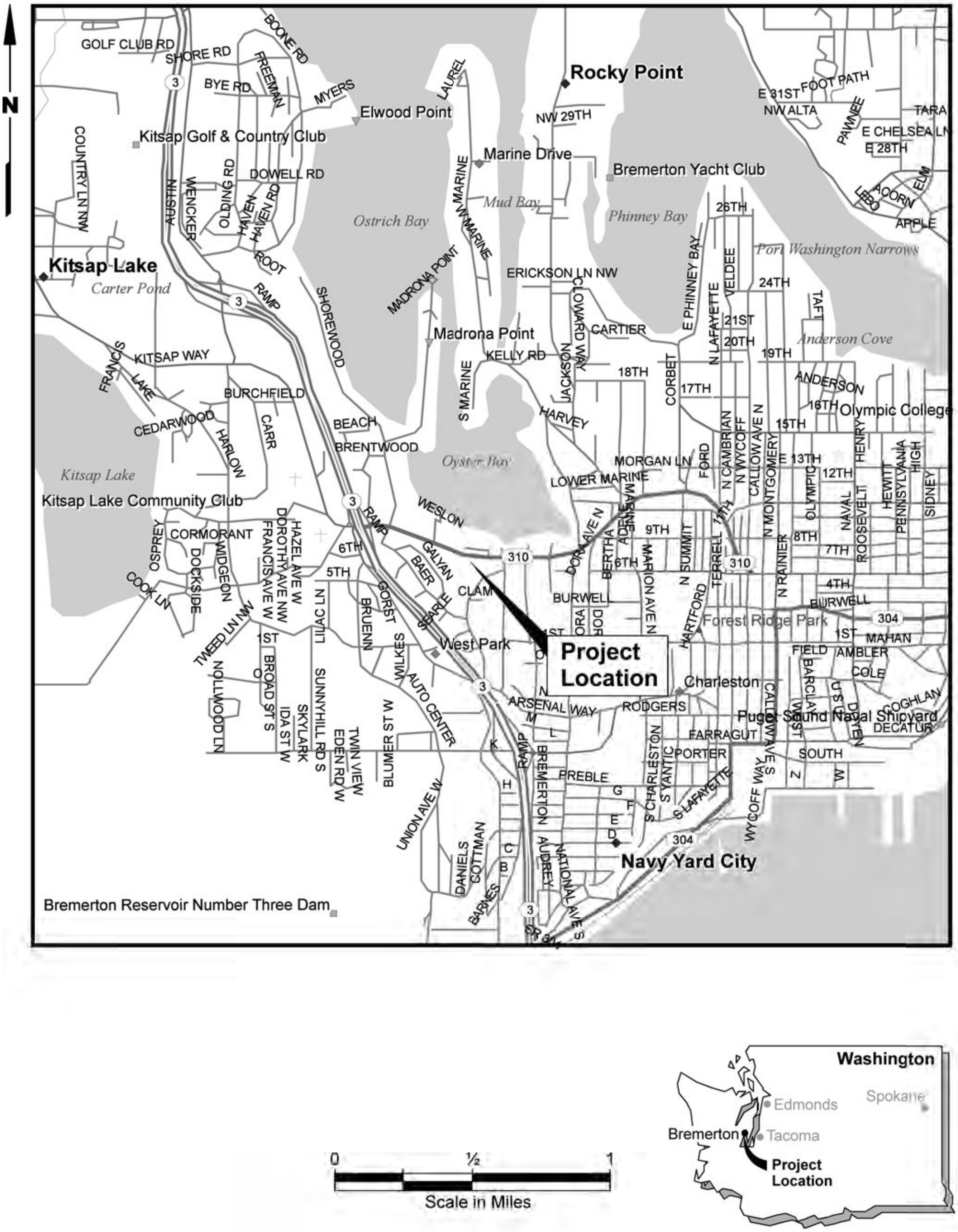


Figure 2-1 Site Vicinity

2.2 PROJECT OVERVIEW

The *Proposed Master Plan* would involve redevelopment and revitalization of the existing Westpark public housing community. It would be redeveloped into a mixed-use, mixed-income, pedestrian oriented community. The Master Plan, shown in Figure 2-2 is still conceptual in nature and subject to change and refinement as a result of ongoing planning.

The *Proposed Master Plan* would result in redevelopment of all existing residential units on the site. A total of 759 units are proposed for the site. Housing would include approximately 110 market rate/rental apartment units, 150 multi-family condominium units, 97 detached single-family units, and 442 units of attached duplexes, townhouses, and cluster cottages in a variety of sizes and styles. Of the latter, approximately 100 units would be rental and the balance for sale. A total of 190 public housing units are proposed to be developed on site; these would be located in a variety of housing types throughout the site. Existing low income housing units not replaced on site (441 units) would be replaced off-site, in Bremerton and other locations in Kitsap County.

Proposed residential densities would range from a low of 8-12 dwelling units per acre for single family attached units, to a maximum of 65 dwelling units per acre for the apartment building. Gross residential density for the site would be approximately 9 dwelling units per acre, and net density approximately 20 dwelling units per acre.

In addition to housing, the *Proposed Master Plan* contains approximately 5 acres/50,000 square feet (gross leasable area) of retail activity located in a village center in the northwestern portion of the site. An additional approximate 10,000 square feet of neighborhood-scale retail and commercial uses would be located in mixed-use buildings in different areas of the site. An EIS alternative, described further below, generally considers the impacts of including a larger retail center (approximately 10-12 acres, up to 130,000 square feet).

The *Proposed Master Plan* includes approximately 28 acres of parks and open space, including a community park, neighborhood parks and urban open spaces plazas. The Proposed Master Plan has been designed to preserve as many of the existing trees as feasible and provide additional landscaping. Approximately 57,000 linear feet of pathways and trails would provide pedestrian connections between neighborhoods.

The *Proposed Master Plan* includes demolition and redevelopment of all existing buildings on site (except the community center), and replacement of all utilities (sewer, water, drainage, electricity/gas and telecommunications). All existing streets would be vacated and re-platted to create the system of streets.

Redevelopment would occur in four phases over an approximate three year period beginning in 2007. All existing buildings except the community center, and all existing infrastructure would be demolished or abandoned and replaced. Development would involve staged relocation of all tenants. Relocated tenants in good standing with BHA would be eligible to return to the new development when it is completed.

Figure 2-2 Westpark Site Plan

2.3 BACKGROUND INFORMATION

2.3.1 Regulatory Overview

Existing Comprehensive Plan and Zoning Designations

A. Local Planning Framework

Overview

The Westpark site has been the subject of several City legislative actions over the past few years, and was also addressed specifically in the City's recent adoption of its updated Comprehensive Plan and zoning code in 2004. These actions have provided a framework for planning redevelopment of the site.

In September 2003, the City amended its Community Renewal Plan, pursuant to the state Community Renewal Law (RCW 35.81), to incorporate the Westpark site as a "blighted" area for purposes of community renewal efforts (Ordinance No. 4830 and 4870). The designation was supported by findings that the site was isolated from adjacent areas that building size and design were deficient, and that physical deterioration was a contributing factor to disinvestment in the area. These actions also reaffirmed the City's intent to cooperate and assist the Bremerton Housing Authority in the redevelopment of Westpark, (pursuant to RCW 35.83), and to provide a framework for redevelopment in the Comprehensive Plan and zoning regulations. This framework is described below.

Public Sector Redevelopment Site (PSRS)

The Comprehensive Plan Land Use Map designates Westpark as a Public Sector Redevelopment Site (PSRS). These are special, large-scale sites with high potential for development that is innovative or that meets a unique community need. They should be developed consistent with specific district planning efforts that address the site, compatibility with surrounding uses, and consistency with the Comp Plan. A PSRS must have a clearly defined community benefit, such as meeting a public housing need. They may include mixed type residential development with an open space component and secondary commercial or office development.

Oyster Bay Neighborhood Center

The Comprehensive Plan also designates a neighborhood center for the Oyster Bay Area adjacent to the Westpark site, on both sides of Kitsap Way. This 37-acre center is seen as redeveloping over time -- in conjunction with, but slower than Westpark -- into an urban, pedestrian-friendly area connected with the surrounding area by trails and open space, including access to the shoreline. The Center would include a core, with mixed-use (residential and commercial) buildings, and would receive support from Westpark's residents and workers. The Plan encourages planning of land uses in Westpark to complement redevelopment of Oyster Bay.

Westpark Sub-Area Plan & Development Regulations

The Comprehensive Plan anticipates that more detailed area-specific plans will be developed to implement Public Sector Redevelopment Sites, such as Westpark. Key aspects of these plans include: a process that involves the community, consistency with the Comprehensive Plan goals and policies, and inclusion of development standards and design guidelines. The Westpark Sub-Area Plan, developed to meet these requirements, was adopted by the Bremerton City Council on February 2, 2007.

In addition to providing a generalized land use map, the Sub-Area Plan contains detailed development regulations and design guidelines that will apply to the Westpark site. The existing zoning designation of the site is Master Development (MD). This zone provides a few basic planning requirements and delegates detailed regulations for MD-zoned sites to site-specific sub-area plans and development standards. The Proposed Master Plan has been developed to be consistent with the Westpark Sub-Area Plan and development standards.

2.3.2 Overview of Bremerton Housing Authority Functions and Programs, & Redevelopment Planning

Bremerton Housing Authority

The Bremerton Housing Authority (BHA) was created in 1940, in response to a need for decent, affordable housing caused by the influx of workers and military personnel associated with the Puget Sound naval Shipyard. The BHA is an independent municipal corporation, created pursuant to the State law to provide affordable housing and related services. The stated mission of the Bremerton Housing Authority is to:

- attempt to relieve the shortage of safe, decent and affordable housing available to low income persons;
- create opportunities for residents;
- increase their self sufficiency and independence; and
- ensure fiscal integrity in all the programs it administers.

BHA is managed by a Board of Commissioners and an Executive Director. Its annual budget is approximately $54 million. BHA contracts with U.S. Department of Housing and Urban Development (HUD) to provide low rent public housing and Section 8 assistance.

As of 2004, the BHA managed or provided housing vouchers for approximately 3,000 units of housing (including units in unincorporated Kitsap, Jefferson and Mason Counties). BHA also administers contracts, on behalf on HUD, for more than 18,000 housing units.

Westpark Community

The existing Westpark public housing community was built in 1941 and is the remnant of a larger World War II-era housing project that was built as temporary housing for shipyard workers. The site currently contains 631 residential units: 571 public housing units, located in one-story duplex and four-plex structures, and the Firs, a 60-unit apartment building for elderly and disabled residents. All units are rental housing. A 72-unit assisted living facility (Bay Vista Commons, formerly the Firs II) is currently under construction.

Existing units are located in one-story structures that each contains one to two residential dwelling units. Ninety percent or more of existing units are for low income families and individuals.

The Westpark site also contains several buildings that contain non-residential uses (approximately 58,960 square feet total). These include the community center, BHA's administrative offices, a senior center, two Head Start buildings, a Teen Center a maintenance building, storage building and four laundry facilities. The community center (18,000 square feet) accommodates a broad range of community activities and services for youth and adults, some of which are funded by HUD. Representative programs include:

Family Self-Sufficiency program;
The Keys to a Better Life Program;
drug prevention and crime prevention;
computer lab;
numerous youth programs (e.g., Red Cross safety, Girl Scouts, National Youth Congress, arts/crafts, sports, music lessons, field trips,)
tax assistance;
counseling services;
pea patch;
self-employment training; and
neighborhood block watch.

The Community Center would undergo some remodeling as part of the redevelopment. Ball fields are located contiguous to the community center.

Westpark's buildings and infrastructure are in need of rehabilitation, and the site has been designated as blighted. Existing buildings and systems have reached the end of their normal life-cycles and redevelopment is more cost-effective and desirable than rehabilitation.

Project Planning and Community Involvement

Development of the Proposed Master Plan has involved approximately 57 meetings and workshops involving residents of Westpark and surrounding neighborhoods, community stakeholders, representatives of the City of Bremerton, and the Planning Commission and City Council. Key master planning meetings that occurred in the course of developing the Master Plan included:

- Nine public community meetings;
- A week-long design charrette;
- Two stakeholder's meetings;
- Six resident Council meetings
- 10 resident presentations
- Joint SEPA/NEPA scoping meeting;
- Bremerton Planning Commission (2 workshops and 1 public hearing on the Westpark Sub-Area Plan); and
- Bremerton City Council (a workshop and public hearing on the Westpark Sub-Area Plan.

Please refer to the Westpark Sub-Area Plan and the community involvement summary submitted to the City of Bremerton for additional information about community meetings.

2.3.3 Environmental Analysis and Review: SEPA and NEPA

This document has been prepared to comply with the requirements of both the State Environmental Policy Act (SEPA) and the National Environmental Policy Act (NEPA). SEPA compliance has also considered the State regulations that implement SEPA and BHA's regulations that implement the policies and procedures of SEPA. This Draft EIS has also been prepared consistent with HUD's adopted NEPA policies and procedures, and is being coordinated with requirements and procedures of the National Historic Preservation Act (NHPA, Section 106) and the Endangered Species Act (ESA).

Preparation of this Draft EIS is the responsibility of the BHA, as SEPA lead agency, and the City of Bremerton Department of Community Development, as the designated Responsible Entity for NEPA compliance. Both BHA and the City have directed the areas of research and analysis that were undertaken in preparing this Draft EIS, and each has determined that this document has been prepared in a responsible manner using appropriate methodology. The environmental elements that are analyzed in this Draft EIS were determined as a result of a formal, public EIS scoping process that occurred from June 6, 2006 through June 27, 2006.

SEPA and NEPA procedures have also been coordinated. Scoping notices were published pursuant to SEPA and NEPA requirements. A public EIS scoping meeting, consistent with the procedures of SEPA and NEPA, was held at the Westpark Community Center on June 22, 2006. This public meeting provided an opportunity for public comment, in addition to the submittal of written comments. Comments received were considered by the BHA and City of Bremerton in determining the issues and alternatives to be analyzed in this Draft EIS. In addition to the Proposed Master Plan, two alternatives are considered – a design alternative and No Action.

As noted in the *Fact Sheet*, this document is being circulated to agencies, organizations and individuals for a 45-day public comment period. At the conclusion of that period, BHA and the City will prepare the Final EIS. The Final EIS will incorporate any refinements to the project subsequent to issuance of the Draft EIS; revisions and clarifications to text contained in the Draft EIS in response to public comments; and responses to written comments and public testimony. The Final EIS will be the environmental document that accompanies Westpark through the development review and permitting processes noted in the *Fact Sheet* of this Draft EIS.

A course of phased/tiered review is being used to evaluate the environmental impacts of the Westpark Master Plan. Redevelopment of the site was initially evaluated in the Supplemental EIS (SEIS) prepared for the City of Bremerton's Comprehensive Plan (2004). An addendum to that SEIS was also prepared (2006) in connection with the City's review and adoption of the Westpark Sub-Area Plan. The Sub-Area Plan establishes land uses for the site and includes zoning standards that will regulate future development.

The BHA and City are also using SEPA's provisions for early environmental review (WAC 197-11-406). This encourages preparation of an EIS as early as possible in the planning process, prior to submittal of a development application, so the EIS can practically be used as an important contribution to project design and agency decision making.

2.4 PROJECT PURPOSE & NEED/GOALS & OBJECTIVES

Westpark was built in the early 1940's to provide temporary homes for defense workers and their families during World War II. The community has endured for more than 60 years, through the careful stewardship of BHA. In 2003, however, the site was designated as a "blighted" area for purposes of community renewal efforts pursuant to the state Community Renewal Law (RCW 35.81). The existing site is considered to be isolated from adjacent areas, characterized by deficient building size and design, physically deteriorated, which is contributing to disinvestment in the area. Rehabilitation is not an economically viable option, given the age and condition of facilities. This situation provides the framework for the present master planning and proposed redevelopment.

Initial conceptual master planning for Westpark began in 2002, and included community involvement, site analysis, and conceptual land use planning. The resulting *Strategic Master Plan* (2003) provided broad goals for redevelopment and subsequent master planning of the site, including the following:

- Produce a positive impact on the surrounding community, and on long term economic and housing development in Bremerton;
- Maximize the value of the property;
- Achieve no net loss of public housing units;
- Improve the quality of public housing, and blend it with surrounding housing;
- Deconcentrate public housing and create mixed-income neighborhoods;
- Meet outdoor recreational needs;
- Improve community services; and
- Address local urban growth goals.

The *Proposed Master Plan* incorporates these broad goals along with more specific design objectives into a vision of a new urban mixed-use, mixed-income, pedestrian-oriented community. The new Westpark will be characterized by a variety of types and styles of housing to meet the needs of a wide range of income groups. Providing both for-sale and rental housing will broaden housing opportunities for the community as a whole. Accommodating a variety of income groups will also help to de-concentrate low income housing in Bremerton. Retail and commercial uses will provide for some of the everyday shopping needs of residents, as well as provide some job opportunities for residents. The quantity and type of on-site commercial uses are intended to complement future development of the Oyster Bay Neighborhood Center.

The site will maintain significant open space and existing trees, preserve and enhance views, and carefully manage stormwater and other natural features. New parks, civic spaces and outdoor amenities will be created. Proposed development standards and design guidelines, and covenants, conditions and restrictions (CC&Rs), will establish high standards for the quality of redevelopment, yet provide flexibility to respond to market changes and opportunities. The plan will provide high quality infrastructure and services to residents. The Westpark site will relate to the surrounding neighborhood in terms of activities and scale, and provide a catalyst and model for future redevelopment.

2.6 DESCRIPTION OF THE WESTPARK PROPOSAL

2.6.1 Overview

The *Proposed Master Plan* would redevelop the site with a mix of urban density uses, integrated with new utilities and infrastructure, and a system of parks and open spaces. The community would provide a mix of housing types to meet the needs of a variety of income groups, including units for low income residents.

Land uses would be more diverse than what currently exists. Residential uses would predominate, and would occur in a variety of types, forms and sizes. Commercial and retail uses to meet residents' everyday needs would also be included. These would be located both in a small commercial village, and on the ground floor of mixed-use buildings in various portions of the site.

The *Proposed Master Plan*, depicted in Figure 2-2, indicates the approximate location of all proposed improvements and facilities. The Master Plan is still conceptual in nature and is subject to change or refinement as a result of ongoing planning. As with master plans for large, phased projects in general, locations of uses or buildings are not intended to be exact or absolute. Building footprints, for example, could be refined as a result of environmental review, more detailed planning, and the land use approval process. Similarly, the *Proposed Master Plan* indicates the relative size and type of residential buildings. Subject to environmental parameters identified in this Draft EIS, and to the Westpark Sub-Area Plan's zoning and regulatory requirements, the *Proposed Master Plan* is intended to provide flexibility in regard to the types of units and/or the size of buildings that may be developed in response to market and economic conditions. This flexibility would be bounded by the following assumptions and elements of the proposal: a maximum numbers of housing units (759); the amount of non-residential space (60,000 square feet) identified and evaluated in this Draft EIS; the density ranges (minimum and maximum number of dwelling units) within identified blocks that comprise the project site (required by the Westpark Sub-Area Plan); and by any conditions imposed as a result of land use permitting.

The balance of this section of the Draft EIS provides descriptive information concerning major elements of the Proposed Master Plan: Housing; Parks, Recreational Facilities, Open Space and Community Facilities; Circulation, Access and Parking; Stormwater and Utilities; Clearing and Grading; and Project Phasing and Demolition.

Table 2-1.
Westpark Land Uses

Land Use	Acres	Units/Square Feet
Residential:		759 du's
- Single family [1]	31.5	499 du's
- Multi-family [2]	5.6	260 du's
Retail/Commercial:		60,000 sf
- Village Center	5.0 [3]	approx. 50,000 sf
- Mixed-Use Buildings		approx. 10,000 sf
Community/Civic	1.04	44,749 sf [4]
Open Space & Parks	28.0	Community & neighborhood parks and open spaces
Trails		57,000 linear feet
Streets/Infrastructure	14.05	611,977

Notes:
1. Single family includes attached townhouses, duplexes and cottages, and detached units.
2. Multi-family includes apartments and condo units. Some multi-family units will be included in mixed-use buildings (e.g., with retail or commercial uses).
3. A 10-12 acre retail option is evaluated in the *Design Alternative* included in the Draft EIS.
4. Reflects the site area of community center.

2.6.2 Housing

Overview

The *Proposed Master Plan* provides 759 rental and for-sale housing units; 759 is considered the maximum for EIS analysis. All existing low income dwelling units would be replaced, either on-site or off-site. Further discussion concerning replacement housing is contained in Section 4.9 of this Draft EIS. Table 2-1 provides an overview of the proposed housing development program and the types of units within each category.

Dispersing public housing would accomplish a number of goals, including the revitalization of dilapidated housing and distressed communities, creation of diverse neighborhoods, and the promotion of housing choice.

Housing Relocation Plan

Implementation of the *Proposed Master Plan* would require the demolition of all existing housing units and necessitate the relocation of all residents during construction. All residents would receive relocation benefits as prescribed by the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (URA).

The BHA, with the involvement of residents, is developing a detailed Relocation Plan that describes relocation benefits and choices. More information about relocation is also provided in Section 4.9.2.2, *Housing.*

Table 2-2.
Proposed Housing Program

	# Units per Phase				# Units
Unit Type Distribution by Phase *	**II**	**III**	**IV**	**V**	**Total**
Market Rate Apartments	0	110	0	0	110
Urban/Loft Condominium	0	65	0	0	65
Condominium	0	85	0	0	85
16' Townhouse	24	27	20	9	80
22' Townhouse and/or Row Home, Alley Load	30	21	26	17	94
24' Townhouse - 2 and 3 Story	2	28	12	18	60
Duplexes (Rental)	14	50	18	18	100
Duplexes (Market Rate)	2	8	6	14	30
Cluster Cottages	10	18	10	0	38
Single Family - 3,500 sq ft Lot	17	30	12	0	59
Single Family - 4,500 sq ft Lot	7	27	4	0	38
Total Units	106	469	108	76	759
Lots per Phase	106	209	108	76	499
Public Housing Units	38	87	38	27	190
% Public Housing Units per Phase	35.8%	18.6%	35.2%	35.5%	25.0%
PHU's as % of Total PHU per Phase	20.0%	45.8%	20.0%	14.2%	100.0%

* Units are approximate, based on the proposed program of 759 total units, and assuming 25% Public Housing Units

2.6.3 Parks, Recreational Facilities, Open Space & Trails, and Landscaping

Parks & Open Space

Parks and open space are depicted in Figure 2-3. The Proposed Master Plan would provide approximately 28 acres of parks and open space providing opportunities for active recreation (12 acres) and passive enjoyment (4.5 acres), and including significant preserved trees (approximately 11.5 acres). Proposed facilities include a 12-acre community park, two neighborhood parks, urban open spaces, and natural areas. Parks and open spaces would be linked by the internal trail network and street system.

Proposed parks – both the new Summit Park and the remodeled Community Center -- would provide facilities for organized sports (e.g., baseball, softball, soccer, football, etc.). The *Summit Park* is an approximate 12-acre, multi-faceted green space at the center of the site. It will function as a recreation space, view corridor and central community space. The center of the park will be a grass recreation area with picnicking facilities. A plaza area will also be created, with benches and a water or art feature. The park will provide views over Oyster Bay and Dyes Inlet.

Trails

As shown by Figure 2-3, an approximate 11-mile long (57,000 linear feet) interconnected system of pedestrian sidewalks, paths and trails is proposed. This system would connect neighborhoods, open spaces and commercial facilities, with a planned connection to the Oyster Bay Neighborhood Center. Trails and sidewalks would generally be 5 ft. wide, paved, with trees and benches located conveniently.

Landscaping

The general approach to landscaping in Westpark is reflected in Figure 2-4. Landscaping will be focused along streets, to enhance the pedestrian environment, along the site's boundaries with arterials, to provide screening, and adjacent to the commercial area, to provide land use transitions. In some areas, such as the retail village and the neighborhood square, hard-scape and green features will be mixed.

A tree survey will be conducted in conjunction with a subsequent subdivision application; detailed information is not available at this time. Existing significant trees would be retained where possible. The majority of retained trees will be located in Westpark's parks and open spaces.

Figure 2-3 Parks & Open Space Plan

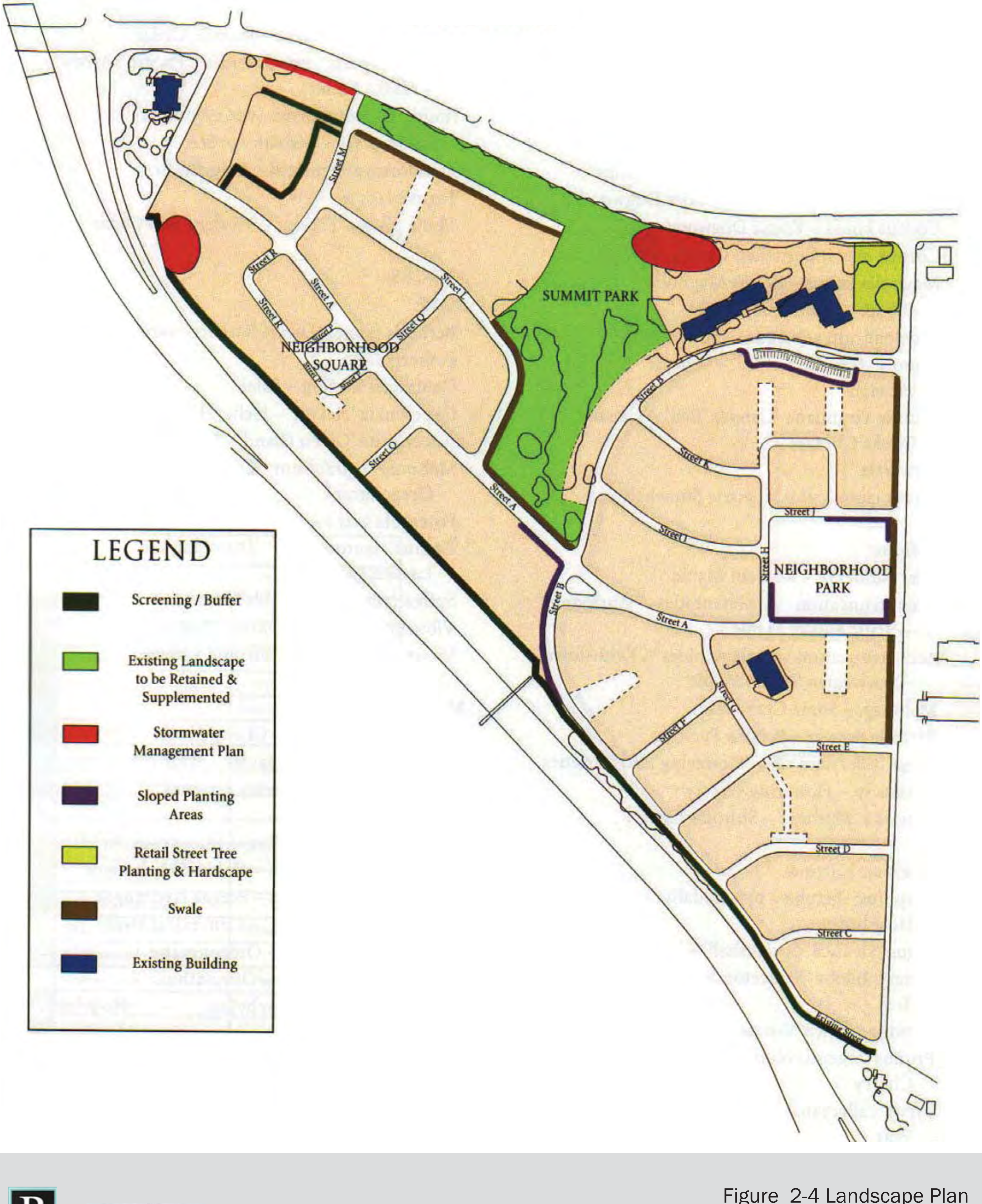


Figure 2-4 Landscape Plan

2.6.4 Village Center

The *Proposed Master Plan* provides approximately 50,000 sq.ft. of commercial service and neighborhood retail space in a 5-acre Village Center, plus an additional potential 10,000 square feet of commercial uses located in mixed-use buildings. Uses would be consistent with the Westpark Sub-Area Plan's development regulations, and would be focused on providing convenient everyday services to residents of Westpark and adjacent neighborhoods. In general, commercial and retail services would be planned and designed to preserve the pedestrian-orientation of Westpark, and to maintain a high quality of design.

An alternative site plan containing a greater amount of commercial/retail uses is considered in the *Design Alternative*.

2.6.5 Community Facilities

As noted previously, the Community Center would be remodeled and would continue to provide a variety of programs for all age groups in Westpark and the surrounding community. Program ideas are still being developed, but will likely include a combination of health and fitness, education and career development, culture and arts, life skills, and social/recreational programs.

2.6.6 Circulation, Access and Parking

Major streets that would provide access to Westpark include Kitsap Way, Oyster Bay Road, and Arsenal Way. An important design focus of the Proposed Master Plan is inclusion of principles of new urbanism, including pedestrian orientation and transit support. It would contain a mix of uses and level of density that locates housing in proximity to neighborhood shopping/services and transit facilities to encourage pedestrian activity and decrease individual auto use. Consistent with these principles, neighborhood streets are organized in a grid pattern, which would promote a more pedestrian-oriented streetscape and improve circulation.

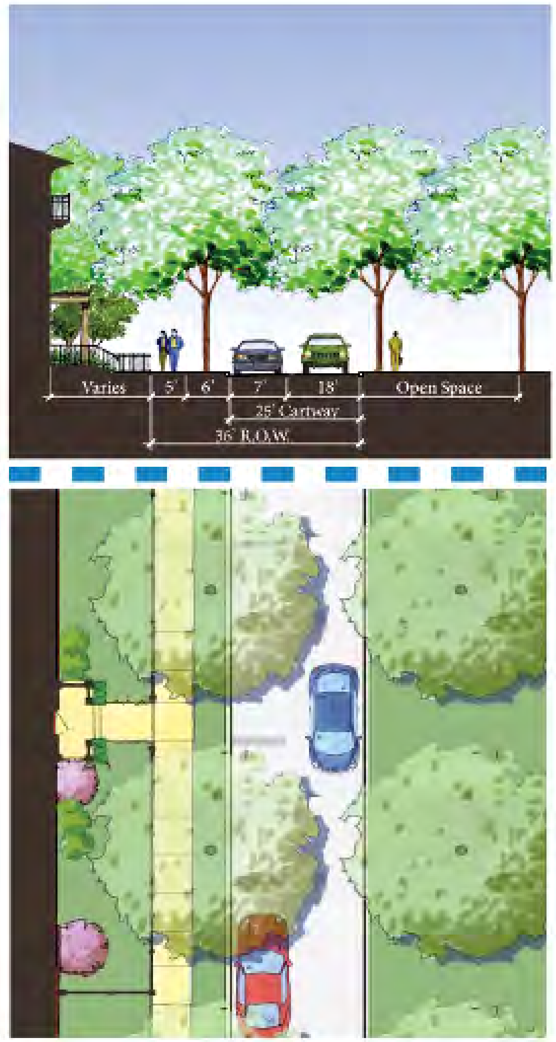
The *Proposed Master Plan* includes approximately 14 acres of streets. All existing streets will be vacated and re-platted. Figures 2-5 and 2-6 depict major street types associated with the *Proposed Master Plan.* (Note that the locations of streets are shown by letter designations on Figure 3.8-3).

> <u>Neighborhood Streets</u>, which are one-lane or two-lane roads (varying among neighborhoods) with on-street parking. Sidewalks of varying width are provided on both sides of the street. These streets are lined with trees and include landscaping between the street and the sidewalk.
>
> <u>Baer Boulevard</u>, which will provide access to the regional transportation system, is designed as a wider, tree-lined street with two traffic lanes, on-street parking and sidewalks on both sides.
>
> <u>Alleys</u>, will provide access to garages for parking and for deliveries and services for Single Family Attached, Single Family Detached, and other unit types as indicated on the Thoroughfare Plan.

STREET A - BAER BOULEVARD

- Curb Return Radius:
  25 feet at street intersections.
- Heights of buildings along Baer Boulevard to vary.
- Curbs shall be vertical (not mountable).
- 2-way, park two sides.

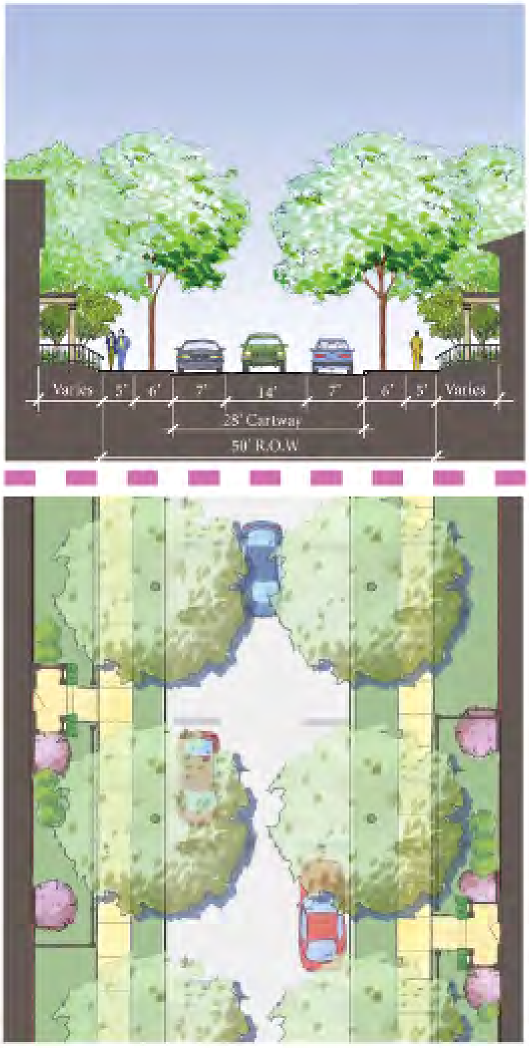
STREET B, N



- Curb Return Radius:
  25 feet at street intersections.
- Curb shall be vertical (not mountable) on building side of street.
- No curb on park side. 18" flat concrete edge or slotted roll curb.
- 2-way, park one side.

Figure 2-5 Street Types

STREET F, K, Q



- Curb Return Radius:
  25 feet at street intersections.
- Queing (2-way), park two sides.

GREEN STREET 1 & 2

- Minimum 20' from building face to building face.
- Pedestrian only.

Figure 2-6 Street Types

"Green streets" are pedestrian paths which are separated from vehicle traffic and provide connections between Westpark neighborhoods, parks and open spaces, retail activities and services. These paths will also connect to the off-site regional trail system.

Depending on the type of street, travel lanes would vary between 11 feet and 18 feet in width, and parking would be provided on one or both sides of most streets. Narrower roads are intended to slow traffic and promote pedestrian circulation. All streets would contain 5-foot wide sidewalks and would be landscaped with trees,

The *Proposed Master Plan* would provide between approximately 1,015 (minimum) and 1,824 off-street parking spaces. An additional 1,100 spaces would be provided on-street. A parking garage could be constructed adjacent to the apartment building (See Figure 2-2).

2.6.7 Stormwater and Utilities

The *Proposed Master Plan* involves replacement of all existing utilities on-site, including water, sanitary sewer, storm drainage, electrical/telephone/cable, and natural gas. The availability of all utility services has been verified by applicable service providers. Electrical and telecommunication cables may be placed underground. Sanitary sewer and water lines would tie into existing systems along Oyster Bay Avenue and Kitsap Way.

A conceptual utility plan is shown in Figure 2-7. Detailed engineering and design for sewer, water and stormwater systems would occur in conjunction future development permit applications. As part of this process, and consistent with the Westpark Sub-Area Plan (Ordinance No. 4998), BHA will also consider incorporating additional low impact development (LID) techniques, such as bioswales, rain gardens, and/or use of pervious surfaces. However, due to soil conditions, topography and other factors, additional LID techniques may be difficult to implement and are not expected to substantially reduce stormwater volumes.

Stormwater Management & Utilities

The *Proposed Master Plan* involves replacement of all existing utilities on-site, including water, sanitary sewer, storm drainage, electrical/telephone/cable, and natural gas. The availability of all utility services has been verified by applicable service providers. Electrical and telecommunication cables may be placed underground. Sanitary sewer and water lines would tie into existing systems along Oyster Bay Avenue and Kitsap Way.

<u>On-Site Stormwater Facilities</u>

An integrated storm drainage plan would provide collection, conveyance and water quality treatment. A conceptual drainage plan is depicted in Figure 2.7 and the system is summarized in Table 2.2 below. The plan is still conceptual in nature; final size, type and location of stormwater management measures will be refined as Westpark progresses through environmental review and design. Basin areas and facility types, sizes and locations could also change as a result of ongoing design. Additional details of the proposed stormwater management system are provided in Appendix A of the Draft EIS.

The system's conceptual design is based on the amount of impervious coverage (e.g., from roofs, parking areas, streets and walkways) and pervious coverage (landscaping, lawns, vegetated medians and undisturbed forested areas) within each basin. The amounts of coverage were estimated based on schematic lot plans. The storm conveyance system would be located within streets and alleys to provide drainage of the streets, alleys, and sidewalks, allow for storm drain connections from adjacent developments, and convey stormwater from upper portions of the basin to stormwater management facilities. The stormwater conveyance system would be designed based on requirements in Chapter 4 of the City of Bremerton Public Works (City) *Design and Construction Standards*, and King County's *Surface Water Design Manual,* as referenced by City standards.

The primary elements of the proposed system are water quality treatment, flow control (e.g. detention facilities), and replacement of the existing outfall in Oyster Bay. Basic water quality treatment best management practices (BMPs) will be used to treat stormwater for pollutants prior to discharging into downstream receiving waterbodies. Basic water quality treatment BMPs include construction of biofiltration swales, open wet ponds, and underground vaults.

Flow control is based on matching 50% of the 2-year through the 50-year design event for forested conditions. Flow control includes an open pond with a flow control structure to control the flow rate that is released to downstream drainage systems. Typically, flow control is applied to basins that discharge to streams. Flow control is proposed for the Ostrich Bay Creek (OBC) basin because its discharge ultimately enters Ostrich Bay Creek.

As shown in Table 2-3, runoff from approximately 2.9 acres of the existing SE basin would be routed to Basin 3 for discharge to Oyster Bay, along with the runoff from most of the rest of the site. With this diversion, the impervious surface area remaining in basin SE and runoff rates after development would closely match existing conditions. This would avoid the need for detention, would avoid impacting the existing WSDOT drainage system along SR 3.

Stormwater Outfall

Replacement of the existing outfall in Oyster Bay, located at the projection of Oyster Bay Avenue north of Kitsap Way, is proposed as a joint City/BHA project. It is intended both to address current limitations in the outfall's capacity and to accommodate the projected increase in stormwater flow rates from Westpark. Replacement would also eliminate the need for on-site flow control for the project-area basins discharging into Oyster Bay. The proposed design is depicted conceptually in Figure 2-8. The existing outfall pipe will likely be removed landward of the Mean Lower Low Water (MLLW) elevation, and abandoned in place below MLLW. A baffled outlet structure would be constructed on the shoreline; the furthermost part of the new structure, including riprap armoring, would be located approximately 12.5 feet waterward of mean high water (MHW) at elevation 8.34 feet. The baffled outlet structure, in combination with riprap placed downslope of it, would reduce stormwater velocities associated with discharge from the site and surrounding area. The structure would be concrete and approximately 13 feet wide, 19 feet long and 11 feet tall. With an inlet pipe discharging across/through a series of baffles. Water would flow out of the structure and onto adjacent/downstream riprap, which would help to reduce downstream erosion potential. The existing storm drain pipe under Kitsap Way is currently being modified.

A drainage alternative that did not require replacement of the existing outfall was also reviewed. This alternative would require construction of additional on-site detention facilities, which would encumber additional land either at grade or below grade, require changes to the types and mix of housing units, and result in substantial additional cost. This alternative would not accomplish the proponent's objectives for redevelopment and was not considered further.

Figure 2-7 Conceptual Utility Plan

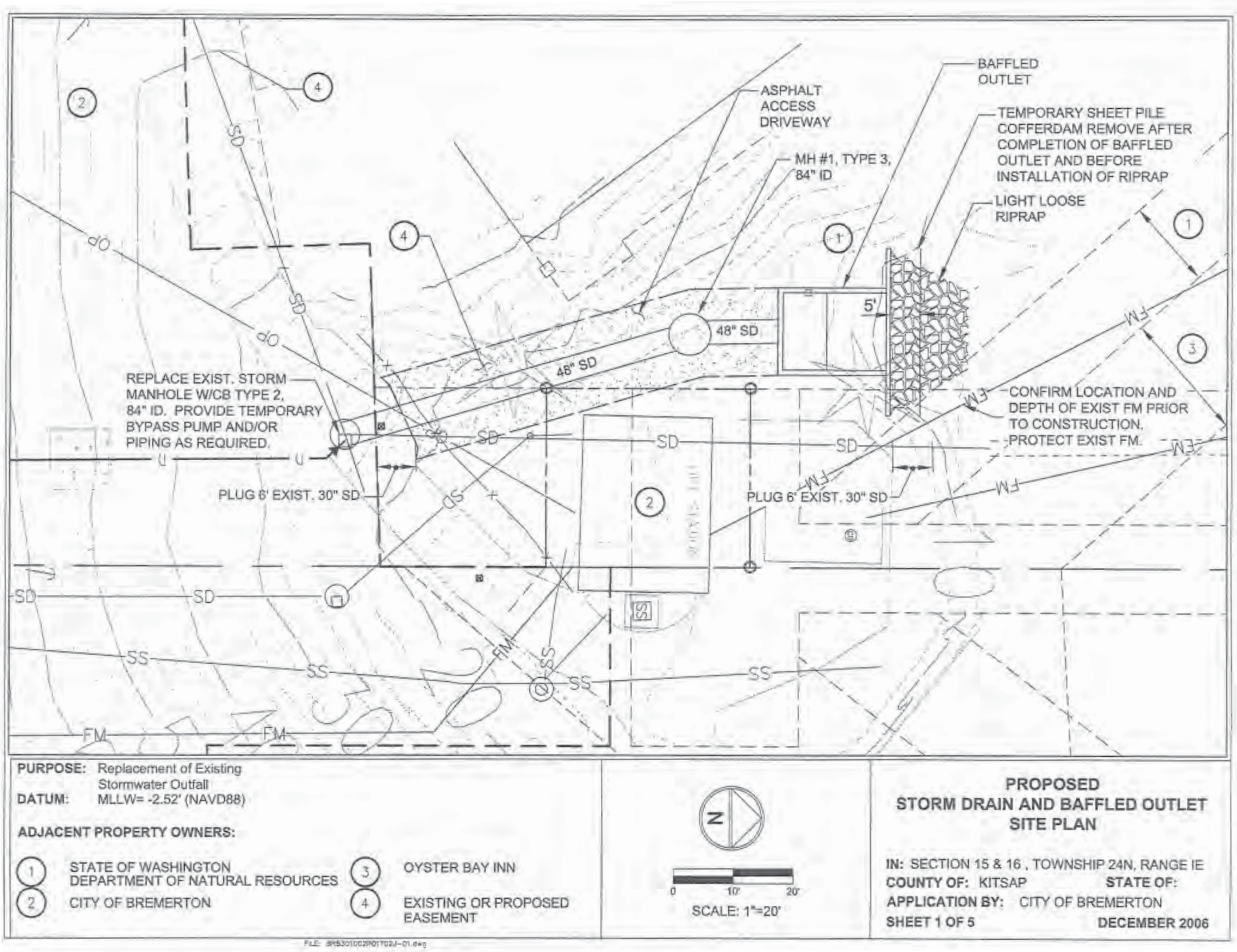


Figure 2-8 Outfall Design Concept

Permits for constructing the outfall replacement will be obtained through the Joint Aquatics Resource Permit Application (JARPA). Replacement of the outfall will be a joint/cooperative project undertaken by the City and BHA to address pre-existing, area-wide stormwater issues, as well those related to redevelopment of Westpark. As noted above, the proposed design is conceptual in nature, and maybe modified as a result of ongoing discussions between BHA, the City and other stakeholders.

A number of conceptual options for providing public access to the shoreline are being considered in conjunction with replacement of the outfall. This Bremerton Shoreline Master Program identifies this general location as desirable for shoreline access. Options identified to date for purposes of discussion include the following:

Construction of a wooden stairway from Kitsap Way to provide access to the waterfront; grading and landscaping of the shoreline area; and installation of seating, picnic tables and interpretive signs.

Construction of a wooden stairway from Kitsap Way to provide access to the waterfront; construction of an over-water pedestrian pier, with a gazebo or shelter and benches at the end of the pier.

Landscaping of the shoreline and creation of enhanced visual access, but no physical access to the shoreline.

Various elements of these concepts could be recombined into a different option. Since access improvements are envisioned as part of a joint City/BHA project, the parties will work together to reach agreement on a preferred approach.

Table 2-3.
Conceptual Stormwater Management System

Basin	Basin Area (acres)	Water Quality Treatment Volume (acre-feet)	Water Quality Treatment Facility and Location	Flow Control
Basin OBC (Ostrich Bay Creek)	4.62	0.88	Wet pond southwesterly of Baer Blvd.	Detention pond included with wet pond; approx. 4.106 acres of live storage
Basin 2	36.98	6.25	Wet pond northwest of Russell Road Wet pond southwest of Baer Blvd.	Replace Oyster Bay outfall
Basin 3	37.31	6.38, including rerouted portion of Basin SE	Biofiltration swale northerly of Baer Blvd. Biofiltration swale southerly of New Street 7 Three underground vaults southerly of Russell Road	Replace Oyster Bay outfall
Basin SE (Southeast project area) - Rerouted to Basin 3	2.93	Included in Basin 3	Included in Basin 3	Replace Oyster Bay outfall
Basin SE - Area remaining for discharge to Sinclair Inlet through existing WSDOT drainage system	3.97	0.72	Vault southwest of Russell Road / Arsenal Road	Not applicable due to maintaining similar runoff flow rates

2.6.8 Clearing, Grading and Impervious Surface Coverage

Approximately 90 percent of the site would be cleared, including demolition of existing buildings. Impervious surfaces would comprise approximately 74 percent of the overall site (61 acres).

The intent of the proposed grading plan is to minimize mass earthwork, retain significant trees and protect steep slopes. Estimated grading quantities are 294,000 cubic yards of cut, and 306,000 cubic yards of fill. Imported fill material would comprise 12,000 cubic yards.

2.6.9 Tenant Relocation, Demolition, and Construction

Tenant relocation, demolition and construction would occur in a phased and coordinated manner, generally as shown in Figure 2-9. Four phases (II-V) are planned, each lasting approximately 9 months and beginning in 2007. Construction would be completed in 2010. [Note that Bay Vista Commons (formerly the Firs II) assisted living facility, an independent project that was previously approved and is currently under construction, is considered as Phase I].

Phase II would begin in the southern corner of the site and includes elements of the major park and open space system, and approximately 106 single family and multi-family units. Phase III, the largest, would consist of approximately 469 units including most of the site's multi-family units. Phases IV and V would consist of 108 and 76 units respectively.

Relocation of existing residents will occur just prior to and in phase with demolition. All residents will receive a Housing Choice Voucher that would allow them to move to areas within or outside Kitsap County. Any resident in good standing wanting to return to Westpark would be offered the opportunity to return. The BHA is currently conducting a survey that will indicate how many existing residents wish to return after redevelopment. If there are more residents wishing to return than available units, a lottery would be held to select future residents.

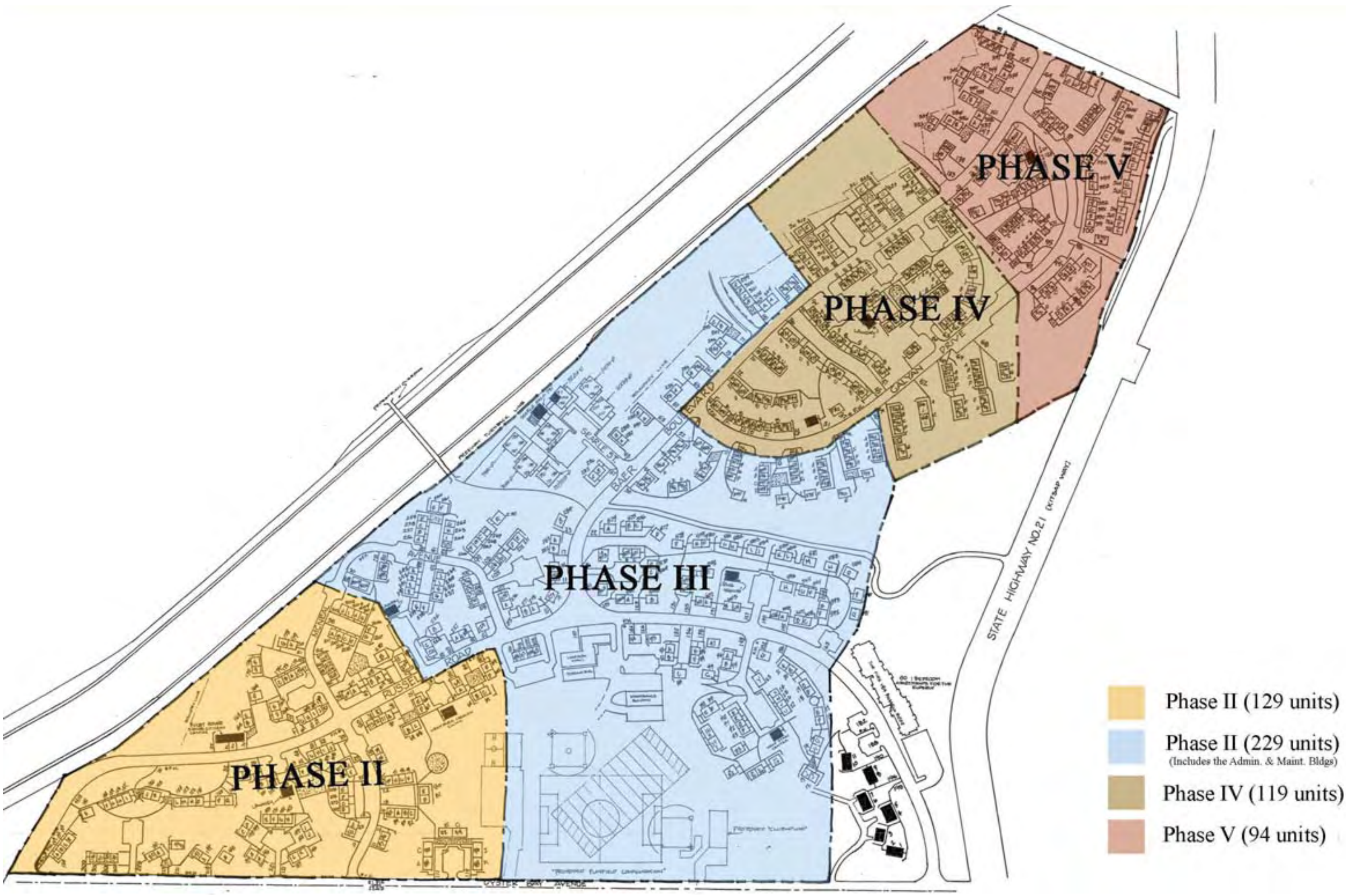


Figure 2-9 Phasing Plan

2.7 ALTERNATIVES

2.7.1 Design Alternative Master Plan

The *Design Alternative Master Plan* is similar in layout to the *Proposed Master Plan* but provides increased area for retail development and the same number of housing units, in a somewhat different mix and density. It also takes a modified approach to stormwater management. A conceptual site plan is shown in Figure 2.10. Major features of the alternative are described below.

Housing

The *Design Alternative Master Plan* would provide 759 housing units, which is the same number of units for the Proposed Master Plan. The same number of replacement public housing would be provided on-site (190); all existing public units would be replaced on-site or off-site.

The overall mix of units and density of housing would be somewhat different. Proposed units are shown by type on Figure 2.10. In general, there would be fewer townhouse units (-4), fewer duplexes (-30) and fewer single family units (-23) compared to the Proposed Master Plan, and more higher density multi-family housing located in the apartment and condominium buildings (+55). The apartment and condominium building would each be increased in height, up to approximately 65 feet, to accommodate additional units and structured parking. This would exceed the applicable height limit in the Westpark Sub-Area Plan and would require a variance or a revision to the plan. These two buildings would contain almost 42 percent of Westpark's total housing units. While gross density of the site would remain the same (approximately 9.25 dwelling units per acre), net density would increase to slightly more than 25 dwelling units per acre (compared to 20.5 dwelling units per acre for the Proposed Master Plan).

Parks and Open Space

The amount and location of parks and open space (28 acres) and trails (57,000 linear feet) would be the same as for the *Proposed Master Plan*. See Figures 2-3 and Table 2-1.

Village Center

The Village Center, located in the northwestern portion of the site, would be expanded to 12 acres and 120,000 square feet; an additional 10,000 square feet of commercial uses are assumed to occur in mixed-use areas of the site. The center would offer a broader variety of commercial goods and services that would be marketed to the broader community rather than focused on the Westpark site. The larger site could also attract larger-footprint retail users. The Westpark Sub-Area Plan establishes size limits for most individual commercial uses and provides criteria for exceeding the applicable maximums.

LEGEND

16' TOWNHOUSE	82
22' TOWNHOUSE	88
24' TOWNHOUSE	60
RENTAL DUPLEX	72
FOR SALE DUPLEX	28
COTTAGE	40
3500 SF LOT	40
4500 SF LOT	34
RENTAL APT.	138
CONDOMINIUM	177
TOTAL	759

EXISTING BHA BUILDINGS

RETAIL

Figure 2-10 Design Alternative Master Plan

Community Facilities

As with the *Proposed Master Plan*, the Community Center would be remodeled and would continue to provide a variety of programs for all age groups in Westpark and the surrounding community. Programs would likely include a combination of health and fitness, education and career development, culture and arts, life skills, and social/recreational programs.

Circulation, Access and Parking

Access to the site and the on-site road system would generally be the same as for the Proposed Master Plan. A few neighborhood streets shown on the Proposed Master Plan in the expanded retail area would be eliminated. All existing streets would be vacated and re-platted to create a grid system.

Due to the increased size and greater parking demand associated with the larger Village Center, the commercial portion of the site would be less compact and less pedestrian-oriented. Compared to the *Proposed Master Plan*, an additional 200-300 parking spaces would be provided in surface parking areas adjacent to the Village Center (400-500 spaces total. Approximately the same number of parking spaces would be provided for residential units, but more would be located within or adjacent to high density residential buildings rather than in surface parking areas.

Stormwater & Utilities

An infiltration system would be constructed to return treated storm water to the ground water system for the additional approximate 7 acres of commercial/retail area included in the *Design Alternative*. The stormwater attributable to the increased commercial area, therefore, would not be routed to the Oyster Bay stormwater outfall. This approach would incrementally reduce runoff and discharge and maintain the same or incrementally improve water quality. Given the conceptual nature of the Design Alternative at this time, these changes have not been quantified. All other features of the stormwater system would be the same as for the *Proposed Master Plan*, including upgrading the stormwater Outfall in Oyster Bay.

Low impact development techniques were also evaluated for the *Design Alternative*, including the potential use of pervious surface material in the parking area of the expanded commercial area. It was determined, however, that spill control BMPs would be difficult to implement with pervious material, which could negate some or all of the benefit of infiltrating storm water.

Clearing, Grading & Impervious Surface

The *Design Alternative* is intended to maintain the same clearing and impervious coverage as the *Proposed Master Plan*. The use of pervious surface material and an infiltration system in a majority of the Village Retail area would help compensate for the larger commercial area.

As for the *Proposed Master Plan*, approximately 90 percent of the site would be cleared, including demolition of existing buildings. Impervious surfaces would comprise approximately 74 percent of the overall site (61 acres).

Quantities of grading, filling and amount of clearing are approximately the same as for the *Proposed Master Plan*.

Phasing

Development would generally occur in the same time period and sequence as for the *Proposed Master Plan*.

2.7.2 No Action Alternative

The *No Action* Alternative would involve no redevelopment of Westpark in the immediate future. The existing public housing units, community facilities and infrastructure would remain. Housing would continue to be maintained to the extent possible; however, deterioration and loss of housing over time would likely occur. BHA could seek other funding sources to redevelop the property.

No additional open space or community facilities would be provided. Existing community facilities and programs would be maintained to the extent possible.

All existing infrastructure (sewer, water, stormwater, roads, etc) would remain and would not be upgraded. In addition, the street configuration and access would not be altered.

The *No Action* Alternative is included in the EIS to meet the requirements of SEPA and NEPA. It would not meet any of the proponent's goals for redevelopment of the site (refer to the discussion in Section 2.5 of this Draft EIS).

2.8 BENEFITS & DISADVANTAGES of DEFERRING IMPLEMENTATION

Deferring implementation of the Proposed Master Plan could result both in benefits and disadvantages. The benefits would likely be personal to existing residents in that disruption of existing on-site housing and existing community-based programs and the anxiety associated with relocation would not occur immediately, but rather at a later, undetermined date.

The disadvantages of delaying implementation could be more far-reaching, both from a resident and program viewpoint. From the resident's perspective, while relocation decisions would be postponed, a greater amount of anxiety may occur for residents due to lack of knowledge of when relocation may occur. Disadvantages would include the following:

- while BHA would continue to maintain the existing housing stock to the extent possible, deferred major repairs could result in the loss of some housing over time (depending upon the length of delay) and relocations associated with such units;

- no additional open space or community facilities would be provided (based on the timeframe associated with the Proposed Master Plan) and BHA would continue to maintain existing facilities, to the extent possible;

- no infrastructure improvements would occur; BHA would continue to maintain existing facilities, to the extent possible;

- the benefits of replacing existing dilapidated residences would not occur.

- the broader interest of the City in redevelopment of Westpark and the economic benefits associated with such redevelopment would not be immediately realized.

3. AFFECTED ENVIRONMENT

3. AFFECTED ENVIRONMENT

This section of the Draft EIS describes the affected environment/existing conditions for all elements of the environment. The descriptions are generally based on a combination of published information, including governmental data and scientific or technical studies, and measurements, data and/or direct observations by the consultants who provided technical analyses for the EIS.

3.1 EARTH

This section describes the existing conditions of general physiography, geology, soils, and geologic hazards of the Westpark Redevelopment study area. Information was obtained from a variety of sources listed in the References section of the Draft EIS.

General Physiography and Topography

The 82-acre Westpark site is located near the center of the Kitsap Peninsula, directy south of Oyster bay, the southern extent of Dyes Inlet. The Kitsap Peninsula lies in a broad lowland between the Olympic Mountains and the Cascade Range, which are situated over 30 to 40 miles to the west and east, respectively. The physiographic and topographic characteristics of the Kitsap Peninsula are similar to the surrounding Puget Sound area commonly known as the Puget Sound Lowland. The terrain of the lowland is dominated by a broad plain composed of deposits from glaciers (drift) that occupied the region over the past 1.6 million years. Glacial and subglacial meltwater channels and modern (post-glacial) streams have cut deep troughs and valleys into the drift plain, many of which have been inundated by marine and fresh water.

The Kitsap Peninsula is long, narrow, and irregular-shaped, indented by many bays or inlets. The peninsula is bordered by waters of the Puget Sound to the north and east; and by Hood Canal on the west and part of the south. The topography, predominately formed by glaciation, consists of rolling ridges separated by long valleys. The ridges and valleys in the site vicinity are oriented north to south, in the direction of the ice movement. Wetlands, ponds, streams and lakes occupy many valleys and are therefore also oriented in this direction. Elevation of the majority of the peninsula ranges from 100 to 400 feet.

Site Conditions

The topography of the Westpark site is highly variable. Overall, the project site topography grades to the north to northeast with a high elevation of approximately 172 feet on the west-central portion of the site to a low elevation of about 60 feet near the northeast corner of the site (Landau, 2006). Steep slopes exist primarily on the central, north and northeast portions of the site. A detailed discussion of site grades is provided in the geotechnical report prepared by Landau (2006).

The project site contains no major water features or delineated wetlands. However, a network of stormwater drainages exist onsite with large drainages on the northern, wooded portion of the site. The closest major water features are Oyster Bay, bordering the northern end of the site, over 200 to 600 feet away; an unnamed stream approximately 1000 feet to the northwest; and Kitsap Lake approximately 1 mile west of the site.

Vegetation in the developed portion of the site consists mainly of lawns and ornamental landscaping around individual structures. Mature conifer and deciduous trees are scattered throughout the development. Within the undeveloped portion of the property (i.e. the central third of the northern portion of the property), vegetation consists primarily of mature conifers (Section 3.4, *Plants & Animals*).

Stormwater Conditions

Stormwater within the site is conveyed by overland flow and through a rudimentary system of open ditches and enclosed drainage pipes. Outside of the project area, stormwater is conveyed away from the site in open ditches and enclosed drainage systems. There are no known sources of off-site stormwater that is routed through the existing Westpark drainage system. The site has been divided into 4 onsite stormwater drainage basins; see Appendix A.

Surface Conditions

Currently, Westpark predominately consists of a series of single-story, wood-framed, single and multi-family housing units. Other structures within the development consist of the Bremerton Housing Authority main office, the Westpark Community Center, and the Firs Apartments. Along the northern property boundary (Kitsap Way), property use is predominately undeveloped except for the western and eastern edge of the property where housing is provided. A ballpark is located along Oyster Bay Avenue about midway between Kitsap Way and Arsenal Way. The ballpark occupies the area of an abandoned landfill that was operated by the City of Bremerton in the 1930's (Landau, 2006).

The streets within the development are Portland cement concrete slabs with integral curves and sidewalks. The Portland cement concrete pavement has been damaged in areas by past utility work. Many of the concrete slabs have cracked. Walking paths and parking lots within Westpark are predominately asphalt paved. The asphalt concrete pavement is generally in poor condition with significant alligator cracking evident in some areas. Electrical and telephone service appear to be overhead. Buried utilities include natural gas, water, storm sewer, and sanitary sewer. These utilities are located beneath or adjacent to the streets within the development (Landau, 2006).

Regional Geology

The project site lies near the center of the Kitsap Peninsula and of the Puget Sound Lowland. The Lowland is part of a large glacial drift plain formed by multiple glaciations. The borders of the Puget Sound Lowland can be defined by the emergence of bedrock from beneath the blanket of thick glacial and interglacial sediments deposited over the last 1.6 million years. The bedrock surface is irregular and forms the higher surfaces of the Cascade and Olympic foothills and the more localized promontories south of the Seattle fault zone, such as the Green and Gold mountains 5 to 6 miles west of the project site.

Bedrock Geology

Tertiary-age bedrock consisting predominately of marine and non-marine volcanic and sedimentary rocks outcrops approximately 1 to 2 miles southwest and 2 miles north to northwest of the project site. The bedrock unit that makes up the Green and Gold mountains to the southwest consists of a thick sequence of basaltic lava flows that have been correlated to the Crescent Formation located on the Olympic Peninsula and have been dated at 50 to 55 million years (Duncan, 1982 in Ecology 1995). To the northwest, rocks of the Blakeley Formation are exposed on the banks of the Port Washington Narrows/Dyes Inlet. The Blakeley Formation consists of a thick sequence of marine and non-marine sandstone, shale and conglomerate that is 20 to 40 million years old (Fulmer, 1954 in Ecology, 1995).

Depth to bedrock increases dramatically from locations of exposed bedrock in the Puget Sound Lowland. The depth to bedrock is about 600 to 900 feet below ground surface beneath the study area (Jones, 1996). The bedrock in the Puget Sound Lowland forms the lateral and vertical boundaries of the unconsolidated deposits. The majority of ground water used for water supply of the Kitsap area is contained in the unconsolidated sediments. The underlying bedrock units are not major sources of ground water for the region.

Pleistocene Geology (10,000 years ago to 1.6 million years ago)

Surficial geologic conditions within the Puget Lowland and the study area are primarily the result of multiple periods of continental glaciation, during which vast ice sheets advanced south from British Columbia and covered much of the Puget Lowland during the last 1.6 million years. During each glacial advance and retreat, rivers emanating from the ice sheet deposited thick sequences of coarse-grained material (glacial outwash) and glacial till (an unsorted mixture of sand, silt, clay, and gravel). The ice sheets disrupted drainage systems and caused rivers to back up and form large lakes. These lake (lacustrine) sediments consist of fine sands and silts.

During the time period between glaciations, the Puget Lowland environment was likely similar to today, with primarily low-energy deposition occurring within floodplains, sedimentation in lakes, wetlands, bogs and streams, weathering of existing soils, and occasional large lahars or other volcanic events.

The most recent glacial episode, the Vashon stade of the Fraser glaciation, is largely responsible for the present topography throughout the Puget Lowland. The resulting Vashon till and outwash deposits mantle much of the Puget Lowland including the project site. Subglacial meltwater streams carved large valleys many of which were inundated to create the present Puget Sound, marine and fresh water bodies. Exposures of older surficial deposits are limited to the river valley bluffs in the study area vicinity. A generalized stratigraphic framework for the surficial sediments has been established for much of the Puget Lowland and is summarized in Table 3.1-1).

Table 3.1-1.
Puget Lowland Stratigraphic Framework [1]

Age[2]	Stratigraphic Unit	Event
Present to 12.5	Recent Deposits	Stream, lake and mudflow deposits
12.5 – 15	Vashon Drift - Recessional outwash - Till - Advance outwash	After glacial ice retreat, inundation of Puget Sound. - Glacial ice retreat - Glacial ice maximum - Glacial ice advance
15 – 60	Olympia Nonglacial	Interglacial deposition
60 – 80	Possession Drift	Glacial deposition
80 – 125	Whidbey Formation (correlative to Kitsap Formation)	Interglacial deposition
125 – 190	Double Bluff Drift	Glacial deposition
190 – 215	Unnamed Interglacial	Interglacial deposition
215 – 280	Unnamed Glacial	Glacial deposition
280 - ~780	Data gap	Data gap
>780	Unnamed Interglacial	Interglacial deposition
800	Salmon Springs Glaciation	Glacial deposition
>1000	Puyallup Interglaciation	Interglacial deposition
~1,600	Stuck Glaciation	Glacial deposition
>1,600	Alderton Interglaciation	Interglacial deposition
>1,600	Orting Glaciation	Glacial deposition

[1] Based on work by Crandell, 1963; Easterbrook et al., 1967; Borden and Troost, 2001; Hagstrum et al., 2001; Troost, 2003; and Troost et al., in prep.
[2] Age is in thousands of years before present.

Holocene Geology (<10,000 years ago)

Following the retreat of the Vashon-age ice sheet, streams incised through Vashon-age sediments and into the older deposits subdividing the drift plain. Post-glacial streams created relatively steep slopes that expose Pre-Vashon aged sediments in the valley walls. Mass-wasting deposits of landslides and colluvium (small incoherent deposits from upper slopes) are common along the bases of these steep slopes. Covering the valley floor of the major streams in the study area vicinity are accumulations of stream deposits (alluvium) consisting predominately of sand and gravel. The smaller streams that originate on the drift plain also deposit thin, narrow alluvium in the channels, mainly composed of sand with some gravel and silt. Peat bogs and wetlands are abundant on the drift plain.

Site Geology

The surficial geology and land surface morphology of the study area is largely the result of the depositional and erosional processes of the most recent, Vashon-age, glaciation. Surficial features were further modified by post-glacial (Holocene) activity and human activity. Two geologic units are exposed at the ground surface: Holocene alluvium and Vashon glacial till. Onsite exploration also encountered significant areas of topsoil, fill and landfill material associated with development of the site. Refer to Figure 3.1-1.

Subsurface geologic conditions at the project site were evaluated by onsite exploration, regional geologic studies and domestic well logs. Examination of domestic well logs and regional studies indicate that sediments beneath Vashon-age deposits in the study area can generally be divided between bedrock and a thick sequence of glacial and interglacial unconsolidated deposits overlying the bedrock. Bedrock is expected to exist beneath the site at approximately 600 to 900 feet depth. Geologic units and artificial fill are further described in the following sections from oldest (deepest) to youngest (shallowest).

A series of test pits (TP-1 through TP-48) and soil borings (B-1 through B-8) were performed to explore surficial sediments. Locations are shown in Appendix B. The test pits were advanced between 4½ and 14 feet below the existing ground surface (bgs) using rubber-tired backhoe between April 4 and 7, 2006. Test pits TP-1 through TP-39 and TP-41 were advanced within the existing housing development. The remaining test pits (TP-42 through TP-48) were advanced around the perimeter of the existing ballpark to characterize the extent and content of the former landfill. The exploratory soil borings were advanced on April 5 and 6, 2006. Borings B-1 through B-7 were advanced along Russell Road and Baer Boulevard. These explorations were advanced between about 6 and 20½ feet bgs using a truck-mounted, hollow-stem auger drill rig. Boring B-8 was advanced to a depth of about 49 feet bgs with the truck-mounted, hollow-stem auger drill rig to further characterize the extent and content of the landfill (Landau, 2006). The exploration logs are presented in Landau (2006).

Bedrock Geology

Thick sequences of basaltic lava flows correlative to the Crescent formation are expected to exist beneath the site from 600 to 900 feet below ground surface (Jones 1996). The Green and Gold mountains are composed of similar basalt that have been dated at 50 to 55 million years (Duncan 1982 in Ecology 1995). For the purposes of this report, bedrock forms a hydrogeologic base of the study area. The hydrogeologic properties of sediments in the project site vicinity as they relate to this study are described in Section 3.3, *Water Resources*.

Pre-Vashon-age Unconsolidated Sediments

Thick sequences of glacial and interglacial unconsolidated sediments exist above the basalt bedrock and below Vashon-age glacial drift. The hydrogeologic properties of sediments that have been explored by area wells are described in Section 3.3, *Water Resources*.

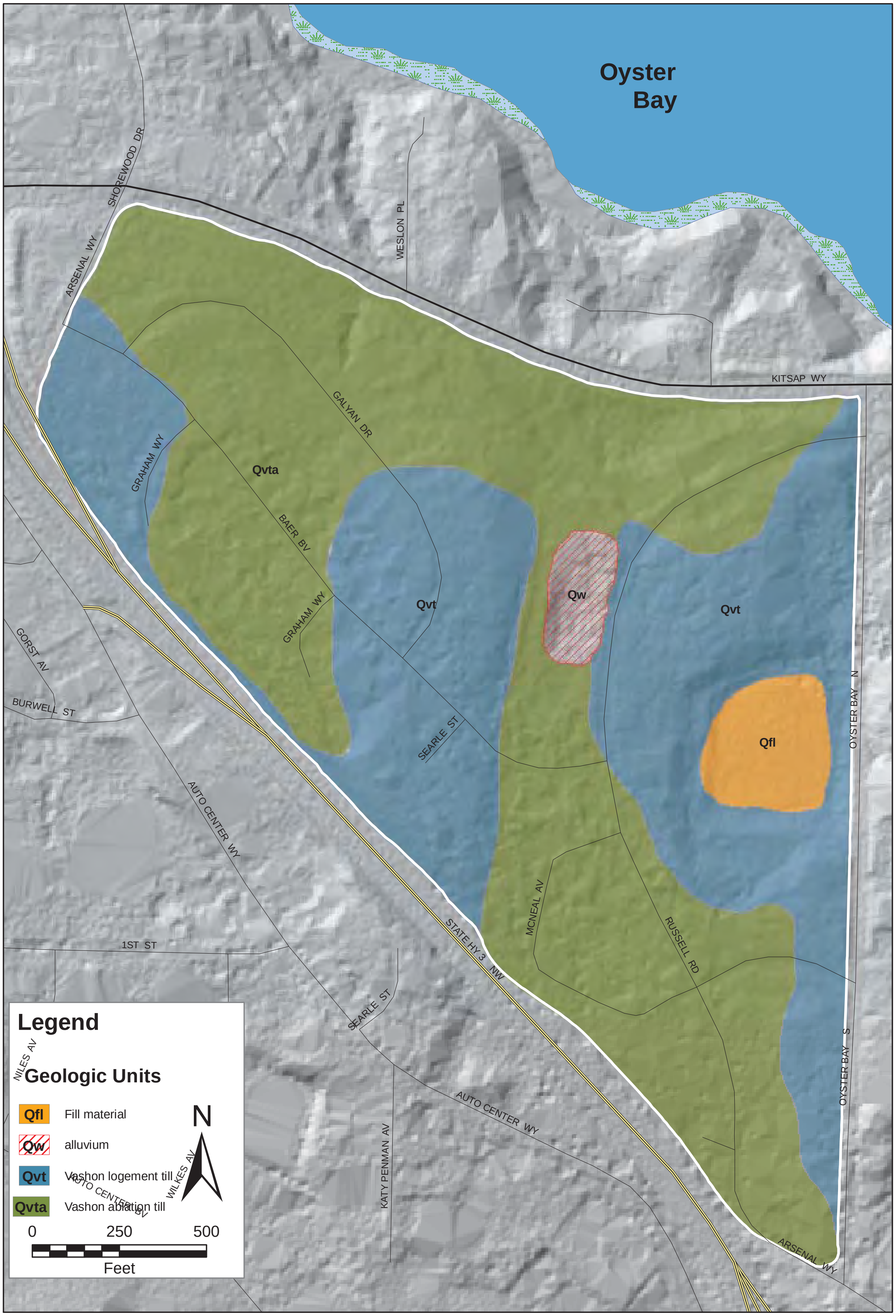


Figure 3.1-1 Geology Map

Vashon Advance Outwash (Qva)

Vashon advance outwash is interpreted to underlie portions of the site and vicinity. It was deposited by glacial meltwater streams that formed in front of, and subsequently overrun by, the advancing Vashon ice sheet, and as a result this material has been glacially consolidated into a dense condition. Advance outwash was encountered beneath glacial till deposits in test pit TP-48 from a depth of 4 feet to the terminal depth of the pit (10 feet bgs). The advance outwash was observed to consist of a dense to very dense, moist, sand with gravel and silt, and is generally considered moderately to highly permeable.

In the project vicinity, water well logs indicate the ground surface is typically mantled with 30 to 40 feet of till, underlain by productive "Colvos Sand" of Vashon advance outwash sequence to a depth of approximately 150 feet below ground surface (Garling, et al., 1965) with an average thickness of approximately 100 feet (Kahle, 1998). Our review of site vicinity water well logs obtained from the Department of Ecology database indicates that till may be as thick as 80 feet, underlain with 30 to 80 feet of sand and gravel likely to represent Vashon advance sediments. In some locations near the site, it appears that the Vashon advance aquifer is very thin or is absent. The site elevations of 60 feet to 176 feet indicate that only a thin sequence of Vashon advance sediments is likely to exist immediately below till underlying the site. All of the well logs reviewed in the vicinity of the site penetrate deeper aquifers from 165 to 300 feet below ground surface, which are likely correlative to the "sea level aquifer" or "deep aquifer" described in Section 3.3, *Water Resources*.

Vashon Glacial Till (Qvt)

Glacial till was encountered in most onsite subsurface explorations; refer to Figure 3.1-1. As stated above, in the project vicinity, water well logs indicate the ground surface is typically mantled with 30 to 40 feet of till. Review of water well logs indicates that till may be as thick as 80 feet in the project vicinity.

Glacial till is expected to underlie locations where fill was encountered onsite, those locations include explorations B-6, TP-3, TP-4, and TP-19. Explorations B-8, TP-28, and TP-42 did not encounter glacial till.

<u>*Lodgement Till*</u>

Vashon lodgement till was deposited at the sole of, and subsequently overrun by, the advancing Vashon ice sheet, and as a result this material has been glacially consolidated into a dense condition. Due to the relatively high silt content and density, Vashon lodgement till generally has low permeability. Glacial till deposits were observed in all of the explorations completed for this study except for borings B-1, B-6, and B-8 and test pits TP-3, TP-4, TP-19, TP-28, and TP-42. Glacial till was observed throughout the depths explored in the remaining explorations, except for TP-48, where advance outwash was encountered below till at 4 feet bgs. Glacial till was observed to consist of gravel with variable silt and sand content, sand with variable silt and gravel content, and sandy to very sandy silt. Glacial till was observed to be dense to very dense/ hard in density.

Ablation Till

Ablation till was deposited from a supraglacial position through the melting of stagnant ice. Ablation till was encountered beneath the topsoil and/or fill in explorations B-1, B-2, TP-1, TP-5, TP-6, TP-9, TP-14, TP-15, TP-20 through TP-22, TP-24, TP-27, and TP-31 through TP-39. Ablation till was observed to consist of medium dense to very dense, silty to very silty, sand with variable gravel content. In general, it was observed to extend to between 1½ and 4½ feet bgs.

Alluvium deposits (Qw)

Alluvium was encountered in boring B-8 immediately below landfill debris and in test pit TP-28 immediately below fill. The explorations did not penetrate through the alluvium (49 feet bgs in boring B-8 and 14 feet bgs in test pit TP-28). In boring B-8, from 28 ½ feet to 35 feet bgs, the alluvium consisted of stiff peat with charcoal. From 35 feet bgs throughout the depth explored, the alluvium was observed to consist of wet, medium dense to dense, sand with silt to silty sand. In test pit TP-28, the alluvium was observed to consist of a sequence of very soft, wet, very sandy silt to silt with trace sand and with abundant organics. The lateral extent of alluvium sediments was not delineated onsite, but is expected to be limited.

Fill (Qf)

Fill was encountered at the ground surface or immediately below the topsoil at many of the exploration locations. Where encountered, fill is of variable composition and density, and typically consists of reworked native soil. Fill was generally encountered above abandoned utility lines. The fill was observed to be very loose to medium dense, soft to stiff.

Landfill Debris (Qfl)

Landfill material was suspected to exist on the western edge of the property under the existing playfields in a former low area on the site. A documented landfill exists on the west side of Oyster Bay offsite; named the VIP landfill. The VIP landfill was explored by Ecology and Environment, Inc. (1987) (E&E) as required by regulatory agencies. Subsurface exploration by E&E documented that landfill debris was placed in a former peat-lined kettle. The landfill material on the project site is underlain by peat and alluvium deposits indicating it is also a kettle; formed by a stagnant ice block during the Vashon glaciation.

Landfill debris was encountered at a depth of about 5½ feet and 4 feet bgs in explorations B-8, and TP-42 respectively. Landfill debris was encountered to a depth of about 28½ feet bgs in boring B-8. Landfill debris was encountered throughout the depth explored (11 feet bgs) in test pit TP-42. In general, the landfill debris consists of glass, metal, rubber, shoes, porcelain, and other household refuse in a matrix of a very silty, fine to coarse sand with gravel and/or sandy, silty gravel. The landfill debris was observed to be very loose to loose in density and wet in moisture. Ongoing investigations at the site will further delineate the landfill material, extent and possible contamination as appropriate closure procedures are initiated.

Topsoil

A surficial layer of topsoil is present over most of the Westpark site. Where encountered, topsoil generally consists of dark brown, silty sand to sandy silt with variable gravel and organic content. The topsoil was observed to be between 3 and 12 inches thick with an average thickness of about 6 inches.

Surface Soils

Physical and chemical weathering of surficial glacial deposits has resulted in the formation of various types of surface soils in the study area. Most of the soils on the project site have similar characteristics and were formed in glacial till. Surface soils data were obtained from the *Soil Survey of Kitsap County Area, Washington,* prepared by the United States Department of Agriculture (USDA), Soil Conservation Service (SCS) (USDA SCS, 1980). Individual soil units have been mapped by the SCS on orthophotoquads of the site vicinity. Figure 3.1-2 presents a surface soils map for the study area based on the SCS mapping.

The five factors typically used to define the type, characteristics, and formation of specific soils are: 1) parent material; 2) climate; 3) topography; 4) organisms (biota); and 5) time. The soils of the study area formed over young glacial or recent stream deposits and have not had sufficient time to develop the deep weathering profiles present in soils in unglaciated terrains. Instead, they exhibit a direct relationship to the underlying parent material, local climate, topography, and vegetation.

The soil characteristics are summarized in Table 3.1-2 and described in the following section.

Table 3.1-2.
Summary of SCS[1] Soils Types

Soil Name and Symbol	Parent Geologic Unit	USDA[2] Textural Classification	Percent Slope	Permeability	Runoff Rate	Erosion Hazard
Alderwood Very Gravelly Sandy Loam (1)	Qvt	Very gravelly sandy loam	0-6	Moderately Rapid	Slow	Slight
Alderwood Very Gravelly Sandy Loam (3)	Qvt	Very gravelly sandy loam	15-30	Moderately Rapid	Medium	Moderate
Harstine Gravelly Sandy Loam (17)	Qvt	Gravelly sandy loam	30-45	Moderate	Rapid	High
Dystrix Xerorthents (10)	Qvt, Qvr or Qva	Very gravelly sandy loam	45-70	Moderate to Rapid	Medium to Very Rapid	High
Urban Land-Alderwood Complex (63) [3]	NA	NA	0-6	NA	NA	NA

1) SCS = Soil Conservation Service.
(2) USDA = United States Department of Agriculture.
(3) **The area identified as unit 63 on the project site is the location of a former landfill.**

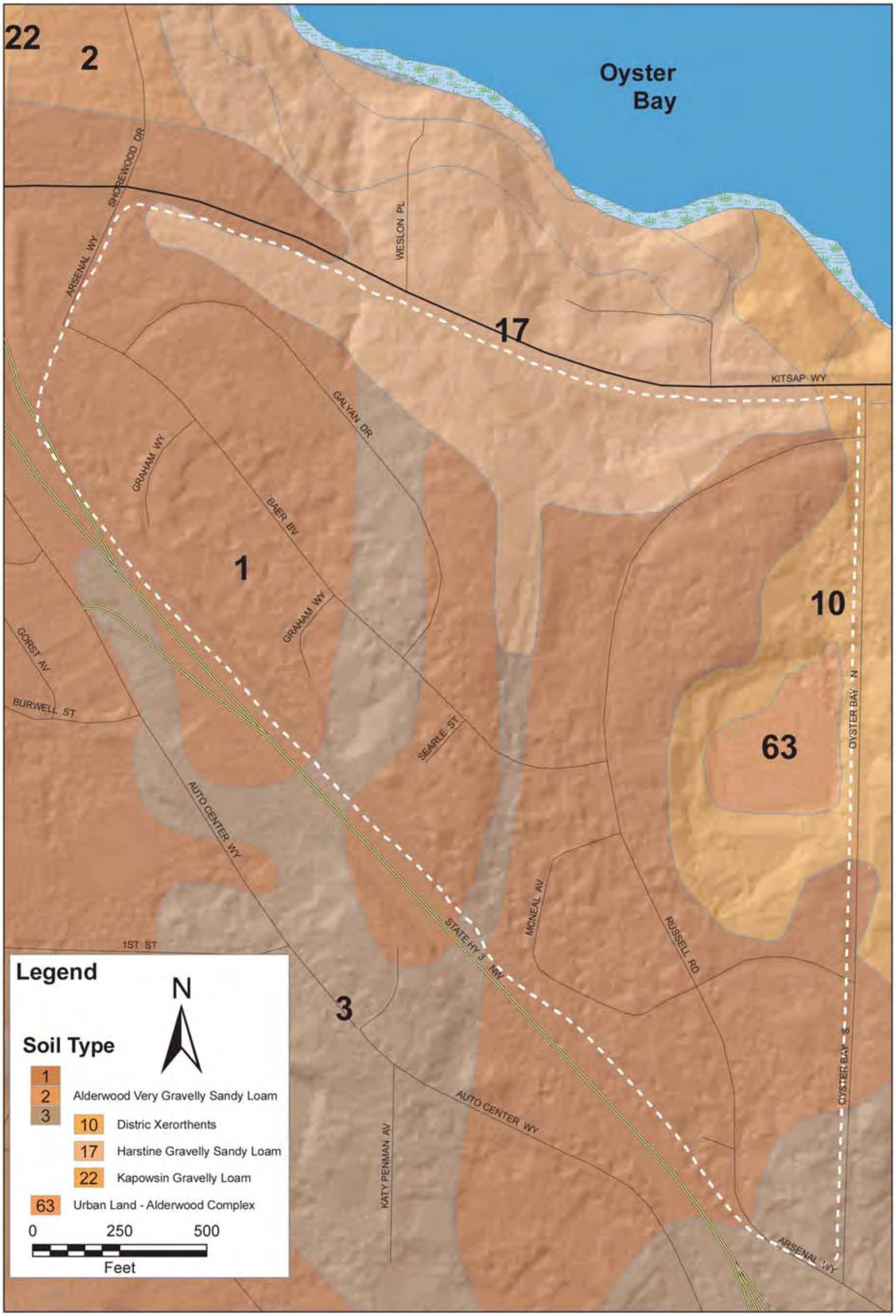


Figure 3.1-2 Soils Map

Alderwood Very Gravelly Sandy Loam (1)

Alderwood very gravelly sandy loam (1) forms on 0 to 6 percent slopes. This moderately deep, moderately well drained soil is on uplands and formed in glacial till. Depth to silica-cemented glacial till ranges from 20 to 40 inches. Permeability of this Alderwood soil is moderately rapid above the till and very slow in the till, runoff is slow, and the hazard of water erosion is slight. A perched water table may exist for short periods during the rainy season at a depth of 2.5 to 3 feet. Alderwood soils are generally not conducive to infiltration of stormwater or to use of on-site septic systems due to shallow perched water and near surface presence of glacial till. This soil map unit makes up most of the project site.

Alderwood Very Gravelly Sandy Loam (3)

Alderwood very gravelly sandy loam (3) forms on 15 to 30 percent slopes. This moderately deep, moderately well drained soil is on broad uplands and formed in glacial till. This soil forms long and narrow areas, oriented north to south. Depth to silica-cemented glacial till ranges from 20 to 40 inches. Permeability of this Alderwood soil is moderately rapid above the till and very slow in the till, runoff is medium, and the hazard of water erosion is moderate. A perched water table may exist for short periods during the rainy season at a depth of 2.5 to 3 feet. Water flows along the top of the till and seeps at the bottom of slopes. Alderwood soils are generally not conducive to infiltration of stormwater or to use of on-site septic systems due to shallow perched water and seepage, near surface presence of glacial till, and steep slopes. This soil map unit is present in thin, north to south oriented strips near the center of the project site and on the southeast corner of the project site.

Harstine Gravelly Sandy Loam (17)

Harstine gravelly sandy loam (17) forms on 30 to 45 percent slopes. This moderately deep, moderately well drained soil is on broad uplands and formed in sandy glacial till. This soil forms long and narrow areas along drainages, oriented north to south. Depth to glacial till ranges from 25 to 40 inches. Permeability of this Harstine soil is moderate above the till and very slow in the till, runoff is rapid, and the hazard of water erosion is high. A perched water table may exist for short periods during the rainy season, however duration is short as water flows laterally above the till and seeps at the bottom of slopes. Slumping of soil material is common. This soil is generally not conducive to infiltration of stormwater or to use of on-site septic systems due to shallow perched water and seepage, steep slopes and near surface presence of glacial till. This soil map unit is present in thin, north to south oriented strip near the center of the site and widens to the north to cover the northern forested property boundary.

Dystric Xerorthents (10)

Dystric xerorthents (10) are very gravelly sandy loam soils that form on 45 to 70 percent slopes. These deep, moderately well drained to somewhat excessively drained soils are on sidewalls of river valleys and entrenched streams. They formed mainly in glacial till but some form in sandy and gravelly outwash. Permeability of dystric xerorthents is moderate to rapid, runoff is medium to very rapid, and erosion hazard is high. These soils commonly form in tree covered slump areas. Dystric xerorthents are present along the eastern project site boundary surrounding the playing fields and former ravine/kettle.

Urban Land - Alderwood Complex (63)

This complex consists of about 70 percent urban land and 20 percent Alderwood very gravelly sandy loam formed on 0 to 6 percent slopes. This complex is mapped on the eastern portion of the project site in the area of the playing fields. This location is documented as a former landfill in Landau (2006). The surficial material consists of fill derived from onsite sources as described in the *Site Geology* section above.

Geologic Hazards

In March 2006, the City of Bremerton updated its Critical Areas Ordinance (CAO, Chapter 20.14 Bremerton Municipal Code (BMC)). BMC 20.14.200 defines critical areas to include "*...any of the following areas or ecosystems: aquifer recharge areas, fish and wildlife habitat conservation areas, frequently flooded areas, geologically hazardous areas, and wetlands, as defined in RCW 36.70A and this Title."* Chapter 20.14.600 declares geologically hazardous areas to include *"…areas susceptible to erosion, sliding, geologic events, landslides, and moderate and steep slope areas."* The CAO also development standards for areas classified as high or moderate geologic hazards.

Areas classified as "High Geologic Hazard" by the CAO meet either of the following two criteria:

> *(1) Areas with slopes greater than forty percent (40%) with vertical relief of ten (10) or more feet; or*
>
> *(2) Areas with slopes greater than thirty percent (30%) with vertical relief of ten (10) or more feet, and any of the following characteristics:*
>
> *(i) Unstable Soil or Shoreline classified as "Unstable" (U), "Unstable Old Slides" (UOS), "Unstable Recent Slides" (URS), or "Intermediate" (I) by the US Department of Agriculture Soil Conservation Service, US Geologic Survey, the Washington Department of Ecology Coastal Zone Atlas, or qualified geologist or geotechnical engineer;*
>
> *(ii) Groundwater Seepage or springs present on the slope, areas underlain by impermeable silts or clays, or mappable emergent water;*
>
> *(iii) Erosion Hazard as indicated by potential for stream or wave incision or as classified as 'highly erodible' or 'potentially erodible' by the Natural Resources Conservation Service.*
>
> *(iv) Seismic Areas subject to liquefaction from earthquakes such as hydric soils as identified by the Natural Resources Conservation Service, and areas that have been filled to make a site more suitable.*

Areas classified as "Moderate Geology Hazard" by the CAO are "…*any areas with slopes of thirty percent (30%) or greater and vertical relief of ten (10) or more feet, and any areas with slopes of fifteen percent (15%) to thirty percent (30%) with vertical relief of ten (10) or more feet and any of the characteristics per BMC 20.14.620(2)(i)(i) – (iii) above. Seismic hazard areas subject to liquefaction from earthquakes, areas with hydric soils, and areas of loose fill shall be classified as Moderate Geologic Hazard Areas regardless of percent slope."*

The existing conditions of geologic hazards in the study area -- including erosion, slope, landslide and seismic hazards – are shown on Figure 3.1-3 and described below.

Erosion Hazard Areas

According to the City of Bremerton CAO (BMC 20.14.600), an erosion hazard area may be indicated by the Natural Resource Conservation Service (formerly Soil Conservation Service) for soil types that have been classified as highly erodible or potentially erodible. When erodible soils are located on significant slopes they may be classified as geologically hazardous areas.

Two soil types delineated at the project site (Harstine Gravelly Sandy Loam (17) and Dystrix Xerorthents (10)) have a high erosion hazard according to the SCS survey (USDA SCS, 1980) and portions of each soil type are located on slopes greater than 30 percent. Harstine soils are on slopes of greater than 30 percent on the center and northern portions of the property. The Dystrix soils are on slopes of greater than 30 percent on the eastern portion of the site surrounding the landfill. Remaining areas with slopes of 40 percent or greater contain Alderwood soils. The potential erosion hazard of these areas is high and they are considered High Geologic Hazard areas according to BMC.

Slopes with gradients of 30 to 40 percent exist in small swaths across the project site and are covered by Alderwood soils. This soil types on slopes of this gradient are considered a moderate erosion hazard by the SCS and for the purposes of this report, these areas have been designated potential erosion hazards of moderate. The remaining site areas are covered predominately with Alderwood soils and ground surface gradients are low. Alderwood soils on low slopes are considered a slight erosion hazard by the SCS and therefore are designated as low potential erosion hazard areas.

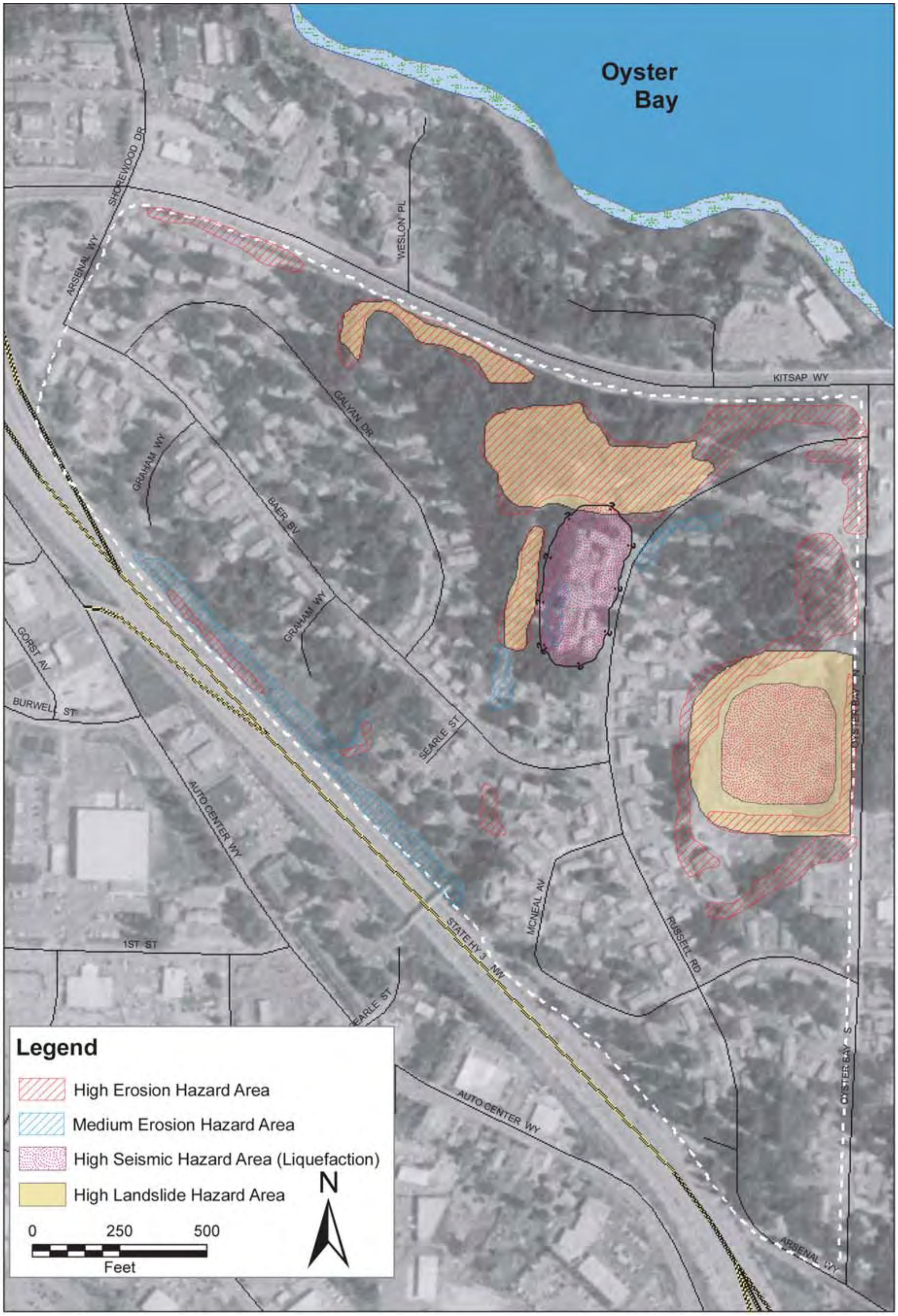


Figure 3.1-3 Geologic Hazards

Landslide Hazard Areas

Areas that are prone to landsliding in the Puget Sound Lowland typically have a combination of following factors: steep slopes, spring or ground water seepage zones, and impermeable sediments (i.e. silt and clay) interbedded with more permeable sediments (i.e. sand and gravel). Landslide hazard areas are designated within the broader category of geologic hazard areas in the Bremerton CAO, which relies on a combination of similar factors and includes areas previously designated as potentially unstable or former landslide masses.

The majority of the site is underlain by low-permeability, medium dense to dense glacial till, likely underlain by glacial outwash sand and gravel. Small areas of the site contain loose to dense alluvium (see *Project Geology Section*). Shallow ground water may perch on top of the low-permeability glacial till which may influence slope stability.

The Westpark site contains moderate to steep slopes. Slopes of 40 percent and greater exist on the eastern portion of the site and surrounding the existing playing fields. These slopes are covered by soils identified as Dystrix Xerorthents (10). According to the SCS (1980), these soils typically form on the sidewalls of valleys and commonly on former slump material. A former topographic low area existed where the playing fields now exist, at the base of steep slopes which has been filled in with landfill debris. The landfill debris is described as loose to very loose and wet (Landau, 2006). Due to the steep slopes, the soil type, and landfill material conditions, slopes greater than 40 percent near and surrounding the landfill and the landfill material are designated a high potential landslide hazard area.

On the northern to north-central portion of the project site, slopes of 30 to over 40 percent exist and are covered with Harstine soils. According to SCS (1980), seepage at the base of slopes and soil slumping are common in this soil type when on slopes greater than 30 percent. In addition, perched water accumulates on top of underlying glacial till and flows laterally along the till on slopes. Stormwater drainage was observed at two locations on these slopes (AESI, 2006b). Due to the presence of water, steep slopes and soil type, this area is designated a high potential landslide hazard area.

Washington State Department of Ecology (Ecology) has created shoreline stability maps of much of the state including the Kitsap Peninsula (Ecology, 1979). The area surveyed for their map included most of the project site. They designate the entire site from Kitsap Way south as "stable". To the north of Kitsap Way is designated "intermediate".

The remaining portions of the site are considered a potential low landslide hazard primarily due to lower slope gradients and soil type.

Seismic Hazards

Four types of potential geologic hazards are usually associated with large seismic events: ground rupture along a surficial fault zone; ground motion response; liquefaction; and seismically induced landslides. Seismic hazard areas designated in the Bremerton CAO (Chapter 20.14.600) are related primarily to liquefaction hazards. An analysis of the existing seismic hazard potential on the study area site was conducted to identify seismic hazard areas as they relate to the four seismic hazards identified previously.

Stresses that cause earthquakes in western Washington are due, in part, to the interaction of tectonic plates that meet under the Pacific Ocean near the west coast of Washington State.

The Juan de Fuca oceanic plate, which forms the floor of the northeastern Pacific Ocean, moves northeastward with respect to the North American continental plate at an average rate of about 3 to 4 centimeters (cm) per year. Differences in density of the two plates cause the Juan de Fuca plate to sink or subduct beneath the North American plate. The interaction of the plates forms the Cascade Range volcanoes and potentially large regional earthquakes.

Three types of earthquakes occur in the Pacific Northwest that affect Washington State: 1) deep intraplate earthquakes; 2) deep interplate earthquakes; and 3) shallow crustal earthquakes.

- <u>Deep Intraplate Earthquakes:</u> The Juan de Fuca plate must bend as it subducts beneath the North American plate, which causes deep earthquakes within the Juan de Fuca plate (intraplate). At least three such events have been recorded in western Washington: the recent Nisqually earthquake (2001, M 6.8), the 1965 earthquake (M 6.5), and the 1949 earthquake (M 7.1). These three events are located approximately 20 to 30 miles southeast of the site.
- <u>Deep Interplate Earthquakes:</u> Deep interplate (or subduction zone) ruptures occur between the Juan de Fuca plate and the North American plate. A subduction earthquake such as this occurred in the year 1700 with a magnitude greater than 8. Evidence of the earthquake has been derived from land subsidence, tree-ring dating, submarine sediment deposits and tsunami sediment deposits (Adams, 1996; Atwater, 1987, 1996; Atwater et al., 1991; and Yamaguchi, 1997). A documented tsunami occurred in Japan on January 26, 1700 and has been attributed to this earthquake. A recurrence interval of 500 to 600 years is estimated for this type of earthquake (Satake et al., 1996; Atwater and Hemphill-Haley, 1997).
- <u>Shallow Crustal Earthquakes:</u> Shallow, crustal earthquakes occur within the North American plate due to tectonic stress regimes. Although no evidence of surface faults or associated ground rupture was observed at the Project site, there are several active crustal faults in western Washington that may pose significant, though infrequent, seismic hazards in the vicinity of the Westpark site. Major regional crustal faults near the site include the Seattle Fault and the Tacoma Fault.

<u>*Surficial Fault Zones*</u>

Ground rupture occurs as offsets of the ground surface and is limited to the immediate areas of the fault. No evidence of surface faults or associated ground ruptures are documented on the site. The USGS identified several major faults in the Puget Sound region (USGS 2003). Several recent publications describe and further define select major faults in the region as discussed below. Regional crustal faults that are mapped in the vicinity of the site include the Seattle Fault and the Tacoma Fault.

Recent studies by the USGS identify a structure referred to as the Tacoma Fault Zone and further refines the geometry of the previously proposed Seattle Fault Zone (Johnson et al., 1994; Johnson et al., 1999; Brocher et al., 2001; and Blakely et al., 2002). The Westpark site is located within to immediately south of the described Seattle Fault Zone and 12 to 15 miles north of the Tacoma Fault Zone.

The Seattle Fault Zone is defined by seismic velocity modeling, seismic reflection data, aeromagnetic data, gravity data, and outcrop patterns (Gower et al., 1978; Johnson et al., 1994; Johnson et al., 1999; Brocher et al., 2001; and Blakely et al., 2002). The Seattle Fault Zone is composed of three or more east-trending, south-dipping, reverse faults within a zone approximately 4- to 6-km wide. Blakely et al. (2002) trace the fault zone from just west of Dyes

Inlet to 10 km east of Lake Sammamish; the Westpark site is located within to immediately south of this zone.

A large earthquake event (M>7) occurred on the Seattle Fault approximately 1,100 years ago (A.D. 900) and produced 5 to 7 meters of documented uplift at Restoration Point and in the Duwamish River Valley (Johnson et al., 1999). This displacement can presently be seen in the form of raised, wave-cut beach terraces along Alki Point in West Seattle and along Restoration Point at the south end of Bainbridge Island. The earthquake was accompanied by a tsunami in Puget Sound (Atwater and Moore, 1992), landslides in Lake Washington (Jacoby et al., 1992; Karlin and Abella, 1992, 1996), and rock avalanches in the Olympic Mountains (Schuster et al., 1992). Since 1970 the largest two earthquakes associated with the Seattle Fault are an M 5.0 event beneath Point Robinson and an M 4.9 event beneath southwestern Bainbridge Island. Movement along the Seattle fault accounts for several of the bedrock highs in the site vicinity including the Green and Gold Mountains west of the site. Slip rates across the Seattle Fault Zone are estimated at 0.7 to 1.1 millimeters per year (mm/yr) (Johnson et al., 1999). The recurrence interval of movement along this fault zone is still unknown, although it is hypothesized to be in excess of several thousand years.

The Tacoma Fault Zone is identified as an arcuate structure that stretches from just north of Tacoma to the southwest side of the Kitsap Peninsula, trending generally east to southeast. Holocene earthquake activity of the Tacoma Fault Zone is suggested by seismicity along the fault zone and by paleoseismic evidence for abrupt uplift of tidal marsh deposits to the north (Brocher et al., 2001). Evidence derived from surface fault scarps, trenching of fault zones, and dating of fault zones and uplifted tidal flats indicates that the Tacoma Fault is a reverse fault that has ruptured in the time range of A.D. 770-1160. This rupture event may have occurred at or near the same time as a rupture of the Seattle Fault in A.D. 900 as discussed above (Sherrod et al., 2004).

The mechanism of the Seattle and Tacoma Fault Zones is not clearly understood, however recent research indicates that it is a complex system of associated reverse or thrust faults. Recent geophysical evidence indicates that the area between the Seattle and Tacoma Fault Zones, known as the Seattle Uplift, is a “passive roof duplex”. A passive roof duplex is generated by a complex system of faults in a fold-and-thrust belt. The Seattle Fault is a south-dipping reverse fault that forms the leading edge of the uplift and the Tacoma Fault is a north-dipping reverse fault that forms the trailing edge of the uplift. The model indicates that the faults form a triangle-wedge structure, the Seattle Uplift, that is forced upward during fault ruptures. The model further indicates that a master fault joins both faults at depth, suggesting the faults are part of a large system that is accommodating north to south directed compression of Washington state. As indicated above, the Seattle and Tacoma Faults may have ruptured at the same time in the past (Brocher et al., 2004).

Ground Motion

Ground motion from an earthquake results from shear, pressure, and surface waves propagating through the earth’s crust from the earthquake’s hypocenter. The ground motion caused by these waves is the seismic shaking felt during an earthquake. The intensity of the shaking felt at a given location during and immediately after an earthquake is a result of several variables including: (1) magnitude of the earthquake; (2) distance from the earthquake; (3) depth of the earthquake; (4) type of rocks and unconsolidated sediments underlying a given site; and (5) attenuation of the seismic energy between the earthquake and a given site. As discussed above, there are several sources of large earthquakes in western Washington and at the site location, including the Seattle Fault Zone.

The USGS has created seismic hazard maps to predict the expected ground motion from earthquakes in the Pacific Northwest. These hazard maps take into consideration shaking from a potential earthquake on the Seattle Fault Zone as well as subduction zone earthquakes. The predicted ground motion results from the hazards maps are used to determine design guidelines presented in the 2003 International Building Code (IBC). Based on the hazard maps, the 0.2 second spectral response acceleration (Ss) for the site is 142 %g (percent of acceleration of gravity) and the 1.0 second spectral response acceleration (S1) is 49 %g. Design guidelines are presented in the 2003 IBC for minimizing earthquake damage to structures based on anticipated ground motions for a specific region.

Liquefaction

Liquefaction is the process in which soil loses strength or stiffness during vibratory shaking, such as that caused by earthquakes, and temporarily behaves as a liquid. Shaking during an earthquake can cause an increase in pore water pressure in the soil, and decrease the soil shear strength. Soils are considered to liquefy when nearly all of the weight of the soil is supported by the pore water pressure and becomes relatively unstable. The seismically induced loss of soil strength can result in failure of the ground surface and can be expressed as landslides or lateral spreads, surface cracks and settlement, and/or sand boils. Seismically induced liquefaction typically occurs in loose, saturated, non-cohesive sandy and silty soils commonly associated with recent river, lake, and beach sedimentation. In addition, seismically induced liquefaction can be associated with areas of loose, saturated fill.

The majority of the site is covered with medium dense to dense glacial till sediments. Due to the relative density and grain size distribution of these sediments, the liquefaction hazard is low in areas covering by such sediments.

Three sediment types on the site -- m alluvium, placed fill, and landfill debris -- pose a moderate to high potential to liquefy during seismic shaking:. The alluvium identified in exploration TP-28 is described as very soft, wet, sandy silt to silty sand to a depth of over 14 feet. The vertical and lateral extent of this material was not determined during exploration. This material has a high potential of liquefaction during seismic shaking. The landfill debris was described as very loose to loose and wet. The landfill debris has a high potential of liquefaction and settlement during seismic shaking. Underlying the landfill material, alluvium consisting of stiff peat and wet, medium dense to dense sands was encountered. Due to the degree of moisture and the grain size distribution of the sand, these sediments are considered liquefiable. Peat is not susceptible to liquefaction but may undergo permanent displacement or loss of strength as a result of earthquake shaking (Palmer et al., 2004). The medium dense to dense condition of the underlying sand limits its susceptibility to liquefaction, therefore we consider this deposit to have a moderate potential to liquefy. Finally, areas with a substantial thickness or lateral extent of place fill, in a loose condition, are considered liquefiable. Ongoing investigations will delineate the lateral extent of loose, placed fill.

Seismically Induced Landsliding

Earthquake vibration may trigger landslides of soil or rock by the mechanical effect of intense horizontal shaking that may exceed the force of gravity; repeated compressional stresses caused by shaking in clays, sands, and silts with weak interparticle bonding; and reduction of intergranular bonding by sudden shock.

The primary conditions that influence seismically induced landsliding in unconsolidated sediments are steep slope gradients, weakly consolidated or low density material, and shallow ground water. Areas that are susceptible to seismically induced landsliding on the project site would correspond to liquefiable sediments on steeper gradients and the landslide hazard areas discussed above.

3.2 AIR QUALITY

Air quality is generally assessed in terms of whether concentrations of air pollutants are higher or lower than ambient air quality standards set to protect human health and welfare. Three agencies have jurisdiction over the ambient air quality in the proposed project area: the United States Environmental Protection Agency (EPA), Washington State Department of Ecology (Ecology), and the Puget Sound Clean Air Agency (PSCAA). These agencies establish regulations that govern both the concentrations of pollutants in the outdoor air and contaminant emissions from air pollution sources. Applicable local, state, and federal ambient air quality standards are displayed in Table 3.2-1.

To measure existing air quality, Ecology and PSCAA maintain a network of monitoring stations throughout the Puget Sound region. Generally these stations are placed where air quality problems may occur, and so they are usually in or near urban areas or close to specific large air pollution sources. Other stations in remote areas indicate regional air pollution levels. Based on monitoring information collected over a period of years, the state (Ecology) and federal (EPA) agencies designate regions as being "attainment" or "nonattainment" areas for particular air pollutants. Attainment status is therefore a measure of whether air quality in an area complies with the National Ambient Air Quality Standard (NAAQS). The project area is attainment for all pollutants under the NAAQS.

Typical air pollution sources in the project area include vehicular traffic, maritime activities and vessels, industrial, commercial and retail businesses, and residential wood-burning devices. Industrial sources include the U.S. Naval Shipyard to the south in Bremerton, and farther to the north, the U.S. Naval Submarine Base (Bangor, Washington). Residential wood burning produces a variety of air contaminants, including large quantities of fine particulate matter (PM_{10} and $PM_{2.5}$). With vehicular traffic, the air pollutant of major concern is carbon monoxide (CO). Of the various vehicular emissions for which there are ambient air quality standards, CO is the pollutant emitted in the largest quantities.

Other pollutants generated by traffic include the ozone precursors: hydrocarbons and nitrogen oxides. Fine particulate matter (PM_{10} and $PM_{2.5}$) is also emitted in vehicle exhaust and generated by tire action on pavement (or unpaved areas) although these levels are small compared with other sources (e.g., a wood-burning stove). Sulfur oxides and nitrogen dioxide are also both emitted by motor vehicles, but ambient concentrations of these pollutants are usually not high, except near large industrial facilities.

Table 3.2-1.
Ambient Air Quality Standards

Pollutant	National (EPA)		Washington	Local
	Primary	Secondary	Ecology	PSCAA
Inhalable Coarse Particulate Matter (PM10) Annual Average (µg/m^3) 24-Hour Average (µg/m^3)	 150 [a, b]		 50 150 [a]	 54 [c] 154 [d]
Fine Particulate Matter (PM2.5) Annual Average (µg/m^3) 24-Hour Average (µg/m^3)	 15 [e] 35 [f]	 15 [e]		 15 [c] 35 [g]
Carbon Monoxide (CO) 8-Hour Average (ppm) [a] 1-Hour Average (ppm) [a]	 9 35		 9 35	 9.4 35
Ozone (O_3) 8-Hour Average (ppm)[h] 1-Hour Average (ppm)	 0.08 [i]	 0.08 [i]	 0.12	 0.08 [i]

NOTES: µg/m^3 = micrograms per cubic meter; **ppm** = parts per million; **blank cells** indicate no standard

All values not to be exceeded except as noted; all averages arithmetic except TSP annual geometric mean.

(a) Not to be exceeded more than once per year

(b) Particles <10 micrometers in size; Federal annual PM10 standard revoked as of Sept. 21, 2006

(c) The 3-year annual average of the daily concentrations must not exceed level

(d) The 3-year average of the 99th percentile (based on the number of samples taken) of the daily concentrations must not exceed level

(e) Attainment based on the 3-year average of the weighted annual mean PM2.5 concentrations from single or multiple community-oriented monitors not exceeding level

(f) Attainment based on the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area not exceeding level

(g) The federal 24-hour standard for PM2.5 was revised as of Sept. 21, 2006. The current PSCAA standard of 65 ppm is based on the previous federal standard but has been superseded by the new federal limits. Although PSCAA has not yet adopted the new federal standard, it must do so soon. So as to avoid confusion, only the prevailing federal standard is reported to represent the maximum level that PSCAA can adopt.

(h) Attainment based on 3-year average of the 4th highest daily maximum 8-hour ozone concentration at each monitoring location

(j) Federal 1-hour ozone standard was revoked in all areas except 14 remaining nonattainment areas. The federal and the PSCAA 1-hour standard lapsed on June 15, 2005.

Source: Geomatrix Consultants, Inc. based on most recent local, state, and federal rules.

Local Climate and Terrain

Weather is one of several variables that influence air quality. In the Puget Sound lowlands, which includes the Bremerton area, variations in temperature and rainfall are common and are due to factors such as distance from the water and from the Strait of Juan de Fuca, and the influence of rolling terrain. In general, there is sufficient wind most of the year to facilitate air pollutant dispersion. However, in the late fall and winter, nighttime thermal inversions due to the low solar heating of the land create stable atmospheric conditions. It is during these very stable atmospheric conditions when little vertical dispersion occurs that monitoring instruments measure high concentrations of air pollutants emitted at ground level. Such ground-level emitted pollutants include carbon monoxide (CO) from motor vehicles and particulate matter from vehicles and wood stoves.

In the Puget Sound region, summers are cool and comparatively dry and winters are mild, wet, and cloudy. The winter months typically are dominated by stronger south winds and frequent precipitation. Annual average precipitation in the Bremerton area is around 52 inches, with about 8 inches of annual average snowfall. Annual mean temperature in Bremerton is 52°F. The annual mean wind speed is less than 10 mph, with a predominately southerly wind direction (i.e., from the south-southwest).

In some instances terrain can also influence air quality. While the greater Puget Sound Area is located between mountainous terrain, the study area is characterized by nearly flat terrain with nearby hills.

Existing Ambient Air Quality

Carbon Monoxide

Carbon monoxide (CO), the product of incomplete combustion, is generated by transportation sources and other fuel-burning activities like residential space heating, especially when solid fuels like coal or wood are used. CO is usually the pollutant of greatest concern related to transportation sources because it is the pollutant emitted in the greatest quantity for which there are short-term health standards. Short-term standards (as opposed to annual-average standards) are often the controlling or most restrictive NAAQSs. There are two air quality standards for CO: a 1-hour average standard of 35 ppm and an 8-hour average standard of 9 ppm. These levels may be exceeded once per year without violating the standard.

Carbon monoxide is a pollutant whose impact is usually localized. The highest ambient CO concentrations usually occur near congested roadways and intersections during periods of cold temperatures (autumn and winter months), light winds, and stable atmospheric conditions. Such weather conditions reduce the mechanisms that disperse pollutants emitted into the air.

The project study area is located in a CO attainment area. Although there are no CO monitoring stations in the Bremerton area, other stations in the Puget Sound region have not measured a violation of the 1-hour or 8-hour CO standard in recent years (EPA, 2006a). Because CO impacts occur so close to the source, it is not possible to extrapolate CO concentrations from regional data or distant monitors to the project area. However, measurements at these monitors indicate that the air quality in the general area is acceptable and measured CO levels at all monitoring locations have shown a decreasing trend in CO concentrations since the early

1990's. Existing and future CO levels near the most project-affected off-site intersections are discussed in the impacts section of this chapter.

Ozone

Ozone is a highly reactive form of oxygen created by sunlight-activated chemical transformations of nitrogen oxides and volatile organic compounds (hydrocarbons) in the atmosphere. Unlike CO concentrations that tend to occur very close to the emission source(s), ozone problems tend to be regional. The atmospheric chemical reactions that produce ozone occur over time and during the lag time between emission and ozone formation, ozone precursors can be transported far from their sources. Transportation sources are one of a number of sources that produce the precursors to ozone. The project study area is within an ozone attainment area for the 8-hour standard (PSCAA, 2006).

Particulate Matter – PM_{10} and $PM_{2.5}$

Many industrial activities and operations, fuel combustion sources like residential wood burning, motor vehicle engines and tires, and other sources emit large and small particles into the air. Such particulate matter may be comprised of inert materials or else may be chemically active and potentially harmful to health. These particles can be transported far from their source of emissions and can carry on their surfaces other pollutants. Federal, state, and local regulations set limits for particulate matter in the air based on the size of the particles and the related potential threat to health.

There are now air quality standards for PM_{10}, or particles less than or equal to about 10 micrometers (microns) in diameter and for $PM_{2.5}$, or particulate matter less than or equal to 2.5 microns in diameter. The latter size fraction is now thought to represent the most dangerous size fraction of airborne particulate matter because such small particles (e.g., a typical human hair is about 100 microns in diameter) can be breathed deeply into lungs. In addition, such particles are often associated with toxic substances that are deleterious in their own right that can adsorb to the particles and be carried into the respiratory system. Based on the most recent health studies, in September 2006, EPA set new, more stringent standards for particulate matter based on fine ($PM_{2.5}$) and coarse (PM_{10}) particulate matter (EPA 2006b).

There are several PM_{10} and $PM_{2.5}$ monitoring stations in Puget Sound, including the Meadowdale location at 7252 Blackbird Drive NE in Bremerton. Measured concentrations of both PM_{10} and $PM_{2.5}$ at all monitoring locations in the Puget Sound area have complied with the applicable ambient air quality standards since 1997 (PSCAA 2006). But with the new more stringent federal standard for $PM_{2.5}$, several areas of the Puget Sound region (in Snohomish and Pierce Counties) may once again be out of compliance with the federal fine particulate matter standard (PSCAA 2006). After sufficient data have been collected, $PM_{2.5}$ attainment status will be assessed based on the measured concentrations for the 3-year period 2007-2009 and will likely take effect in 2010.

3.3 WATER RESOURCES

Ground Water

Regional ground water assessments on the Kitsap Peninsula were reviewed information regarding the existing ground water conditions of the site. Other sources of information included a geotechnical engineering study performed for Westpark planning, and studies of shallow subsurface ground water conditions specific to the project site performed for the Bay Vista Commons. Additional regional hydrogeologic studies including wellhead protection studies were consulted. Available domestic water well logs in the project vicinity were retrieved from the Department of Ecology database.

Ground Water Quantity

Water is present in the pore spaces of soils and sediment. This “ground water” is part of the continuous hydrologic cycle, which, in the natural state, begins with infiltration of precipitation and runoff (termed recharge) and ends with discharge to rivers, springs, streams, and wetlands.

Under natural conditions, ground water recharge and discharge may shift with climatic cycles but remain in overall balance. Withdrawal of ground water by wells diverts a part of the ground water cycle, resulting in adjustments to natural recharge, discharge, or both.

Ground water under saturated conditions flows preferentially through materials with greater porosity and permeability, such as clean gravels and sands. Where geologic conditions limit discharge, ground water accumulates in permeable zones, which, if they can support production from wells, are termed “aquifers”. Materials that are impermeable or distinctly less permeable, such as silts and clays, do not easily transmit the flow of water and are termed “confining units”. The sustainability of wells, or the long-term aquifer capacity, depends both on the extent of the aquifer, its rate of recharge and natural discharge, and the amount of withdrawal by producing wells.

Climate and Precipitation

The climate of the study area is influenced by maritime air masses originating over the Pacific Ocean throughout the year. A well-defined rainy season exists in winter where the majority of the annual precipitation falls from October through March, when the prevailing wind is from the southwest. During winter, rainfall is generally light to moderate in intensity and is virtually continuous. A well-defined dry season generally occurs in summer when the prevailing wind is from the northwest.

Annual precipitation over the Kitsap Peninsula ranges dramatically from about 80 inches to 30 inches, generally decreasing to the northeast. This pattern of rainfall is due to the creation of a rain shadow on the northern portion of the peninsula by the Olympic Mountains. In the project site vicinity, annual precipitation is approximately 50 inches. An anomalous precipitation high occurs in the area of the Green and Gold mountains west of the project area due to the relative high ground surface elevation of the mountains. The increased precipitation has a direct impact on surface water flow and available ground water recharge in the vicinity of the site.

In winter, precipitation occasionally occurs in the form of snow, but generally warm temperatures prevent accumulation and the effect of snow storage on stream flow in the vicinity of the project site is insignificant. The highest stream flows are produced by direct runoff following winter storms, whereas low flows, sustained by groundwater effluent, occur during the precipitation deficient summer months (Garling, et al., 1965)

Aquifers

Regional ground water assessments have developed three-dimensional characterizations of aquifers and confining units on the Kitsap Peninsula based on published geologic data and well logs. Several water supply and wellhead protection studies have been performed in the region and also identify hydrogeologic units. The hydrogeologic units in the project area are composed of unconsolidated glacial and inter-glacial sediments (approximately 600 to 900 feet thick) that directly overlie the bedrock in the project area (see Section 3.1, *Earth*). The bedrock surface is assumed to represent the relatively impermeable basement of the glacial aquifer system, therefore, the majority of the ground water in the area is contained in the overlying unconsolidated sediments. The bedrock surface is irregular and is exposed southwest of the project area at Green and Gold Mountains and approximately 2 miles north to northwest of the project.

An attempt was made to correlate aquifers and confining units to geologic units in the regional studies. The unconsolidated hydrogeologic units overlying bedrock in the study area vicinity are listed in Table 3.3-1 from shallowest to deepest. The hydrogeologic unit names of these units have a "Q" designator, indicating Quaternary age and are further subdivided as to nonglacial deposits ("n") and glacial deposits ("g"). These are then designated 1, 2, 3, etc., with the numerals ranking each similar deposit from younger to older. Thus, Qn3 is the third nonglacial (interglacial) deposit which underlies the second youngest glacial deposit (Qg2) (Ecology, 1997). Additional geologic unit correlations are presented from area studies.

Glacial units are generally coarse-grained and consist of sand and gravel deposits derived from glacial meltwater streams. Most major aquifers occur within these deposits. Nonglacial units are generally fine-grained deposits consisting of silt and clay and are considered confining units. A few aquifer zones may occur within interglacial deposits however they typically have low yields (Ecology, 1997).

All Quaternary glacial and nonglacial units in Kitsap County are discontinuous in nature. Units may be absent in specific locations due to the complex erosional and depositional history of the area. Potentially significant aquifers in site vicinity are further described below.

According to hydrogeologic studies of the Kitsap Peninsula (Garling et al., 1965 and Ecology, 1997), there are three main aquifers that underlie the site and surrounding areas. A regional "shallow" aquifer is contained within the Vashon advance outwash (Qg1a) and possibly deeper units from elevations of about 300 to 150 feet above sea level. Numerous public and domestic wells are completed in this productive aquifer (Ecology, 1997). In addition, Vashon advance sediments could underlie the site vicinity to depths of over 100 feet (Garling et al., 1965 and Ecology, 1997).

Table 3.3-1.
Subsurface Hydrogeologic Conditions

Hydrogeologic Unit	Geologic Description	Suggested Regional Correlation	Hydrogeologic Description
Qn1	**Recent alluvium and peat deposits younger than Vashon**	**Quaternary alluvium**	**Aquifer when saturated**
Qg1	**Vashon glacial till**	**Vashon glacial till**	**Confining Unit, includes thin recessional deposits**
Qg1a	**Vashon advance outwash**	**Vashon advance outwash Colvos sand, Esperance sand**	**Aquifer, important water supply**
Qn2	**First interglacial deposits**	**Unnamed deposits below Lawton Clay (Mullineaux, 1965) Olympia Formation (AGI, 1996)**	**Confining Unit**
Qg2	**Second glacial deposits**	**Possession Drift (Easterbrook, 1968)**	**Aquifer, extent limited**
Qn3	**Second interglacial deposits**	**Whidbey Formation (Easterbrook, 1968) Kitsap Formation (Garling et al., 1965)**	**Confining Unit**
Qg3	**Third glacial deposits**	**Double Bluff Drift (Easterbrook, 1968)**	**Aquifer, “Sea level aquifer”, important water supply**
Qn4	**Third interglacial deposits**	**Uncertain**	**Confining Unit**
Qg4	**Third glacial deposits**	Uncertain	**Aquifer, water supply**
Qg4m	**Marine/glaciomarine deposits**	Uncertain	**Extent limited, interbedded with Qg4**
Qn5	**Fourth interglacial deposits**	Uncertain	**Confining Unit**
Qg5	**Fifth glacial deposits**	Uncertain	**Aquifer, “Deep aquifer”, important water supply**
Qn6	**Ancient non-glacial Pleistocene deposits**	Uncertain	**Confining Unit**

Source: Modified from Ecology, 1997, Exhibit 5-1B.

A confined aquifer, locally referred to as the “sea level" aquifer (Qg3), exists predominately within pre-Vashon age glacial deposits of sand and gravel at elevations of 250 feet above sea level to 250 feet below sea level. This aquifer is confined by a thick, fine-grained (predominately silt) non-glacial unit (Qn3) deposited prior to the Vashon glaciation. Artesian wells are common in the sea level aquifer, which is a major public water supply for the region. A "deep" aquifer contained in sand and gravel units (Qg5) is located several hundred feet below sea level. Wells that penetrate the aquifer are artesian, and it is the source of some public water supplies in the area. The extent of this aquifer is poorly understood (Garling et al., 1965 and Ecology, 1997).

All deposits younger than the Vashon glaciation are grouped into unit Qn1. These sediments generally consist of peat and recent alluvium and are generally thin. The recent alluvium can be a source of ground water in some valley floors, particularly if it is in hydraulic continuity with surface water (Ecology, 1997).

Site Ground Water Conditions

In the project vicinity, water well logs reviewed by Garling and others (1965) indicate the ground surface is typically mantled with 30 to 40 feet of till, underlain by productive "Colvos Sand" of Vashon advance outwash sequence to a depth of approximately 150 feet below ground surface. Review of vicinity water well logs obtained from the Department of Ecology database indicates that till may be as thick as 80 feet, underlain with 30 to 80 feet of sand and gravel likely to represent Vashon advance sediments. Several additional confining units and aquifers exist below the Vashon advance sediments that likely correlate to hydrogeologic units described in Table 3.3-1. In some locations near the site, it appears that the Vashon advance aquifer is very thin or is absent. The site elevations of 60 feet to 176 feet indicate that a thin sequence of Vashon advance sediments is likely to exist immediately below till underlying the site. All of the well logs reviewed in the vicinity of the site penetrate deeper aquifers from 165 to 300 feet below ground surface, which are likely correlative to the "sea level aquifer" or "deep aquifer" described in regional studies.

The project area is served with water by the Rocky Point Water District #12 which obtains water from the City of Bremerton. There are no public water supply wells in the site vicinity that could be impacted by site development activities. According to the City of Bremerton and Kitsap County current critical areas maps, critical aquifer recharge areas do not exist in the site vicinity or downgradient of the site. The nearest public supply wells are located approximately 3 miles to the northwest (Erland Point Water Company) and 3 miles south (City of Bremerton). In addition, Kitsap County and the Basin Assessment (Ecology, 1997) delineate the extent of principle aquifers utilized for water supply in the county. No principle aquifers underlie the site. The closest delineated aquifers (Gorst, Manette Bremerton, and Port Orchard Deep) are more than 3 miles from the project site boundaries.

The following sections describe the hydrogeologic units underlying the project site.

Interflow/Perched Water

A shallow interflow zone is expected to exist in the weathered surficial mineral and organic soils. Interflow commonly accumulates seasonally in areas underlain by glacial till. The interflow network consists of surface water that percolates down through the relatively permeable, surficial weathered soils and becomes perched atop the underlying, low permeability, unweathered till surfaces.

Water in the interflow zone moves downslope at rates strongly influenced by the hydraulic conductivity of the soil, and the flow generally corresponds to the slope of the land surface and discharges to streams and springs or to bodies of open water. Much of the discharge from the interflow zone occurs during the summer by transpiration of plants, whose roots penetrate the soil horizon. The thickness of an interflow network will fluctuate due to the time of year and amount of annual precipitation. In areas where a more permeable parent material is present, ground water in the interflow network will infiltrate and recharge underlying aquifers. Some of the ground water in the interflow zone seeps through the glacial and other underlying sediments to recharge deeper aquifers, such as the Vashon advance aquifer. The interflow zone is generally not active during prolonged periods of dry weather.

Perched ground water was encountered at depths of 4 to 7 feet in explorations B-8, TP-17, TP-18, TP-19, and TP-42. Boring locations are included in Appendix B In TP-28, ground water was encountered in alluvium at a depth of 12 feet (Landau, 2006). No perched water or seepage was encountered during the exploration onsite for the Bay Vista Commons development (CEO, 2004). Flow direction of the shallow interflow on site is expected to follow the ground surface topography and generally flow north to northeast. Perched water may daylight on the steep north-facing slopes on the north end of the project site where surface water drainage was observed during field reconnaissance.

Fill/Landfill Debris

Placed fill and landfill material was encountered on site as described in Section 3.1 *Earth.* In several locations the fill material was observed to be wet and may represent limited ground water perched on underlying low-permeability sediments. Ground water contained in these sediments is expected to behave generally like water in the interflow zone described above; however it may be limited in lateral extent and hydraulic connectivity to other permeable units due to the nature of its placement. In the landfill, stiff peat was observed at the base of the landfill material, which may cause percolating water to perch within the landfill material. The landfill debris encountered was observed to be wet. Perched water within the landfill material will drain downgradient with some very slow infiltration in the peat and underlying “alluvium” observed. Leachate from the landfill material will mix with this ground water.

Alluvium Deposits

Alluvium sediments were encountered in explorations B-8 and TP-28. The lateral extent of these sediments have not been clearly defined, however they are expected to be limited. Sediments in both explorations were wet and may represent limited ground water perched on underlying low-permeability sediments. Ground water contained in these sediments is expected to behave generally like water in the interflow zone described above. It is expected to flow in the general direction of ground surface gradients toward the north to northeast and may daylight on the steep north-facing slopes on the north end of the project site. In addition, some of the ground water in the alluvium sediments is expected to seep through the glacial and other underlying sediments to recharge deeper aquifers, such as the Vashon advance aquifer.

Vashon Glacial Till

Glacial till mantels the majority of the site and is considered a low-permeability, confining unit. Regional hydrogeologic studies indicate that the site is likely mantled with 30 to 40 feet of till; according to domestic well logs it may be as thick as 80 feet. In onsite explorations, glacial till was not encountered in the landfill area or is an isolated area of alluvium (TP-28); however, it is expected to underlie the remainder of the site.

Vashon Advance Aquifer

The oldest sediments encountered on site are interpreted to represent Vashon advance outwash; considered an important regional aquifer. Numerous public and domestic wells are completed in this productive aquifer (Ecology, 1997). Very few domestic water wells are located within the project area vicinity. Review of vicinity water well logs indicates that till may be as thick as 80 feet, underlain with 30 to 80 feet of sand and gravel likely to represent Vashon advance sediments. In some locations near the site, it appears that the Vashon advance aquifer is very thin or is absent. According to regional studies, the Vashon advance aquifer is expected to exist from elevations of about 300 to 150 feet above sea level. The site elevations of 60 feet to 176 feet indicate that a somewhat thinner sequence of Vashon advance sediments is likely to exist immediately below till underlying the site.

The existence of an aquifer in the Vashon advance sediments underlying the site is unknown from onsite exploration and vicinity well logs. However, the ground water flow direction if such an aquifer existed in the site vicinity would be expected to be similar to the ground surface gradient and would flow toward Oyster Bay to the north. Based on available well logs, no domestic water wells are located on site or between the project site and Oyster Bay to the north. All of the water well logs reviewed in the vicinity of the site were completed in deep aquifers below the expected depth of Vashon advance sediments from 165 to 300 feet below ground surface, which are likely correlative to the “sea level aquifer” or “deep aquifer” described above and in regional studies.

Deep Aquifers

Regional studies describe two significant aquifers below the Vashon advance aquifer, the “sea level aquifer” and the “deep aquifer” described above. Domestic well logs in the vicinity of the site encounter sand and gravel aquifers at depths of 165 to 300 feet below ground surface. These aquifers are likely correlative to the sea level aquifer. Deeper aquifers likely exist beneath confining units similar to the regional environment discussed above.

Ground Water Flow, Recharge and Discharge

The upland areas of the Kitsap Peninsula are predominately recharge areas. All recharge to the Kitsap Peninsula and project site comes from precipitation falling directly on the peninsula and percolating to the underlying aquifers. Most recharge on the Kitsap peninsula is expected to occur on relatively low sloping ground, in upland areas, underlain with high-permeability soils. Locally, the majority of the site would be considered potential recharge area (Ecology, 1997). However, a minimal amount of recharge to the underlying shallow aquifer is expected to occur at the site under existing conditions due to the significant ground surface gradients and low-permeability soils that directs stormwater runoff toward the nearby surface water bodies such as Oyster Bay. As noted previously, the site is not designated as a critical aquifer recharge area pursuant to City of Bremerton critical area regulations.

The ground surface gradient of the site is highly variable with occasional steep slopes which facilitates runoff of surface water and limits infiltration. Overall, the site grades toward Oyster Bay at low ground surface elevations from 60 feet to 172 feet above sea level. In addition, the majority of the site is underlain by low-permeability glacial till, further limiting vertical infiltration of water. Finally, the existing pervious surfaces at the site consist mainly of residential lawns that may limit recharge due to previous site grading and compaction during construction. A minimal amount of recharge is expected to occur at the site under existing conditions due to the significant ground surface gradients and low-permeability, compacted soils, which direct stormwater runoff and interflow toward the surrounding downgradient surface water bodies such as Oyster Bay.

The larger surface water drainages, such as Gorst Creek, provide internal drainage for the shallow ground water systems that occur within the upland sediments. The inlets and bays within and surrounding the Peninsula are predominantly regional discharge areas for the deep ground water that originated within the uplands; much of discharge points are submerged. Locally, discharge areas may include the northern steep slopes facing Oyster Bay and Oyster Bay. Ground water flow likely follows the ground surface gradient and flows generally south to north toward Oyster Bay.

Surface Water – Ground Water Interactions

There are no perennial surface waters on or in the immediate vicinity of the site, but stormwater drainage ditches do exist on-site. Surface water and precipitation is expected to percolate into the exposed subsurface and travel within the interflow zone, shallow alluvium sediments and fill sediments. It likely perches across the site on low-permeability till sediments. In a few isolated areas till is not present and water likely infiltrates to underlying deeper aquifers. A small amount of perched water would also infiltrate through the glacial till to recharge deeper aquifers. The majority of the shallow perched water onsite likely travels along ground surface gradients to the north to northeast and may daylight on steep slopes.

Ground Water Quality

Ground Water Quality Standards

The goal of Washington State's groundwater quality standards is to protect groundwater quality and existing and future beneficial uses through an anti-degradation policy (Chapter 173-200-030 WAC) and definition of maximum contaminant level (MCL) criteria. A partial listing of the criteria is shown in Table 3.3-2). State regulations require that contaminants proposed for entry to groundwater be provided with all known, available and reasonable methods of prevention, control and treatment prior to entry.

Washington State Drinking Water Standards (Chapter 246-290-300 WAC)

The purpose of drinking water regulations is to ensure health quality standards are maintained for public drinking water supplies. Drinking water standards established by the Washington Department of Health (WDOH) comply with the Federal Safe Drinking Water Act of 1974 and subsequent 1986 amendments (WDOH 1992, Chapter 246-290-300 WAC). The standards outline monitoring protocols and maximum contaminant levels (MCLs) for bacteriological, inorganic chemical, and physical characteristics (including turbidity at 1 NTU, conductivity at 700 µmhos/cm, and total dissolved solids at 500 mg/L), trihalomethanes, pesticides, and volatile organic chemicals. The MCLs are divided into primary and secondary categories. Primary standards are based on chronic, non-acute, or acute human health effects. Secondary (including physical characteristics) standards are based on factors other than human health effects, for example taste, odor, color, and appearance. Groundwater standards and drinking water standards are similar, but not identical.

Table 3.3-2.
Groundwater Quality Standards for Primary and Secondary Contaminants

Primary or Secondary Designation	Contaminant	Maximum Contaminant Level (MCL)
Primary	Barium	1.0 mg/L
	Cadmium	0.01 mg/L
	Chromium	0.05 mg/L
	Lead	0.05 mg/L
	Mercury	0.002 mg/L
	Selenium	0.01 mg/L
	Silver	0.05 mg/L
	Fluoride	4 mg/L
	Nitrate-Nitrogen	10 mg/L
	Total Coliform Bacteria	1/100 mL
Secondary	Copper	1.0 mg/L
	Iron	0.30 mg/L
	Manganese	0.05 mg/L
	Zinc	5.0 mg/L
	Chloride	250 mg/L
	Sulfate	250 mg/L
	Total Dissolved Solids	500 mg/L
	pH	6.5-8.5 standard units

Source: WAC 173-200-040 Partial listing of primary and secondary contaminants criteria. All heavy metal standard criteria are for total metals.

Ground Water Quality Summary

The Kitsap County Initial Basin Assessment (Ecology, 1997) provides a summary of ground water quality for the county. Water quality in the county was assessed by assembling a study database of water quality sampling results from wells in the county. The database was evaluated by the geographic occurrence for selected water quality parameters. Water quality parameters that are commonly measured and are useful in evaluating ground water quality on a regional basis are chloride, specific conductance, nitrate, iron, and manganese. Chloride and specific conductance are commonly used as indicators of seawater intrusion. High concentrations of nitrate typically indicate contamination from sewage, animal wastes, and/or fertilizer applications. Iron and manganese occur from natural sources, and can compromise aesthetic qualities of water at higher concentrations.

According to the Ecology (1997), the county's ground water is generally of good quality and suitable for most purposes. Most of the water sampled was within Washington State drinking water standards for the constituents evaluated. Standards for iron and manganese were frequently exceeded, as is expected for glacial aquifers of western Washington. Chloride and electrical conductivity are constituents typically sampled to determine the degree of seawater intrusion. Chloride concentrations of wells sampled indicate that seawater intrusion does not appear to be a serious or extensive problem in Kitsap County. Electrical conductivity values are typically used as a measure of total dissolved solids (TDS). Calcium, magnesium, sodium, bicarbonate, sulfate chloride and silica are the primary contributors to TDS in ground water. Electrical conductivity levels are primarily below water quality standards; however, several locations along the coast and a few inland locations exceed standards. Chloride and electrical conductivity levels in wells closest to the site were within normal ranges.

The geographic distribution of nitrate can reflect the occurrence of ground water contamination from sewage, animal waste, industrial water, and/or nitrogen rich fertilizers. Nitrate levels detected above background (background can be considered nitrate concentrations in rainfall) are commonly considered to be impacted by human (or animal waste) sources of contamination. Approximately 2 percent of the wells sampled in the Kitsap County study have nitrate levels over background and 0.5 percent are above Washington State drinking water standards. The well locations are scattered throughout the county, and do not appear to be associated with higher concentrations of population. Nitrate contamination in the county appears to be localized. Nitrate levels in wells closest to the site were equivalent to expected background levels.

Iron and manganese are derived naturally from the weathering of minerals that are abundant in western Washington ground water flow systems. Anthropogenic ground water contamination which alters the pH and oxidation state of ground water (e.g. landfill leachate) can cause particularly high concentrations of iron and manganese. Concentrations above the MCL are generally not considered health problems, but can encrust plumbing and stain laundry. Many wells within the county had iron concentrations that exceed the State MCL. Exceedence of the State MCL for manganese is also common, but not as common as for iron. There is no apparent pattern to the locations of those wells with exceedences of manganese and iron. Iron and manganese levels in wells closest to the site were generally within normal ranges; exceedences were not common.

3.4. PLANTS & ANIMALS

Affected Environment

The information used to identify plants and animals on the site included site reconnaissance and inventories, direct observation and review of documents and maps from a number of state and federal lists and scientific sources. Please refer to Appendix C-1 for more information about methods and data.

Vegetation

The majority of the Westpark property is developed and consists primarily of residential housing units and community facilities. Several fragmented forest patches exist on the site, the largest of which is located on the north side. The site is otherwise interspersed with mowed grasses, landscaped areas, and planted or remnant trees of various sizes.

Four distinct cover types occur on the Westpark site: Urban (U) mowed, lowland grass/forb (Gm), second-growth coniferous forest (Fc), and second-growth deciduous forest (Fd). Cover types are shown on Figure 3.4-1; vegetation data is included in Appendix C-2. Most of the vegetation cover is consistent with urbanized residential areas and includes shared green spaces in the form of lawns, as well as scattered coniferous and deciduous trees.

Most of the forested areas, which comprise approximately 10 acres, are located in the north-central and northeast portion of the property. They consist primarily of conifer stands (approximately 6.5 acres). Some scattered deciduous trees, primarily Pacific madrone and big-leaf maple, occur within these stands. Small patches of deciduous forest occur along the western boundary of the site abutting State Highway 3 and along the east boundary of the site. These forest patches have a considerable coverage of non-native shrubs in some areas. The lowland grass/forb community (approximately 3 acres) is found on the ballfield in the east-central portion of the site. Overall, the forest stands (Fc and Fd) and grass field (Gm) on site total approximately 13 acres, whereas, the areas considered “urban” consisting of existing residences and associated roads, lawns, and landscaping total approximately 68 acres.

The forested area east of the site and the shoreline habitat north of the site along the south shore of Oyster Bay were also investigated. The forest patch east of the site is similar to the forest patches on-site in species composition and stature, and is not considered separately in this report. The south shore of Oyster Bay is occupied by a variety of hotels and other businesses, as well as being buffered to some extent by coniferous trees of varying sizes. Vegetation along the edge of the Bay on either side of the existing stormwater outfall pipe consisted of coniferous forest dominated by Douglas-fir and western red cedar, with scattered Pacific madrone, Scouler’s willow, and red alder, and an understory of oceanspray, salal, and English ivy. The intertidal shoreline consisted of a mud and cobble beach with sparse vegetation consisting of several herbs and grasses, including pickleweed, orache, spike bentgrass, and saltgrass.

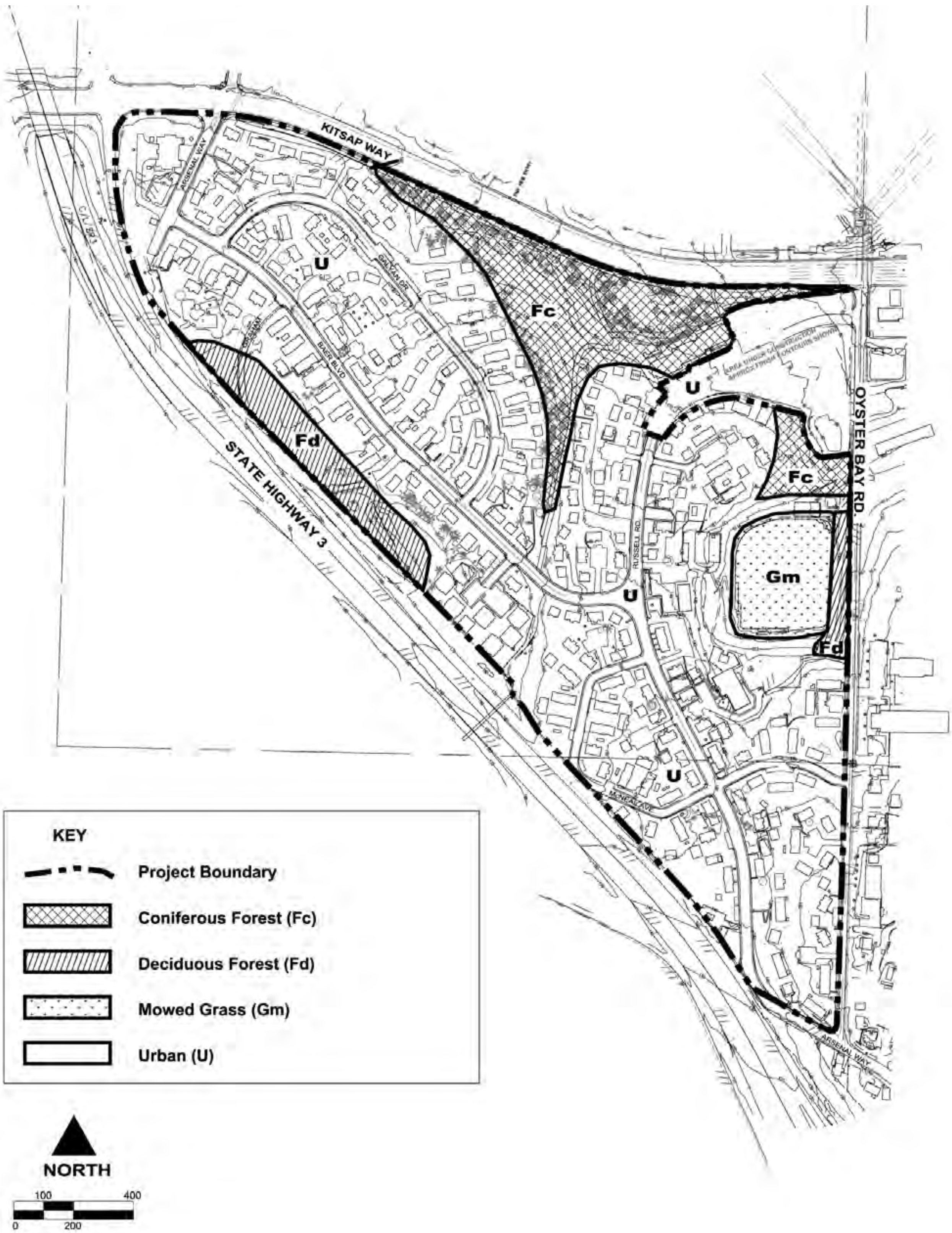


Figure 3.4-1 Cover Types

Upland Habitats

Urban, Moderately Vegetated (U)

This habitat type includes areas in which vegetation comprises between 30 percent and 70 percent of the total ground area. Mowed grass lawns occur throughout the site between housing structures, sidewalks, and streets. Several species of trees grow within the lawn areas. Douglas fir is the dominant species present, with planted pines and maples comprising much of the remaining trees present. Trees are approximately 80 feet in height, and canopy cover varies from 20 percent to 30 percent. Very little shrub cover is present in the portions of the site dominated by this cover type.

Lowland Grass/Forb, Mowed (Gm)

Mowed grassy habitat on the Westpark site is found within the outfield and surrounding open areas of the baseball field in the east-central portion of the site. These areas are dominated by lawn grasses, which were difficult to identify due to a general lack of characteristic leaf and inflorescence structure caused by mowing.

Coniferous Forest (Fc)

Second-growth coniferous forest is located in the north-central and northeast portions of the property. This cover type is dominated by Douglas fir with scattered Pacific madrone, western red cedar and big-leaf maple. The deciduous trees are located primarily at the edges of this cover type (e.g. big-leaf maple) or scattered amongst the conifers (e.g., Pacific madrone), but do not comprise enough cover either overall or in any individual patches to be considered separately as deciduous forest. Evergreen huckleberry and Himalayan blackberry are the dominant shrub species within this cover type, and scattered sword fern comprises the dominant species in an overall sparse herbaceous layer. English ivy is the dominant or co-dominant ground cover in some areas, whereas periwinkle dominates the ground cover in an isolated location on the north side of the site.

Deciduous Forest (Fd)

Deciduous forest habitats are present on the western side of the property and along the eastern boundary of the baseball field. Like the coniferous forest cover type, the deciduous forest on the site is not composed entirely of deciduous trees, but includes some scattered conifers as well. The deciduous forest stand on the west side of the site consists of Scouler's willows, red alder, Pacific madrone, paper birch, and scattered Douglas fir, with Scotch broom and Himalayan blackberry dominating the shrub layer. A strip of deciduous forest habitat is located along the east side of the baseball field, and consists of black cottonwood, red alder, Douglas fir, Pacific madrone, big-leaf maple, and Pacific willows in the overstory. Himalayan blackberry dominates the shrub layer with hazelnut, Scotch broom, and oceanspray present in lesser amounts.

Wetland Habitats

No wetland habitats occur on-site. Several depressions and potential seeps were investigated throughout the site for wetland characteristics (see Appendix C-2) but none demonstrated the necessary combination of hydrophytic plants, wetland soils, and wetland hydrology to be classified as wetlands.

Special Habitat Features

Special habitat features include biologic elements such as edges between plant communities or successional stages, cliffs, snags, and coarse woody debris, which are often important to wildlife (Brown 1985, Thomas and Verner 1986). The most distinct edges on the Westpark project site are the edges between the developed portions and the forested habitats on the north side of the property, as well as the forest edges along Kitsap Way and Oyster Bay Avenue.

Snags (dead or partly dead trees at least 4 inches diameter at breast height [dbh] and 6 feet tall) are important to many wildlife species for nesting, feeding, and roosting (Cross 1986, Neitro et al. 1985, Scott et al. 1977 in Ohmart and Anderson 1986). Very few snags exist on the site, though a few smaller (approximately 6 inches dbh) Douglas fir snags were observed in the forest patch on the north side of the property, predominantly along a dirt footpath.

Coarse woody debris includes downed logs and major limbs of trees lying on the ground. Downed logs can provide many habitat features, including perch sites, food, nest cavities, and cover for many species, such as some amphibians (Jones 1986). The native forest cover present on-site generally had limited downed woody debris, likely due to the relative youth of the forest and the lack of older, senescent trees.

Endangered, Threatened and Sensitive Plant Species

There are no federal or state threatened, endangered, or sensitive plant species known to exist on the Westpark site (WDNR 2005) nor were any identified during field surveys.

The current list of endangered, threatened, and sensitive plants of Washington thought to occur in Kitsap County is provided in Appendix C-3 . Based on habitat descriptions for these species in Hitchcock and Cronquist (1976), and Pojar and MacKinnon (1994), and our field surveys, adequate conditions do not exist on the project site to support these species, and thus they are not likely to be present. None of these species was observed during our field investigations.

Wildlife

The developed portion of the site provides habitat for species adapted to urbanized habitats. The undeveloped forested portions on the north side of the property provide habitat for a wider variety of species. These areas provide habitat for resident wildlife, including birds, mammals, reptiles, and amphibians, and also may act as “stepping stones” or avenues of movement for migrating birds.

Based on reference lists from similar habitats in western Washington, a variety of species could occur in any of the habitats encountered (Appendix C-4). However, the actual number of species found in these habitats in the project vicinity is limited to some degree by the size of the site and highly urbanized surroundings. Because the field investigation was conducted outside the breeding season in November, and because of the secretive habits of many species, only a portion of the species expected to use the on-site habitats were actually observed or detected.

Reptiles and Amphibians

Most amphibians and reptiles are secretive and seldom observed, except during short periods in their life cycles, and thus require special techniques to inventory adequately. No reptiles or amphibians were observed on-site, though no formal searches or sampling were conducted.

Reptiles and amphibians are likely to use the developed portion of the site only incidentally en route to the native forest patches, if at all.

The Westpark site provides little habitat for amphibians. Many amphibians rely on wetlands and streams for breeding habitats. Since no wetlands were detected on-site and the property is surrounded on all sides by paved roads, breeding on-site would probably not be possible for these species. A surface channel that appears to convey stormwater run-off occurs in the west end of the north forest patch. A man-made ditch and small stormwater retention area exist east and northeast of the baseball field, respectively, and may contain water during some periods of the year, but none of these areas are likely to provide sufficient breeding habitat for amphibians.

Some salamander species and frogs breed or spend significant time in logs and duff in the forest, and are active feeders in the forest during moist periods. Species that lay their eggs in the forest duff such as the ensantina and western red-backed salamander might be found using the forested portions of the site. Amphibian populations are likely limited, however, by the lack of connective habitat and high vehicular traffic between this and nearby forest patches. Among reptiles, garter snakes may occur on the project site, primarily using the wooded areas for cover, and forested and adjacent areas for basking.

Birds

Raedeke Associates, Inc. staff observed sixteen bird species during field visits at the Westpark property. However, additional species could be expected to occur in all habitats during different times of year. No birds were detected in the developed portion of the property, though as many as 37 species could inhabit urban habitats such as developed portions of the Westpark site (see Appendix C-4).

The project site has no aquatic habitat, which precludes most shorebird, waterfowl, and wading birds from using the property, except those that could feed on mowed lawns or incidental occurrence flying over the site. Of these, only a single glaucous-winged gull was observed flying over the baseball field. Additional incidental fly-over species include double-crested cormorant (*Phalacrocorax auritus*) and common raven (*Corvus corax*).

The forested areas of the site are relatively small and are dominated by younger trees with few snags. In addition, the site has little connectivity with other, larger off-site forest patches; thus, use of the site by smaller owls such as western screech and northern saw-whet owls is unlikely. Great horned owls are large owls that occupy fragmented forest stands, and could possibly use the site as a transitory cover or hunting area, though the site is unlikely to provide nesting habitat for this species. No owls, or evidence thereof, were detected on-site. Sharp-shinned hawks and Cooper’s hawks are small hawks (accipiters) that prey mainly on small birds in forest or shrub habitats, and may be seen in urban areas. A single sharp-shinned hawk was observed on the south end of the forest patch north of the baseball field, otherwise no hawks were observed. Red-tailed hawks occupy a variety of open, fragmented habitats and may use the site for roosting or hunting, though none were observed at the time of our field visit.

Woodpeckers glean insects and larvae from on or under the bark of trees and snags. All are forest primary cavity-nesting species that excavate their own nests (primary cavity-nesters). Northern flickers, Washington’s most common woodpecker, were observed in the vicinity of the baseball field in the eastern portion of the site. Though none were directly observed, pileated woodpecker foraging sign was noted in the forest patch in the north-central portion of the site. Northern flickers are fairly common around urbanized areas and often feed at suet feeders at single-family homes. Habitat for these species in the vicinity is limited by the relative lack of snags and downed logs in the forested areas.

Passerines, or perching birds, contain the largest number of families and have the most diverse range of bird species of any order. Passerines are generally small birds that exhibit a wide range of feeding modes. Insectivorous passerines include aerial feeders (e.g. swifts, swallows, and flycatchers) and gleaners of insects from trees and shrubs (e.g. warblers, vireos, chickadees, and kinglets). Small flocks of chestnut-backed chickadees, bushtits, and golden-crowned kinglets were observed in northern forested portion of the site. These species likely forage in the trees even in the developed portion of the site.

Ground foragers, including song sparrows, winter wrens, and spotted towhees were observed in the Himalayan blackberry and other low shrubs in the deciduous forest patch east of the baseball field, and to a lesser extent in the larger forest patches farther north and west. Steller's jays were observed in the deciduous forest near the baseball diamond. Jays, song sparrows, and spotted towhees also commonly use bird feeders and live in urban areas where woodlots exist. The trees on the property are likely used by many species of passerines throughout the year as perching, foraging, and migratory habitat.

Mammals

The forested portions of the site likely support a variety of mammals. They are less frequently observed than birds because of their often secretive and nocturnal habits. As many as 31 mammals (See Appendix C-4) could inhabit any one of the types of habitats on the Westpark property, though many species may not actually be present at the site due to its urban nature and surroundings. No mammal species were observed during our field investigation. Moles likely live in some of the lawn areas in the developed portions of the site. Introduced house mice, as well as Norway and black rats are common mammals adapted to live in urban areas. Raccoon and opossum are also likely to use both the developed and undeveloped portions of the site as well as the adjacent open spaces.

The forest floor has relatively sparse ground cover in some areas, but dense ground cover and shrub cover in others. Areas with better cover likely provide some habitat for small mammals such as shrews, voles, mice, and rats. Shrews and voles are generally insectivores, and are an important food source for predatory birds. These species are likely more limited in areas surrounded by urban habitats due to the presence of domestic dogs and cats, which can be highly effective predators on native species (Penland 1984).

Bat distribution and abundance in western Washington are relatively poorly known and require specialized techniques to inventory. Some species of bats could be found in the forest habitats and green spaces, feeding in open areas and wetlands. Most species are migratory and return to this region in the spring when insect populations are abundant. Bats are aerial foragers that feed on insects in the twilight periods and at night. Our survey was conducted during the day, and thus was not an appropriate time to determine bat presence. It is unlikely that bats inhabit the Westpark site to any significant degree.

No carnivores or their sign (footprints, scat) were observed, though as previously mentioned, raccoons are likely present. Because the area is highly urbanized, it is unlikely that the small, fragmented forest patches provide much habitat for larger predators like bobcats or black bears. However, coyotes are better acclimated to living in proximity to humans and may be present. Domestic cats and dogs can be significant predators on species restricted to habitat islands in urban settings and are likely to hunt on the Westpark property and contiguous habitats.

Deer are herbivores that browse mainly on shrubs and trees in forests and shrublands. The busy surrounding roads and highly developed nature of the area make it unlikely that deer would use the site to any significant degree.

<u>Endangered, Threatened, Sensitive, and Other Priority Species and Habitats</u>

Maps and tabular data from the WDFW (2005a) Priority Habitats and Species (PHS) and Natural Heritage Wildlife (HRTG) databases, which document known occurrences of endangered, threatened, sensitive and other Priority species and habitats in the vicinity of the Westpark site, were reviewed from their. No priority species or habitats are documented as occurring on the Westpark site or along the shore of Oyster Bay to date. Documented occurrences in the vicinity are discussed below.

<u>Priority Habitats</u>: The PHS database depicts no mapped priority habitats on-site mor along the shore of Oyster Bay. One small wetland area is located approximately 0.75 miles north of the site along the south shore of Mud Bay, and a regular large waterfowl concentration is found 1.5 miles away on the west side of Phinney Bay to the north and east. An unnamed stream flowing near the northwest tip of the Westpark property apparently provides both anadromous fish runs and critical spawning habitat for resident fish (WDFW 2005a), and Kitsap Creek one mile west of the site similarly is shown as providing habitat for anadromous fish.

<u>Endangered, Threatened, and Sensitive Wildlife Species</u>***:*** WDFW (2005a) shows no records of federal- or state-listed endangered, threatened, or sensitive species of birds, mammals, reptiles, or amphibians present on the Westpark site or along the shore of Oyster Bay. None of these listed species on the project site were observed during a field visit.

The bald eagle is currently listed federally and in Washington State as a Threatened species (WDFW 2005b). Because of a significant increase in bald eagle populations in Washington, the state has proposed to reclassify the bald eagle as a Sensitive species (Stinson et al. 2001) concurrent with the federal proposal for delisting of the eagle (Ms. Harriet Allen, WDFW, pers. comm. March 18, 2003), which has not yet occurred. Three bald eagle nests are known to occur within about 1.5 miles of the Westpark site. Two are located between 0.75 and 1 mile from the site to the northwest, and both have been known to be active in the last 4 years. These nests are located between Kitsap Lake and Ostrich Bay, and the nesting birds likely forage in these and other nearby bodies of water during the breeding season. A third bald eagle nest is located just over 1.5 miles northeast of the site west of Phinney Bay, and activity at this nest site was observed in 2005.

Eagles in this area likely forage along Oyster and Ostrich Bay as well as other portions of the Puget Sound, most likely concentrating in areas with significant use by adult salmonids or waterfowl. Eagles are not likely to perch in the trees on the Westpark property due to the highly urbanized nature of the site, though they may use the larger conifers north of the site along the south side of Oyster Bay.

As previously mentioned, nearby streams provide habitat for priority fish species, including chum, Coho, steelhead, and cutthroat. Information regarding fish resources is discussed in a separate report provided by The Watershed Company (2005).

Other Priority Species*:* The WDFW (1999) lists species as "Priority" for management and conservation other than those legally designated as endangered, threatened, and sensitive (WAC 232-12-011, -014). State Priority designations include candidate, monitor, and game species. Several of these species could potentially be found on the site (Table A.4) and are discussed below.

State Candidate: State candidate species are those fish and wildlife species that "will be reviewed by the WDFW (POL-M-6001) for possible listing as endangered, threatened, or sensitive according to the process and criteria defined in WAC-232-12-297" (WDFW 1999). Some state candidate species, including the pileated woodpecker, western toad, and merlin, are listed as potentially occurring in the types of habitat found on the site (Appendix C-4).

Another candidate species known to occur in the general area is the purple martin (WDFW 2005a), though they are not listed as occurring in habitat types found on-site. Of the previously mentioned species, only the pileated woodpecker was detected as present on the site, though this was only through observation of foraging sign on a few isolated snags in the wooded patch on the north end of the site. No birds were seen or heard calling during our field site visit and the site overall does not provide enough suitable habitat to sustain use by pileated woodpeckers. Relatively few snags are found on-site, and those observed are generally too small to provide nesting or roosting habitat for pileated woodpeckers. However, pileated woodpeckers are a large bird with high mobility, and they may use the site as a peripheral foraging area, and may focus their activity in the larger trees elsewhere in the vicinity of Oyster Bay.

Western toads have an extensive geographic range in Washington, but have become uncommon in western Washington lowlands, particularly in the more urbanized portions of this region (Leonard et al. 1993, Dvornich et al. 1997). This, coupled with the previously mentioned characteristics of the Westpark site that are not conducive to amphibian breeding or dispersal, make western toad presence on the site highly unlikely. Toads are often found in upland habitats far from potential breeding areas, but the roads surrounding the Westpark site make movement to the project site difficult and thus unlikely.

The merlin is a small falcon that is very uncommon in Washington, and is present more often as a migrant or winter resident than as a breeding bird (Wahl and Paulson 1994, Smith et al. 1997). They typically hunt small birds in open areas (Johnsgard 1990, Ferguson-Lees and Christie 2001). Due to their low abundance, it is unlikely that merlins would inhabit the Westpark site during any season, though it is not impossible. Any merlins in the area would most likely hunt the shoreline along the Puget Sound, possibly including Oyster Bay.

Purple martins forage aerially over open areas for flying insects, and tend to focus their foraging flights within the vicinity of their nest site. In natural settings, they tend to inhabit the nest holes created by woodpeckers or other primary cavity nesters, but also readily use nest boxes. The WDFW (2005a) identifies two locations for purple martins located 1 mile from the project site. The first is located to the southeast, where 1 or 2 pairs of purple martins have been observed nesting in the Puget Sound Naval Shipyard. The second location identifies a nest box installed at a private residence northeast of the Westpark project site, though no purple martins are known to nest at this location. This species is unlikely to occur on the Westpark property.

State Game: Priority game species are those native species managed for game hunting that require protective measures and/or management guidelines to ensure their perpetuation. Three state priority game species could use habitats found on the project site or vicinity (Table A.4).

These include the band-tailed pigeon, elk, and Columbian black-tailed deer. None of these species were detected on-site. No "regular" or "regular large concentrations of deer," as defined by WDFW (2005b), are mapped or known on or in the vicinity of the Westpark project site. Similarly, no breeding areas or mineral springs used by band-tailed pigeons are mapped by WDFW (2005a) or known to occur on the project site or nearby. Elk are largely absent in the heavily populated Puget Trough region (Johnson and Cassidy 1997), and thus the possibility of elk using the site is extremely unlikely.

Other Occurrences: In addition to the priority species discussed above, two additional priority species or habitats occur within about 1.5 miles of the project site (WDFW 2005a). The first is a harbor seal haulout location approximately 1.5-to-2 miles north of the site in Ostrich Bay. Harbor seals likely feed in Ostrich Bay and in large marine waters north of this area, but may also feed in Oyster Bay to the north of the Westpark project site. Seals use haulouts, in this case rafts and floats in Dyes Inlet, as places to bask and rest when they are not feeding. The second priority location is a regular large concentration of waterfowl, primarily American wigeon, mallards, goldeneye, and bufflehead, which is located slightly more than 1.5 miles northeast of the Westpark project site on the western side of Phinney Bay. Wintering ducks often congregate in large groups or "rafts" in foraging areas. In this case, birds are observed primarily at the mouth of inlet streams, where they presumably are able to feed on material flowing into the bay.

Wildlife Habitat Networks or Corridors

Wildlife habitat networks or corridors can take different forms, depending on the landscape. Corridors can be in the form of hedgerows or fencerows that connect woodlots in an agricultural landscape. In a fragmented forested landscape, corridors are linear patches of forest or forested riparian zones connecting larger patches of forest. They can also be non-forested linear patches, such as utility easements, or wetland and stream systems, in a landscape that is forested. In an urban environment, parks and native forestland can act as corridors connecting otherwise disjunct habitat for wildlife species.

Corridors can provide (1) habitat for certain species; (2) movement pathways; (3) extensions of foraging ranges for large, wide-ranging species; and (4) escape from predators (Harris 1984, Levenson 1981, Noss 1987, Noss and Harris 1986, Simberloff and Cox 1987). Corridors may also have disadvantages, such as: (1) providing conduits for disease, fire, pests, and exotic species; (2) increasing exposure to predation; and (3) potentially having negative genetic impacts on a population (Noss 1987, Simberloff and Cox 1987).

The Westpark site provides very little habitat for wildlife, with the exception of the forest patches on the north side of the property. Very little connectivity exists between these and adjacent patches of habitat, especially when the heavily used roadways that surround the site are taken into account. The landscape surrounding the Westpark site is highly urbanized, and wildlife habitat that is present exists primarily as isolated, fragmented patches with little connectivity. However, only Kitsap Way separates the largest forest patch on the north side of the Westpark site from another, highly fragmented and isolated stand of trees north of the road. This off-site forest patch is contiguous with an often sparse strip of trees that is found along the south and east shorelines of Oyster Bay. Although this does not likely provide significant wildlife habitat, it could possibly serve as a movement or dispersal corridor. This benefit likely does not extend to the Westpark site, except for those species, primarily birds, for which Kitsap Way does not pose a barrier.

3.5 FISHERIES RESOURCES

Site Features & Stormwater Discharge

The Westpark site is located in an upland area within the City of Bremerton, with unincorporated areas of Kitsap County lying to the west. Although the project site and area are located within Water Resource Inventory Area (WRIA) 15, no perennial or intermittent streams cross the site, and it does not immediately adjoin any freshwater lake or Puget Sound. As such there is no potential fish habitat within the bounds of the site.

Runoff from the Westpark site presently discharges along four distinct drainage pathways to four separate outfalls. Two of these are stormwater conveyances which outfall directly into Oyster Bay. A third contributes flow to Ostrich Bay Creek (WRIA #15-0226), which ultimately discharges into Ostrich Bay. The fourth discharge contributes to a drainage which outfalls to Sinclair Inlet. Each of these drainage pathways and associated discharge locations is described below.

<u>Oyster Bay Discharges</u>

The existing, primary discharge for stormwater runoff originating from within the project area consists of the outfall of a 30-inch pipe located along the shore of Oyster Bay less than 400 feet north of the intersection of Oyster Bay Avenue and Kitsap Way. Runoff from roof areas, driveways, and roads within the proposed project area currently discharges to this outfall without treatment or detention. The 30-inch-diameter pipe is anchored to the bottom and extends well into the bay. The mouth of this conveyance pipe is submerged at all times (even during low tides). The result is that standing water in the pipe intercepts and attenuates the energy of any high-velocity runoff and prevents scouring of the marine substrate areas surrounding the outfall. Storm runoff water discharged at that location is presently collected by the Oyster Bay Avenue and Kitsap Way drainage systems. On-site portions of the existing storm drainage system are predominantly closed, piped systems, intercepting storm runoff water primarily via a system of street catch basins along existing roadways.

The shoreline along the OHWM surrounding the existing outfall pipe location consists of angular rip-rap boulders amalgamated with cobble, gravel, sand, silt, and shell fragments. (Photographs of the area are included in the Fisheries Appendix). The slope of the intertidal area (OHWM to MLLW) is approximately 5 percent. Upland vegetation in the project area is described in Section 3.4, *Plants & Animals.*

The Watershed Company performed a substrate composition survey within the exposed intertidal zone during low (minus) tide conditions on December 3, 2006. At the time of survey, no potential Pacific surf smelt or sand lance spawning gravel/sand were present within the intertidal area. Starting at the OHWM (0 feet) there is an existing angular rock bulkhead. Angular rip-rap and natural boulders are scattered throughout the toe of the bulkhead. An assemblage of large shell fragments, small cobble, gravel, and sandy marine mud occur from 0-25 feet from the OHWM (15 percent boulder/rip rap mix, 20percent cobble, 30 percent gravel, 35 percent mud/sand mix). A small soil pit (approximately 18” deep) was dug at 25 feet from the OHWM to locate any benthic organisms (polychaetes, amphipods, bivalves, etc.) that might be present, however no such benthos were found.

A similar mixture of cobble, gravel, and sandy marine mud exists from 25-45 feet from the OHWM (80 percent muck-sand mixture, 10 percent gravel-cobble mix, 10 percent shell fragments). A few random fragments of rip-rap were found in this section, but no boulders were present. Another soil pit (approximately 18” deep) was dug at 45 feet from the OHWM and, again, no benthic organisms were found. Acorn barnacles (*Balanus glandula*) dominated the muddy terrain, attached to small cobble and gravel. An abundant amount of bivalve shells are scattered throughout the intertidal zone (species found include Nuttalls cockle [*Clinocardium nuttallii*], Pacific littleneck [*Protothaca staminea*], and softshell clam [*Mya arenaria*]). A few shells of the Pacific blue mussel (*Mytilus edulis*) are also found near the outfall pipe.

A muck/sand mixture is found at approximately 45-54 feet from the OHWM (75 percent sand; 15 percent muck; 10 percent shell fragments). Similarly to the previous test pits, an additional soil pit dug at 54 feet from the OHWM did not render any visible benthic organisms. The existing in-line catch basin for the outfall pipe is found approximately 63 feet from the OHWM. Acorn barnacles coat the inside and outer shell of the catch basin and surrounding rip rap. At the time of survey, water was observed flowing through the catch basin. Further observation located a moderate leak from the west side of the stilling well which discharged freshwater through a channel cut through the muddy sand, ending at the low water mark. Evidence of pipe deterioration was found at each joint of concrete pipe.

A larger concentration of mucky sand exists at 75-83 feet from the OHWM (50 percent sand, 45 percent muck, 5 percent shell fragments). Polychaetes (marine worms) were found in the soil pit dug at 83 feet below OHWM, and the test pit was soon inundated with water. From 83-101 feet, the inundated substrate became very difficult to negotiate (approximately 60 percent wet muck, 35 percent sand, 5 percent shell fragments), and therefore the existing outfall pipe was used to approach the remaining intertidal and subtidal zone. Sight distance was limited to the view given above outfall pipe. The water level at low tide was found at approximately 164 feet from OHWM at the time of the survey. Various organisms were found below the low tide mark including hermit crabs (*Pagurus* sp.), small fish (sculpins), barnacles, ochre sea stars (*Pisaster ochraceus*), anemones, and an assortment of gastropods (snails and limpets). The majority of observed organisms surrounded the area of submerged outfall pipe, and shell remnants of Dungeness crab were found throughout the mucky substrate. At the time of the survey, no macro aquatic vegetation was present in the intertidal or subtidal area of the proposed project. Again, there was no observation of available spawning habitat for Pacific surf smelt or sand lance throughout the project area.

A second discharge to Oyster Bay carrying Westpark site runoff occurs at the outlet of an 18-inch HDPE pipe sleeved within a 24-inch concrete pipe, located approximately 1,500 feet to the west of the primary discharge in the vicinity of Weslon Place (Wandling, pers. comm., November 30, 2005). The lowermost section of this drainage on-site, approaching Kitsap Way, flows along an intermittent, eroding swale with accumulations of litter. The inlet of the presumed culvert under Kitsap Way was entirely obscured with litter and organic debris during a site visit on November 30, 2005. There is no potential fish use of this swale.

Ostrich Bay Discharge

Ostrich Bay Creek (stream #15-0226), and its tributary (stream #15-0227), flow to the northwest of the site and discharge into Ostrich Bay. The lower section of Ostrich Bay Creek appears to receive some surface runoff from the westerly-most areas of the Westpark site (Basin OBC per Stormwater Report Appendix). According to the PHS data, Ostrich Bay Creek is used by cutthroat trout and coho and chum salmon. Under the City of Bremerton’s CAO classification system, Type 2 streams have perennial flow, are used by salmonids and/or have significant salmonid habitat, or flow directly into streams that are used by salmonids or have significant salmonid habitat. Under this definition, Ostrich Bay Creek is a Type 2 stream, because it has perennial flow and is used by salmonids (either condition being sufficient to justify the classification). Its tributary is also shown by the PHS data to be used by cutthroat trout, and so is also a Type 2 stream. However, as noted, Type 2 streams under the City's definition also include those streams that flow directly into streams that are used by salmonids, regardless of direct fish use. Ostrich Bay Creek is considered so polluted with fecal coliform bacteria that the Health District advises against public contact. However, fecal coliform level is an indicator of potential human health risks and is not necessarily an indicator of fish and wildlife habitat condition.

Sinclair Inlet Discharge

A small area at the southeast corner of the Westpark site drains via a network of swales, pipes, and ponds to Sinclair Inlet (Basin SE per the Stormwater Report Appendix). The drainage passes along various swales, through a number of car dealerships to the west of SR 3, and is piped under a municipal sewage treatment plant to a tidally influenced pond south of the plant. Its outfall is located at the intersection of State Routes 3 and 304, south of the Westpark site and west of the Bremerton Naval Shipyard. This drainage was not identified as a stream by either the PHS data maps or by the Catalog of Washington Streams and Salmon Utilization, Volume I Puget Sound (WDF 1975). Fish use of this drainage was not indicated by the PHS data or other sources, and is not likely to occur upstream of the pond below the treatment plant.

Aquatic Species

Table 3.5-1 summarizes known or expected sensitive or salmonid aquatic species use in the Oyster Bay, Ostrich Bay, Ostrich Bay Creek, Dyes Inlet, and Sinclair Inlet receiving waters as reported in the literature, indicated in state and federal agency maps and data, communicated by the local state biologists, and as observed in the field. A description of each species and its habitat requirements is provided in the Fisheries Appendix.

Aquatic Habitat Conditions and Fish Use

Puget Sound

Aquatic Habitat

Like much of Puget Sound, Oyster Bay, Ostrich Bay, Dyes Inlet, and Sinclair Inlet have all been impacted by a variety of human activities which have modified the shoreline condition and function, and which have impacted water quality. Shoreline development and clearing have reduced the amount of woody materials lining the shore, and artificial shoreline armoring has reduced substrate material supply, affecting the composition of many beach areas. Estuary areas of Chico, Clear, Barker, and Gorst Creeks have been impacted by road crossings near their mouths. These estuary areas comprise important habitat for the rearing of juvenile anadromous salmonid fish during their period of transition to sea water.

Table 3.5-1.
Aquatic Species Use of Area Waterbodies

Common Name *Scientific Name* Special status*	Project Area Waterbodies				
	Oyster Bay	Ostrich Bay Creek	Ostrich Bay	Dyes Inlet	Sinclair Inlet
Chinook salmon *Oncorhynchus tshawytscha* FT, SCA	✓[5,9]		✓[5,9]	✓[1, 2,4,5]	✓[1, 2,4,5]
Coho salmon *Oncorhynchus kisutch* FSC	✓[5,9]	✓[1]	✓[5,9]	✓[1, 2,4,5,8]	✓[1, 2,4,5,8]
Chum salmon *Oncorhynchus keta* None	✓[5]	✓[1]	✓[5]	✓[1, 2,4,5,8]	✓[1, 2,4,5,8]
Cutthroat trout *Oncorhynchus clarki* None	✓[5,6]	✓[1]	✓[5,6]	✓[1,5,6]	✓[1,5,6]
Steelhead trout *Oncorhynchus mykiss* None				✓[1, 2, 4,5]	✓[1, 2, 4,5]
Bull trout *Salvelinus confluentus* FT, SCA				None [3,5]	None [3,5]
River lamprey *Lampetra ayresi* SCA				✓	✓
Pacific lamprey *Lampetra tridentata* FSC				✓	✓
Sand lance *Ammodytes hexapterus* None			✓[1]	✓[1]	✓[1]
Surf smelt *Hypomesus pretiosus* None			✓[1]	✓[1]	✓[1]
Geoduck *Panopea abrupta* None				✓[1]	✓[1]
* Status Codes: FT=Federal Threatened, FSC=Federal Species of Concern, SCA=State Candidate Sources: [1] WDFW 2005, [2] WDF et al. 1993, [3] WDFW 1998, [4] WDFW 2002, [5] Haring 2000, [6] WDFW 2000, [7] USFWS 2005, [8] WDF 1975, [9] WDFW Jeff Davis 2005					

The Port Madison/Sinclair Inlet sub-basin (as identified in the *Regional Nearshore and Marine Chapter of the Puget Sound Salmon Recovery Plan)* extends from Sinclair Inlet northward through Port Orchard and along the east side of Bainbridge Island to Port Madison north of Bainbridge Island. Liberty Bay and Dyes Inlet are included in this area and also Oyster and Ostrich Bays in the project vicinity since they are part of Dyes inlet. Overall, this sub-basin is a very heavily developed area with 59percent of the shoreline armored. Small tributaries are numerous in the sub-basin, forming 39 pocket estuaries - the greatest concentration in Puget Sound. These pocket estuaries provide feeding, osmoregulation, and refuge for juvenile chinook, and their protection is listed as a Key Protection Action by the Technical Recovery Team.

Fish Use

Overall, the *Salmon and Steelhead Habitat Limiting Factors* report for WRIA 15 and the 2002 *Washington State Salmon and Steelhead Inventory* (WDF et al. 2002) list 13 stocks of salmonid fish distinct to the WRIA including one chinook, seven chum, two coho, two steelhead, and one cutthroat stock. Of these, six stocks are identified as being in the project area, including Dyes Inlet chum, Sinclair Inlet chum, and one stock each of chinook, coho, steelhead, and cutthroat. No stocks of pink or sockeye salmon were listed for WRIA 15 in any of the references reviewed, nor were bull trout. Juveniles of all the species of anadromous fish identified as being in the project vicinity are expected to occupy nearshore marine environments to some degree.

The Puget Sound Technical Recovery Team (TRT) has not identified any *historic* chinook populations as homing to streams in the Port Madison/Sinclair Inlet sub-basin, which, again, includes the Westpark project vicinity. However, many hatchery fish, including chinook, are released within the sub-basin area, for example from Gorst and Grover Creeks. Also, juvenile chinook from populations spawning in other regional sub-basins use the area for rearing, refuge, and marine acclimation (osmoregulation). Both juveniles and adults use the area as a migratory corridor.

Pacific and river lamprey may also be present in streams and salt water areas. Their presence and use are widespread at low levels, but not specifically documented (see Table 3.5-1).

Oyster and Ostrich Bays

Aquatic Habitat

Streams and marine waters in vicinity of Westpark are shown in Figure 3.5-1. Oyster Bay is an inlet of Ostrich Bay, in turn an inlet of Dyes Inlet in and near Bremerton on the east side of central Puget Sound. As described previously, Oyster Bay receives runoff from the Westpark project area directly via two existing storm drainage outfalls while Ostrich Bay receives storm runoff from the site via Ostrich Bay Creek. There are no fish-bearing creeks flowing into Oyster Bay at any point, so no important estuary areas are present in that bay. However, the mouth of Ostrich Bay Creek on Ostrich Bay forms one of the “pocket estuaries” as described by the TRT and mentioned above.

Oyster Bay is approximately 250 feet north of the site’s northeastern boundary and approximately 180 feet north of in-progress stormwater conveyance upgrades.

Fish Use

Chinook Salmon: Near the project area, the chinook salmon stock utilizing the marine waters of Dyes Inlet, and possibly venturing into Oyster and Ostrich Bays as juveniles for limited rearing, belong to the South Sound Tribs stock, spawning from September through October (WDFW 2002). These fish may spawn to a limited and undocumented degree in the larger Dyes Inlet streams, such as Chico Creek (WDFW 2005).

Adult or sub-adult chinook salmon are generally not expected to occur in Oyster or Ostrich Bays, but individuals may occasionally stray through the area. Because Oyster Bay is a “dead end” bay with no perennial freshwater inlet streams and only a small, non-chinook stream enters Ostrich Bay, it is not likely that either of these bays are heavily used by mature chinook salmon. A 2005 Priority Habitats and Species Map indicated that there are no chinook spawning streams flowing into either Oyster or Ostrich Bays. However, a WDFW area habitat biologist whose territory includes the project area in Kitsap County, stated that juvenile chinook salmon are expected to use the marine habitat in Oyster and Ostrich Bays on a limited basis for feeding and rearing (Jeff Davis, pers. comm., June 13, 2005). As such, juvenile chinook salmon in Oyster Bay may occasionally pass by the mouth of the stormwater effluent pipe draining the majority of the Westpark site area. They would also occasionally be present in Ostrich Bay near the mouth of Ostrich Bay Creek, which also carries some site runoff.

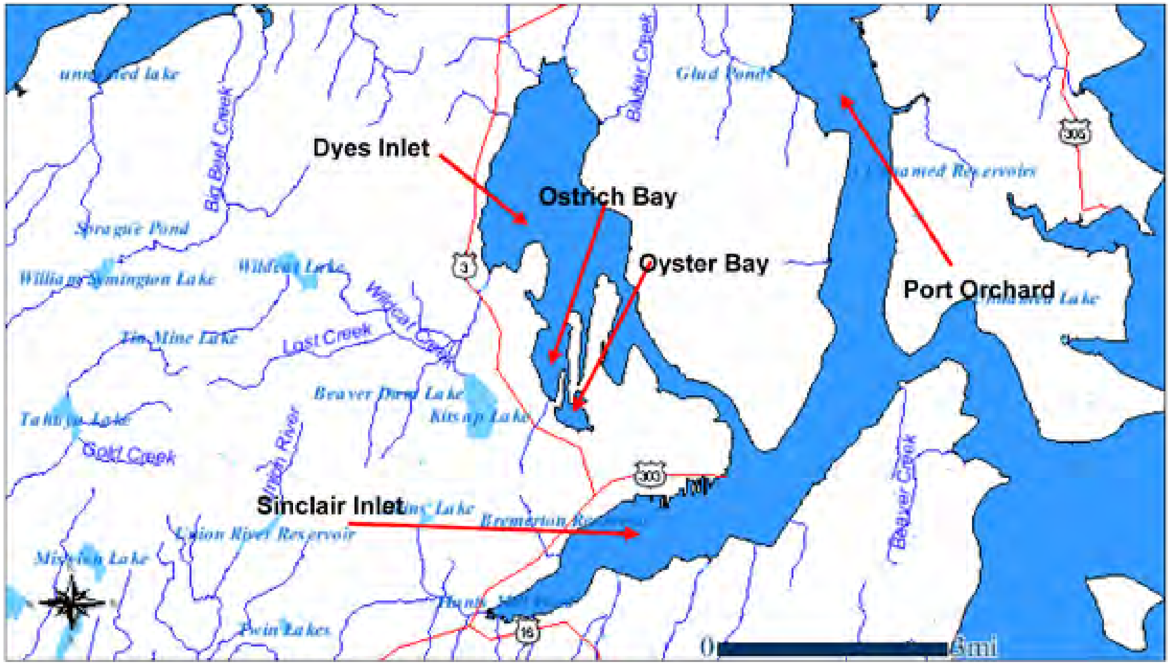


Figure 3.5-1 Vicinity Streams and Marine Areas

Coho Salmon: Coho salmon utilizing streams and nearshore areas in the project vicinity belong to the East Kitsap Coho stock. This is a healthy stock, with fish spawning in all suitable and accessible streams along the eastern shore of the Kitsap Peninsula from late October through late December (WDFW 2002). Adult or sub-adult coho salmon are generally not expected to occur in Oyster Bay, but, like chinook, individuals may occasionally stray through the area. Because Oyster Bay is a "dead end" bay with no perennial freshwater streams flowing in, it is not likely to be heavily used by mature coho salmon. A limited number of coho may spawn in Ostrich Bay Creek, however, as indicated by the 2005 Priority Habitats and Species Map and Data. The PHS data also indicated that coho salmon spawn in other Dyes Inlet streams, including Chico, Clear, and Barker Creeks and their tributaries. A WDFW habitat biologist stated that juvenile coho salmon are expected to use the marine habitat in Oyster and Ostrich Bays for feeding and rearing on a fairly routine basis (Jeff Davis, pers. comm., June 13, 2005). Like chinook, juvenile coho salmon in Oyster Bay may occasionally pass by the mouth of the stormwater effluent pipe draining a large portion of the Westpark site. They would also be present in Ostrich Bay Creek, which carries some site runoff, and Ostrich Bay.

Chum Salmon: The South Sound – Dyes Inlet/Liberty Bay chum salmon stock is a fall stock whose status is healthy as reported in both the 1992 and 2002 SASI reports. Fish from this stock spawn during November in Dyes inlet tributaries Chico, Barker, and Clear Creeks as well as in Liberty Bay area Dogfish and Scandia Creeks. This is a native stock with composite production; some fish are propagated at a Suquamish Tribal hatchery. Spawning escapements for this stock are reported as high as approximately 115,000 fish in 1998, and orca whales are estimated to have consumed approximately 18,000 adult chum salmon in Dyes Inlet in 1997 (WDFW 2002). Two chum salmon carcasses were seen near the mouth of Ostrich Bay Creek on 30 November 2005. Juvenile chum salmon likely make short-term use of all nearshore areas in the project vicinity for rearing.

Bull Trout: According to the *Salmon and Steelhead Habitat Limiting Factors* report for WRIA 15 (Haring, 2000), "There is no known bulltrout (char) presence in the low elevation streams or marine areas of East WRIA 15." No bull trout stocks are identified as using this area in the 1998 WDFW *Bull Trout Appendix to the Salmonid Stock Inventory* (WDFW 1998). The USFWS county-wide species lists direct information requesters to the WDFW Priority Habitats and Species Maps for details about potential sensitive species in a specific project area, and the June 2005 WDFW maps do not indicate the presence of bull trout in the project area.

Steelhead Trout: Limited numbers of East Kitsap winter steelhead spawn in Dyes Inlet tributaries Chico, Clear, and Barker Creeks from February through mid-April (WDFW 2002). The stock status and escapements for this native stock with wild production are unknown.

Cutthroat Trout: Cutthroat trout can be expected to inhabit virtually all accessible streams and nearshore areas within the project vicinity to some extent, and resident populations can also occur upstream of migration barriers. The Western South Sound Coastal Cutthroat stock inhabits the region, and its status is unknown (WDFW 2000). Cutthroat trout presence in project vicinity streams is also indicated by the state Priority Habitats and Species maps and data.

Non-Salmonids: Near the project area, sand lance and surf smelt spawning areas have been mapped along the nearshore of Ostrich Bay, including near the entrance to Oyster Bay (WDFW 2005). Geoduck and other extensive clam beds are not mapped in Oyster or Ostrich Bays by the PHS data, but geoduck, hardshell intertidal, and hardshell subtidal clams are mapped near the entrance to Dyes Inlet. Pacific and river lamprey may also be present in the streams and salt water areas in the project vicinity.

Sinclair Inlet

<u>Aquatic Habitat</u>

Sinclair Inlet extends to the southwest of downtown Bremerton and the Naval Shipyard, in turn southwest of Bainbridge Island and Port Orchard, on the east side of central Puget Sound. Several fish-bearing streams flow into Sinclair inlet, including Gorst, Anderson, and Blackjack Creeks, with the most extensive estuary area occurring near the mouth of Gorst Creek at the extreme southwest end of the inlet (Figure 3.5-1).

As stated above in regard to Oyster Bay and Puget Sound generally, habitat in and around Sinclair Inlet has been impacted by a variety of human activities which have modified the shoreline condition and function and have impacted water quality. Most notably, downtown Bremerton and the Puget Sound Naval Shipyard line the north central shore of the inlet, and major highways, including SRs 3, 304, and 16, line the shoreline of virtually the entire inlet. Relatively little native vegetation occurs near the water's edge. Woody materials along the shore are relatively scarce due to the overall lack of a forested shoreline condition, and artificial shoreline armoring primarily associated with highway embankments has affected substrate material condition and supply.

<u>Fish Use</u>

Chinook Salmon: As for Dyes Inlet and its associated bays including Oyster and Ostrich Bays, the chinook salmon stock utilizing the marine waters of Sinclair Inlet can be identified as belonging to the South Sound Tribs stock. The nearest stream to the Westpark site used by significant numbers of chinook is Gorst Creek, a tributary of Sinclair Inlet approximately three miles overland from the site. Gorst Creek chinook are propagated artificially by the Suquamish Tribe.

Coho Salmon: Coho salmon utilizing Sinclair Inlet and its tributary streams also belong to the East Kitsap Coho stock. As stated above, this is a healthy stock, with fish spawning in all suitable and accessible streams along the eastern shore of the Kitsap Peninsula from late October through late December (WDFW 2002). Coho salmon are known to spawn in Sinclair Inlet tributaries Gorst, Anderson, and Blackjack Creeks (Williams et al, 1975, WDFW 2005).

Chum Salmon: The South Sound – Sinclair Inlet chum salmon stock is a fall stock whose status is healthy as reported in both the 1992 and 2002 SASI reports. Fish from this stock spawn from December through early January (later than the Dyes Inlet/Liberty Bay chum) in Sinclair Inlet tributaries Gorst, Anderson, Ross, and Blackjack Creeks. This is a native stock with wild production. Spawning escapements for this stock are typically several thousand fish, ranging from 477 to 6,690 during the period 1986-2001 (WDFW 2002). Juvenile Sinclair Inlet chum salmon likely make short-term use of Sinclair Inlet nearshore areas for rearing.

Bull Trout: As described above for Ostrich and Oyster Bays, there is no known bull trout presence in the low elevation streams or marine areas in the project vicinity.

Steelhead Trout: Limited numbers of East Kitsap winter steelhead spawn in Sinclair Inlet tributaries Gorst and Blackjack Creeks from February through mid-April (WDFW 2002). The stock status and escapements for this native stock with wild production are unknown.

Cutthroat Trout: As described above for Ostrich and Oyster Bays, cutthroat trout can be expected to inhabit virtually all accessible streams and nearshore areas within the project vicinity.

Non-Salmonids: Sand lance and surf smelt spawning areas have been mapped along the south shore of Sinclair Inlet, just west of Port Orchard, south of and across the inlet from the mouth of the drainage along SR 3 which drains a portion of the Westpark site (WDFW 2005). An extensive hard shell intertidal clam bed has also been mapped in that same area. A few, scattered areas of sand lance and surf smelt spawning have also been mapped along the east side of the City of Port Orchard. Pacific and river lamprey may also be present in the streams and salt water areas in the project vicinity.

3.6 NOISE

Noise Level Terminology

Noise is sometimes defined as unwanted sound. This section makes no such distinction, and the terms noise and sound are used more or less synonymously. The human ear responds to a very wide range of sound intensities. The decibel (dB) scale used to describe and quantify sound is a logarithmic scale that provides a convenient system for considering the large differences in audible sound intensities. On this scale, a 10-dB increase represents a perceived doubling of loudness to someone with normal hearing. Therefore, a 70-dB sound level will sound twice as loud as a 60-dB sound level.

People generally cannot detect sound level differences (increases or decreases) of 1 dB in a given noise source. Although differences of 2 or 3 dB can be detected under ideal laboratory conditions, such changes are difficult to discern in an active outdoor noise environment. A 5-dB change in a given noise source or environment would likely be perceived by most people under normal listening conditions.

As mentioned above, the dB scale used to describe noise is logarithmic. On this scale, a doubling of sound-generating activity (i.e., a doubling of the sound energy) causes a 3-dB increase in average sound produced by that source, not a doubling of the loudness of the sound (which requires a 10-dB increase). For example, if traffic along the road is causing a 60-dB sound level at some nearby location, doubling the traffic on this same road would increase the traffic-related sound level at this same location to 63 dB. Such an increase might not be discernible in a complex acoustical environment.

When addressing the effects of noise on people, it is necessary to consider the "frequency response" of the human ear, or how well people hear sounds of different frequencies. Sound-measuring instruments are therefore often programmed to "weight" sounds based on the way people perceive different frequencies. The frequency-weighting most often used to evaluate environmental noise is A-weighting, and measurements using this system are reported in "A-weighted decibels" or dBA. All sound levels discussed in this evaluation are reported in A-weighted decibels.

For a given noise source, a number of factors affect the sound transmission from the source, which in turn affects the potential noise impact. Important factors include distance from the source, frequency of the sound, absorbency and roughness of the intervening ground surface, the presence or absence of obstructions and their absorbency or reflectivity, and the duration of the sound. The degree of impact on humans also depends on who is listening and on existing sound levels.

Federal regulatory agencies and some local jurisdictions use the equivalent sound level (L_{eq}) and the day-night sound level (L_{dn}) to evaluate noise impacts. The L_{eq} is the sound level that if held constant over a specified time period would have the same sound energy as the actual, fluctuating sound that occurred over that time interval. As such, the L_{eq} can be considered an energy-average sound level. When using L_{eq}, it is important to identify the time period being considered. $L_{eq(24)}$, for example, is the equivalent sound level for a 24-hour period. The day-night sound level, L_{dn}, is similar to the $L_{eq(24)}$, except that a 10 decibel penalty is added to sound levels between 10 p.m. and 7 a.m. to account for potential sleep interference.

Applicable Noise Regulations

Bremerton Municipal Code

The site and surrounding property are on land regulated by the City of Bremerton. Therefore, noise rules and regulations established in the City of Bremerton Municipal Code (BMC) apply.. BMC 6.32.040(a) establishes limits on sounds crossing property boundaries based on the district of the sound source and the receiving properties. BMC Chapter 6.32.010(c) defines District I as residentially-zoned properties, District II as properties zoned for commercial or business use, and District III as properties zoned for industrial use. The allowable sound levels for the various combinations of source and receiving Districts are displayed in Table 3.6- 1.

Table 3.6- 1.
Bremerton Maximum Permissible Environmental Noise Levels (dBA)

District of Sound Source	District of Receiving Property Within the City of Bremerton		
	District I Day/Night[a]	District II	District III
District I	55/45	57	60
District II	57/47	60	65
District III	60/50	65	70

[a] A 10-dBA nighttime reduction for District I (Residential) receiving properties applies between 10 p.m. and 7 a.m.

Source: Bremerton Municipal Code Chapter 6.32

The Bremerton noise limits can be exceeded for certain periods of time: 5 dBA for no more than 15 minutes in any hour, 10 dBA for no more than 5 minutes of any hour, or 15 dBA for no more than 1.5 minutes of any hour. Sometimes these exceptions are described in terms of the percentage of time a certain level is exceeded using a statistic called an interval "L_n." For example, the hourly L_{25} represents a sound level that is exceeded 25 percent of the time, or 15 minutes in an hour. Similarly, $L_{8.33}$ and $L_{2.5}$ are the sound levels that are exceeded 5 and 1.5 minutes in an hour, respectively. At no time can the allowable sound level be exceeded by more than 15 dBA, represented by an L_{max} noise limit.

Bremerton's regulations identify a number of specific exemptions to the maximum permissible environmental noise levels, including the following:

> Sounds created by motor vehicles when regulated by Chapter 173-62 of the Washington Administrative Code (WAC) [BMC 6.32.040(4)(i)]
>
> Sounds created by motor vehicles, licensed or unlicensed, when operated off public highways except when such sounds are received in District I. [BMC 6.32.040(4)(i)]
>
> Sounds created by temporary construction sites as a result of construction activity, with the exception of such noise received at District I receivers between 10 p.m. and 7 a.m. [BMC 6.32.040(3)(i)]

Department of Housing and Urban Development Regulations

Noise criteria established by the U.S. Department of Housing & Urban Development (HUD) are applicable to this project, since federal approval is required for disposition of the property and/or federal funding may be used. For new developments, HUD bases its approval of residential projects partially upon whether it considers the existing noise environment acceptable for human habitation.

HUD has established three zones for describing noise conditions under their criteria: an "acceptable" zone where all projects may be approved; a "normally unacceptable" zone where mitigation measures would be required and where each project needs to be individually evaluated for approval or denial; and an "unacceptable" zone in which projects are not, as a rule, to be approved (HUD, 1985). Table 3.6- 2 summarizes HUD noise guideline levels and their corresponding noise zones for housing developments.

Table 3.6- 2.
HUD Noise Guidelines

HUD Acceptability Standards	Day-Night Average Sound Level (L_{dn}, dBA)	Special Approvals and Requirements
Acceptable	Above 55 but Not Exceeding 65 [(a)]	None
Normally Unacceptable	Above 65 but Not Exceeding 75	Special Approvals, Environmental Review, and Attenuation [(b)]
Unacceptable	Above 75	Special Approvals, Environmental Review, and Attenuation [(c)]

(a) HUD recognizes EPA's recommended level of L_{dn} = 55 dBA as a goal for outdoor residential areas to protect the public health and welfare with an adequate margin of safety. However, the levels recommended by EPA are not standards and do not take into account cost or feasibility. For the purposes of this regulation, and to meet other program objectives, sites with a day-night average sound level of 65 dBA and below are acceptable and allowable.
(b) 5 dBA additional attenuation required for sites above 65 dBA but not exceeding 70 dBA, and 10 dBA additional attenuation required for sites above 70 dBA but not exceeding 75 dBA
(c) Attenuation measures to be submitted to the Assistant Secretary for Community Planning and Development on a case-by-case basis.

Source: *The HUD Guidebook*, 1985

The HUD guidelines were established for sound levels at *exterior* residential locations. HUD noise policy is further clarified for interior locations as follows: "It is a HUD goal that the interior auditory environment shall not exceed a day-night average sound level of 45 decibels. Attenuation measures shall be employed where feasible. Emphasis shall be given to noise sensitive interior spaces such as bedrooms." (HUD, 1985)

The guidelines summarized in Table 3.6-2 also apply at "other outdoor locations where it is determined that quiet outdoor space is required in an area ancillary to the principal use on the site." (HUD, 1985) Other outdoor locations may include play areas, open spaces, or parks incorporated into residential development.

Existing Conditions

Sound levels on the project site are dominated by traffic noise from Kitsap Way and SR-3. Noise from vehicles on Oyster Bay Avenue and Arsenal Way is audible near these roads but not typically dominant. On-site noise sources include maintenance vehicles and equipment, local traffic, leaf blowers, and other miscellaneous residential neighborhood noise.

Existing sound levels on the project site were measured in November 2005. Measurements included long-term (>=24 hours) and short-term monitoring at several locations within the project site to characterize the existing acoustic environment. Sound level measurement (SLM) locations were selected based on their proximity to either existing or proposed residential use areas that could be affected by noise from on-site and off-site sources. The sound level measurements are summarized in Table 3.6-3 and the measurement locations are depicted in Figure 3.6-1 (which is based on the existing configuration of the project site).

Measurements and observations indicate receivers near the southwestern edge of the Westpark site are exposed to traffic noise from SR-3 at levels generally considered unsuitable for residential use. Sound levels are slightly lower along the northern edge of the site, but are still above normally acceptable levels at many locations due to traffic along Kitsap Way. Sound levels at locations in the interior portions of the site are more typical of an urban residential environment, with traffic noise from SR-3 and Kitsap Way audible throughout. No other major sources of noise affecting existing on-site residential receivers were observed.

Table 3.6-3.
Measured Existing Sound Levels (dBA)

SLM Location	Length of Measurement	Hourly L_{eq} Range		L_{dn} [b]
		Day[a]	Night[a]	
SLM-1	48 hours	67 - 74	60 - 73	74
SLM-2	48 hours	69 - 74	60 - 74	75
SLM-3[c]	24 hours	63 - 68	55 - 66	69

[a] The ranges are shown for daytime hours (7 a.m. to 10 p.m.) and nighttime hours (10 p.m. to 7 a.m.).

[b] The reported L_{dn} levels are based on measurements over two 24-hour periods (with the exception of SLM 3). For both SLM1 and SLM2, L_{dn} values for each of the two 24-hour periods were identical.

[c] The sound level meter at this location was tampered with midway through the 48-hour sound level measurement. About 24 hours of data were recorded and considered complete prior to the meter being incapacitated. The recorded data not were affected by vandalism.

Source: Sound level measurements by Geomatrix Consultants, Inc., 2005

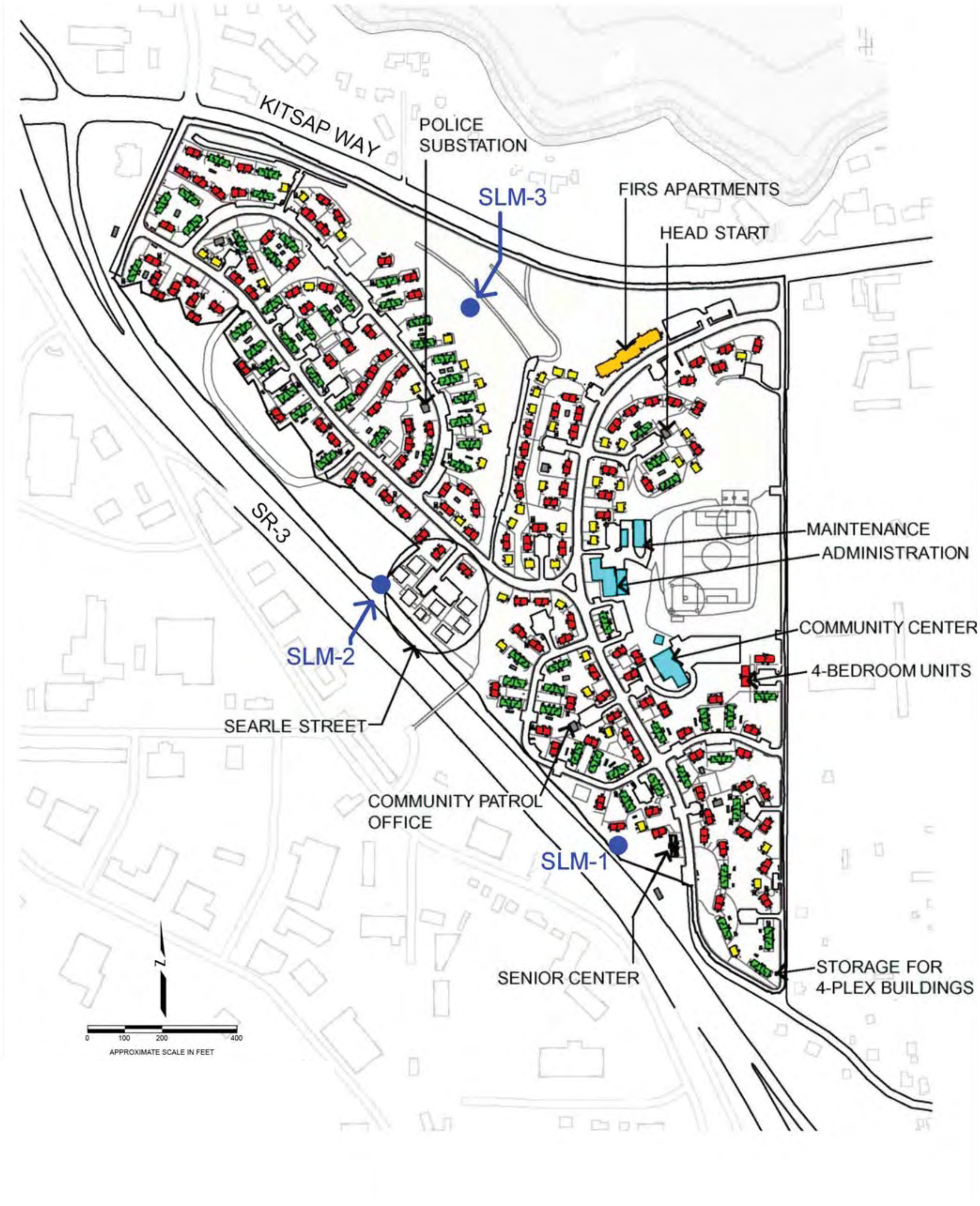


Figure 3.6-1 Sound Measurement Locations

3.7 ENVIRONMENTAL HEALTH

This section describes existing environmental site conditions. Primary information for this section was gathered from the *Phase I Environmental Site Assessment* (Associated Earth Sciences Inc., January 2006); *Phase I Environmental Site Assessment Addendum* (Associated Earth Sciences Inc., June 2006); and an *Asbestos and Lead-Based Paint Survey* (Wolfe Environmental Consulting, 2006).

Phase I ESA

The purpose of a Phase I Environmental Site Assessment (ESA) is to identify the presence or likely presence of hazardous substances or petroleum products under conditions that indicate a past, present or threatened release into structures, the ground, ground water or surface water on the site. The Phase I ESA was conducted using the American Society for Testing and Materials (ASTM): E-1527-00, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*.

Sources of information used for the Phase I ESA included the following:

- a review of regulatory agency databases for the site and surrounding properties, and relevant records of the Department of Ecology;
- research of past site use using historical records, interviews, aerial photographs and assessor records;
- review of published maps; and
- direct observation of existing conditions and activities.

The history of the Westpark site is contained in Section 3.11, *Historic & Cultural Resources*.

Database Search

A search of regulatory databases identified numerous locations within an approximate 1.5 mile radius of the site. Such listing may reflect the reported presence of an underground storage tank a release, and/or sites that have undergone or are planned for some level of cleanup activity. Three sites – two on the Westpark site and one nearby – were initially identified for further investigation.

- *BHA Maintenance Building (110 Russell Road):* Two 1,000 gallon underground storage tanks were removed from the west side of the maintenance building in 2003. Household amounts of paint, paint thinner, petroleum products and lawn care products were observed inside the maintenance building. Larger quantities of petroleum products, degreaser, tires, and car batteries were observed outside the maintenance building; these products are in current use and are stored on concrete pads. Based on reports of removal and cleanup, this site is not considered to be an environmental hazard. All the above products should be properly disposed of prior to redevelopment.

- *31 Gaylan Drive – Formerly Bremerton Police Department Precinct Office, Currently Teen Center*: A letter dated 1991 requested removal of a 10,000 gallon underground storage tank at this address. Based on interviews, however, is considered unlikely that an underground tank existed at the Gaylan Drive location, and was probably located at the Police Department office on Auto Center Way.

- *VIP Landfill (Oyster Bay Avenue and Russell Road, south of the gasoline service station*): This landfill operated from the 1930's until 1977 and was not properly closed pursuant to state requirements. According to Kitsap County Health District information, the landfill contained a variety of wastes, including construction debris, industrial debris, wood waste, vegetation, tires, appliances, scrap metal, automobiles, auto batteries, lead and other rubbish. Ecology reported in 1986, in a letter to the U.S. Environmental Protection Agency, that heavy metal and organic contaminants were found, but the investigation did not find any evidence of contaminant migration off the site through ground water or leachate Based on this information, the landfill is not considered to be an environmental hazard to the Westpark site.

Playfield

Interviews indicated that the playfield located adjacent to the Community Center, on the eastern portion of the property, was used by the City of Bremerton as a landfill from the 1930's until about the early or mid 1940's. Aerial photographs from 1946 show the landfill area covered and inactive. The site may have been used for construction debris generated by the original construction of military housing on the site. A recent geotechnical study included borings and test pits in the area of the playfield (see Section 3.1, *Earth*). Debris was found in one boring and test pit, and included glass, metal, rubber and household refuse. The Phase I ESA report recommends that further studies of the landfill area be performed to determine whether hazardous substances are present in the landfill and/or have impacted soils and groundwater.

An assessment of the landfill is being conducted as of this writing. The assessment includes installing four monitoring wells to collect water samples for testing; and installation of four gas probes to determine if methane gas is present. Additional geotechnical and archaeological investigations are also being coordinated with these activities. New information concerning the landfill will be reported in the Final EIS.

The presence of gas at the off-site VIP Landfill will also be evaluated, to determine if it could potentially affect structures on the Westpark site.

Findings

The Phase I ESA did not observe any obvious indications of surficial staining, dumping or environmentally significant releases of chemicals on the Westpark site. No obvious visual evidence of hazardous materials contamination was discovered in surficial areas of the site.

A number of on-site and off-site properties of potential environmental significance were identified in the database searches. Upon further investigation, however, each of these sites was determined to be non-hazardous to the Westpark site because of their distance, position in the local watershed, or because of remediation status.

Asbestos & Lead-Based Paint

Interviews conducted for the Phase I ESA Addendum identified that surveys and abatement for asbestos materials and lead-based paint have occurred since 1997. Asbestos was documented in most residential units, but approximately 75 percent has previously been abated or encapsulated. Lead-based paint was also documented in the interior and exterior of all residential units

A survey was conducted of 63 residential units on Gaylan Drive and Baer Boulevard in January, 2006 (Wolfe Consulting, 2006). Findings are based on visual observations and laboratory analysis of building material and paint chip samples. A total of 442 samples of suspected asbestos-containing material were analyzed, and regulated quantities of asbestos were identified in 27 of the samples, primarily in vinyl floor tiles. Ninety-three samples of paint were obtained from the interior and exterior walls and trim of units. Sixty-two of the samples were found to contain lead concentrations above the detection limit but at relatively low levels; findings varied among paint colors and individual units.

Wind Blown Arsenic & Lead

Many locations in the Central Puget Sound area have been affected by elevated levels of arsenic and lead in soils. The cause in most cases in arsenic and lead emissions from the former ASARCO smelting operation in Tacoma which were dispersed by winds and has settled in soils. Based on information from the Kitsap County Department of Health (http://www.kitsapcountyhealth.com/tacoma_smelter_project.htm), no lead concentrations levels have been found to be above the level of concern that poses a risk to human health. In regard to arsenic, sampling has not identified lead levels in soils that are considered to pose an immediate health risk or concern. The highest arsenic level measures in Kitsap County is 37 parts per million (ppm), compared to 1,050 ppm in Pierce County and 460 ppm on Vashon Island.

3.8 LAND USE & SOCIOECONOMICS

3.8.1 Land Use

Vicinity Land Uses

The project site is located in the western portion of the City of Bremerton, in Kitsap County, Washington. The site encompasses an area of approximately 82 acres and is triangular in shape. The project site is generally bounded by Kitsap Way on the North, Oyster Bay Avenue on the east, Arsenal Way on the south, and SR 3 on the west (see Figures 2-1 and 2-2). Oyster Bay lies approximately ¼ mile north of the site, across Kitsap Way. Bremerton's City Center is located approximately 3 miles to the east.

The surrounding area is a mixture of single family residential neighborhoods (to the east, and west of Kitsap Way adjacent to the shoreline), commercial and retail uses (along Kitsap Way), and freeway commercial and light industrial uses (south of SR 3). A city public works operations and maintenance facility is located along Oyster Bay Avenue, east of the site. The City's sewage treatment plant is located on Oyster Bay Avenue further to the south. Forest Lawn Cemetery is located west of the site

Surrounding residential neighborhoods are developed with single family homes at urban densities, ranging from 5 to 10 dwelling units per acre. These neighborhoods are mostly developed, although there are infill sites with development potential scattered throughout.

Commercial uses along Kitsap Way are generally auto-oriented in nature and include a mix of neighborhood-scale strip shopping centers and large footprint buildings, including several supermarkets, motels, convenience stores, restaurants, gas stations

Land uses south and west of SR 3 are light industrial and freeway-oriented commercial in nature. These include warehousing, light manufacturing and auto repair. Residential uses are located west of the industrial corridor.

Existing Land Uses On-Site

The existing Westpark public housing community was built in 1941 and is the remnant of a larger World War II-era housing project that was built as temporary housing for shipyard workers. The site currently contains 631 residential units, primarily one-story duplex and four-plex in design, and a 60-unit apartment building for elderly and disabled residents. All units are rental housing. Some have been converted to community uses, such as laundry facilities. A 72-unit assisted living facility (Bay Vista Commons) is currently under construction.

Existing units are located in one-story structures that each contains one to two residential dwelling units. All existing units are subsidized for low income families and individuals.

The Westpark site also contains several buildings that contain non-residential uses (approximately 58,960 square feet total). These include the community center, BHA's administrative offices, a senior center, teen center, Head Start, a maintenance building, storage building and laundry facilities. The community center (18,000 square feet) accommodates a broad range of community activities and services for youth and adults, some of which are funded by HUD.

The site contains several areas of open space and concentrations of significant trees. These areas are located on the north, adjacent to Kitsap Way, on the east, adjacent to Russell Road, and along the site boundary adjacent to SR 3. A ball field is also located adjacent to the community center. The site of the ball field was previously used as a landfill; environmental conditions are discussed in Section 3.7 of this Draft EIS.

Land Use & Zoning Designations

The City of Bremerton Comprehensive Plan Land Use Map (City of Bremerton, 2004) designates the Westpark site as a *Public Sector Redevelopment Site (PSRC).* See Figure 3.8-1. These large sites provide potential for innovative redevelopment by public entities. Redevelopment is intended to meet a unique community need, such as providing affordable housing. Specific land uses and development density are established in sub-area plans prepared for each site. PSRC sites are intended to be mixed use but primarily residential in nature with significant open space; commercial uses may be a secondary development component.

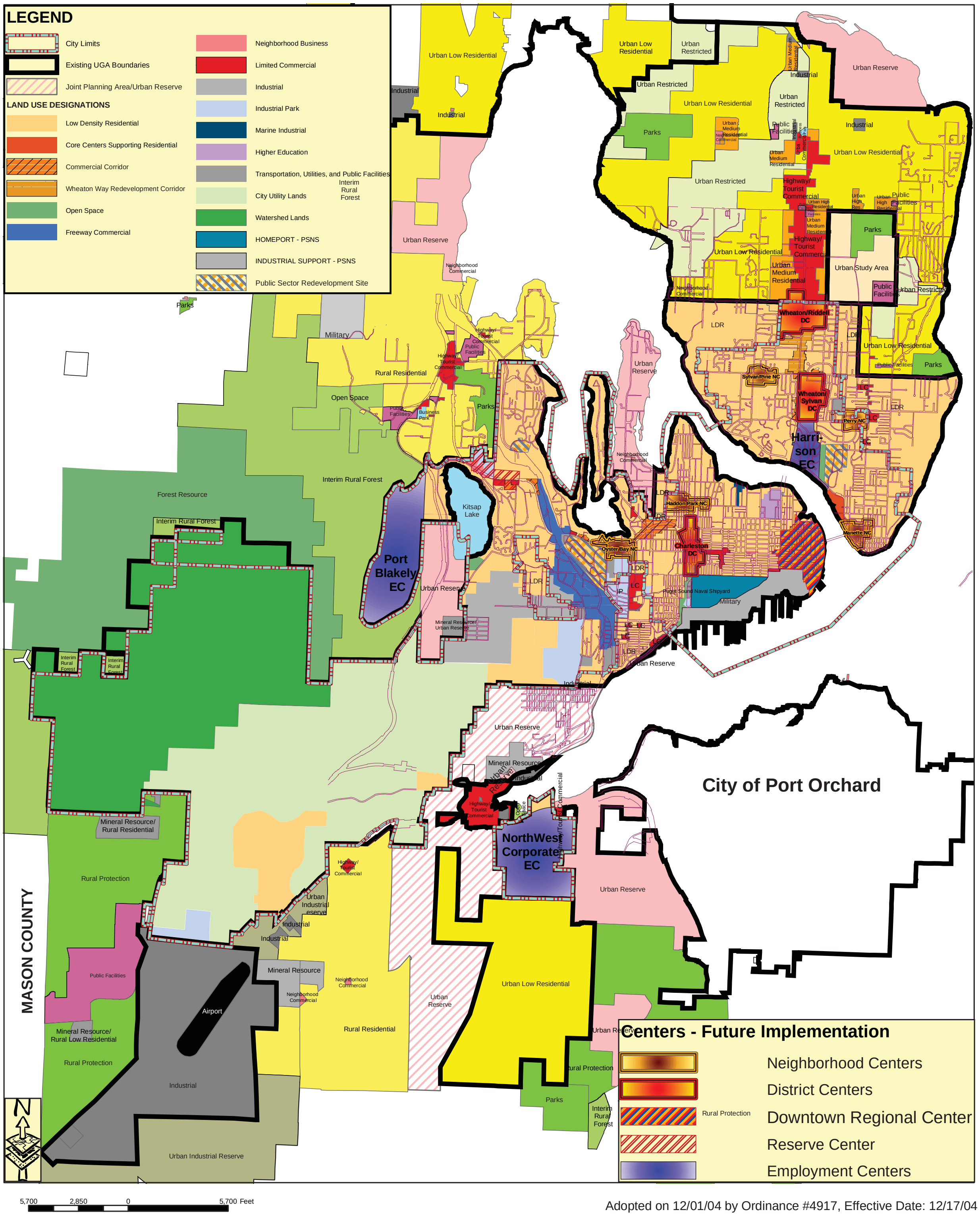
Zoning of the Westpark is *Master Development (MD),* as shown on Figure 3.8-2. The MD zone provides a vehicle for coordinating the redevelopment of PSRC sites through preparation of sub-area plans. Such plans must be developed through a public process, must be consistent with Comprehensive Plan goals and policies, and must establish development standards and design guidelines for the applicable site. A sub-area plan meeting these requirements was adopted by the Bremerton City Council in February, 2007. Westpark Land Use is shown in Figure 3.8-3.

The area along Kitsap Way immediately to the east of the site (approximately 37 acres) is designated and zoned as the Oyster Bay *Neighborhood Center (NC).* Neighborhood Centers are intended to develop with a mix of single family and multi-family residential uses – in mid-rise buildings at densities up to 20 dwelling units per acre -- and smaller-scale commercial uses that serve the surrounding neighborhood. The Oyster Bay Neighborhood Center is intended to develop in conjunction with redevelopment of the Westpark site.

Lands adjacent to SR 3 west of the site and along Auto Center Way are designated and zoned *Freeway Corridor (FC).* This designation accommodates high intensity commercial activities that serve the region, including large-scale (“big box”) retail uses, activities that generate large amounts of traffic, and those requiring large outdoor display areas (such as for autos).

The portion of Oyster Bay Way immediately east of the site, including the City’s public works operations and maintenance facility, is designated and zoned *Industrial Park (IP)*. These areas are intended to accommodate industrial, office and light manufacturing activities in well planned, landscaped complexes.

City of Bremerton Land Use Map



Adopted on 12/01/04 by Ordinance #4917, Effective Date: 12/17/04

Figure 3.8-1 Bremerton Comprehensive Plan Land Use Map

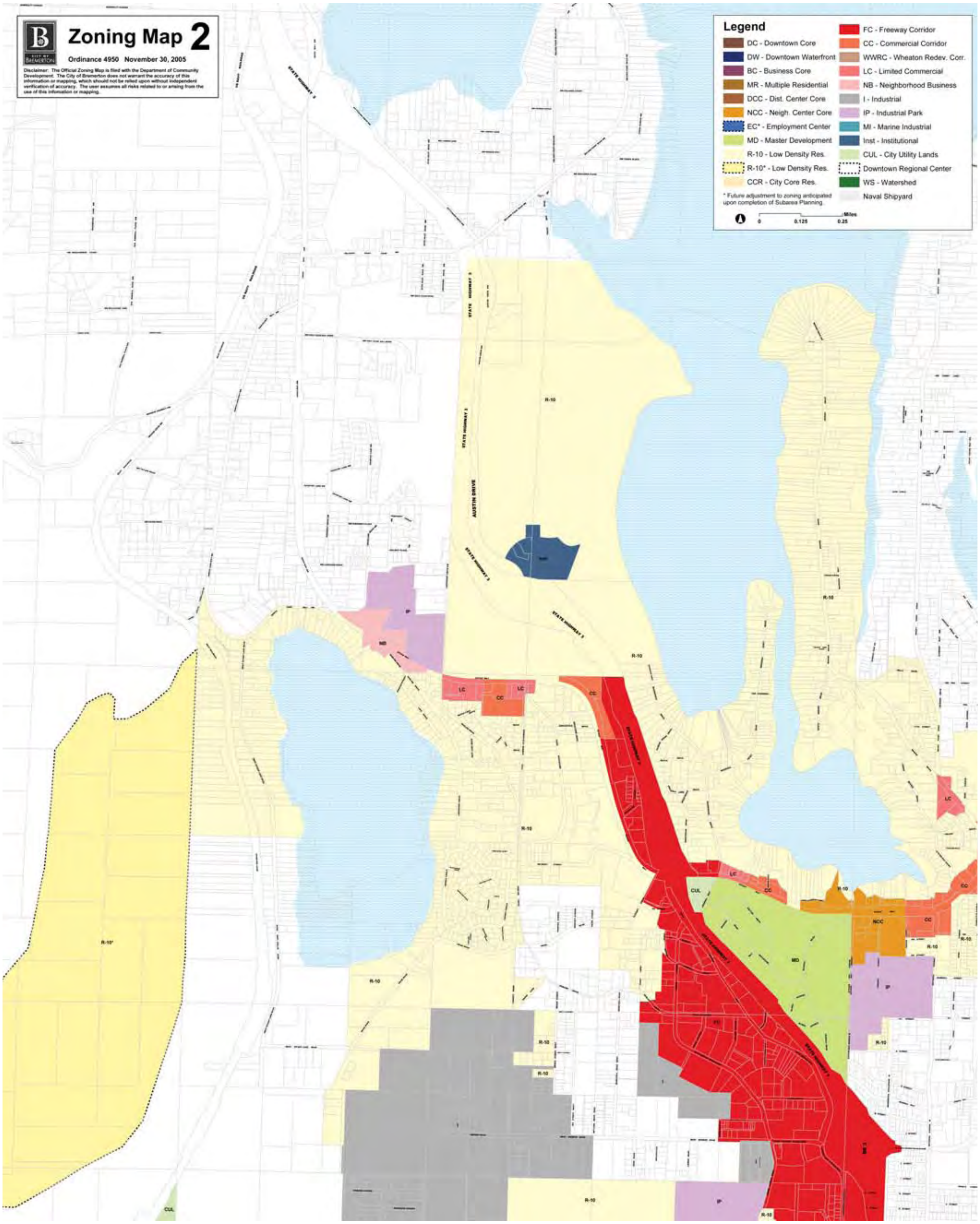


Figure 3.8-2 Bremerton Zoning Map

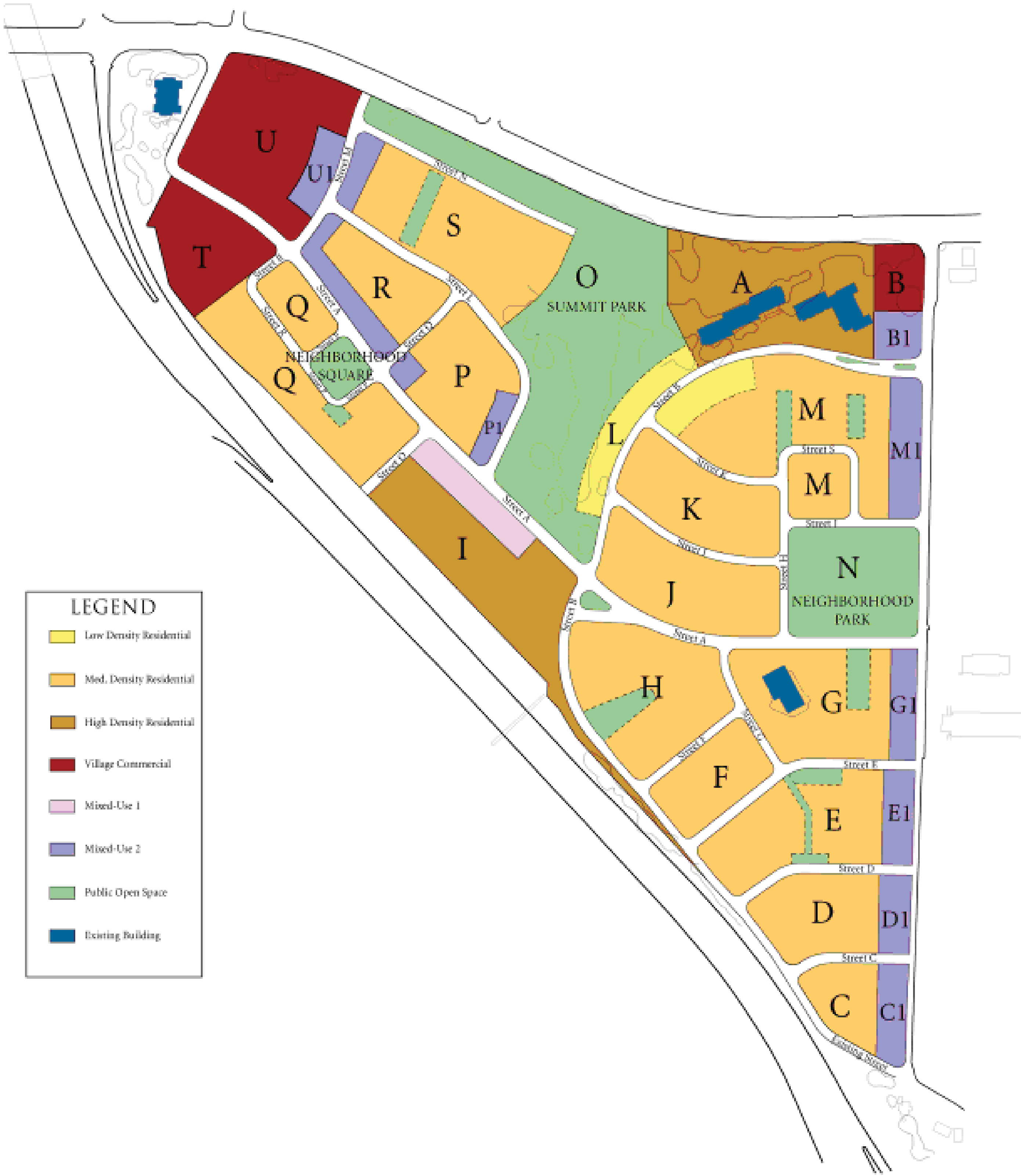


Figure 3.8-3 Westpark Sub-Area Plan Land Use

Large areas to the east and west of the site are designated and zoned *Low Density Residential (LDR).* Development in this designation is intended to be low rise (maximum 3 stories), detached single family housing on individual lots, at a density of 5 to 10 dwelling units per acre, and compatible with the surrounding neighborhood. The LDR designation is the City's predominant land use designation and is applied to most of the City outside of designated centers.

3.8.2. Socioeconomics

3.8.2.1 Population

The Study Area

Census Tract 810 is the study area for Socioeconomics and Environmental Justice (Section 3.10). Westpark is located in the northwest corner of the Census Tract, in Block Group 2. See Figure 3.8-4 Although Block Group 2 is somewhat larger than Westpark, Westpark residents comprise 51.7 percent of the population and Westpark housing units make up 60.0 percent of the housing stock in the Block Group. Therefore, , census data for Block Group 2 will be used in this analysis as a proxy for data specific to Westpark when the latter is not available.

In addition to Census data, the description of the affected environment includes data from the City of Bremerton, the Bremerton Housing Authority, Dupre + Scott Apartment Advisors, Inc., the Northwest Multiple Listing Service and New Home Trends, Inc..

Population & Household Growth

In 2000, the study area population was 4,663. The population in the area grew by 2.9 percent (130 people) between 1990 and 2000, compared with a population loss in the City of Bremerton of 2.3 percent and population growth in Kitsap County of 22.3 percent. The population of Block Group 2 decreased by 8.4 percent during the decade.

Table 3.8-1.
Population Growth Trends

Area	1990 Population	2000 Population	Percent Change
Kitsap County	189,731	231,969	22.3%
Bremerton	38,142	37,259	(2.3%)
Census Tract 810	4,533	4,663	2.9%
CT 810, Block Group 2	2,134	1,955	(8.4%)

Source: US Census 1990 and 2000

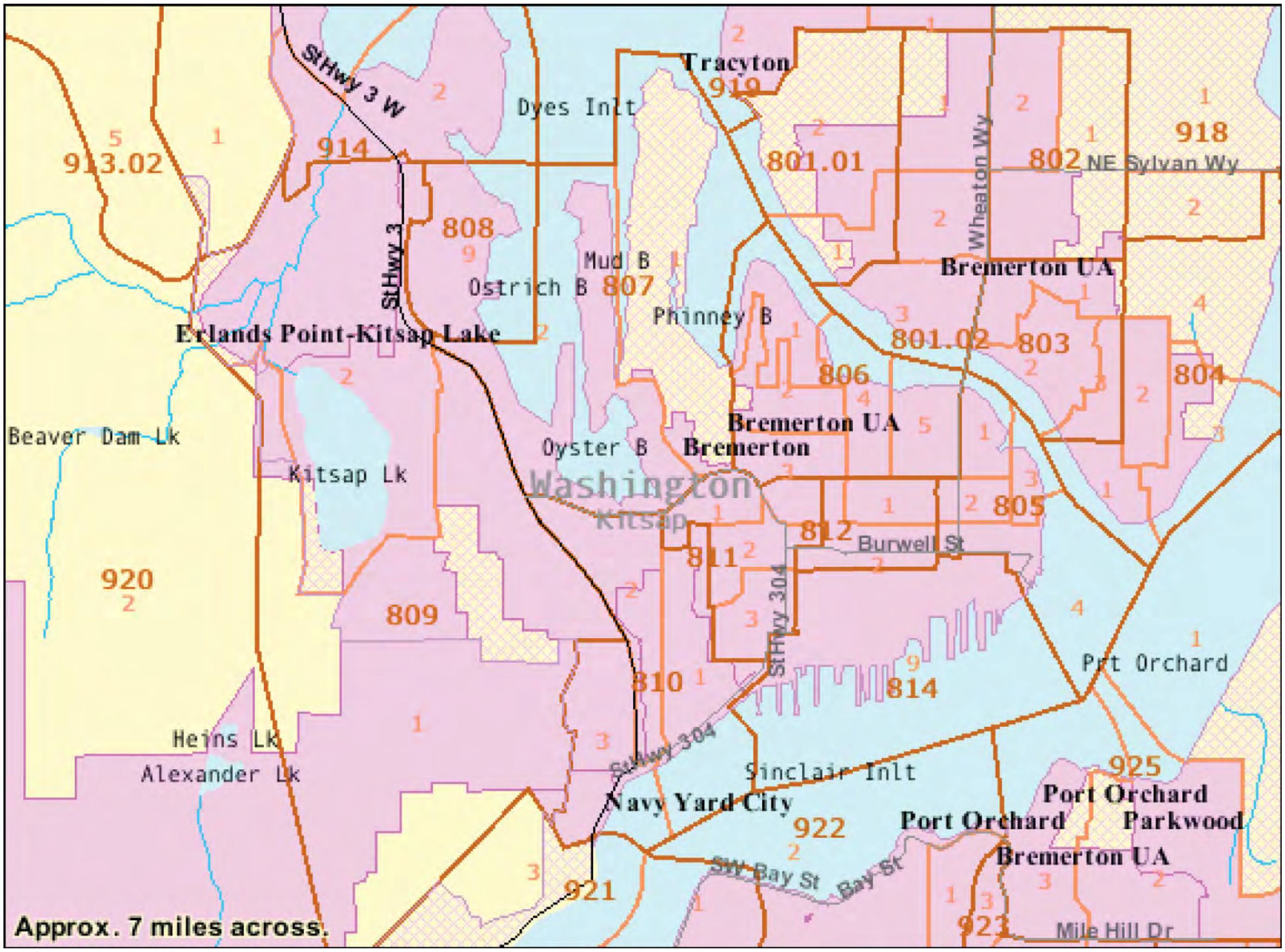


Figure 3.8-4 Census Tract Map

The population in the study area represents 11.9 percent of the population of Bremerton. Westpark's 1,088 residents (as of March 2006) comprise 24.3 percent of the study area.

Between 1990 and 2000, households in Census Tract 810 increased by 4.5 percent compared with a 2.5 percent increase in the number of Bremerton households. Block Group 2 lost 3.4 percent of it households during the decade and the rate of household growth in Kitsap County was 19.8 percent.

Table 3.8-2.
Household Growth Trends

Area	1990 Households	2000 Households	Percent Change
Kitsap County	69,267	86,416	19.8%
Bremerton	14,718	15,096	2.5%
Census Tract 810	1,974	2,068	4.5%
CT 810, Block Group 2	935	904	(3.4%)

Race and Ethnicity

The study area and Block Group 2 are somewhat more racially diverse than the City overall, and significantly more diverse than Kitsap County (Table 3.8-3). Minorities make up over one-quarter (27.2 percent) of the population of the study area and about one-third (32.1 percent) of the population of Block Group 2. Minorities are also about one-quarter of the population in Bremerton, but only 16 percent of the Kitsap County population. Comparable to Bremerton, minorities make up 25 percent of the population of Westpark.

In particular, higher percentages of African Americans, Native Americans, and Asians live in the study area and Block Group 2 than in the other areas. Within Westpark, 75.0 percent of households are white, 13.0 percent are African American, 6.9 percent are Asian, 4.5 percent are Native American or Alaska Native, and 0.5 percent are Native Hawaiian or Pacific Islander. (BHA, 2006)

Table 3.8-3.
Racial Characteristics of the Study Area Population

Race	Census Tract 810	Census, Tract 810, Block Group 2	Bremerton	Kitsap County
White	72.8%	66.9%	75.0%	84.0%
Black or African American	8.8%	10.8%	7.5%	2.7%
American Indian, Alaska Native	2.4%	4.1%	1.9%	1.4%
Asian	6.3%	7.2%	5.5%	4.5%
Native Hawaiian, Pacific Islander	1.4%	1.0%	0.9%	0.7%
Some other race	1.8%	1.6%	2.6%	1.5%
Two or more races	6.5%	8.4%	6.5%	5.2%
Hispanic, Latino of any race	5.6%	5.8%	6.6%	4.2%

Source: US Census 2000

The study area is also characterized by ethnic diversity resulting from immigration. Based on the 2000 Census, 8.6 percent of the study area population was born outside of the United States, with over 40 percent having immigrated within the last 10 years. Within Block Group 2, 10.7 percent of the population is foreign born with 47.6 percent having arrived in the United States between 1990 and 2000.

Residents of Westpark are from several foreign countries. The largest number of immigrants have come from Asia, primarily Viet Nam and Cambodia. However, there are also former residents of the Middle East, Africa, Eastern Europe, and Russia.

Table 3.8-4 .
Ethnicity of Westpark Residents

Area of Origin	All Residents	Head of Household
United States	580	123
Asia/Pacific Islands	588	264
Africa	169	82
Middle East	76	33
Eastern Europe	39	15
Russia	10	4

Source: Bremerton Housing Authority, 2006

Age and Gender

In Block Group 2, nearly one-third (31.3 percent) of the population is under the age of 18. This is a higher percentage of children than either Census Tract 810 (27.6 percent) or the City of Bremerton (24.5 percent). See Table 3.8-5.) The percentage of the population which is 65 years of age and older is roughly comparable in the Census Tract and Block Group, but smaller than in the City.

Table 3.8-5.
Age Profiles

Age Categories	Census Tract 810	Census Tract 810, Block Group 2	Bremerton
0 to 5 years	9.9%	11.2%	8.1%
5 to 17 years	17.7%	20.1%	16.4%
Total ≤ 17 years	**27.6%**	**31.3%**	**24.5%**
18 to 64 years	64.0%	60.4%	63.0%
65 or older	8.4%	8.4%	12.5%

Source: US Census 2000

The gender profile of Block Group 2 is markedly different from that of the other areas analyzed. In Bremerton, the population of men and women is roughly equal – 50.9 percent male and 49.1 percent female. In Census Tract 810 there are slightly more women (51.3 percent) than men (48.7 percent). However, in Block Group 2, women make up 55.0 percent of the population.

Household Characteristics

There are 2,068 households in the study area. The 631 households in Westpark are 30.5 percent of the total in the study area. The majority of households (55.8 percent) in the study area are families, although single person households make up more than one third (35.2 percent) of the total. This household make-up is roughly comparable to that of Bremerton with 51.6 percent families and 35.4 percent single-person households. Westpark households are predominately families or those in which a member of the household is disabled.

Table 3.8-6.
Characteristics of Westpark Households

Household Type	Number	% Total
Elderly	21	3.9%
Disabled	222	40.7%
Family	248	45.5%
Single person (non-elderly, non-disabled)	54	9.9%
Total	545	100.0%

Source: Bremerton Housing Authority, March 2006

The study area and Block Group 2 are characterized by relatively large percentages of single-parent headed households. Whereas 12.4 percent of Bremerton's households are headed by a single parent, 18.6 percent of the households in the study area and 26 percent of those in Block Group 2 are single parent families. The vast majority of these households—85.5 percent in Census Tract 810 and 90.2 percent in Block Group 2—are headed by women.

Income and Poverty

Households in both Westpark and the surrounding area have relatively low incomes. While the 2006 median family income for Bremerton is $36,358, it is $25,625 in Census Tract 810 and $10,793 in Block Group 2. Similarly, the poverty rate in the City of 19.4 percent compares with 30.8 percent and 56.3 percent for the Census Tract and Block Group 2, respectively.

In order to live in public housing such as Westpark, a household must make less than 80 percent of the area median income (AMI). However, it is typical for public housing residents to have much lower incomes, usually less than 30 percent of AMI. For Westpark, 86.2 percent of resident households make less than 30 percent of median income, 9.9 percent have incomes between 31 percent and 50 percent of AMI, and 3.9 percent have incomes between 51 percent and 80 percent of AMI.

3.8.2.2 Housing

Characteristics of the Housing Stock

In 2000, there were 2,068 housing units in Census Tract 810 and 978 in Block Group 2, representing 12.6 percent and 5.9 percent of Bremerton's total housing units respectively. The 631 units in Westpark make up 64.5 percent of the units in Block Group 2.

Between 1990 and 2000, housing units in Bremerton increased by 6.0 percent. The increase in housing units in Census Tract 810 was roughly comparable (7.0 percent). Block Group 2 lost seven units in this time period. By comparison, Kitsap County's housing stock increased by 25.1 percent during the 1990's.

According to the Washington State Office of Financial Management (OFM), between 2000 and 2005 Bremerton experienced a net loss of 57 housing units. The numbers of both single family and multi-family units decreased, although these losses were partially offset by an increase in the number of mobile homes (Table 3.8-7).

Table 3.8-7.
Change in Housing Units by Structure Type, 2000 – 2005

Structure Type	2000	2005	Actual/Percent Change
One Unit	9,007	8,984	-23/-.26%
Two or More Units	7,289	7,236	-53/-.73%
Mobile Home, Trailer, Spec.	335	354	19/5.6%
Total	16,631	16,574	-57/-.34%

Source: State of Washington Office of Financial Management, *2005 Population Trends*

As shown in Table 3.8-8, the housing stock in the study area contains a higher percentage of older units than in the City'. The majority of the housing (53.5 percent) in Census Tract 810 was built prior to 1950. The proportion in Block Group 2 is 77.2 percent. By comparison, in Bremerton 43.4 percent of the housing is of the same age, while in Kitsap County only 17.3 percent of units were built prior to 1950.

Table 3.8-8.
Age of Housing

Year Built	Census Tract 810	Block Group 2	Bremerton
1990-March 2000	12.9%	0%	8.7%
1980-1989	9.6%	3.5%	9.0%
1970-1979	11.4%	7.9%	14.6%
1960-1969	3.7%	5.1%	10.3%
1950-1959	8.9%	6.2%	13.9%
1940-1949	28.4%	41.1%	22.0%
1939 or Before	25.1%	36.1%	21.4%

Source: US Census 2000

Table 3.8-9.
Units by Structure Type

Structure Type	% Total Units	
	Census Tract 810	Block Group 2
1 unit, detached	39.1%	31.4%
1 unit, attached	4.9%	8.0%
2 units	16.7%	28.7%
3 or 4 units	11.5%	23.0%
5 to 9 units	5.0%	0.0%
10 to 19 units	8.5%	0.0%
20 to 49 units	5.2%	0.0%
50 + units	5.0%	8.1%
Mobile homes	4.2%	0.0%
RV, van, boat	0.0%	0.0%
	100.0%	100.0%

Source: US Census 2000

Housing in the surrounding area is characterized by single family homes and small multi-family structures of two to four units. In Census Tract 810, nearly three quarters of all units (72.2 percent) are in one- to four-unit structures. In Block Group 2, 91.9 percent of units are in structures of four units or less. In both areas the prevalence of smaller multi-family structures is, in part, due to the presence of the Westpark development, which is comprised of small duplex, tri-plex, and four-plex structures.

Both Census Tract 810 and Block Group 2 have higher percentages of single family homes than any other structure type, but not as high as Bremerton, where single family structures are 47.6 percent of all units, or Kitsap County with 66.3 percent single family units.

There is a significantly higher proportion of small units (based on number of bedrooms) in Block Group 2 than in either Census Tract 810 or in Bremerton (Table 3.8-10). Nearly half (48.0 percent) units in the Block Group are studio or one-bedroom units, compared with 32.2 percent for the Census Tract and 28.5 percent for Bremerton. Here again, the Westpark project is strongly influencing the data, since 231 units (39.4 percent of the development) have one bedroom. In Census Tract 810 and Bremerton, two- and three-bedroom units make up more than 60.0 percent of all units, while in Block Group 2, they are 46.0 percent.

Table 3.8-10.
Unit Size Comparison

Bedrooms	% Units in Census Tract 810	% Units in Block Group 2	% Units Bremerton
0	5.0%	5.7%	6.9%
1	27.2%	42.3%	21.6%
2	42.6%	35.6%	36.6%
3	18.5%	10.4%	24.6%
4	5.5%	5.1%	8.4%
5+	1.2%	0.8%	2.2%
	100%	100%	100%

Source: US Census 2000

Overcrowded Housing

Overcrowded conditions exist when there is more than one person per room living in a housing unit. Overcrowding can occur when large families cannot find or afford appropriately-sized units, or when families double-up in units in order to afford the cost of housing.

Overall, residents of Census Tract 810 and Block Group 2 are more likely to live in overcrowded housing than other residents of Bremerton or Kitsap County. The 2000 Census reported that, considering all households, 3.5 percent of the households in the County experience conditions of overcrowding, as do 5.6 percent of City residents. 6.1 percent of residents in Census Tract 810 and 7.4 percent of those in Block Group 2 -- more than twice the County rate -- live in overcrowded conditions. However, the rate of overcrowding is comparable among all renters.

The most significant overcrowding impacts owners with 1.4 percent of the owner households in the County and City experiencing conditions of overcrowding, yet 5.7 percent and 8.7 percent of the owners in Census Tract 810 and Block Group 2 live in overcrowded conditions.

Tenure

With the exception of Kitsap County, the number of renter-occupied units exceeds the numbers of owner-occupied units in all study areas shown in Table 3.8-11.) In Census Tract 810 and Block Group 2, renters represent more than two-thirds of all households.

Table 3.8-11.
Housing Tenure, 1990 and 2000

Tenure	Census Tract 810	Block Group 2	Bremerton	Kitsap County
Owners	33.8%	21.1%	41.4%	67.4%
Renters	66.2%	78.9%	58.6%	32.6%
Total	100%	100%	100%	100%

Source: US Census 1990 and 2000,.

Table 3.9.2-12 compares the composition of the rental housing stock in Bremerton with that of Census Tract 810 and Block Group 2. The higher percentages of single attached units, duplexes, triplexes, and four-plexes in Block Group 2 reflect the presence of Westpark. Rental housing in Block Group 2 is primarily made up of these smaller rental properties.

The Bremerton Housing Market

Rental Housing

Rents increased in both Bremerton and Kitsap County between 2001 and 2005 (Table 3.9.2-13). The most significant increases occurred between 2001 and 2003. While average rents were higher in Kitsap County, rent increases in Bremerton were higher.

Vacancy rate is also used to describe a rental housing market. A vacancy rate of 5 percent is considered to represent a balanced rental market, where demand is being met by the supply of new units or by existing units as they become vacant. Vacancy rates of 1 percent to 3 percent indicate a “tight” housing market where demand is high and renters cannot easily find units. Lower vacancy rates are also typically associated with higher rents based on the higher demand. Higher vacancy rates indicate an oversupply of available rentals and a market in which landlords are having difficulty renting units.

Between 2001 and 2005, the local and regional rental markets were healthy. Declining vacancy rates and rent increases between 2001 and 2003 were evidence of a strong demand for rental housing. By 2005, the vacancy rate had risen and rent increases were lower. However, the rental market remained relatively strong.

Table 3.8-12.
Composition of Rental Housing Stock

Structure Type	Census Tract 810		Block Group 2		Bremerton	
	# Units	% Total	# Units	% Total	# Units	% Total
1, detached	241	17.6%	105	14.4%	2,028	22.6%
1, attached	105	7.7%	80	11.0%	907	10.1%
2	315	23.0%	238	32.6%	1,241	13.9%
3 or 4	249	18.2%	229	31.4%	1,280	14.3%
5 to 9	65	4.7%	0	0.0%	1,022	11.4%
10 to 19	159	11.6%	0	0.0%	570	6.4%
20 to 49	109	8.0%	8	1.1%	608	6.8%
50 +	97	7.1%	69	9.5%	1,182	13.2%
Mobile Home	31	2.3%	0	0.0%	107	1.2%
Boat, RV, Van	0	0.0%	0	0.0%	13	0.1%
Total	1,371	100%	729	100%	8,958	100%

Source: US Census 1990 and 2000

Table 3.8-13.
Average Rents: Bremerton and Kitsap County, 2001-2005

	2001 Average Rent	2003 Average Rent	2005 Average Rent	% Chg 2001-2003	% Chg 2003-2005	% Chg 2001-2005	Average Annual Change
Bremerton	$599	$697	$743	16.4%	7.0%	24.0%	6.0%
Kitsap County	$647	$725	$765	10.8%	5.5%	18.2%	4.6%

Source: Dupre + Scott *Apartment Vacancy Reports Fall 2001, Fall 2003 & Fall 2005*

Table 3.8-14.
Comparative Vacancy Rates, 2001 - 2005

	2001	2003	2005
Bremerton	5.5%	3.2%	4.8%
Kitsap County	5.0%	3.7%	5.0%

Source: Dupre + Scott *Apartment Vacancy Reports Fall 2001, Fall 2003 & Fall 2005*.
.

Bremerton's rental housing market is heavily influenced by the presence of the Navy and the Puget Sound Naval Shipyard. The arrival and departure of ships can cause fairly significant changes in the market, particularly related to rental vacancies.

Affordability

Rental housing is deemed affordable by federal standards if a household pays no more than 30% of their income for rent and utilities. Housing affordability is often an issue for households with 30 percent (extremely low-income), 50 percent (very low-income), and 80 percent (low-income) of median income. Table 3.8-15a shows the 2005 federal income limits for households in these income categories. Table 3.8-15b shows what gross rents are affordable in these income categories.

Table 3.8-15 a.
2006 Federal Income Guidelines

Household Size	30% Median	50% Median	80% Median
1	$13,350	$22,250	$35,550
2	$15,250	$25,400	$40,650
3	$17,150	$28,600	$45,700
4	$19,050	$31,750	$50,800
5	$20,550	$34,300	$54,850
6	$22,100	$36,850	$58,950
7	$23,600	$39,350	$63,000
8	$25,150	$41,900	$67,050

Source: U.S. Department of Housing and Urban Development, 3/2006

Table 3.8-15b.
Affordable Rents per 2006 Federal Income Guidelines

Household Size	30% Median	50% Median	80% Median
1	$334	$556	$889
2	$381	$635	$1,016
3	$429	$715	$1,143
4	$476	$794	$1,270
5	$514	$858	$1,371
6	$553	$921	$1,474
7	$590	$984	$1,575
8	$629	$1,048	$1,676

Source: U.S. Department of Housing and Urban Development, 3/2006

Based on the 2000 Census, 51.1 percent of renters in Bremerton and 48.6 percent of renter households the study area pay 30 percent or more of their income for rent and utilities (Table 3.8-16). 21 percent of renters in Bremerton and 13.9 percent of households in Census Tract 810 pay more than 50% for gross rent. Table 3.8-17 illustrates the general affordability of the market-rate rental units in the City of Bremerton for extremely low-income, very low-income, and low-income households. The rents include an estimate of monthly utility costs since the federal standard for affordable housing is based on 30 percent of monthly household income for rent *including* utilities.

Table 3.8-16.
Gross Rent as a Percentage of Household Income

	Census Tract 810	Block Group 2	Bremerton
30% or more	48.6%	53.9%	51.1%
50% or more	13.9%	16.9%	21.0%

Table 3.8-17a.
Affordability of Market (Gross) Rents
at 30%, 50%, and 80% of Median Income, City of Bremerton

	Average Rent	Affordable Rent (30%)	Gap or Surplus	Affordable RENT (50%)	Gap or Surplus	Affordable Rent (80%)	Gap or Surplus
20+ Units							
Studio (1person)	$694	$334	**-$360**	$556	**-$138**	$889	**$195**
1BR (2 people)	$602	$381	**-$221**	$635	**$33**	$1,016	**$414**
2 BR/1BA (2 people)	$704	$381	**-$323**	$635	**-$69**	$1,016	**$312**
2BR/1BA BR (3 people)	$704	$429	**-$216**	$715	**$11**	$1,143	**$439**
2 BR/2BA BR (4 people)	$825	$476	**-$349**	$794	**-$31**	$1,270	**$445**
3 BR/2BA BR (5 people)	$956	$514	**-$442**	$858	**-$98**	$1,371	**$415**

Source: The Apartment Vacancy Report, Dupre + Scott Apartment Advisors, April 2006; NewHomeTrends 2006; and HUD

In general, households with incomes of less than 30 percent of median income are unable to afford the average rent of any unsubsidized units. Those with incomes of 80 percent or more can afford a range of unit types and sizes. Households with incomes of less than 50 percent of the median income may or may not be able to find affordable rental housing in the unsubsidized market depending on the size of the unit they need. Average market rate rents for one-bedroom units are affordable for one- and two-person households. A household must be earning 50 percent or more of the median income for three people in order to afford a two-bedroom unit. The average rent for three-bedroom and larger units is not affordable for any size household with 80 percent or less of the area median income.

In April of 2001, Dupre + Scott noted that 5,400 households -- or about 30 percent of households in the study area -- had incomes between $25,000 and $50,000 and would be able to afford rental units priced between $750 and $1,125 per month.

Home Ownership

Between 2004 and 2005, there were 10,810 single-family homes resold in Kitsap County. During that period the average single-family home price increased by 20.8 percent, from $206,900 to $250,000 (Tables 3.9.2-17 and 3.9.2-18). Even with the increase, the average cost of a single family home in the area remained well below the comparable average of $374,000 for neighboring King County.

Of the 10,810 homes sold between 2004 and 2005, about 9 percent were in West Bremerton and about 10 percent in Central Kitsap (areas closely associated with the study area).

Table 3.8-17b.
Kitsap Count Median Home Prices, 2000-2005

2000	2001	2002	2002	2004	2005	% CHG 03/04;04-05
$149,400	$155,000	$165,900	$184,000	$206,900	$250,000	**12.4; 20.8**

Source: Kitsap County Trends Spring/Summer 2006

Table 3.8-18.
Kitsap County Resale Activity, 2000-2005

2000	2001	2002	2002	2004	2005	% CHG 03/04;04-05
4,070	4,510	4,460	5,080	5,460	5,350	**7.5; -2.0**

Source: Kitsap County Trends Spring/Summer 2006

Table 3.8-19 illustrates affordability of homeownership in Kitsap County by income category. In general, households need at least 80 percent of the median income to afford the average price of a single family home and 50 percent of median income, or more, for the average price of a condominium.

Table 3.8-19.
Affordability of Home Purchase in Central Kitsap Market Area, 2006
(Includes Bremerton)

120% of Median 2005 Household Incomes	Price of a Home a Household Making 120% of AMI Can Afford	Average List Price of a Multi-Family Unit	Average List Price of a Single Family Home
$54,354	$200,000-$220,000	$489,950	$307,900

Source: NewHomeTrends, April 2006

Assisted Rental Housing in the Study Area

Assisted rental housing is defined as housing units that received public funds that supported the purchase, acquisition, rehabilitation or construction. This financial support ensures that the units remain affordable to low or moderate-income households for the long term.

Through 2005, the Kitsap Consolidated Housing Authority and Bremerton Housing Authority inventory of assisted housing included 1,455 units of housing in the form of public housing, Section 8 housing, special needs housing and other subsidized units in areas of the City of Bremerton and Kitsap County. Assisted units account for about 1.6 percent of the County's total housing units.

The Kitsap County Consolidated Plan also defines subsidized rental housing as housing for which ongoing rental subsidies (used to assist tenants with the actual payment of monthly rent) are provided. In Kitsap County, the majority of this type of assistance is provided through housing authorities. This type of subsidy may be attached to a specific unit (project-based), or be provided on behalf of a specific low-income tenant (tenant-based). These rental subsidies come primarily from the federal Section 8 housing program in the form of certificates and vouchers. In 2005, there were 275 certificates and vouchers in use in Kitsap County.

3.8.2.3 Employment & Economics

Employment

As of 2005, there were a total of 27,380 jobs in the City of Bremerton (Table 3.8-20). Employment in 2005 comprised approximately 34 percent of county-wide employment. There was a slight decrease in jobs (117) between 2000 and 2005, but this may reflect the fact employment numbers in some categories are confidential and are not reported in the data. Trends in employment categories cannot be evaluated accurately because of changes in some categories.

Table 3.8- 20.
City of Bremerton Employment by Job Category[1]

Job Sector	2000	2005
Construction/Resources*		*
FIRE[2]	8,347	907
Manufacturing	439	*
Retail	3,505	2,063
Services	**	9,512
WTU[3]	852	664
Education	1,888	1,898
Government	12,101	11,782
Total	**27,497**	**27,380**

Source: Puget Sound Regional Council, 2006.

Notes: [1]Figures "Covered Employment," which consists of employment for those firms, organizations and individuals whose employees are covered by the Washington Unemployment Insurance Act. Covered employment excludes self-employed workers, proprietors, CEOs, etc., and other non-insured workers. Typically, covered employment has represented 85-90% of total employment.
* The employment data has been suppressed, per a confidentiality agreement with the Employment Security Department. Data represents either less than 3 employers or 80 percent or more of the employment total is associated with one employer.
** Included in FIRE category

PSRC data for Census Tract 810 was used to estimate jobs for the general Westpark area (Table 3.8-21). Between 2000 and 2005, total of jobs increased by 19 percent, or almost 6 percent of the city-wide total. The most significant increases were in the construction, retail, and services sectors.

Table 3.8-21.
Study Area Estimated Employment

Study Area Jobs[1]	2000	2005
Construction/Resources	60	114
FIRE	*	14
Manufacturing	*	*
Retail	354	519
Services	191	245
WTU	75	*
Education	453	353
Government	202	216
Total	**1,348**	**1,610**

Source: Puget Sound Regional Council, 2006.
* The employment data has been suppressed, per a confidentiality agreement with the Employment Security Department. Data represents either less than 3 employers or 80 percent or more of the employment total is associated with one employer.

PSRC projections for the City of Bremerton, shown in Table 3.9.2-11, estimate 39,837 jobs by 2010 and 43,872 jobs by 2020. Compared to city-wide 2005 employment, this projected growth reflects increases of 12,457 jobs (45 percent) by 2010 and 16,492 jobs (60 percent) by 2020.

Table 3.8-22
Bremerton Area * Employment Projections by Job Category

Jobs Sector**	2010	2020
FIRES	10,209	11,710
Manufacturing	10,202	10,290
Retail	4,376	5,317
WTCU	1,136	1,460
GovEd	13,914	15,095
Total	**39,837**	**43,872**

Source: Puget Sound Regional Council, 2006 Sub-County (Small Area) Forecasts of Population and Employment, Central Puget Sound Region (2006).
* The "Bremerton Area" used by PSRC for projections is somewhat larger than the City.
**The "total" employment data includes additional categories not included in "covered" employment data of the previous tables.

As shown in Table 3.8-23, jobs in the study area (defined as the West Bremerton/CBD by PSRC) are projected to increase by almost 16 percent by 2020, with the largest increases in services (FIRES), retail and WTCU.

Current employment on the Westpark site is estimated at approximately 80 jobs. Numerous businesses are located in the areas adjacent to Westpark. These include commercial and retail uses along Kitsap Way, and light industrial and automobile sales and service businesses west of SR 3.

Household income data for Westpark and the surrounding area is discussed in Section 3.8.2.1 above.

Table 3.8-23.
West Bremerton/CBD Employment Projections

Job Sector	2000	2010	2020
FIRES	4,550	4,905	5,900
Manufacturing	10,100	9,963	9,973
Retail	1,814	2,019	2,546
WTCU	243	387	650
GovEd	10,880	11,994	12,852
Total	**27,587**	**29,268**	**31,921**

Source: Puget Sound Regional Council, 2006.

Unemployment

Data from Census Tract 810 indicates that 2,077, or 59.5 percent, of the 3,489 total population (16 years and older) were employed in the year 2000, with males comprising 45.3 percent and females 54.7 percent of the total. Seventy percent of these males are in the labor force, of those, and 17.3 percent of those are in the armed forces. For male civilians, 14.8 percent are categorized as unemployed. Just over 50 percent of the females are in the labor force, of those 3.8 are in the armed forces. For female civilians,16.5 percent are categorized as unemployed.

The 2000 Census civilian unemployment rate within Census Tract 810 contrasts starkly with that of Kitsap County as a whole, which was then estimated at 5.9 percent among males and 6.1 percent among females. PSRC data for Kitsap County overall, estimates a county-wide unemployment rate of 5.4 percent in 2005. County-wide unemployment has generally been consistent with that for the rest of the State of Washington, rising as the national economy contracts and falling as it expands. Since 2003, Kitsap County was the only county in the region whose per capita income consistently grew at a rate higher than inflation (PSRC, Puget Sound Trends, Nov. 2006).

Business Climate

Westpark is located just west of the Bremerton's central business district. An $800 million downtown Bremerton revitalization effort is underway and has helped create a climate of growth in the greater Bremerton area. Recent development has included the government center, the Port Washington Trail, convention center, Harborside Park, the Naval Museum, banks and other services, retailers and offices, as well as significant new residential development.. The City estimates that these revitalization will add 3,258 new jobs (Kitsap County Trends Report, 2006)

Historically, the large percentage of land devoted to public housing in the Westpark area and the high poverty level have been found to discourage new commercial activity and revitalization efforts. Property values have lagged behind other nearby areas; please refer to the discussion in Section 2.3.1.

3.9 ENVIRONMENTAL JUSTICE

Introduction

"Environmental justice" is defined by the Environmental Protection Agency's (EPA's) office of Environmental Justice as follows:

> *"The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal and commercial operations or the execution of federal, state, local and tribal programs and policies." (US EPA,1998).*

Executive Order 12898 (the Environmental Justice Executive Order) supplements the requirements of Title VI of the Civil Rights Act of 1964. Federal agencies must ensure that activities receiving Federal assistance do not result in discrimination, exclusion from participation, or a denial of benefits to anyone on the basis of race, color, national origin, sex, age, disability, or religion.

The underlying principles of environmental justice are to:

- Avoid, minimize, or mitigate disproportionately adverse health and environmental effects, including social and economic effects, on minority populations and low-income populations.
- Ensure full and fair participation by all potentially affected communities.
- Prevent the denial, reduction, or significant delay of benefits received by minority and low-income populations.

This analysis is intended to provide the basis for public discussion and HUD's review of the proposed redevelopment of Westpark pursuant to NEPA. (Note that Environmental Justice is not an "element of the environment" for purposes of compliance with SEPA (WAC 197-11-448)).

The following definitions are relevant to the discussion of environmental justice.

L*ow-income households* are those, which on the basis of annual household income, fall below guidelines developed by HUD. The guidelines are based on the area's median family income, which was $46,840 for Kitsap County and $30,950 for the City of Bremerton as of 1999 (reported in the 2000 Census). HUD defines *extremely low-income households* as those with 30% of less of the area median income, *very low-income households* as those with 50% or less of the area median income, and *low-income households* as those with 80% or less of the area median income.

Low-income population means any readily identifiable group of low-income persons who live in geographic proximity and, if circumstances warrant, geographically dispersed/ transient persons (such as migrant workers or Native Americans) who will be similarly affected by the *Proposed Action*, policy or activity.

Minority population means any readily identifiable groups of minority persons who live in geographic proximity and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed program, policy or activity.

A minority population is present if the minority population percentage of the affected area is greater than the percentage in the general population or other appropriate unit of geographic analysis (census tracts are generally considered appropriate). Guidance from the US Council on Environmental Quality (CEQ) states that,

> *"[M]inority populations should be identified where either (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis" (CEQ, 1998).*

Disproportionately High and Adverse Effect on Minority and Low-Income Populations means that an adverse effect is predominately borne by a minority population and/or a low-income population and that the effect will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the rest of the population. The Civil Rights Act ensures that this potential for discrimination is identified and addressed without regard to race, color, national origin, sex, age, or disability and includes the following adverse affects:

- destruction or disruptions of community cohesion (community separation);
- destruction or disruptions to access of available public and private facilities and services;
- adverse employment effects;
- displacement of businesses, housing, and people;
- tax and property value losses;
- actions injurious to the public's health (e.g., air, noise and water pollution); and
- actions harmful to the public's well being (e.g., aesthetic impacts and loss of recreational property).

Racial, sex, age, and income data from the 2000 US Census and income guidelines from HUD were analyzed to determine the location of low-income and racial minority populations. Federal guidelines for analysis of environmental justice issues were evaluated (see discussion below).

BHA has been conducting an extensive public outreach and involvement process related to the Westpark Master Plan. This included a public scoping meeting related to the EIS. BHA has also kept residents of Westpark informed about the progress of the redevelopment proposal and its impacts through periodic newsletters, public meetings, and a website (www.newwestpark.com). BHA has also established a Westpark Project Hotline to respond to residents and the general public's questions or concerns.

The *environmental justice study area* is defined as Census Tract 810; this area is also used to evaluate Socioeconomic Impacts and is shown in Figure 3.8-4. The population in the *environmental justice study area* is used as a point of comparison for an identified *impact area population*. Census Tract 810, Block Group 2, where Westpark is located, is the *impact area.*. These Census designated areas provide the best available demographic information for Westpark and the surrounding area as of the publication date of this document.

Low-Income Population

According to the 2000 Census, the median *family* income (1999) for Kitsap County was $46,840. and $30,950. for the City of Bremerton. Median family incomes for the Census Tract 810 and Block Group 2 were considerably lower, $25,625 and $10,793, respectively. As shown in Table 3.9-1, almost one-third of the census tract's population and more than one-half of the block group's population is below poverty status, which is significantly greater than the city as a whole,

Table 3.9-1.
Poverty Status

	Census Tract 810	Census, Tract 810, Block Group 2	City of Bremerton
Population below poverty	30.8%	56.3%	19.4%
Families below poverty level	31.6%	57.4%	16.0%

Source: U.S. Census

Westpark residents have an average household income of $11,730. Approximately 86.2 percent of households have incomes less than 30 percent of the area median income (AMI), 9.9 percent have incomes between 31 percent and 50 percent, and 3.9 percent have incomes between 51 percent and 80 percent of median income.

Minority Population

Demographic data is summarized in Table 3.9-2. Racial minorities comprise 16 percent of the total Kitsap County population. They make up 27 percent of the total population within the study area, compared with 25 percent in Bremerton and 33 percent in the impact area. Within the impact area, the minority population is predominately Black (11 percent), Asian (7 percent), and of two or more races (10 percent).

Westpark is also home to an immigrant population that is proportionally greater than that of the City. The City is 7.2 percent foreign born, the study area 8.6 percent, and the impact area 10.7 percent (Source: 2000 US Census).

Senior Citizens and the Disabled

On a percentage basis, both the study area and impact area have comparable elderly populations (11 percent), and they are proportionally smaller than that of Bremerton (15 percent). However, the impact area has a significantly larger proportion of its population that is disabled. Disable persons are approximately 1.5 to 1.66 times more prevalent in the impact area than in the study area or the City.

Table 3.9-2.
Demographic Summary of Environmental Justice Study Area

GEOGRAPHIC AREA		AGE			RACE							DISABILITY
Geographic Area	**Total Pop.**	**Age < 20**	**Age 20 to 59**	**Age 60+**	**White**	**Black**	**Native Amer.**	**Asian**	**Pacific Is.**	**Other & Two or More Races**	**Hispanic or Latino (of any race)**	**Disabled***
Bremerton	37,259	10,465	21,136	5,658	27,932	2,793	726	2,061	345	3,402	2,457	9,450
Census Tract 810	4,663	1,445	2,689	529	3,396	412	114	292	66	383	260	1,347
CT 810, Block Group 2	1,955	678	1,053	224	1,308	211	80	141	19	196	113	819
Population Composition												
Bremerton	100%	28%	57%	15%	75%	7%	2%	6%	1%	10%	7%	25.4%
Census Tract 810	**100%**	**31%**	**58%**	**11%**	**73%**	**9%**	**2%**	**6%**	**1%**	**8%**	**6%**	**28.9%**
CT 810, Block Group 2	**100%**	**35%**	**54%**	**11%**	**67%**	**11%**	**4%**	**7%**	**1%**	**10%**	**6%**	**41.9%**

*Civilian population over 5 years of age with a sensory, physical, mental, or self-care disability.

Source: US Census 2000.

3.10 HISTORIC & CULTURAL RESOURCES

Information in this section summarizes a report prepared by Northwest Archaeological Associates, Inc. (No. WA06-15, January 30, 2007), titled *Archaeological and Historic Resources Assessment of the Westpark Redevelopment Project*. The potential location of cultural resources is considered to be sensitive and confidential information. State law protects such information from public disclosure to prevent potential disturbance or vandalism of resources. Accordingly, specific locations are not identified in the Draft EIS and the NWAA report is not reproduced in its entirety. The report also contains extensive historical information, some of which has been abbreviated for the Draft EIS.

Regulatory Context

Federal funds will be used to redevelop Westpark and it is, therefore, subject to provisions of the National Historic Preservation Act of 1966, as amended (NHPA). Section 106 of the NHPA requires federally assisted undertakings to take into account the effects of those undertakings on historic properties. `Historic properties' refers to prehistoric and historical archaeological sites as well as buildings, structures, districts, objects, and landscapes that are listed on or qualify for the National Register of Historic Places (NRHP). Eligible properties generally must be at least 50 years old, meet at least one of four criteria of significance, and retain integrity sufficient to convey that significance (National Register Bulletin 1991).

The proposal also must comply with two Washington State laws, the Indian Graves and Records Act (RCW 27.44), which prohibits knowingly disturbing a Native American or historic grave; and the Archaeological Sites and Resources Act (RCW 27.53), which requires that anyone proposing to excavate into, disturb, or remove artifacts from an archaeological site on public or private lands obtain a permit from the Department of Archaeology and Historic Preservation (DAHP) in Olympia.

Area of Potential Effect

The project area of potential effect (APE), shown in Figure 3.10-1 includes the 82-acre Westpark site and the shoreline area adjacent to the Oyster Outfall. The BHA initiated consultation with the Washington State Historic Preservation Officer (SHPO) and the Suquamish Tribe in March 2006. SHPO concurred with the APE. The Suquamish Tribe noted that there are four Suquamish place names in the vicinity of the APE, which document intensive Tribal land use during the ethnographic period. The Tribe also requested that a cultural resources assessment of the APE be conducted.

Methodology

Background and archival research was conducted at the Washington State Department of Archaeology and Historic Preservation in Olympia, National Archives and Records Administration in Seattle, University of Washington Suzzallo and Architecture and Urban Planning Libraries, as well as Special Collections, Seattle Public Library, King County Library System, Kitsap County Regional Library, Kitsap County Museum, Bremerton Housing Authority, City of Bremerton, NBBJ Architects, and NWAA's library. Original construction blueprints were made available to NWAA by Jan Hillman, former Westpark Facilities Manager. The Suquamish Tribe was also contacted by letter to gather information about cultural resources and traditional use areas and to discuss any concerns the Tribe has about the project (Section 5).

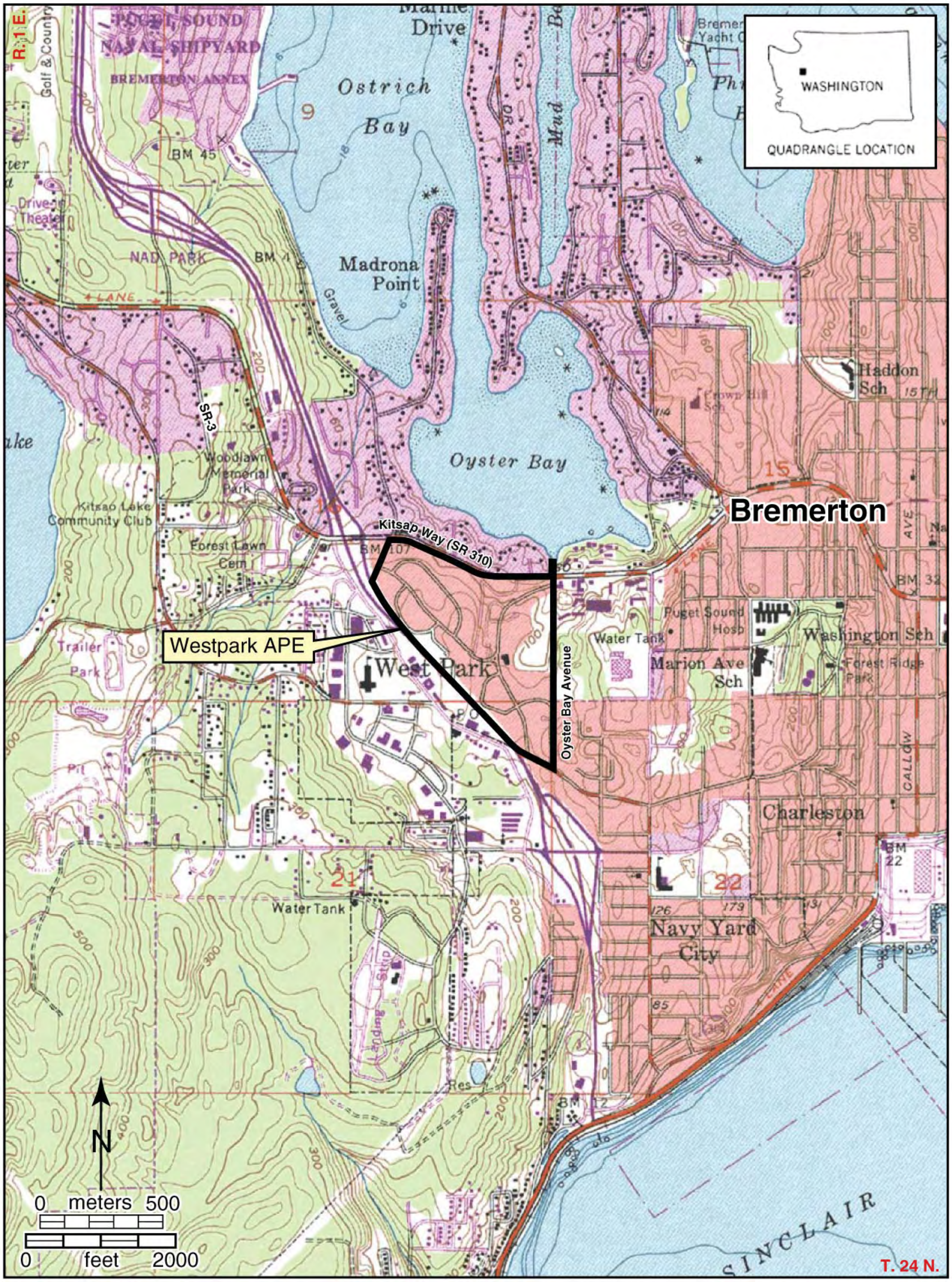


Figure 3.10-1 Area of Potential Affect (APE)

Staff from Northwest Archaeological Associates (NWAA) reviewed archaeological site records, building inventories, historical maps and photographs, cultural resources assessments, ethnographic documents, geotechnical bore logs, and other historical documents to determine the potential for archaeological resources in the APE. Four field visits were made to the project area. The first (March 13-16, 2006) was to prepare an inventory of all buildings in the APE. Each building within the APE was examined and was inventoried by its particular style. Each individual style was recorded on a Washington State Historic Inventory Form. The exterior of each style was photographed and described to determine the degree to which the buildings have changed.

A second visit involved an intensive pedestrian survey of the APE. Surface examination was conducted in residential yards. In the non-residential portions of the APE, survey was accompanied by shovel scrapes to remove vegetation, when needed. This inspection resulted in identification of either glacial deposits directly on the surface, or thick deposits of fill used to build up some of the landscape prior to development.

A third visit was made (April 4, 2006) to monitor the excavation of geotechnical trenches around the perimeter of the Westpark playfield. The purpose of the excavation was to define the extent of the known historic landfill within the playfield. The boundaries of the landfill were not clearly defined by the these excavations, and further excavation of 10 test trenches within the Westpark playfield is being performed

The final visit (January 25, 2007) excavated shovel probes at the stormwater outfall north of Westpark at the stormwater outfall on the south shore of Oyster Bay. Due to its proximity to the shoreline, this area was considered to have a high probability for pre-contact cultural resources.

The surveys placed special focus on three distinct non-residential areas with the potential for unmodified landforms and intact cultural deposits: the forested north edge of the APE between Westpark and Kitsap Way; the area around the Westpark playfield; and the northeast corner of the APE along the south shore of Oyster Bay, where the existing stormwater outfall will be replaced. The survey determined that significant land modification has taken place in all three areas; shovel probes were warranted only at the stormwater outfall area. The forested north edge of the APE has several road/trail cuts as well as many areas that have been artificially leveled. The landform is a relatively steep slope extending from the north edge of Westpark downslope to Kitsap Way, and glacial deposits are present on the surface throughout the area. Shovel scrapes were conducted around the Westpark playfield, and determined that the area is built up on fill that was used to cover the landfill that is present under the playfield.

Three shovel probes were excavated at the existing stormwater outfall area. This area has been heavily modified by previous installations of utility facilities, including a wastewater pump station. Shovel probes were placed at the base of the steep slope from Kitsap Way. The first shovel probe was terminated by concrete below 10 centimeters of sandy gravel (fill or colluvium), and the second was terminated by a small boulder at 22 centimeters below surface (cmbs) within a gravelly sand matrix. The third shovel probe hit glacial deposits at 17 cmbs.

Ethnography and Ethnohistory

The Kitsap Peninsula is in the ethnographic territory of the Suquamish, a southern Puget Sound Salish-speaking group. Their territory was centered on Puget Sound between the eastern Kitsap Peninsula and Hood Canal, and included Whidbey Island and Bainbridge Islands (Ruby and Brown 1986; Snyder 1968). Ethnographic research in the 1920s, and later in the 1960s, show at least five places in the Oyster Bay area north of the project area that were noted for resources, camping places or, in one case, as an historic potlatch house (Snyder 1968; Waterman 2001[1920]).

The people in the southern Puget Sound lived in centrally located autonomous villages, and engaged in a seasonal cycle of movements to other smaller and more informal settlements in order to exploit regional resources. Since contact with the whites, the Suquamish have resided generally on Kitsap peninsula between Hood Canal and Admiralty Inlet from near the mouth of Hood Canal south to Vashon Island. Their territory included land around Port Madison, Liberty Bay, Port Orchard, Dye's Inlet, Sinclair Inlet, and continues south to Olalla, Bainbridge Island, Blake Island, and possibly the west side of Whidbey Island (Miller 1999). Ethno-historically documented villages in the project vicinity were at present-day Silverdale, Chico, and Elwood Point in Dyes Inlet and Point White on Bainbridge Island (Waterman 2001[1920]); these were probably villages that had amalgamated around the time of the Point Elliott Treaty in 1854 (Horr 1974). A local group of Suquamish (referred to as *Saktabsh*) lived on Sinclair Inlet, Dyes Inlet, and southern Blakely Island and had villages at Bremerton and on Eagle Harbor (Swanton 1952). Several historic period Indian communities were located in the Dyes Inlet area, including settlements at Elwood Point, Erlands Point, Chico, Tracyton, Rocky Point, and Phinney Bay (Iversen et al. 2001).

In 1855 the Suquamish, led by Chief Sealth and six other subchiefs, signed the Point Elliott Treaty and were sent to live on the Port Madison Reservation. By act of Congress the reservation was enlarged and redefined in 1864, however, of the 7,284 acres set aside for the reservation, only 2,849 remain in trust or in Indian ownership. In 1980 over 800 non-Indians lived on the reservation (Ruby and Brown 1986).

History

The earliest known Europeans to visit what is now the Kitsap Peninsula and interact with the Suquamish and other local peoples were Spanish and British explorers, who came by sea in the late 18th century. Other sea traders and explorers soon followed as worldwide attention began to focus on the vast natural resources of the Northwest and, initially, the valuable pelts of the sea otter. In the early nineteenth century fur-bearing animals like the beaver also drew overland explorers, who were often representatives of large trading firms like the British Hudson’s Bay Company. In 1832 to 1833, the establishment of Fort Nisqually, a Hudson’s Bay trading post at the southern end of Puget Sound near the current town of Dupont, was the basis for the first sustained European presence in the region. In addition to the trade in furs and other commodities with Native peoples of the region, some of these newcomers also began to farm and raise livestock. American interest in the region was also piqued by the work of Lt. Charles Wilkes, the leader of the United States Exploring Expedition, whose men surveyed much of the Sound and also named many additional natural features (Carpenter 1986:36-38, 43-44, 96-97).

The Donation Land Claim Act and the formation of Washington Territory had a major impact on settlement within the Puget Sound region, as did the Indian treaties negotiated by Washington Territorial Governor Isaac Ingalls Stevens. Beginning with the Treaty of Medicine Creek in December of 1854, Stevens essentially paved the way for Euroamerican settlement by concluding land cessions from Native peoples of the Sound, who were placed on a series of smaller reserves.

Lumber was Puget Sound’s major product for much of its early history, and the well-timbered land quickly drew the attention of entrepreneurs who saw the potential for milling and then exporting lumber products from the region. The early mill owners initially logged off the lands closest to their plants and along the shoreline where the logs could be easily transported by water. Once those accessible supplies were exhausted, they moved inland, began to invest heavily in the Puget Sound region, and to import large quantities of lumber from the Northwest (Ficken 1987:38).

Early Bremerton and Puget Sound Navy Yard Development

As the timber industry became established, settlement also increased around the Sound. Many newcomers were attracted by provisions of the Homestead Act of 1862, a federal land law that allowed individuals to claim up to 160 acres after five years of residency. Others bought cutover lands from the timber companies. In October of 1875, Andrew Williams, a Scandinavian native and a logger, received a homestead patent for a 168.25-acre claim along Point Turner, which later became the site of downtown Bremerton and a portion of the Puget Sound Navy Yard. Lt. Ambrose B. Wyckoff, who came to Puget Sound with the Coast and Geodetic Survey in 1877, was probably the first to suggest that the area would make an ideal location for a naval station. In 1888, money was appropriated to build a drydock facility on Puget Sound. Local businessman William Bremer and Henry Hensel, knowing of the government's interest, bought up much of Point Turner along Sinclair Inlet from Andrew Williams and others. They sold some of it to Wyckoff at $50 per acre, substantially less than their purchase price, but then Bremer platted the rest as the city of Bremerton in September 1891. (Perry 2002:13-15; Kitsap County Book Committee 1977:III-1).

The naval facilities became an important component of the local economy. The drydock was fully operational by 1896. The Navy received substantial additional funding to expand facilities at the site by 1900 and the site was upgraded and became known as the Puget Sound Navy Yard. During the next decade the yard was mainly used as a ship repair facility. Bremerton also grew during this same period (An Industrial and Administrative History of Puget Sound Navy Yard 1891-1945 (Industrial History) in National Archives and Records Administration (NARA), RG 181, 13th Naval District, Box 5, Wartime Histories of Units, Folder 1; Kitsap County Book Committee 1977:III-114, 115).

Iin 1917, as World War I intensified in Europe, the Navy announced plans to begin shipbuilding at the Bremerton facility. After the United States entered the war, the Yard also became a training site. By May of 1917, nearly 1600 recruits had arrived at the base, most of them living on the USS Boston and the USRS Philadelphia. Tents served as the quarters for the remaining volunteers until wooden barracks could be completed. An increasing number of women from all over the Northwest were hired for jobs on the base, including industrial work. Many were also enlisted as clerical workers and learned drills and also how to handle arms during their off-duty hours (Reh 1984:7-9; Kitsap County Book Committee 1977:III-14).

The Navy Yard reached a peak of 6,500 employees at the height of World War I. Both Bremerton and its neighbor to the west, Charleston, grew as a result of the Navy's presence. The demand for housing was so great that the Navy encouraged construction of an apartment building, 250 houses scattered around Bremerton and Charleston, and a 360-room hotel (Industrial History, Chapter I, 46, 76; Kitsap County Book Committee 1977:III-14-16).

With the onset of the Depression, the work force at the Navy Yard had dropped to 2,700, but Franklin Roosevelt's New Deal programs funneled money to Navy and other military installations. The Puget Sound Navy Yard received funds for base construction and its work force expanded; this was augmented by as many as 1,700 men on relief who were involved in construction projects initiated through the Works Progress Administration (WPA). Under the provisions of the Victor-Trammell Act of 1933, the Navy Yard also began to receive large shipbuilding orders, including a total of eight destroyers constructed over the next six years. Manpower at the base rose to over 6000 during this period (Industrial History, Chapter IV:92-93; Reh 1984:34).

Housing Needs in the Depression and World War II Era

Residential construction was virtually nonexistent during the Depression years, and very quickly there was a severe housing shortage in Bremerton as well as many other cities around the country. As a result, local officials and residents began to push for some kind of government initiative to address these housing issues (*Seattle Post-Intelligencer*, December 16, 1938:HH).

The initial focus of this nationwide movement for public housing was to provide inexpensive accommodations for people in the lowest income groups. Through the passage of the United States Housing Act of 1937 (also called the Wagner-Steagall Act), the government provided $800 million for both slum clearance and the construction of new low-income housing across the nation. The United States Housing Authority (USHA) offered loans to local housing authorities with the provision that they would build the projects and that local governments would take responsibility for 20 percent of the federal contribution. The USHA also added small subsidies to make up the difference between tenant rents, which they hoped to keep low, and actual operating costs (Wright 1981:227). In February of 1939, the Washington Legislature passed enabling acts for the creation of local housing authorities and gave the new agencies power to construct and operate low income and defense housing in cooperation with the federal government (Housing Authority of the City of Bremerton (HACB) 1943:no pagination).

As conflicts in Europe grew, the pace of ship repairs and construction at the Puget Sound Navy Yard increased. After Pearl Harbor, that pace intensified even more. During the period from 1939 until 1945 when the war came to an end, the work force at the Navy Yard jumped from 6,000 to 32,500. (Industrial History, Chapter IV:93-94).

According to naval records, the location of the Yard had always created housing problems during emergency situations when the local labor supply was inadequate to meet employment demands. The influx of newcomers to the area during the World War II era particularly taxed resources in the Bremerton community and the housing crisis worsened (Industrial History, Chapter V:322, 344-345). In July 1940, Bremerton's City Commission initiated a Housing Authority whose main task was to supplement private housing with new construction. (HACB 1943: unpaginated).

Among the most pressing needs were accommodations for the huge number of new residents who flocked to the area. Bremerton, whose population was only 15,000 in 1940, could not handle this influx. Hundreds of recent arrivals found themselves living in old garages or store buildings, dilapidated shacks and even tents, while other commuted by ferry or car as much as forty miles or more to work in the Yard (Figure 8). Kitsap County's population more than doubled between 1940 and 1944, taxing the housing situation in other communities around the Sound (Industrial History, Chapter V:345-347).

The newly formed Bremerton Housing Authority immediately wrote a proposal to the Federal Works Agency under the Wallace-Steagall Act asking for funds to construct a 600-unit development in 250 buildings at Westpark. The project was accepted, construction began within four months, and within another four months, the first families moved into the complex (HACB 1943).

Soon after Westpark construction began, the Navy and the Federal Housing Authority (FPHA) reached the conclusion that additional housing was needed to cope with the rapid expansion of the Puget Sound Navy Yard personnel. In January 1941, FPHA proposed the purchase of 26.57 acres of property adjacent to the Westpark site for an additional 240 housing units to be used exclusively for Navy and Marine Corps personnel. The project, known as the Westpark Extension, was designed by the same firms involved in the development of Westpark. As a result, the architecture and construction methods were similar and little differentiation between the projects was apparent. The Bremerton Housing Authority was issued a management contract to oversee the operation of the complex (HACB 1943).

The need for additional units was addressed by a series of other building projects developed under the provisions of the Lanham Act of October 1940. The FPHA acted as the construction agency but the Bremerton Housing Authority managed the properties under a lease arrangement. The Eastpark project, initiated in late November 1940, was built in three separate parts on land in Manette, also known as East Bremerton. Continued construction over the next three years ultimately provided a total of more than 6240 new living units in the Bremerton area, as illustrated in Table 3.10-1.

Table 3.10-1.
Public Housing Projects in Bremerton

Project Name	Project ID No.	No. of Residential Units
Westpark	Wash. 3-1	600 units
Westpark Extension	Wash. 45043	240 units
Eastpark	Wash. 45044	260 units
Eastpark	Wash. 45047	230 units
Eastpark	Wash. 45048	70 units
Sheridan Park	Wash. 45049	1,750 units
Anderson Cove	Wash. 45111	160 units
Qualheim Hill	Wash. 45112-A	560 units
Sinclair Park	Wash. 45112-B	280 units
View Ridge	Wash. 45141	250 units
View Ridge	Wash. 45144	250 units
Dormitory Apartments	Wash. 45145	96 units
Sheridan Park Extension	Wash. 45210	476 units
View Ridge	Wash. 45216	1,024 units
TOTAL		6,246 units

(HACB 1943; HACB 1945: unpaginated).

Westpark Development

Westpark was the first defense housing project developed by the newly-formed Bremerton Housing Authority, and the only one built under the Wallace-Steagall Act. The initial proposal met with some criticism from both the Apartment Owners' Association and local landowners, who feared that these new units would adversely affect property values after the war. Once the government addressed these concerns by promising postwar oversight of the developments, Housing Authority officials proceeded to look for an adequate location for the project (HACB 1943).

The site chosen for Westpark was originally part of a section of land reserved for the state in 1858. The site was probably logged during the latter part of the 19th century, and was covered with second growth fir and cedar as well as heavy underbrush by the time Westpark was constructed (White 1991:138-139; HACB 1943; *Architectural Forum* 75(6):411). The city already owned a significant portion of the site, and had used a deep ravine on the property as a garbage dump, probably since the 1930s. The rest of the section had been sold over the years to individuals and was divided into small farms and other lots. (*Architectural Forum* 75(6):411-412; HACB 1943; Casad 1955; *Bremerton Sun*, October 18, 1940:1; November 6, 1940; December 5, 1940:6).

The Westpark property was annexed to the City in October 1940 and the Westpark Extension in 1941. The site was also close to bus lines and to a few shops and groceries that could supply the needs of residents. The Housing Authority ran a contest to find a name for the planned complex, and the winner, Mrs. F.C. Diamond, suggested Westpark and received a $10 prize (Heiliger 1941:1; *Architectural Forum* 75(6):411; *Bremerton Sun*, November 6, 1940).

Architects Floyd A. Naramore, Clyde Grainger, and Perry B. Johanson, all of whom practiced in Seattle, were major contributors to the Westpark projects. (Ochsner 1994:198-202). Landscape architect Butler Sturtevant was another important member of the design team for the Westpark project. Sturtevant's partnership with Edwin Grohs worked on a number of public housing projects, including including Yesler Terrace, High Point, and Holly Park in Seattle; and Westpark, Eastpark, and Bremerton Gardens in Bremerton. (Deitz in Ochsner 1994:234-239).

In order to limit the amount of grading and to preserve the forested character of the area, the plans called for streets and buildings to fit into the contours of the land. Another aspect of the design process was the intended postwar use of the housing, which the Navy planned to offer the Westpark homes as temporary residences for naval personnel while on shore leave. They wanted to keep maintenance requirements at a minimum. Much native vegetation was retained throughout the site, and yards were graveled except for large playfields around community buildings (*Architectural Forum* 75(6):411-412; HACB 1943).

Other aspects of Westpark's design reflect characteristics of two planning/architectural movements of the early 20th century: the "garden city" movement, which combined open space with low cost housing; and "modernism", which incorporated simple building styles, and regularized blocks of housing set in park-like environments. (Galernter 1979:252-254, 263; Roth 1979:272-273).

Garden city elements were noticeable in the site plan of Westpark and the inclusion of administrative services, playfields, and other recreational and social facilities to provide important elements of a self-contained community. Most of the public buildings were located in a central park-like area surrounded by playfields and open space, and residential buildings were also frequently grouped around a common area. The curvilinear streets were probably the most economical means of addressing the rolling terrain, but also avoided the monotony of standard grid patterns and kept heavy automobile traffic from intruding on these residential areas. The use of small, paved cul-de-sacs for parking also reflected garden city goals of providing transportation access without sacrificing the natural character of the landscape.

Residences

The residential buildings at Westpark incorporate some significant features of the Modernist style including corner and strip windows, dominant horizontal lines, and relatively austere forms, although there are also elements of bungalow styling to harmonize with the forested site. The project consisted of three different types of one-story buildings configured for one, two, or four families. All repeated the same basic floor plan, and the use of simple frame construction with wood cladding and shake roofs reflected the standardized construction methods of the era, but also emphasized both structure and local materials that would blend into the natural setting (*Architectural Forum* 75(6):413-414).

To add some diversity to the plan, the architects varied the exterior appearance of the units, using the following methods to add individuality:

Use of both gabled and hipped roofs;
Variations in the location and detail of entrances;
Use of three different types of window configurations to take advantage of building orientations and views;
Variations in exterior cladding, with shakes, clapboards, and board and batten used individually or in combination with each other; and
Selection of five different paint colors as well as white. In forested areas, warm colors such as tan, dark brown and red predominated, while gray, green, and tan were used in settings with less vegetation. Doors were often accented by bright colors (*Architectural Forum* 75(6):414).

Each living unit had a kitchen, living room and bath as well as a small utility room. The walls were plastered and interior amenities included an electric refrigerator, and gas range and water heater. All were set on poured concrete foundations with no basements. The Navy estimated that most of the new defense workers would be part of two-person families, so the majority of residences at Westpark were one-bedroom units (98 in 4-unit buildings), although a number of two-bedroom dwellings (189 in 2-unit buildings), and three-bedroom dwellings (70 1-unit buildings) were also available. (*Architectural Forum* 75(6):413-414; HACB 1944-1945).

Community Buildings

Westpark also included public spaces that became important centerpieces for the community. Haddon Hall, named for Bremerton Housing Authority board member and State Senator, Mrs. Lulu Haddon, was a recreation and social center for tenants and also included rental and administrative offices for the Housing Authority as well as maintenance and storage facilities. This one-story building incorporated architectural elements similar to the residences and was accessed by curving paved paths from various living units. Two playfields also surrounded the community center. One of the fields was built on fill over the former City garbage dump, which had been located in a steep ravine on the site. Tennis courts were added later, while smaller play areas were distributed throughout the complex with easy access to individual units (HACB 1943; Casad 1955; HACB 1944-1945). The complex also included eight laundry buildings, which were scattered among the residences. (HACB 1943; McCotter:2).

Previous Cultural Resources Studies & Archaeological Expectations

The Bremerton area has been subject to numerous archaeological investigations and cultural resource management activities; these are summarized Table 3.11-2. With the exception of the Firs II (now Bay Vista Commons), and the Shellbanks shell midden at the head of Ostrich Bay, these sites are all located between 1.5 and 2 miles from Westpark. The Firs II assessment (Hudson, Boswell Hodges 2005) recorded six buildings at the northeast corner of the Westpark site that were to be demolished for the construction of an assisted living facility. These buildings were not recommended eligible for the NRHP. No archaeological sites were identified within the APE. This study also recommended that the remaining buildings within Westpark be inventoried and evaluated, and that geotechnical work at the Westpark playfield be monitored by a professional archaeologist to identify and possibly assess the NRHP eligibility of a buried historical dump.

The surface of the project area is underlain by Vashon recessional outwash and thus would have been available as a stable occupation surface for at least the past 12,000 years. The geomorphic setting of the proposed project, on a bluff overlooking the southern end of Oyster Bay, also attests to high potential for the presence of pre-European contact archaeological materials. This expectation, however, is tempered by the high degree of surface modification associated with historic land use. These modifications include site preparation for buildings and structures, excavations for utilities, and grading for streets and landscaping.

Two historic archaeological sites and 247 historic buildings were identified in the APE, and redevelopment has the potential to affect these resources. Potential impacts, discussed further below, are related to the existence and disturbance of archaeological resources, and/or the demolition of historical resources.

Archaeological Resources

Archaeological survey within the Westpark site identified two historic-era archeological sites:

> **WPR-06-01** is 16 features associated with the former defense housing development of Westpark. These features are primarily house foundations and old parking areas. The 1941 blueprints of the Westpark development (City of Bremerton Housing Authority) show that the buildings associated with the foundation features were not part of the initial 1940 development, but built as part of a later phase in 1941. The features include a depression which once held a house foundation, ten concrete house foundations, four concrete parking areas, an abandoned road known as Graham Way, and one concrete light pole foundation. According to a 1947 Sanborn Fire Insurance map, the foundations represent a laundry building, six two-family residential units, two three-family residential units, and one four-family residential unit (Sanborn Fire Insurance Company).
>
> **WPR-06-02** is the unnamed former City of Bremerton landfill that is beneath the Westpark playfield. The landfill was active prior to the construction of the Westpark development in 1940. The City of Bremerton began garbage collection in 1921, and the city's first landfill was at Evergreen Park. Other landfills were later placed in various locations around Bremerton. After objections from neighbors about the landfill on National Avenue the city moved the landfill to a 40 acre city-owned site in a large depression off Oyster Bay Avenue. The Federal Government took over this site for the Westpark Housing Project in 1940. Garbage dumping continued here even after the land was acquired by the government. A resolution from a December 18, 1940 City Commission of the City of Bremerton meeting

forced the city to end all dumping at Westpark by May 9, 1941. There is no precise date for when landfilling began at Westpark, but it is estimated at ca. 1930.

Monitoring of geotechnical test trenches in the Westpark playfield (WPR-06-01) confirmed the presence of historic-era artifacts within landfill deposits in 10 of the 16 trenches. These trenches are part of an ongoing evaluation to locate the boundaries of the landfill; see the discussion in Section 3.8, *Environmental Health*. Referenced borings and test pits are shown in Appendix B. One borehole (B-8) placed in the center of the Westpark playfield encountered landfill to a depth of 28 feet below surface (Landau Associates 2006). The landfill deposits and depths varied dramatically across the Westpark playfield. Rather than one large landfill, there may be scattered areas of dumping. Dense landfill deposits were found in Trenches 53 and 54, at the western edge of the Westpark playfield, between 1.5 and 3 feet below surface.

Diagnostic artifacts were removed from the spoils and photographed for a later determination of age. The diagnostic artifacts recovered were primarily bottle bases that date from 1930 to 1940 which fits with the description of when the landfill was in use. No artifacts that pre-date 1930 were found. There is currently not enough information to evaluate the NRHP eligibility of this site, because the depth and extent of the site are not yet known

Historical photos of Westpark taken during construction indicate the degree to which the surface was modified by excavation for structure foundations, trenching for utilities, and grading for paved areas and landscaping. The extent of surface disturbance is also indicated by recent geotechnical studies carried out in association with the proposed project. As indicated in Section 3.1, *Earth*, the sediments underlying the proposed project area are predominantly sand with some gravels consistent with glacial outwash deposits. Test pit descriptions indicate that the near-surface sediments are light-colored, suggesting that the dark-colored organic-enriched native soils was removed during previous land use activities. Portions of the study area are characterized by moderate to steep slopes; areas of more subdued topography are either the result of grading associated with building site preparation or with landscaping. In the area encompassed by Testpits 9, 10, and 13, the subdued topography just west of Oyster Bay Avenue is the result of uncontrolled fill. The sparse historical material recovered from the bore holes was thought to be from opportunistic trash disposal related to the use of Oyster Bay Avenue. However, it is possible this material is related to the old landfill under the Westpark playfield.

Table 3.10-2.
Selected Previous Cultural Resource Investigations
in the Vicinity of the Westpark APE

AUTHOR	DATE	TITLE	RESULTS	RELATIONSHIP TO APE
Snyder	1952	45KP6 Site survey form	Shell midden site recorded (45KP6)	~2.0 miles north
Snyder	1952	45KP9 Site survey form	Manette Site (45KP9)	~ 2.5 miles east on east shore of Port Washington Narrows
Sleight	1972	*A Burial Excavated Near Bremerton, A Preliminary Report of Site 45KP9*	Manette Site (45KP9)	
Kennedy	1976	*Archaeological Testing of 45KP9*	Manette Site (45KP9)	
Jermann	1983	*Archaeological Investigations at the Manette Site (45KP9), Bremerton, Washington*	Manette Site (45KP9)	
Simmons	1984	*Archaeological Investigation of the Marlow Avenue Outfall Pipe Project Area*	Manette Site (45KP9)	
Larson et al.	1993	*Bremerton Ferry Terminal to Vicinity of Gorst Highway Improvement Project, Kitsap County Cultural Resources Assessment*	Seshwa p Site (45KP109)	~1.75 miles southwest on northwest shore Sinclair Inlet
Morgan	1993	*Results of Test Excavations at Archaeological Site 45KP109, Kitsap County, Washington*	45KP109 recommended NRHP eligible	
Lewarch et al.	2002	*Data Recovery Excavations at the Bay Street Shell Midden (45KP115), Kitsap County, Washington*	Bay Street Shell Midden (45KP115) recommended NRHP eligible	~2.0 miles southeast, on south shore Sinclair Inlet
Kelly and Powers	1992	*Historic and Archaeological Survey, Jackson Park and Subbase Housing Expansion Study*	Elwood Point Shell Midden (45KP116)	~ 1.5 miles northwest on west shore of Ostrich Bay
Larson et al.	1993	*Bremerton Ferry Terminal to Vicinity of Gorst Highway Improvement Project Cultural Resources Assessment*		
Foster-Wheeler Environmental Corp.	1998	*Draft Archaeological Resources Protection Plan, Pre-remedial Action at Operable Unit 1, Site 103, Jackson Park Housing Complex, Bremerton, Washington*	Elwood Point Shell Midden (45KP116)	
Dugas et al.	1998	*Shellbanks Log Home Site and Adjoining Property Archaeological Assessment, Kitsap County, Washington*	Shellbanks Shell Midden Site (45KP120)	~ 0.5 miles northwest at head of Ostrich Bay
Cooper et al.	1999	*Archaeological Assessment and Clean-up at the Evergreen Park Site (45KP121), Bremerton, Kitsap County, Washington*	Evergreen Park Site (45KP121)	~1.75 miles east on bluff overlooking Port Washington Narrows to east
Lewarch	2001	*Head of Hililix Shell Midden (45KP123)*	Head of Hililix Shell Midden (45KP123)	1.5 miles north on Rocky Point Peninsula
Inersen et al.	2001	*Head of Hililix Shell Midden (45KP123) Archaeological Resources and Traditional Cultural Places Assessment, Kitsap County, Washington*	Head of Hililix Shell Midden (45KP123)	
Hodges	2003	*Archaeological Inspection, 2955 Rocky Point Road, Bremerton, Washington*	Head of Hililix Shell Midden (45KP123)	
Hudson et al.	2005	*Archaeological and Historic al Resources Assessment of the Bremerton Firs II Project, Bremerton, Washington*	6 buildings recorded	within the APE

3.11 AESTHETICS, LIGHT & GLARE

Visual Character

Primary viewer groups of the site include residents of Westpark and adjacent properties, motorists and pedestrians using area roadways, on-site employees, and visitors to the site. There is limited pedestrian activity along area roads. Photographs were taken from various public locations to characterize existing views by primary viewer groups. View locations are shown in Figure 3.11-1; view photos are included in Appendix F. Existing visual character is described below.

The 82-acre Westpark site is triangular in shape and located between two major roads (Kitsap Way and SR 3). The site is somewhat isolated from the surrounding neighborhood by its shape and a discontinuous road system. The surrounding area is developed for a variety of urban uses -- commercial and retail facilities along Kitsap Way to the north, industrial and heavy commercial uses west of SR 3, and a mix of residential and some pubic facilities along and east of Oyster Bay Road. Oyster Bay is located north of the site, across Kitsap Way. Views of the water are possible from limited locations on-site and from vehicles traveling on Kitsap Way.

The site is characterized by some steep slopes, with topography varying between 60 and 180 feet in elevation. Elevations are lower along the northern portion of the site. There are stands of large coniferous trees, concentrated along the northern portion of the site. Ornamental deciduous trees are dispersed throughout the site, with a concentration adjacent to SR 3. Mature trees and individual lawn areas help to physically and visually define open spaces and clusters of residential buildings.

Westpark's existing residential structures were built in the 1940's and reflect building materials and a style that is characteristic of that era. Buildings are one-story, wood frame construction with a consistent architectural style that lacks detail, color or design detail. The buildings have been repaired and remodeled over the years and, therefore, lack architectural integrity. Some residential buildings have been converted to house community facilities.

A large stand of mature trees is present along the northern/central boundary of the site. This vegetation creates a park-like visual setting for drivers along this stretch of Kitsap Way, and blocks or screens views into the site. Small patches of vegetation occur along the western boundary of the site with SR 3, and buildings along that portion of the site are visible from the highway. Large or prominent trees are also scattered across the site.

Several larger non-residential buildings are located on the site and are visible from adjacent roads. Most of these buildings are in the eastern portion of the site and front onto Russell Road. Bay Vista Commons, a 3-story (plus basement),72-unit assisted living facility currently under construction, is located on Russell Road, close to the intersection of Kitsap Way and Oyster Bay Road, which is a major entrance to the site. This portion of the site is elevated and the new building is visually prominent. The site is currently disturbed by construction but will be re-landscaped. The Firs Apartments, a 3-story, 60-unit elderly and disabled housing facility, is located just south of Bay Vista Commons. BHA's administrative offices and a maintenance facility are located on Russell Road further to the south. The Westpark Community Center is located in the east/central portion of the site, also along Russell Road. It is visible from Oyster Bay Road, as is an adjacent community playfield. Other non-residential uses on the site –

senior center, teen center, laundry facility and child care -- are located in converted residential structures, and reflect the general character of the site's existing buildings.

The other major entrance to Westpark is at the intersection of Kitsap Way and Arsenal Way, approximately 200 feet east of an interchange of SR 3. This area generally serves as the western "gateway" to the City of Bremerton. The current visual character is dominated by transportation facilities, restaurants, a motel, and small retail businesses. A new fire station is located on the northwest side of Arsenal Way. It is set back from Kitsap Way and buffered by trees. Views of this portion of the Westpark site are of residential buildings which reflect the site's general character.

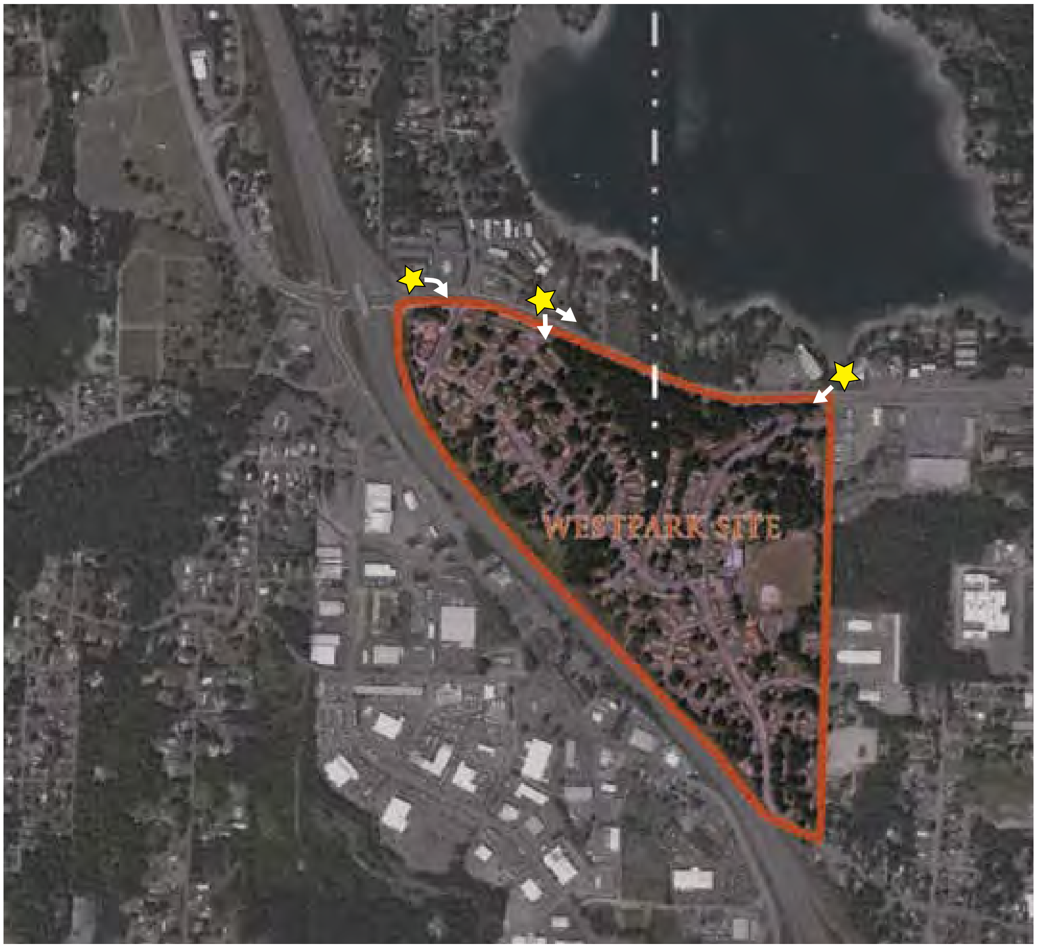


Figure 3.11-1 View Locations

Light & Glare

Outdoor illumination within the Westpark site consists of exterior lights on buildings, interior lighting, and street lighting. The more intensive lighting occurs in association with larger residential buildings (The Firs, Bay Vista Commons), and non-residential buildings (Community Center, BHA administrative building), and along Kitsap Way. Lighting levels in residential neighborhoods are generally lower and consist of house and yard lighting and street lights. Existing sources of reflective glare are limited to unshielded overhead lighting and vehicle headlights reflecting on building windows. Reflective glare is not extensive due to the architectural style of existing buildings.

3.12 TRANSPORTATION

Study Area

The study area for the transportation analysis is illustrated in Figure 3.12-1, and is generally bounded by Marine Drive to the east, Oyster Bay to the north, SR 3 to the west, and W Arsenal Way to the south. Within the study area, intersections along Kitsap Way are currently signalized (except at Weslon Place), and intersections along Oyster Bay Avenue are stop-controlled with Oyster Bay Avenue as the major approach. Existing intersections analyzed within the study area include the following:

- Kitsap Way at Marine Drive/Adele Avenue (signalized)
- Kitsap Way at National Avenue (signalized)
- Kitsap Way at Oyster Bay Avenue (signalized)
- Kitsap Way at Weslon Place (unsignalized)
- Kitsap Way at Shorewood Drive/Arsenal Way (signalized)
- Kitsap Way at SR 3 northbound ramps (signalized)
- Kitsap Way at SR 3 southbound ramps/Auto Center Way (signalized)
- Oyster Bay Avenue at Russell Road (unsignalized; currently closed for construction)
- Oyster Bay Avenue at McNeal Avenue (unsignalized)
- Oyster Bay Avenue at W Arsenal Way (unsignalized

Functional Classification and Roadway Characteristics

Roadway function classifications are the basis for planning roadway improvements and appropriate standards (e.g. right-of-way requirements, roadway width, design speed) that apply to each roadway facility. The following definitions serve as a general guide in determining street classifications, and are consistent with Washington State Department of Transportation (WSDOT) and Federal Highway Administration (FHWA) functional classifications for the City of Bremerton:

Principal Arterials – *Inter*community roadways connecting primary community centers with major facilities. Principal arterials are generally intended to serve through traffic, and it is desirable to limit direct access to abutting properties.
Minor Arterials – *Intra*community roadways connecting community centers with principal arterials. In general, minor arterials serve trips of moderate length. Access is partially controlled with infrequent access to abutting properties.
Collector Arterials – Roadways connecting residential neighborhoods with smaller community centers and facilities as well as access to the minor and principal arterial system. Property access is generally a higher priority for collector arterials; through-traffic movements are served as a lower priority.
Local Access Streets – Streets providing direct access to individual residential or commercial properties.

Figure 3.12-1 Transportation Study Area

The Draft EIS addresses only the arterial street system since local access streets typically do not have capacity deficiencies. However, local access streets are an integral part of the street network, and are important travel routes used by pedestrians and bicyclists. A brief description of roadways within the study area is provided below.

State Highways

SR 3 is the sole north-south freeway in Central Kitsap County. Located on the west side of the study area, this four-lane limited access facility accommodates both regional and more localized travel between surrounding communities in Kitsap County. Within the study area, SR 3 has interchange connections at Kitsap Way (SR 310).

SR 310 (Kitsap Way) is a principal arterial that connects West Bremerton to Central Kitsap County via SR 3. SR 310 extends east-west as a five to seven lane arterial from Marine Drive/Adele Avenue to SR 3, including a center two-way left turn lane within most of the study area.

Arterial Routes

SR 310 is the only principal arterial within the study area, and is discussed in the previous section. West of SR 3, Kitsap Way is classified as a minor arterial.

Adele Avenue is a two-lane minor arterial that begins south of Kitsap Way (across from Marine Drive) and continues south towards W Arsenal Way. National Avenue, east of and parallel to Adele Avenue, is also a two-lane roadway classified as a minor arterial, and begins at Kitsap Way, south of private access parking areas. These arterials serve north-south traffic and connect relatively low-density residential, limited commercial, and industrial park land uses.

Within the study area, Marine Drive, Oyster Bay Avenue, and Shorewood Drive are two-lane collector arterials. Marine Drive begins at Kitsap Way (north of Adele Avenue) and extends alongside Oyster Bay. Oyster Bay Avenue is a north-south facility that links Kitsap Way to W Arsenal Way in the south. Located in the western portion of the study area, Shorewood Drive is located north of Kitsap Way (across from Arsenal Way) and continues north outside the study area. West Arsenal Way represents the southern limit of the study area, and is a two-lane collector arterial that connects Oyster Bay Avenue, National Avenue, and Adele Avenue. These collector arterials provide access to similar land uses as the minor arterials.

Highways of Statewide Significance

In 1998 the Washington State Legislature passed Substitute House Bill 1487 (also called the “Level of Service” bill). The bill (codified in RCW 47.06.140) relates to transportation and growth management planning, and calls for coordinated planning for major transportation facilities identified as “transportation facilities and services of Statewide Significance.” In 1999 the state legislature adopted a list of Highways of Statewide Significance (HSS). The following facilities in the study area are currently on this HSS list for the Central Puget Sound Region: SR 3 – US 101/Shelton to SR 104 (entire route); SR 310 (Kitsap Way, Callow Avenue); and SR 3 to SR 304/Bremerton (entire route). Designation as an HSS has the following consequences:

- Higher priority for improvement funding from state sources;
- State has authority for setting level of service (LOS) standards;

Expressly exempt from local transportation concurrency requirements;
Identified as an essential public facility (i.e., local comprehensive plans may not preclude the siting of these facilities); and
Consideration for primary funding by a Regional Transportation Investment District (RTID).

Transit Facilities

Public transit service is an integral component of Bremerton's multi-modal transportation system. Kitsap Transit operates the public transit service in the City of Bremerton, and current transit routes with stops in the study area are illustrated on Figure 3.13-2. According to Kitsap Transit's July, 2006 bus schedules, the following fixed transit routes provide service within the study area:

Route #24 (Olympic College) – This route begins at the Bremerton Transportation Center (at the Washington State Ferry Terminal in Downtown Bremerton), to the Olympic College area, continues along Kitsap Way, and ends at the West Bremerton Transfer Center. During the week, operating hours for Route #24 is between 6:30 AM and 9:00 PM with one-hour headways. The weekend schedule is similar to weekdays, however the hours of operation are truncated to 9:30 AM to 7:00 PM.

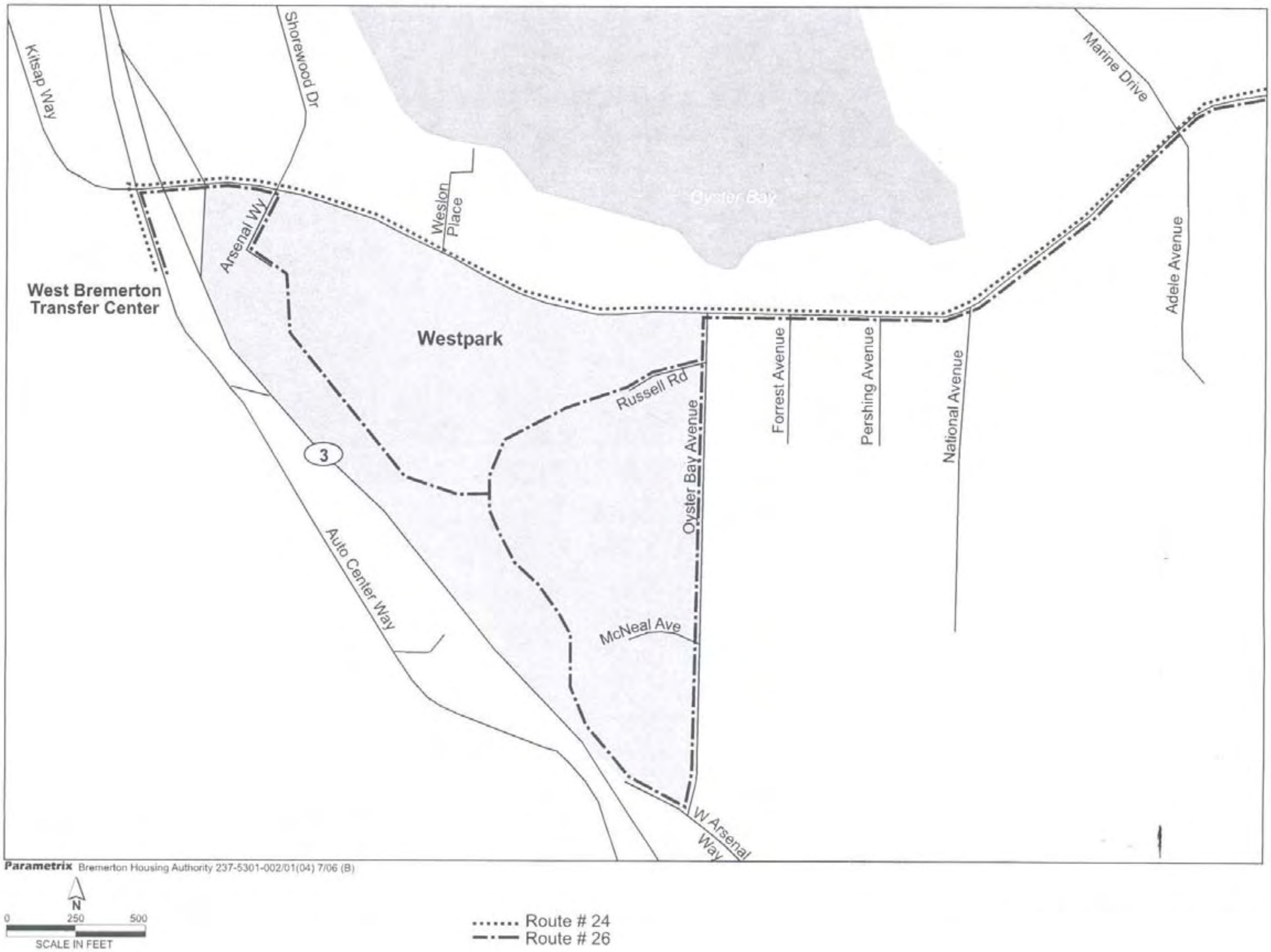
Route #26 (West Park) – From the Bremerton Transportation Center, Route #26 stops at the Westside Park-and-Ride, extends along Kitsap Way, serves the Firs Apartments area along Oyster Bay Avenue, and ends at the West Bremerton Transfer Center. Weekday operations are from 5:45 AM to 9:00 PM with one-hour headways, and weekend operating hours are from 9:30 AM to 7:00 PM with one-hour headways.

Kitsap Transit Routes #14 and #11 also travel through the study area, but without any stops.

ACCESS, Kitsap Transit's paratransit service, provides door-to-door or curb-to-curb transportation to the elderly and disabled unable to use the fixed route transit system. Eligible *ACCESS* riders can travel throughout Kitsap County; however rides must be scheduled at least one day in advance of the trip.

Non-motorized Facilities

Facilities that encourage pedestrian, bicycle and other non-motorized travel are located throughout and integrated within Bremerton's multi-modal transportation system. Figure 3 shows the existing bicycle routes and arterial pedestrian facilities within the study area. Kitsap Way provides raised sidewalks along both sides of the roadway, painted crosswalks with pedestrian call buttons, a designated bicycle lane and wide shoulders, and a mid-block pedestrian crossing located east of Oyster Bay Avenue. Oyster Bay Avenue has raised sidewalks on the west side, and all other roadways within the study area have paved or gravel shoulders that accommodate non-motorized travel. Sidewalks are also currently provided within the Westpark project site.



Kitsap Way
Shorewood Dr
Marine Drive
Weslon Place
Oyster Bay
Arsenal Wy
West Bremerton Transfer Center
Westpark
Adele Avenue
Forrest Avenue
Pershing Avenue
National Avenue
Russell Rd
Oyster Bay Avenue
3
Auto Center Way
McNeal Ave
W Arsenal Way
Parametrix Bremerton Housing Authority 237-5301-002/01(04) 7/06 (B)
N
0
250
500
SCALE IN FEET
Route # 24
Route # 26

Local Traffic Safety

Accident data records for Kitsap Way compiled by the Washington State Department of Transportation were reviewed for 2003 through 2005, the last three consecutive and complete years. Study intersections along Kitsap Way were reviewed for the frequency of accidents and accident severity (e.g. property damage only, injuries, or fatalities). The criteria used to determine if an intersection has an unusually high accident rate and should be considered for further examination from a safety perspective were: five or more average accidents per year for unsignalized intersections; or ten or more average accidents per year for signalized intersections.

Figure 3.12-3 highlights accident locations and Table 3.12-1 provides a breakdown of accident frequency and severity by location as well as the three-year average.

Table 3.12-1.
Accident History – Frequency and Severity

Study Intersection	2003			2004			2005			3-Year Average
	PDO	INJ	FAT	PDO	INJ	FAT	PDO	INJ	FAT	
Signalized Intersections										
Kitsap Way at Marine Drive/Adele Avenue	7	2	0	5	3	0	4	3	0	8.0
Kitsap Way at National Avenue	5	2	0	5	6	0	6	5	0	9.7
Kitsap Way at Oyster Bay Avenue	7	4	0	9	5	0	4	3	0	10.7
Kitsap Way at Shorewood Drive/Arsenal Way	5	3	0	10	2	0	4	3	0	9.0
Kitsap Way at SR 3 Northbound ramps	4	2	0	3	4	0	1	0	0	4.7
Kitsap Way at SR 3 Southbound ramps	8	2	0	0	1	0	5	3	0	6.3
Unsignalized Intersection										
Kitsap Way at Pershing Avenue	7	3	0	5	0	0	6	0	0	7.0
Kitsap Way at Forrest Avenue	0	0	0	3	0	0	0	0	0	1.0
Kitsap Way at Weslon Place	2	0	0	0	0	0	0	0	0	0.7
Oyster Bay Avenue at Russell Road	1	0	0	1	0	0	0	0	0	0.7

PDO = Property Damage Only
INJ = Accident resulted in injury
FAT = Accident resulted in fatality

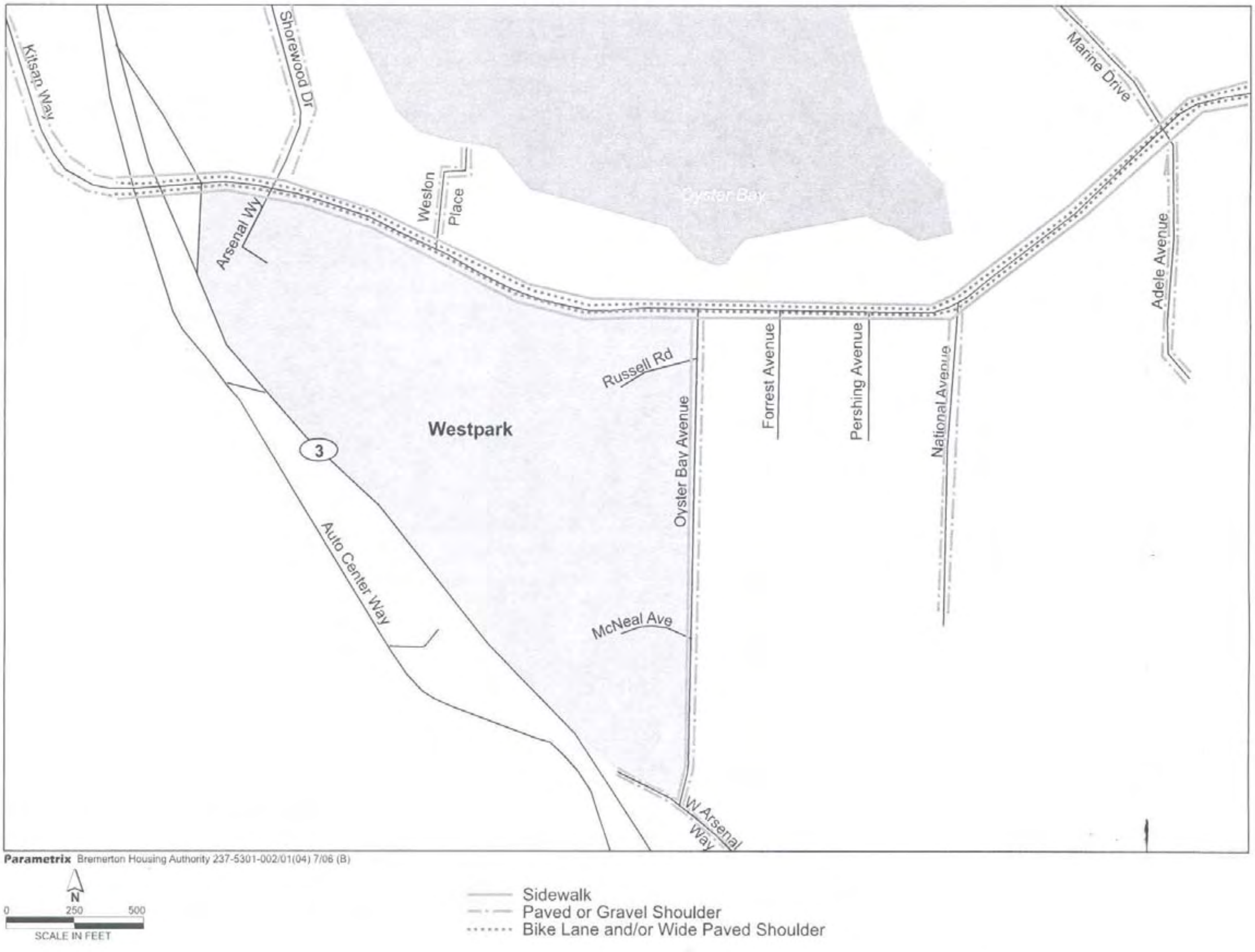


Figure 3.12-3 Existing Non-Motorized Facilities

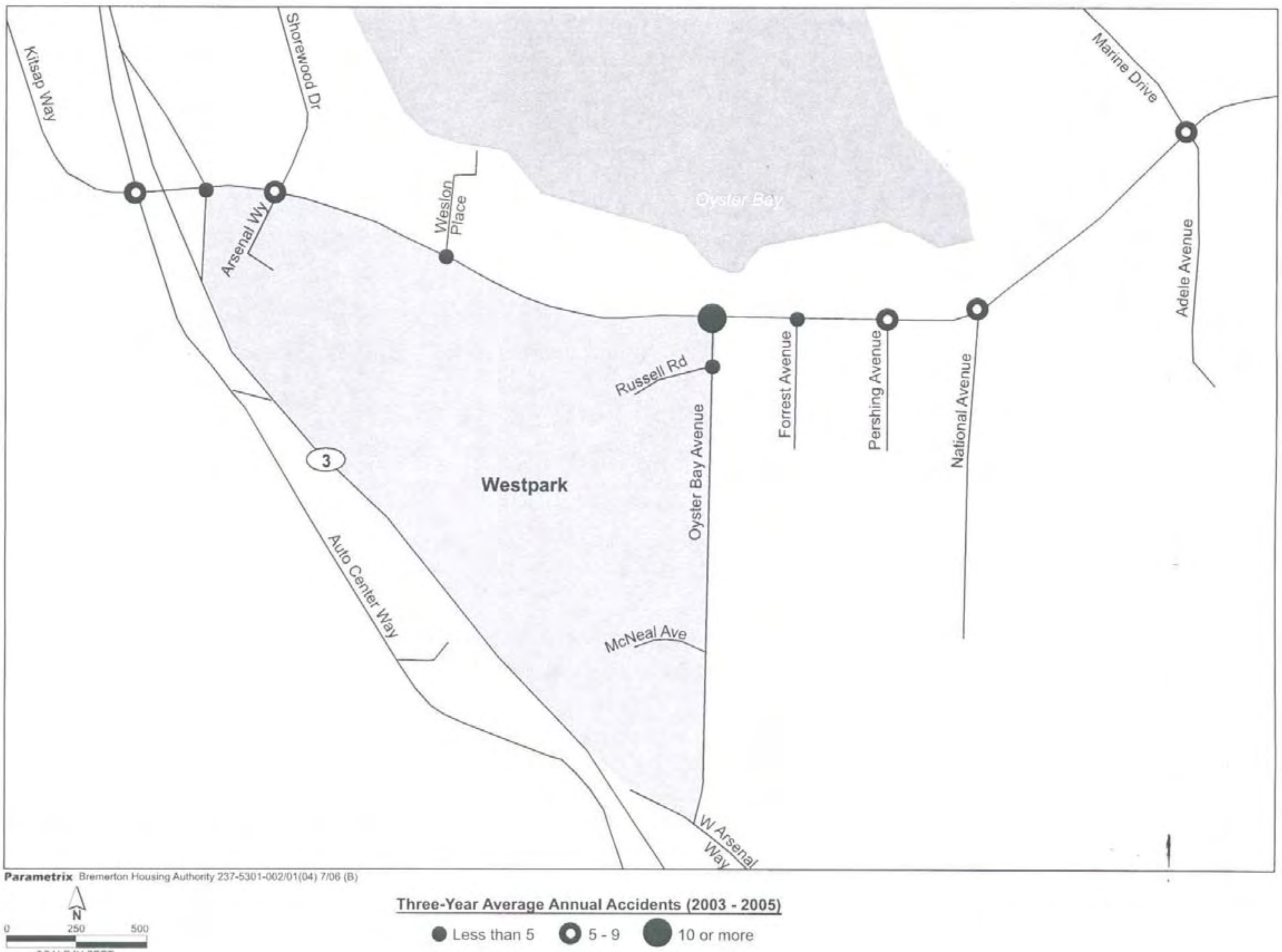


Figure 3.12-4 Accident History Location & Frequency

Table 3.12-1 indicates that the intersections of Kitsap Way at Oyster Bay Avenue, and Kitsap Way at Pershing Avenue have relatively high three-year average accident rates. At both intersections, the majority of collisions (between 67 and 72 percent) occurred along Kitsap Way, as opposed to the minor cross street, and were rear end accidents. The frequency of rear end accidents along Kitsap Way suggests a number of possible causes:

Hidden intersections/driveways (i.e. poor sight distance of vehicles entering or exiting the traffic stream),
Poor visibility of traffic signals,
High dilemma zone frequency
Excessive speeds of some vehicles on the approach, and/or
High traffic volumes.

Potential measures to mitigate these causes are described in Section 4.12.3 Mitigation Measures.

Existing Level of Service Conditions

A level of service (LOS) analysis was conducted for 10 intersections in the study area to determine existing operating conditions. LOS is an estimate of the quality and performance of transportation system operations. One industry standard for evaluating traffic conditions is based on the Transportation Research Board's methodology outlined in the *Highway Capacity Manual* (HCM), Special Report 209 (TRB 2000). Using this methodology, traffic conditions are assessed with respect to the average intersection delay (seconds/vehicle) and uses the letter "A" to describe the least amount of congestion and best operations and the letter "F" for the highest amount of congestion and worst operations. The 2000 HCM level of service ratings and criteria for signalized and unsignalized intersections are shown in Table 3.12-2. The City of Bremerton identifies LOS E or better for intersections along Kitsap Way as acceptable, and LOS D or better at intersections along other roadways within the study area.

Table 3.12-2.
Level of Service Ratings for Signalized and Unsignalized Intersections

LOS Rating	Average Delay for Signalized Intersections (seconds/vehicle)	Average Delay for Unsignalized Intersections (seconds/vehicle)
A	0 – 10	0 – 10
B	> 10 – 20	> 10 – 15
C	> 20 – 35	> 15 – 25
D	> 35 – 55	> 25 – 35
E	> 55 – 80	> 35 – 50
F	> 80	> 50

The following 10 existing intersections were identified by City of Bremerton staff for inclusion in this traffic analysis:

- Kitsap Way at Marine Drive/Adele Avenue (signalized)
- Kitsap Way at National Avenue (signalized)
- Kitsap Way at Oyster Bay Avenue (signalized)
- Kitsap Way at Weslon Place (unsignalized)
- Kitsap Way at Shorewood Drive/Arsenal Way (signalized)
- Kitsap Way at SR 3 northbound ramps (signalized)

- Kitsap Way at SR 3 southbound ramps/Auto Center Way (signalized)
- Oyster Bay Avenue at Russell Road (unsignalized; currently closed for construction)
- Oyster Bay Avenue at McNeal Avenue (unsignalized)
- Oyster Bay Avenue at W Arsenal Way (unsignalized)

These intersections were analyzed using Trafficware's software program, Synchro 6.0 (build 614). The PM peak hour turning movement count data used in this analysis were completed in June, 2006. Table 3.12-3 summarizes the existing traffic operations for the study intersections, and Figure 3.12-5 shows the existing turning movement volumes at each study intersection. All intersections within the study area currently meet the City of Bremerton's intersection LOS standards.

Unlike signalized intersections, which report overall intersection LOS and delay, stop-controlled intersection operating conditions are typically further described by approach LOS and delay. In some cases, certain intersection approaches and/or turning movements under stop-sign control may be substantially restricted due to high through movement volumes.

Table 3.12-3.
Existing Level of Service Conditions

Study Intersection	LOS	Delay (seconds/vehicle)
Signalized Intersections		
Kitsap Way at Marine Drive/Adele Avenue	E	62.2
Kitsap Way at National Avenue	B	18.9
Kitsap Way at Oyster Bay Avenue	B	13.7
Kitsap Way at Shorewood Drive/Arsenal Way	C	22.5
Kitsap Way at SR 3 Northbound ramps	A	8.3
Kitsap Way at SR 3 Southbound ramps	D	43.3
Stop-sign Controlled Intersections		
Kitsap Way at Weslon Place	B	4.3
Southbound approach	F	129.5
Oyster Bay Avenue at Russell Road	A	4.2
Eastbound approach	B	10.4
Oyster Bay Avenue at McNeal Avenue	A	3.3
Eastbound approach	A	9.3
Oyster Bay Avenue at W Arsenal Way	A	3.4
Southbound approach	A	9.2

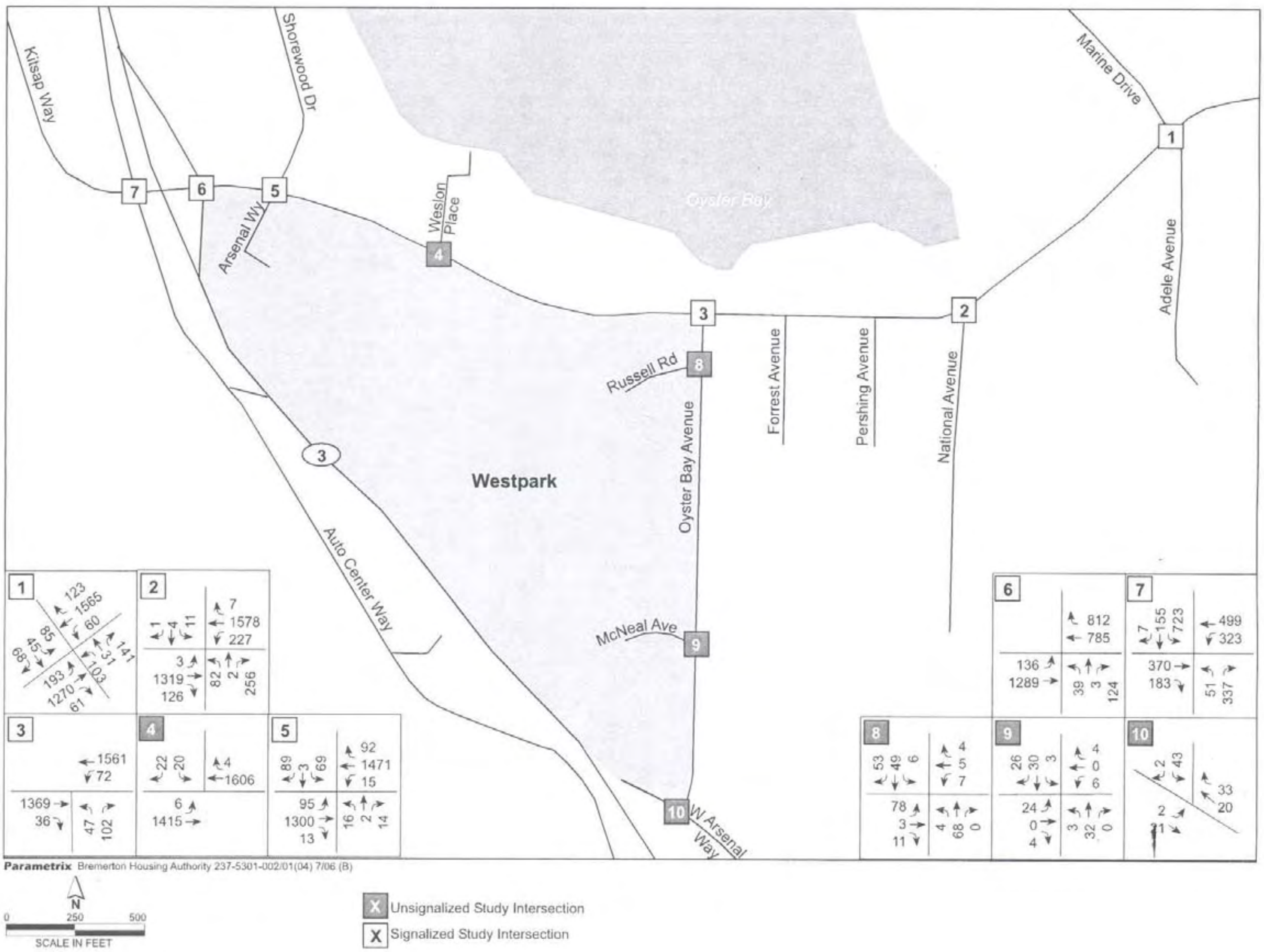


Figure 3.12-5 2006 PM Peak Hour Traffic Volumes

3.13 PUBLIC SERVICES & UTILITIES

3.13.1 Public Services

Police, Fire and Emergency Medical Services

Police Service

The Bremerton Police Department (BPD) provides public safety protection to businesses and residents within the City of Bremerton. BPD's administrative functions are located in City Hall. The Patrol Divisions Headquarters/West Precinct located at 4846 Auto Center Way, just west of the Westpark site.

The BPD currently provides foot patrol, bicycle officers, undercover police, 911 service and vehicle patrols. In 2005 there was an average of 1.11 officers per 1,000 people in the City of Bremerton. The BPD deploys patrol cars around the clock on three shifts or watches.

The BDP operates a crime prevention program to assist the community that involves close communication and cooperation with area residents and businesses to implement block watches and other crime-reduction techniques. The BPD also provides an officer on duty Monday through Friday 9AM to 5PM at the Westpark Community Center. This officer works with the bicycle and drug unit as well as detectives to make the Westpark community safer and a more enjoyable place to live.

The City's preferred level of service for police service is 1.8 officers per 1,000 population, while it's current service is approximately 1.6 officer per 1,000 people, which is the same as the state average. In general, the ratio of officers to population is significantly related to crime rates, city size, geography, demographics, socio-economic characteristics and many other variables). The BPD estimates a need for 21 additional officers by 2023, based on projected population. Capital facility improvements are also needed to maintain existing staff levels in the future.

Fire & EMS

The City of Bremerton Fire Department (BFD) provides emergency service to the project site. The Department services approximately 38,000 citizens and covers approximately 14 square miles within the City of Bremerton. Current staffing consists of a total of 58 personnel including both line, staff, and supporting staff.

BFD has an ISO Class 3 rating based upon manpower, water supply and other factors. Class 3 is considered a favorable rating as it results in lower insurance rates for commercial, institutional and community housing. In addition, homeowners pay lower fire insurance rates than in areas where fire districts have been rated less favorably.

BFD has three fire stations within the city and Max Meigs Station 2 provides primary response service to the site; Station 1 and Station 3 provide secondary and tertiary support. Station 2 is located at 5005 Kitsap Way, on Arsenal Way bordering the northern edge of the Westpark site. The station is equipped with one engine staffed by a minimum of 2 firefighters at any time; and one medic unit staffed by a minimum of 2 firefighters at any time. Additional backup service is provided by the Central Kitsap Fire and Rescue and South Kitsap Fire and Rescue. These departments have established automatic response agreements with the BFD.

BFD Station 1 is the Department headquarters and is located at 911 Park Ave. in Bremerton and Station 3 is location 3031 Olympus Drive in East Bremerton. Both Station 1 and 3 have an engine and medic unit staffed full time.

The BFD reports fire and emergency response statistics annually. In 2004 there were 6137 calls for EMS service and 1183 calls for fire response totally 7,320 total calls, a decrease from 7,700 calls in 2003. In 2004, the BFD's staffing level of service was 1.54 employees per 1,000 people.

Table 3.13-1 illustrates the total number of responses by EMS and fire units serving Bremerton over the past six years.

Table 3.13-1.
Call Volumes by Year

Year	EMS	Fire	Total
2004	6137	1183	7320
2003	6300	1400	7700
2002	6054	1379	7433
2001	6221	1531	7751
2000	6060	1692	7452
1999	5792	1433	7225

The BFD experienced approximately 160 calls for service at Westpark in 2004, which is similar to the number of calls in 2003. Approximately 80 percent of the calls were for aid services; the remaining 20 percent of the calls were for traffic accidents, spills and fires. Approximately 2 percent of the total calls for fire and EMS came from Westpark. The City's level of service for response time is approximately five minutes; however, Station 2 is located at the northern boundary of the Westpark site, and estimated response time to the site is two minutes.

Schools

Westpark is located within the Bremerton Public School District #100C, which provides public education in most parts of the City. The school district has a total population of approximately 5,300 students (2004 data) and includes one high school, an alternative school, an 8^{th} Grade school and freshman academy, one middle school, and six elementary schools. West Hills Elementary is the closest elementary school to the Westpark site. Enrollment at West Hill Elementary was 363 FTE students for 2004-2005, with a capacity of 561.

The *Bremerton Comprehensive Plan City Services Appendix* (2004) contains projected enrollment and capacity data for schools within the District. However, these were prepared in 1994 and are considered outdated. They do not reflect, for example, the additional capacity that will be provided by expansion and upgrading of the Mountain View Middle School and Bremerton High School, authorized as part of a $30 million bond issue approved by the voters in 2005. In addition, the district is preparing new enrollment projections as part of its updated long-term plan. As shown in Table 3.13-2, based on these projections, and not accounting for school expansions that are currently planned or underway, the school district would have a deficit in capacity in 2014.

Table 3.13-2.
Enrollment Projections *

School Level	Existing Capacity *	Enrollment 2005-2006	Surplus Capacity 2005-2006	Projected Enrollment 2014	Surplus Capacity 2014
Elementary	3,550	2,214	1,336	4,609	-2,395
Middle	2,190	1,200	990	1,301	889
Senior High	1,602	1,132	459	1,742	-140
Total	7,342	4,546	2,796	8,710	-1,368

Source: Bremerton School District, City of Bremerton Comprehensive Plan.
* Note that the Bremerton School District is updating its long range plan and capacity data and projections could be revised. Capacity data also does not reflect capital improvements to the High School and middle School approved by the voters in 2005.

Parks & Recreation

Bremerton contains a total of 695 acres of parklands which are managed by the City Parks Department. As characterized by their size, functions and service areas, the City's inventory of park facilities includes neighborhood and pocket parks (approximately 47 acres total), community parks (approximately 57 acres total), regional parks (approximately 506 acres), and open space. A number of City parks and open space areas are located in the general vicinity (within about one mile) of Westpark, including the following:

Neighborhood Park	Regional Parks	Open Space
Haddon Park (3.7 ac) Forest Ridge Park (27 ac) SR 3 Park (2.5 ac)	Pendergast Regional Park (50 ac) N.A.D. Park/Marine Park (54 ac)	Kitsap Lake Park (30 ac)

The City has adopted level of service standards, based on population, for various categories of parks, which it uses to plan for future needs. The standard for all parklands is 18.3 acres per 1,000 population, which is calculated as follows:

Park Type	LOS (acres per 1,000)
Local	1.7
Regional	14.4
Open Space	2.2
Total	18.3

The Westpark playfield, adjacent to the Community Center, currently provides active recreational opportunities for residents. The existing stand of trees along Kitsap Way, in the north central portion of the site (approximately 11 acres) also provides significant passive open space area; it is not developed for recreational use, however. There are also several play areas for young children dispersed on the site.

Community Services

As noted in Section 2 (*Project Description)* of the Draft EIS, the Westpark site contains a number of existing community facilities, including community center, a senior center, two Head Start buildings, and a Teen Center. The community center accommodates a broad range of community activities and services for youth and adults, including the following:

Family Self-Sufficiency program;
The Keys to a Better Life Program;
drug prevention and crime prevention;
computer lab;
numerous youth programs (e.g., Red Cross safety, Girl Scouts, National Youth Congress, arts/crafts, sports, music lessons, field trips,)
tax assistance;
counseling services;
pea patch;
self-employment training; and
neighborhood block watch.

Other services and programs available to residents of the broader community include: the *Bremerton Senior Center*, which provides space for seniors to gather for educational, recreational, and social events. *Kitsap Family YMCA,* located in East Bremerton, which provides recreational activities for the community including youth, teen and adult programs and childcare; the Downtown Bremerton Branch of the Kitsap Regional Library; and Bremerton Women & Infant Center (WIC), which provides nutrition counseling and education, health screening, medical and social service referrals, plus other services.

3.13.2 Utilities

Sewer

The City of Bremerton wastewater system includes collection, transmission, treatment, effluent disposal and biosolids reuse. The City's treatment plant was designed to treat an average flow of 10.1 million gallons per day (MGD). Current annual average and maximum monthly flows are approximately 6o percent of design capacity.

Data in the 2004 Comprehensive Plan Update SEIS (City of Bremerton, 2004) indicated that the City's sewage treatment plant could reach or exceed its capacity by 2014, depending on the rate of population growth and the number of currently unsewered customers that hooked up to the system. Redevelopment of Westpark and the Oyster Bay Neighborhood Center was included in these calculations; Westpark would be redeveloped by 2010. The City is preparing a new Comprehensive Sewer Plan to identify the need for and timing of an upgrade to the system.

Water

The City of Bremerton Water Utility services a population of approximately 56,000 people in Bremerton and the surrounding area. Water is supplied by the Union River Reservoir behind Casade Dam and 12 active production wells. Four principal aquifers within or adjacent to the City also provide water, including the Manette North Aquifer, Gorst Aquifer, Anderson Creek Aquifer, and North Lake Aquifer. None of these are located in the vicinity of Westpark.

The current average daily water demand is approximately 8 million galls per day (MGD). The current capacity of the water system is 13.8 MGD for average day demand, and 28.1 MDG for maximum day demand. The water quality is high, particularly for surface water system, and the Department of Health permits the system to operate unfiltered.

The capacity of the City's water supply can support a residential population in excess of 100,000 people; this population level is not projected to be approached until after 2023. Some potential water pressure issues have been identified for the area of the Oyster Bay Neighborhood Center due to elevation changes.

Westpark is currently served by water mains in the streets constructed of 6" or 8" ductile iron pipes in Baer Boulevard, Gaylan Dr., Searle St and McNeal Ave. The water system distribution network consists of 4" to 8" water mains, which are in a looped system that provides service to the site. The water mains and services on site were installed in the 1940's as part of the original development and were replaced in 1989. At that time, two service connections with meters and two fire hydrant connections were made to the existing water main routed along Oyster Bay Road. Interior building water pipes are from original construction.

Stormwater

Currently, stormwater management systems on the Westpark site are primitive or non-existent. There are no detention facilities and no water quality treatment facilities on-site. Building roof drains are not connected to the storm system. The stormwater system is separate from the wastewater system.

A culvert constructed under Kitsap Way carries stormwater to a City outfall located in Oyster Bay. The culvert is currently being upgraded. The existing outfall currently has limited capacity remaining and experiences maintenance problems. The *Proposed Master Plan* includes a joint City/BHA program to upgrade the outfall.

Solid Waste

Waste Management of Bremerton is responsible for the collection and disposal of solid waste within the City and contracts with the BHA to dispose of waste for Westpark. The solid waste collected from Westpark is transported to the Olympic View Transfer Station and later is railed to the Columbia Ridge Landfill in Arlington, Oregon. The Columbia Ridge Landfill is projected to have capacity for the next 40 years. There is no on-site recycling for Westpark.

There are 30 two-yard solid waste disposal containers located throughout Westpark that are emptied one to three times per month depending upon location. On average, approximately 203 total yards of solid waste is removed from the Westpark site per month, which equates to approximately .18 yards per resident per month.

Construction and demolition debris is disposed of separately from municipal solid waste; requirements for inert debris are less stringent than for garbage. Construction and demolition debris is disposed of at private transfer stations.

Electricity & Energy Use

The Westpark site is served by electricity and natural gas. Puget Sound Energy (PSE) supplies electric power to customers in Kitsap County; Bremerton is within PSE's North Kitsap sub-area. The power utilization of all substations in the North Kitsap sub-area is at 81 percent. The system can be expanded as the area load increases. PSE's current long-range plan, which covers 2010 and 2020, are based on the Office of Financial Management's population projections for counties; these are the same projections used by local jurisdictions to plan for growth pursuant to the Growth Management Act. Utilities are required to provide service adequate to accommodate future growth. A number of system improvements – including new and upgraded transmission lines and substations – are planned to meet planned growth.

Cascade Natural Gas (CNG) provides natural gas service to the City. Natural gas is available to the Westpark site.

No quantitative data is currently available regarding electrical or gas usage at Westpark. In general, existing residential units in Westpark are old and are not energy efficient and are likely to reflect higher than average consumption. Data from the Greenbrige, a recent redevelopment proposal that is similar to Westpark in type, age and number of units, reported that average energy consumption for heating, light and other energy needs ranged from 7,334 KWH for a one-bedroom unit, to 11,388 KWH for a three bedroom unit (King County Housing Authority, Greenbridge Draft EIS, 2003).

4. SIGNIFICANT IMPACTS, MITIGATION MEASURES & UNAVOIDABLE ADVERSE IMPACTS

4. SIGNIFICANT IMPACTS, MITIGATION MEASURES, & SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

This section of the Draft EIS evaluates direct, indirect and cumulative impacts of the *Proposed Master Plan* and alternatives. Construction and operations are addressed. Mitigation measures are also identified, including those incorporated into the proposal and additional reasonable measures that could be considered. Adverse impacts that cannot be avoided if the *Proposed Master Plan* or alternatives are implemented are noted.

4.1 EARTH

4.1.1 Significant Impacts of the Proposed Master Plan

Erosion Hazard Impacts

Erosion is considered to be both a long- and short-term hazard for the redevelopment of the site, but risks are greatest during demolition and construction. Once buildings and roadways are completed and landscaping and other vegetative cover have been re-established, the risk of erosion would be similar to existing conditions. However, uncontrolled storm water runoff from impervious surfaces (roads, roofs, driveways, parking lots) or from drainage conveyance systems (pipes, swales, outfalls) could still pose a risk after development, particularly on steep slopes or in streams.

Under existing conditions, the project area has been subdivided into three erosion hazard areas based on geology, soils, hydrology, and slope gradient conditions: high, moderate, and low. These erosion hazard areas are described in the 3.1, *Earth*, and are graphically illustrated in Figure 3.1-3. Erosion impact potential from the project is greatest in areas of high erosion hazard.

Significant impacts to identified erosion hazard areas, prior to mitigation, are considered to be possible from clearing and grading/regrading activities, uncontrolled stormwater runoff, and changes to existing stormwater drainages and discharge points.

Clearing and grading activities during construction will increase erosion potential through the removal of vegetation and the exposure of soil directly to precipitation and runoff. The most significant increase in erosion hazard potential would be during the construction phase when earthwork activity commences. Unless otherwise mitigated, erosion would produce sediment that could be transported to stormwater conveyances or receiving waters. Uncontrolled gully and sheet erosion along slopes could lead to oversteepening of the slopes and subsequent slope instability hazards. Uncontrolled raindrop erosion will suspend fine-grained particles into the runoff flow. Silt and clay particles, once mobilized during the earthwork activities, can be difficult to trap and can be discharged into receiving waters through the storm water control facilities unless additional measures are implemented.

Uncontrolled stormwater runoff from development into existing stormwater drainages, drainage sidewalls or steep slopes could increase erosion and sediment transport hazards. Increases in stormwater runoff into existing unlined drainages could increase the ability of the stormwater flow to carry sediment.

After construction is complete, the volume and flow rate of stormwater discharging offsite will increase in Oyster Bay and Ostrich Bay Creek. Unless mitigated, significant erosion at the discharge location could occur, undermining slopes and leading to slope instability.

Landslide Hazard Impacts

Sloping ground has an inherent risk of instability. In some cases, due to the low-slope gradients and geologic and hydrologic conditions, the landslide risks may be considered low. The risk is greater on steeper slopes, in weak and/or saturated slopes, and where ongoing or historic landslide activity has occurred. Most large-scale landslides are naturally occurring phenomena; however, the risk of a landslide could be increased as a result of land use practices.

Depending on the characteristics of a slide, avoidance of the hazard zone may be the most economic and prudent mitigation alternative. This is generally the case for large or deep-seated landslides. Buildings and other structures associated with the *Proposed Master Plan* would be set back a suitable distance from the potential slide area. For other landslide areas, the risk of slope movement can be reduced to an acceptable level by proper grading, drainage control, and/or the use of retaining structures.

The subject property was subdivided into “low” and “high” landslide hazard areas based on topographic, geologic, geomorphic, and hydrologic information. These landslide hazard areas are described in Section 3.1, *Earth* and are graphically illustrated in Figure 3.1-3. Landslide impact potential from the project is greatest in areas of high landslide hazard.

Project activities or potential effects that could increase landslide hazard risk beyond existing conditions or induce landslides unless mitigated include clearing and grading/regrading activities, uncontrolled stormwater runoff; and increases in volume and flow rate of stormwater.

Clearing of vegetation that would normally reduce stormwater runoff volume and rates could increase the existing landslide hazard potential across the site. This could result in concentrated stormwater runoff on cleared slopes that could precipitate erosion and oversteepening of the hillside and result in slope instability.

Uncontrolled grading (earthwork) activities could also increase the existing landslide hazards. Fill soils placed on or adjacent to steep slopes might increase the driving forces of the soil column and result in slope failures. Surface drainage patterns are typically altered by grading. If the new drainage pattern resulted in an increase in either surface or subsurface water flow on or near a slope, landslides could develop. In addition, improperly placed fill soils could fail due to inadequate compaction effort, use of organic material or soft, fine-grained soils, placement of material at oversteepened gradients or other factors. Cut slopes could also fail due to removing the toe support for a slope, or from improper drainage control.

The landfill and immediately surrounding sloping area is considered a high potential landslide hazard area due to ground surface gradients, presence of perched ground water, soil cover and the loose condition of the landfill material. Fill placed on the existing highly compressible landfill material that overlies compressible peat would cause significant differential settlement as noted in the Draft Geotechnical Report (Landau, 2006). The proposed grading plan indicates significant regrading of the landfill area with placement of up to 26 feet of fill on the southern end of the area. Differential settlement is expected. Stormwater should not be directed on or near the landfill area or on slopes surrounding the landfill. Plans for regrading and placement of fill in this area should be reviewed and certified by the geotechnical engineer.

Uncontrolled storm water discharge onto sloping areas or stormwater drainage swales could cause erosion, undermine steep slopes, and cause landslides. Concentrating stormwater on uplands above steep slopes could increase infiltration and cause spring discharge to increase, triggering landslides.

After construction is complete, the volume and flow rate of stormwater discharging offsite will increase in Oyster Bay and Ostrich Bay Creek. Unless mitigated, significant erosion at the discharge location could occur, undermining slopes and leading to slope instability.

Seismic Hazard Impacts

Earthquakes can result in greater damage in areas that are developed. The *Proposed Master Plan* would increase the density of development on the site and would, therefore, incrementally increase the risk of seismic damage. The hazards associated with seismic events in the study area include surface ground rupture, ground motion, liquefaction, and seismically induced landslides.

Surface Ground Rupture

No evidence of surface ground rupture has been documented in the study area vicinity.

Ground Motion

Large earthquakes with magnitudes over 7 (M>7) have occurred in the Puget Sound and along the Seattle Fault zone. Significant ground motion caused by an earthquake of sufficient intensity could result in damage to buildings, roadways, and other structures including utilities.

Liquefaction

Two areas on-site, shown on Figure 3.1-3, are considered to have a high potential of liquefaction during seismic shaking based on grain size, moisture content and density of the material: the central to northern portion of the site and the landfill debris. The potential for liquefaction on the balance of the site is low.

Seismically Induced Landslides

Areas that are susceptible to seismically induced landsliding on the project site would correspond to liquefiable sediments on steeper gradients and the high landslide hazard areas designated on Figure 3.1-3.

4.1.2 Impacts of the Alternatives

No Action Alternative

The density of the *No Action* alternative is less than the *Proposed Master Plan* or the *Design Alternative*, and no increase in impervious surface areas, grading, or storm water runoff would occur. The risks of an increase in the existing erosion and landslide potential could, therefore, be less than under the other alternatives. However, the existing stormwater drainage system does not include modern best management practices (BMPs). BMPs that would be implemented by the *Proposed Master Plan* or *Design Alternative* include wet ponds, wet vaults, biofiltration swales, properly sized stormwater conveyances and discharge points, stormwater flow control for Basin OBC (Ostrich Bay Creek), and stormwater infiltration for the *Design Alternative*. *No Action* would incur no construction-related erosion or landslide impacts; however, on-going erosion caused by the existing stormwater conveyance system would continue. The seismic hazard potential would be similar under all alternatives; however, No Action would not increase the on-site seismic hazard.

Design Alternative

Both the *Design Alternative* and *Proposed Master Plan* propose similar degrees of site re-grading, involving similar potential for construction impacts related to erosion and landslide hazards. Practices to manage stormwater, which would avoid and minimize construction-related impacts, would also be similar.

The *Proposed Master Plan* and *Design Alternative* involve similar development footprints and engineering concepts, such as storm water management, vehicular and pedestrian access and circulation, treatment of sensitive areas, perimeter buffering, and recreation areas. Potential erosion and landslide hazard impacts described previously would also be applicable to the *Design Alternative*. Seismic hazards potential would also be similar under both alternatives.

4.1.3 Mitigation Measures

Erosion Hazards Mitigation Measures

Proper control of surface water runoff would be important in alleviating potential erosion hazards, and subsequently, potential slope stability hazards from redevelopment. BMPs would be applied to mitigate and reduce the sheet and channel erosion hazard potential on the site, Standards contained in the City of Bremerton Design and Construction Standards, the King County Surface Water Design Manual, and Kitsap County Stormwater Design Manual would be implemented during construction. Specific BMPs that will be implemented during construction should be outlined in the temporary erosion and sediment control (TESC) plan submitted in conjunction with a site development permit application. The following BMPs described in the stormwater manuals are recommended.

- Source control measures are practices that are used to reduce erosion risks before they occur. These measures typically involve soil cover practices and drainage control. In general, it is more effective and efficient, both physically and economically, to employ source control methods to prevent erosion rather than to establish repairs to erosion features or to trap sediment once it is in motion. Source-control BMP mitigation measures for the project area for cleared areas during summertime construction should include, at a minimum, the proper placement of 1.5 tons/acres straw mulch (tacked down) on exposed ground surfaces. Prior to the onset of winter, the exposed subgrade should be seeded, covered with plastic sheeting, or otherwise protected. In addition, exposed construction slopes should be trackwalked (up and down) in order to roughen the ground surface and reduce runoff velocities. Surface water runoff should be directed away from exposed subgrades or into approved temporary stormwater conveyance systems, such as tightlined drains or rock-lined swales.

- Stockpiled soils to be used as backfill material should be stored in such a manner to minimize sheet, rill or gully erosion. Protective measures may include, but are not necessarily limited to, covering the stockpiled soils with plastic sheeting, the use of low stockpiles in flat areas to reduce the risk of sediment transport from the area, or the use of silt fences around the perimeter of the stockpiles to trap eroded sediment.

- Temporary sedimentation traps or ponds should be installed to provide sediment transport control during construction. These facilities are designed to slow the water flow in order for sediment to settle out of the water column prior to the material entering surface water features. Discharge points for stormwater release, including emergency overflow outfalls, should be provided with an energy dissipater to reduce the risk of erosion.

- Rock check dams are often utilized to reduce water velocities and trap transported sediment. Rock check dams should be established along roadways during the earthwork phase of construction. In addition, rock check dams should also be used within drainage ditches constructed along sloping ground to reduce the water energy and the subsequent risk of channel incision.

- Silt fences are temporary structures utilized to trap sediment transported from sheet erosion while allowing some conveyance of water through the filter fabric. Silt fences are not designed for concentrated flows but are most effective in retaining sediment transported from sheet flow in relatively small catchment areas. Silt fences should be established along wetlands, stream and river corridors, open space areas, and other sensitive areas located in or adjacent to construction zones to reduce the risk of sediment transport into these features.

- All construction runoff must be collected and treated by sediment ponds, turf-covered sand filters, temporary filtration, or other approved methods before release to any surface waters. Surface discharge should not exceed 5 nephelometric turbidity units (NTU) above background in the receiving water and be free of construction waste or its influences.

- Clean water entering construction areas should not be allowed to mix with construction water. All intercepted clean water should either be routed around construction areas to discharge into the original receiving waters or discharge separately into stormwater facilities. Energy dissipaters may be required at discharge points depending on the site conditions.

- A temporary erosion and sediment control plan (TESCP) should be established for the development during the design phase. A TESCP inspector should be on-site during construction to assist in maintaining the integrity of the erosion control structures and to provide further site-specific erosion recommendations, as necessary. The TESCP inspector should be independent of the contractor and have the authority to stop work if necessary to facilitate implementation of erosion control measures during construction.

- TESCP measures should be in place and operating properly prior to beginning major clearing and earthwork activities.

- Disturbed areas beyond the permanent project footprint would be revegetated, using an appropriate seed mix, by the close of the construction period.

In addition, the following erosion mitigation measures should also be considered during the design and construction of the project.

- Surface water and domestic discharge, either during or after construction, should not be directed onto sloping areas or randomly daylight on the project area. All devices used to collect surface runoff should be directed into tightlined systems that discharge into approved stormwater control facilities such as infiltration or detention ponds. Uncontrolled discharge on slopes would promote erosion and, subsequently, slope instability hazards.

- Clearing, excavation and grading should be limited to the minimum areas necessary for construction and original vegetation should be retained as much as possible, including buffer strips between construction disturbance zones and potential receiving waters.

- A geotechnical engineer should review the grading, erosion, and drainage plans prior to final plan design to further assist in mitigating erosion hazards during and after development. Additional erosion mitigation measures might be offered at that time to address site-specific issues.

The following long-term erosion mitigation is also included in the *Proposed Master Plan*:

- The stormwater design indicates increased stormwater volumes and flow rates for the following discharge points: Ostrich Bay Creek (Basin OBC) and Oyster Bay (Basin 2, Basin 3, and a portion of Basin SE). Sinclair inlet will receive the same discharge as under existing conditions. In order to mitigate potential erosion and landslide hazards to Ostrich Bay Creek at the discharge point, the stormwater plan will utilize a detention pond that includes a wet pond (water quality treatment pond) as flow control in order to meter out discharge and minimize impacts. For Oyster Bay, the existing outfall at Oyster Bay Road will be replaced and resized to accommodate the additional flow. In order to mitigate for potential increased erosion or landslide hazards at the discharge point in Oyster Bay, a baffled outfall structure, described in Section 2.6.7, will be used to control flows. The new structure is designed to reduce discharge velocities, and adjacent riprap will help
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With the proper implementation of BMPs, the probable significant erosion hazard impacts associated with the *Proposed Master Plan* can be mitigated to non-significant levels, even in areas where a high erosion hazard risk is present.

Landslide Hazard Mitigation Measures

The Westpark site was subdivided into “low” and “high” landslide hazard areas based on topographic, geologic, geomorphic, and hydrologic information. These designations correspond to those in the City’s CAO.

For the two areas designated as high landslide hazard areas on the project site, a minimum setback distance of 50 feet for structures or impervious surfaces – as required by the Bremerton CASO -- should be maintained from the top or toe of high geologic hazard slopes, unless reductions supported by a Geotechnical Report are approved. The Final Geotechnical Report, which is currently in preparation, could satisfy the Special Report requirements of BMC 20.14.660. It may also provide recommendation for setback reductions, and grading/regrading and drainage control as needed for these areas.

The grading plan indicates that the landfill area including surrounding steep slopes will be regraded to a lower gradient slope (less than 30 percent). As indicated in the Draft Geotechnical Report (Landau, 2006), during construction, significant differential settlement of placed fill is expected and must be accommodated. Proper regrading and drainage control of this area may reduce the erosion and landslide hazard potential after construction and settlement is complete. Plans for regrading and placement of fill in this area should be reviewed and certified by the geotechnical engineer.

The grading plan indicates that the northern-central steep slopes will remain undeveloped open space and significant vegetation will remain on the slope. Stormwater currently is directed in an open swale down this slope. If stormwater is conveyed in an enclosed pipe to the base of the slope, as proposed, potential landslide hazard would be reduced and no additional mitigation should be necessary.

A stormwater detention facility is planned for the base of the steep slopes at the north-central portion of the site. The construction of the detention should be reviewed by the geotechnical engineer.

The remainder of the site has a low landslide hazard potential. By conforming to applicable CAO standards and implementing mitigation measures identified above for erosion hazards, the landslide hazard risk and potential impacts to the remaining project site would be reduced.

With implementation of appropriate BMPs and the mitigation measures listed above, the probable significant landslide hazard impacts for the Proposed Master Plan can be mitigated to non-significant levels, even in areas where a high landslide hazard risk is present.

Seismic Hazard Mitigation Measures

Surface Ground Rupture

The potential of a ground surface rupture impacting the study area as a result of seismic activity is considered to below, and no mitigation is required.

Ground Motion

All structures would be constructed in accordance with the International Building Code (IBC) guidelines. If the IBC is followed, buildings would be designed to be able to sustain some damage from ground motion during the design seismic event without causing life safety concerns.

Liquefaction

A quantitative liquefaction analysis is recommended for all areas with a moderate to high liquefaction potential prior to development. Mitigation measures for liquefaction include soil improvement techniques (to reduce liquefaction hazard) and structural improvement techniques (to accommodate liquefaction effects). Mitigation would be designed by a geotechnical engineer. The choice of mitigation measure will depend on the extent of the liquefaction hazard as determined by site-specific geotechnical engineering analysis.

Seismically Induced Landslides

Mitigation measures for reducing potential landslide impacts from earthquakes include the recommendations outlined in the *Landslide Hazard Mitigation* section above.

4.1.4 Significant Unavoidable Adverse Impacts

Minor soil losses would be expected during the construction phase of the project. No significant unavoidable adverse impacts related to landslide hazards and seismic hazards have been identified.

4.2 Air Quality

4.2.1 Impacts of the Proposed Master Plan & Alternatives

Construction Impacts

Construction of either the Proposed Westpark Master Plan or the Design Alternative could result in temporary minor, localized impacts to air quality due to emissions from construction-related sources and activities. For example, dust from short-term construction activities such as excavation, grading, sloping and filling would contribute to ambient concentrations of suspended particulate matter. Construction contractor(s) would have to comply with PSCAA regulations requiring that all reasonable precautions be taken to minimize fugitive dust emissions.

Demolition of existing structures would require the removal and disposal of building materials that contain asbestos. The demolition contractors would be required to comply with U.S. EPA and PSCAA regulations related to the safe removal and disposal of any asbestos-containing materials.

Construction would require use of heavy trucks and smaller equipment such as generators and compressors. The engines on such equipment would emit air pollutants that would slightly degrade local air quality, but these emissions and the resulting concentrations would be far outweighed by emissions from existing traffic around the project area. Diesel emissions from on-site construction are unlikely to substantially affect air quality in the project vicinity.

Some phases of construction would cause odors detectable to some people in the area. This would be particularly true during paving operations using asphalt. Construction contractor(s) would have to comply with PSCAA regulations when emitting odor bearing air contaminates. Such odors from paving operations would be short term.

Construction equipment and material hauling could affect traffic flow in the project area. Given that there is heavy traffic during some periods of the day, scheduling haul traffic during off peak times (e.g., between 9 a.m. and 4 p.m.) would have the least effect on other traffic and would minimize indirect increases in traffic related emissions.

There is a potential for dust to affect on-site residences during construction of the residential and commercial facilities if the residences are occupied prior to remaining construction. Any impacts from construction or equipment emissions would be temporary and probably minor after implementation of reasonable methods to control dust emissions. However, construction-related dust or equipment emissions could represent a health risk to sensitive individuals like the chronically ill, the old, and the very young. Communication with residential and other sensitive users during construction, and implementation of a construction management plan could prevent or minimize the potential for such impacts.

In general, construction activities that comply with applicable rules and regulations would not be expected to significantly affect air quality under either of the Westpark Development build alternatives.

Operational Impacts - Off-Site Traffic

Project-related traffic could affect operation of off-site transportation facilities and thereby increase pollutant concentrations beyond the project site. The air pollutant of major concern with transportation sources is carbon monoxide (CO). Of the various vehicular emissions that are regulated, CO is the pollutant emitted in the largest quantity. Therefore, CO is the focus of this portion of the analysis.

To consider the CO implications of the redevelopment, an air quality “hot spot” analysis was conducted in accordance with EPA guidance (EPA 1992). Two standard computerized tools were used to evaluate potential air quality impacts in both its existing (2006) and design (2010) years at the two worst-performing, project-affected signalized intersections. Peak-hour pollutant emission rates were computed using the Mobile Source Emissions Model, Mobile6.2, and then incorporated into EPA’s CAL3QHC dispersion model (EPA 1992) to predict worst-case peak-hour CO concentrations. The project’s impacts were determined by comparing the modeling results with ambient air quality standards.

The intersections included in the air quality modeling analysis were selected by reviewing the projected p.m.-peak hour performance (the amount of delay) and the change in delay expected in 2010 with full buildout of the Proposed Master Plan and Design Alternative. Based on these data, the two intersections that would be most-affected by project-related traffic were selected for dispersion modeling. The intersections of Kitsap Way at Marine Drive / Adele Avenue and also at Shorewood Drive / Arsenal Way both degrade substantially with either alternative compared with the future No Action traffic conditions. Based on the *Transportation* analysis (Section 4.14), these intersections would be most affected by traffic volume changes because of the relative increase in total delay, and therefore provide an indication of worst-case project-related impacts on air quality in the project vicinity.

Dispersion Modeling Results

The results of the CAL3QHC dispersion modeling analysis for existing and future traffic scenarios are presented in Table 4.2-1. As shown, calculated worst-case CO concentrations at the most project-affected intersections are far below the levels allowed by the applicable 35-ppm 1-hour or the 9-ppm 8-hour ambient air quality standards. Modeling indicates there would be no air quality problems with the No Action in 2010 or the *Proposed Master Plan* or *Design Alternative* in 2010. Although project-related traffic delays would increase in 2010 over existing conditions, maximum predicted CO concentrations would remain about the same or decrease slightly due to vehicle emissions reduction measures required by federal and state regulations. The specific modeling results are discussed further below.

<u>2006 Conditions</u>: Currently, at model receptor locations near the project-affected intersections, maximum predicted CO concentrations under worst-case modeling conditions are less than 25 percent of the 1-hour 35 ppm NAAQS. The highest calculated maximum 8-hour concentration would reach 7.5 ppm, less than the standard of 9 ppm. This finding indicates that under worst-case meteorological conditions, existing peak period traffic is not likely to produce elevated CO levels near the most congested intersections in the project vicinity.

Table 4.2-1.
Maximum-Predicted CO Modeling Results (ppm)

Location	Averaging Time	2006 Existing	2010 No Action	2010 Alternative 1	2010 Alternative 2
Kitsap Way / Marine Dr./Adele Ave	1-hour	7.0	7.1	7.2	7.2
	8-hour	4.9	5.0	5.0	5.0
Kitsap Way / Shorewood Dr./Arsenal Way	1-hour	7.5	7.1	7.7	8.0
	8-hour	5.6	5.0	5.4	5.6
Source: Geomatrix Consultants, Inc. 2007					

<u>No Action Alternative</u>: Increasingly stringent federal emission reduction requirements would reduce Mobile6.2 vehicle emission rates in future years. This would offset expected increases in CO concentrations that would be caused by increases in traffic volume and congestion by the year 2010. As a result, maximum calculated CO concentrations with the No Action Alternative are nearly the same as existing model-predicted CO concentrations, and do not exceed the ambient air quality standards.

<u>Proposed Master Plan</u>: Similar to *No Action*, maximum-predicted CO concentrations would remain about the same as existing conditions. Although traffic volumes are expected to increase in future years, CO levels are reduced by lower vehicle emission rates. At both modeled intersections, maximum CO concentrations would remain well below the ambient air quality standards.

<u>Design Alternative</u>: Similar to the *Proposed Master Plan*, traffic delays increase at both intersections but more substantially at the Kitsap Way / Shorewood Drive intersection where delays more than triple over existing and *No Action* conditions. Despite these increases in delay, maximum-predicted CO concentrations near both intersections remain well below the ambient air quality standards. Increases in CO concentrations are greater than for the *Proposed Master Plan*, but still remain well below ambient standards.

Overall, the analysis indicates that under worst-case traffic and meteorological conditions, the maximum-predicted CO levels are likely to remain far below the 1-hour and 8-hour ambient air quality standards. Therefore, project-related traffic would not be expected to significantly affect air quality under any of the alternatives.

4.2.3 Mitigation Measures

Construction Impact Mitigation

Although significant air quality impacts related to construction are not anticipated, the construction contractor(s) would be required to comply with all relevant federal, state, and local air quality laws. They would be required to prepare a plan for minimizing dust and odors sufficiently to comply with PSCAA Regulation I, Sections 9.11 and 9.15. The Associated General Contractors of Washington's *Guide to Handling Fugitive Dust from Construction Projects* provides practical examples of best management practices that can be used to comply with construction-related air quality regulations. The following list identifies possible mitigation measures that could be implemented to reduce potential temporary air quality impacts during construction of the project.

- Use only equipment and trucks that are maintained in optimal operational condition
- Require all off road equipment to be retrofit with emission reduction equipment (i.e., require participation in Puget Sound region Diesel Solutions by project sponsors and contractors)
- Use bio diesel or other lower-emission fuels for vehicles and equipment
- Use car pooling or other trip reduction strategies for construction workers
- Stage construction to minimize overall transportation system congestion and delays to reduce regional emissions of pollutants during construction
- Implement construction curbs on hot days when region is at risk for exceeding the ozone NAAQS, and work at night instead
- Implement restrictions on construction truck idling (e.g., limit idling to a maximum of 5 minutes)
- Locate construction equipment as far away as possible from sensitive receptors such as fresh air intakes to buildings, air conditioners, and sensitive populations
- Locate construction staging zones where diesel emissions won't be noticeable to the public or near sensitive populations such as the elderly and the young
- Spray exposed soil with water or other suppressant to reduce emissions of PM10 and deposition of particulate matter
- Pave or use gravel on staging areas and roads that would be exposed for long periods
- Cover all trucks transporting materials, wet materials in trucks, or provide adequate freeboard (space from the top of the material to the top of the truck bed), to reduce PM10 emissions and deposition during transport
- Provide wheel washers to remove particulate matter that would otherwise be carried off site by vehicles to decrease deposition of particulate matter on area roadways
- Remove particulate matter deposited on paved, public roads, sidewalks, and bicycle and pedestrian paths to reduce mud and dust; sweep and wash streets continuously to reduce emissions
- Cover dirt, gravel, and debris piles as needed to reduce dust and wind blown debris
- Route and schedule construction trucks to reduce delays to traffic during peak travel times to reduce air quality impacts caused by a reduction in traffic speeds

Operational Impacts Mitigation

The air quality analysis indicates that the Westpark alternatives would not result in any significant adverse air quality impacts due to off-site traffic. Consequently, no operational impact mitigation measures are warranted or proposed.

4.2.4 Significant Unavoidable Adverse Impacts

No significant unavoidable adverse air quality impacts have been identified related to the Westpark alternatives, and none are anticipated.

4.3 WATER RESOURCES

4.3.1 Significant Impacts of the Proposed Action

For purposes of analysis, the *Proposed Master Plan* or alternatives would be considered to result in an impact to ground water resources if it substantially altered or impeded ground water recharge; substantially depleted ground water supply; or substantially lowered ground water quality or violated water quality standards. These criteria area used in the impact analysis.

Ground Water Recharge

Under the existing conditions of the site, approximately 50 to 60 percent of the site contains impervious surfaces (Parametrix, 2006). Both the *Proposed Master Plan* and the *Design Alternative* would convert additional pervious area (primarily residential lawns) into impervious area (buildings, parking lots, etc). A reduction in pervious area is usually associated with a reduction in the aquifer recharge surface area.

Existing pervious surfaces at the site consist mainly of lawns and ornamental landscaping around individual structures. Mature conifer and deciduous trees are scattered throughout the development. Within the undeveloped portion of the property (i.e. the central third of the northern portion of the property), vegetation consists primarily of mature conifers (Rrefer to Section 3.4, *Plants & Animals*). This undeveloped area will remain undeveloped in all alternatives and significant trees and vegetation will remain undisturbed.

Most recharge on the Kitsap peninsula is expected to occur on relatively low sloping ground, in upland areas, underlain with high-permeability soils. The ground surface gradient of the site is highly variable with occasional steep slopes which facilitates runoff of surface water and limits infiltration. Overall, the site grades toward Oyster Bay at low ground surface elevations from 60 feet to 172 feet above sea level. In addition, the majority of the site is underlain by low-permeability glacial till, further limiting vertical infiltration of water. Finally, the existing pervious surfaces at the site consist mainly of residential lawns that may limit recharge due to previous site grading and compaction during construction. A minimal amount of recharge is expected to occur at the site under existing conditions due to the significant ground surface gradients and low-permeability, compacted soils, which direct stormwater runoff and interflow toward the surrounding downgradient surface water bodies such as Oyster Bay.

The *Proposed Master Plan* will decrease pervious area at the site, which will further limit recharge to the underlying ground water systems compared to existing conditions. The current contributing recharge from the site pervious area to the underlying aquifers is expected to be limited. The loss of recharge due to the proposed action is expected to be a minor component of the recharge to the underlying aquifers. Therefore, there would be an insignificant loss of recharge to the underlying ground water systems from the *Proposed Master Plan*.

Ground Water Supply

Westpark would continue to receive water and sewage service from local providers. No impacts related to ground water supply would occur.

Ground Water Quality

Under the *Proposed Master Plan*, all stormwater will be collected and conveyed through stormwater water quality systems before discharge offsite. The water quality systems will consist of wet ponds, wet vaults, or biofiltration swales that will treat stormwater to applicable standards. Under the existing conditions, stormwater is routed to offsite discharge points without onsite water quality treatment. Although the proposed action will increase the volume of stormwater generated, it will be treated to applicable standards before offsite discharge to surface water bodies. A potential reduction in ground water contamination from stormwater is identified if water quality treatment is performed on stormwater prior to discharge. No significant negative impact to ground water quality is identified from stormwater generated from the proposed action.

Under existing conditions, a landfill exists on the project site that has not been closed under applicable regulations. This landfill likely generates leachate that mixes with infiltrated precipitation that may further infiltrate to underlying ground water systems. In the proposed action, the landfill will be closed under applicable regulations. Onsite work to delineate contamination from the landfill and to initiate closure proceedings is currently underway. Proper closure per applicable regulations should limit infiltration of precipitation into the landfill material and further limit mixing of leachate with infiltrated water. In addition, stormwater that is currently directed to the landfill area would be diverted to stormwater conveyance pipes and reduce the amount of precipitation/stormwater that enters the landfill material. Leachate may continue to slowly infiltrate through the underlying peat layer after closure. A reduction in potential contamination from the landfill is anticipated, provided proper closure and regrading is performed under the proposed action. No significant negative impact over existing conditions from the proposed action to ground water quality is identified from the landfill.

4.3.2 Impacts of the Alternatives

No Action

Ground Water Recharge

In the *No Action* alternative, impervious cover and the stormwater conveyance system would remain the same; therefore recharge to the ground water would remain the same. No significant impacts related to ground water recharge would occur.

Ground Water Supply

Westpark would continue to receive water and sewage service from local providers. The onsite water and sewer lines would not be replaced or upgraded. No significant impacts related to ground water supply would occur.

Ground Water Quality

Impervious cover and the stormwater conveyance system would remain the same. Under existing conditions, stormwater is routed to off-site discharge points without on-site water quality treatment. The existing landfill likely generates leachate that mixes with infiltrated precipitation that may further infiltrate to underlying ground water systems. Any existing ground water quality impacts from stormwater and the landfill would continue.

Design Alternative

Ground Water Recharge

The *Design Alternative* proposes a similar level of new impervious cover and similar amounts of open space and undisturbed sensitive areas. The stormwater plan would be similar with one significant change: the *Design Alternative* proposes to infiltrate stormwater from approximately 7 acres of retail space into the subsurface on-site. This would act to further minimize loss of recharge over the *Proposed Action* and the loss of recharge would be less. The amount of recharge lost in the *Proposed Master Plan* is considered insignificant however; the amount of lost recharge under the *Design Alternative* is also considered insignificant. No significant impact to ground water recharge would occur.

Ground Water Supply

In all alternatives, Westpark would continue to be served with water and sewage service from local providers. No significant impacts related to ground water supply would occur.

Ground Water Quality

The *Design Alternative* proposes a similar amount of new development and similar amounts of open space and undisturbed sensitive areas as the *Proposed Master Plan*. The stormwater plan would be similar with one significant change: stormwater from approximately 7 acres of retail space would be infiltrated into the subsurface. The stormwater plan would provide appropriate treatment of all stormwater prior to infiltration or discharge off-site. The landfill would be closed under applicable regulations; stormwater that is currently directed to the landfill area would be diverted to stormwater conveyance pipes and reduce the amount of precipitation/stormwater that enters the landfill material. No significant adverse negative impact to ground water quality would occur.

4.3.3 Mitigation Measures

No significant adverse impacts to ground water recharge, supply or quality have been identified from the Proposed Master Plan relative to existing conditions. Best management practices proposed in the stormwater plan (Parametrix, 2006) would be implemented to improve water quality through planned water quality treatment facilities. This should improve water quality of the stormwater generated at the site over existing conditions. No further mitigation is necessary.

Closure of the landfill consistent with applicable regulations is recommended. No further significant impacts to ground water recharge or supply have been identified and no further mitigation is recommended.

4.3.4 Significant Unavoidable Adverse Impacts

No significant unavoidable adverse impacts to ground water supply have been identified. A minor amount of ground water recharge loss is expected from the *Proposed Master Plan*. The reduction is considered insignificant compared to existing conditions. Ground water quality improvements are expected from stormwater treatment. However, proper closure of the landfill may not prevent landfill leachate from reaching underlying ground water systems.

4.4 PLANTS & ANIMALS

4.4.1 Significant Impacts of the Proposed Master Plan

Impacts to Plants

Under the *Proposed Master Plan*, the majority of the site would be re-developed into a variety of housing and community services uses. This would result in clearing and grading of the portions of the site identified as Urban (U), moderately vegetated habitat. Similarly, most of the portions of the site identified as deciduous forest (Fd) would be cleared and graded. The area identified as lowland grass/forb, mowed (Gm) is currently dominated by a baseball field, and would be re-designed to include more landscaping and provide multiple recreational uses. A majority of the coniferous forest in the north-central portion of the site will be retained, and this open space area will be expanded to accommodate Summit Park. The small patch of coniferous forest remaining in the eastern portion of the site would be cleared for redevelopment of the site..

Most of the existing trees located within the developed portions of the site would be removed. These trees are predominantly planted and remnant Douglas-fir with some interspersed ornamental and native conifers and deciduous tree species. Within the developed portions of the site, a large number of ornamental landscape trees would be planted. In addition, lawns and other landscape vegetation would be established where appropriate along streets and among buildings. As previously mentioned, the amount of open space on the property will increase from approximately 18 acres to 28 acres.

A small area (approximately 2,000 square feet) of coniferous forest off site would be removed to replace the stormwater outfall along the edge of Oyster Bay. A new segment of pipe would be constructed to tie into the existing storm drainage line, with a new baffled outlet and riprap to provide energy dissipation. Access to the new outlet structure would be provided by a paved road atop the new pipe.

The *Proposed Master Plan* would not directly affect any wetland habitats, as none occur on site. Construction of the new stormwater outlet and removal of a portion of the existing pipe along the edge of Oyster Bay would disturb a small area of estuarine, intertidal, unconsolidated shore (mud and cobble substrate) wetland habitat. A pad of riprap (encompassing approximately 300 square feet) would be located at or below the Mean High Water elevation along the shore to provide energy dissipation. A temporary coffer dam would be constructed to keep tidal waters out of the area during construction. The existing ground surface would be restored upon removal of the coffer dam. In addition, approximately 200 feet of existing storm drainage pipe (down to the Mean Lower Low tide elevation) would be removed, and the associated pipe supports would be removed to the existing ground elevation. The north end of the remaining stormwater pipe would be plugged. The removal would result in temporary disturbance of an additional area of estuarine intertidal habitat (approximately 2,000 square feet), and the existing ground surface would be restored following pipe removal.

Impacts to Wildlife

Direct alteration (reduction) to the distribution, composition, and amount of native vegetation resulting from site development can affect the distribution and composition of wildlife populations in a given area. Because the majority of the site is currently urban residential habitat, removal of the existing trees, lawns, buildings, and roads would affect habitat suitable mainly for urban-adapted wildlife species, such as European starlings, American robin, rock dove, various gulls, raccoons, eastern gray squirrels, rodents, and others. Clearing, grading, and construction activities would thus remove habitat temporarily for these species, many of which are non-native, invasive species. As the new site landscaping becomes established, habitat for these species would again be provided. The primary loss of shelter or cover would result from removal of some of the larger trees (primarily native species) that occur on the site in developed areas among the existing housing and roads. Similarly, the re-development of the portion of the site currently identified as lowland grass/forb, mowed (Gm) would not be likely to impact wildlife, except during the construction phase of development.

As noted above, much of the existing coniferous forest vegetation on the site, primarily that in the north-central portion, would be retained. Aside from temporary construction-related disturbance and a possible increase in recreational use of these areas, wildlife species that occupy this area would be largely unaffected by the redevelopment proposed on the site.

If the majority of the small areas of deciduous forest in the western and eastern portions of the site are removed as proposed, this would nearly eliminate the small patches of native deciduous forest cover on the property. This cover type provides habitat for a variety of wildlife including native birds, mammals, amphibians, and reptiles. Removal of this forest cover could eliminate some species from the site, but the on-site acreage of this forest habitat is limited (approximately 3.75 acres). In addition, the deciduous forest stands currently found on the property are young, linear in configuration, and have considerable non-native plant species cover, and thus have somewhat limited value to native wildlife.

Indirect impacts to unaltered habitat retained on-site could make it less suitable for some species of wildlife currently inhabiting the site. Human activities associated with clearing, grading, and new construction could cause additional disturbance to wildlife species inhabiting the native forest areas along the east and west boundaries through increased noise and human activity. Once the construction is completed, however, human disturbance would subside to levels similar to current activities. The increased human population has the potential to increase human disturbance or use of adjoining native habitats and wildlife species that inhabit them. Proposed trails and pedestrian walkways and recreational activity may also increase the level of disturbance to wildlife on the site.

Upon completion of development, and over time, the *Proposed Master Plan* would provide similar habitat for wildlife as that exists under current conditions on most of the site. This habitat is generally suited primarily to urban-adapted species. The potential for human disturbance of retained natural habitats would increase under the *Proposed Master Plan*, but the area of human activity would remain essentially the same as under current conditions. Although some of the native deciduous forest along the east and west boundaries of the site are proposed to be removed, much of the existing vegetation (primarily coniferous forest) on site would be retained, and thus would continue to provide habitat similar to current conditions. Therefore, the *Proposed Master Plan* is not expected to have significant adverse impacts on wildlife that inhabits the site.

Impacts to Endangered, Threatened, Sensitive, and Other Priority Species

No endangered, threatened, or sensitive plant species are known or likely to occur on-site. Consequently, the *Proposed Master Plan* would not adversely impact such species.

Similarly, development of the site is not expected to affect endangered, threatened, or sensitive animal species, as none have been documented on the site or along the edges of Oyster Bay. In addition, potential habitat for these species on the Westpark property is either lacking or very limited. Although bald eagles, a state and federal threatened species, are known to occur within 1.5 miles of the property, no nest sites are known to occur on the property, and except for potential perching habitat north of the site along Oyster Bay, the site lacks suitable foraging or nesting habitat. Primary foraging areas likely focus on fish-bearing waters of Puget Sound.

No other priority animal species would be adversely affected by the *Proposed Master Plan*, because none are known or likely to inhabit the site.

4.4.2 Impacts of the Alternatives

Design Alternative Master Plan

Impacts to Plants

The *Design Alternative* would cause impacts to plant and animal communities similar to those of the *Proposed Master Plan*. This alternative would involve redevelopment of the same general area as under the proposed plan, and retained native open space would occur in the same areas and approximately the same amount. Thus, as with the proposed plan, the majority of clearing and grading on the property would affect the existing urban habitat, and much of the natural vegetation cover would be retained as open space. As with the *Proposed Master Plan*, trees and other vegetation that are removed within the residential and commercial portions of the site will be replaced with ornamental trees, lawns, and other landscaping, where appropriate, along streets and among buildings. The landscaped and developed open space areas would likely cover a similar (or possible somewhat smaller) area. As under the proposed plan, this alternative may actually improve the water quality of stormwater runoff, as no water quality treatment is provided under current conditions. The *Design Alternative* includes replacement of the existing stormwater outlet structure, with the same associated impacts as with the *Proposed Master Plan*.

Impacts to Wildlife

Impacts to wildlife under the *Design Alternative* would be approximately the same as under the *Proposed Master Plan*. Clearing and grading of the site for redevelopment would remove existing trees, shrubs, lawns, and buildings that currently provide habitat primarily for urban-adapted species. This would be a temporary impact, as under the *Proposed Master Plan*, because as the new site landscaping becomes established, habitat for these species would again be provided over time. Again, the primary loss of shelter or cover for wildlife on site would be removal of many of the larger trees (both ornamental and native species) that occur on site on landscaped areas among the existing housing and roads.

Existing native vegetation on the site within the north-central portion of the property would be retained as open space, and wildlife species that occupy this area would be largely unaffected by the redevelopment proposed on site. As with the *Proposed Master Plan*, if most of the deciduous forest on the western and eastern boundaries of the site are removed, this would nearly eliminate native deciduous forest cover from the site. Consequently, some species that inhabit this cover could find reduced habitat on site or be eliminated from the site.

The *Design Alternative* is not expected to have significant adverse impacts to wildlife habitat on the site over the long term. After redevelopment, the site would continue to provide habitat for mostly urban-adapted species. Although some of the native deciduous forest along the east and west boundaries of the site may be removed, most of the natural vegetation on site would be retained, and thus would continue to provide habitat similar to current conditions.

Impacts to Endangered, Threatened, Sensitive, and Other Priority Species

As for the *Proposed Master Plan*, the *Design Alternative* would not adversely affect endangered, threatened, or sensitive plant or animal species, as no such species are known or expected to inhabit the site or the edges of Oyster Bay. Similarly, no other priority animal species would be adversely affected because none are known or likely to inhabit the site.

No Action Alternative

Because existing housing units and infrastructure would remain and no construction would occur, no temporary or long-term impacts to plants and animals are expected to occur under the No Action alternative.

The process of natural forest development (succession) would continue to occur in the existing natural open space areas under this alternative. The small areas of forest and shrubland areas would continue to grow and develop into forests of varying mixes of Douglas fir (and other scattered conifers) and deciduous trees. Given enough time and lack of a major disturbance (such as fire), conifer species (such as Douglas fir and western hemlock) now present in the young deciduous and mixed forest communities would become dominant over deciduous species (such as red alder and big-leaf maple) because the conifers live longer and grow larger. Some blowdown of existing trees in these natural open space areas could occur over time. Existing trees on site among buildings and along roadways would continue to grow larger and would remain, unless they were to fall due to wind or rot, or were removed for safety considerations.

Passive recreational use of the existing trails on-site and off-site by local residents would likely continue at levels similar to the present. Over time, as the human population of the local region grows, use of these trails could grow as well.

4.4.3 Mitigation Measures

Based on the site plan, the *Proposed Master Plan* would retain most of the existing stands of native vegetation cover on site. In addition, the proposed Master Plan would provide approximately 28 acres of open space and parks, including retained trees and active and passive recreation areas. Basic water quality treatment best management practices including construction of biofiltration swales, open wet ponds, and underground vaults will be used to treat stormwater for pollutants prior to discharging into downstream receiving waterbodies.

The proposed design for replacement of the existing outfall in Oyster Bay would help protect remaining native habitats in the vicinity of the discharge site and farther off site from adverse impacts of erosion or sediment deposition, and would help protect water quality in Oyster Bay.

The Westpark Sub-Area Plan development regulations also contain requirements or guidelines that would increase habitat values of otherwise altered landscapes and mitigate wildlife impacts.

These include landscaping with native plant species, and landscape and irrigation design concepts that encourage use water-conserving, low-volume irrigation, and discouraging the use of exotic ornamental plantings.

Per the requirements of the Westpark Sub-area Plan, the *Proposed Master Plan* includes landscaping with native species, where feasible, and precludes the use of exotic, invasive species. Landscaping with native plant species, especially trees and shrubs that provide ground cover for nesting birds, cover for small mammals, and feeding sites (such as where landscaped areas abut native growth areas), would help increase habitat values of otherwise altered landscapes. The plan also would employ water conservation measures in the landscape and irrigation design.

A tree survey would be conducted in conjunction with the subdivision application. Existing significant trees would be retained where feasible, where they do not pose a safety hazard to future residents or facilities.

Other potential mitigation measures could include retention of existing deciduous forest vegetation in the eastern and western portions of the site. This might involve a conservation easement on the rear portions of the proposed lots in that area or designation of the forest itself as native open space.

Interpretive or educational materials could be made available to residents and visitors to foster an understanding and appreciation of the natural features of the property and surrounding area (e.g., the coniferous forest within the proposed Summit Park, stormwater management, and water quality treatment). Such an appreciation can help to limit unnecessary disturbance or destruction of remaining native vegetation or wildlife. Materials could include signs or materials available from public agencies or local conservation groups.

4.4.4 Significant Unavoidable Adverse Impacts

Redevelopment of the site under the *Proposed Master Plan* or *Design Alternative* would unavoidably affect existing planted trees, lawns, buildings, and infrastructure on site. This would remove, at least temporarily, existing urban habitat from the site, which harbors primarily those species adapted to urban environments. However, most of the area of native vegetation on site would be retained, and upon completion, similar urban habitat would be created. Consequently, impacts to plants and animals of the site and vicinity are not considered significant.

4.5 FISHERIES RESOURCES

4.5.1 Impacts of the Proposed Master Plan

Overview of Impacts

As described in Section 3.5, no potential fish habitat occurs on or immediately adjacent to the Westpark site itself. No lakes, ponds, or stream channels are present on or adjoining the site. Based on the current mapping available, surface water run-off from the Westpark site currently drains to three distinct water bodies. Ostrich Bay Creek lies off-site to the west, and currently drains approximately 5 acres of on-site area to Ostrich Bay. The site also currently includes approximately 7 acres of headwater area that contributes runoff to a drainage (not identified as a stream) that flows to the south, roughly paralleling SR 3, and eventually discharges to Sinclair Inlet. Runoff generated by the remaining site area (approximately 68 acres) is currently discharged to Oyster Bay via two stormwater outfall pipes.

The proposed stormwater conveyance system would be designed based on requirements in Chapter 4 of the City of Bremerton Public Works *Design and Construction Standards*, and King County's *Surface Water Design Manual,* as referenced by City standards. Off-site stormwater outfall construction and subsequent stormwater discharge will occur primarily at Oyster Bay. The stormwater system, including the proposed upgrade of the outfall to Oyster Bay, is described in Section 2.6.7.

Flow control (e.g. detention) is currently proposed for approximately 5 acres, or less than 6percent of the total site area, that discharge to Ostrich Bay via Ostrich Bay Creek. Flow control is not required under the adopted regulations on the remaining 94percent of the site, provided that the conveyance system is upgraded to handle the increased volumes expected. As previously noted, stormwater from approximately 2.9 acres would also be diverted from Basin SE (which drains to Sinclair Inlet) to Basin 3 (which drains to Oyster Bay). With the diversion, the impervious surface area remaining in Basin SE post-redevelopment will closely match existing conditions, as will runoff rates. Diversion would avoid the need for on-site detention in Basin SE and potential impacts to WSDOT's drainage system along SR 3. However, run-off volumes and rates from the overall project site, including those areas that discharge to Oyster Bay, would increase when compared to the current condition due to the proposed increase in impervious surface coverage from \redevelopment and the associated construction of a modern stormwater system. Increased stormwater discharge to Oyster Bay would also result from the diversion of flows from a portion of Basin SE to Basin 3 as previously described.

The primary Oyster Bay discharge is north of the intersection of Oyster Bay Avenue and Kitsap Way, and will be reconstructed as a joint City/BHA project in conjunction with the *Proposed Master Plan*. A second discharge occurs approximately 1,500 feet to the west of the primary discharge, in the vicinity of Weslon Place (Wandling, pers. comm., 30 November 2005). Flows originating on-site that currently discharge to the Weslon Place outfall will be rerouted to the reconstructed Oyster Bay outfall. Since no fish habitat is present on the Westpark site proper, any potential fish- or fish-habitat-related impacts of the proposed project or its alternatives would occur only in those areas somewhat removed from and downslope of the site where fish and fish habitat occur. These areas include all of the receiving waters, as well as the site of the proposed replacement stormwater outfall at Oyster Bay.

The area immediately surrounding the proposed replacement stormwater outfall at Oyster Bay will be subject to direct construction impacts, as well as potential beach scour and salinity changes associated with discharging increased quantities of stormwater in a different manner and location than occurs presently. Based on the current revised outfall design, approximately 3400 square feet of beach substrate would be permanently altered by the construction of the proposed outfall and a rock-lined channel that will convey storm flows from the outfall across the intertidal area to the Mean Lower Low Water (MLLW) line of Oyster Bay. In addition to outfall construction impacts, loss of natural beach substrate habitat and potential operational beach erosion impacts, all of the receiving waters -- Oyster Bay, Ostrich Bay, Ostrich Bay Creek, and Sinclair Inlet -- could potentially be impacted by water quality changes both during and after construction in the upland site. The exact nature of such impacts would depend primarily on the quantity, quality and timing of surface water run-off originating from the site, as influenced by existing and proposed land cover and the effectiveness of temporary erosion and sediment control measures, water quality facilities and flow controls. Impacts are discussed in additional detail below.

Construction-Related Impacts

Potential construction-related impacts to fish and fish habitat from on-site activities are related to the amount and type of soils exposed during construction, the effectiveness of temporary erosion and sedimentation control measures, and the extent and effectiveness of flow control measures from temporary sedimentation ponds. These factors will affect the amount, quality, and timing of potentially silt-laden water reaching downstream areas of fish habitat in Ostrich Bay Creek, Ostrich Bay, Oyster Bay, and Sinclair Inlet. Under the *Proposed Master Plan*, approximately 90percent of the site would be cleared and 74 percent of it, or 61 acres, would be impervious surface following construction. By comparison, impervious surface coverage within the existing site is estimated at between 50 percent and 60 percent. Under the *Proposed Master Plan*, there would be approximately 294,000 cubic yards of cut, 306,000 cubic yards of fill, 12,000 cubic yards of imported soils, and no significant export of soil.

Ostrich Bay Creek is somewhat more vulnerable to construction-related impacts from redevelopment than are Ostrich Bay, Oyster Bay, or Sinclair Inlet because it is a fresh-water stream habitat where increased sedimentation could clog streambed gravels, which are used for the incubation of salmonid fish eggs and aquatic insect production. Marine intertidal and subtidal habitats are also vulnerable to sediment loading which can ultimately affect the biodiversity and ecological value of marine shoreline habitats (Thrush et al. 2004).

Apart from potential indirect impacts to fish habitat based on runoff water quality and quantity originating on-site during construction, construction of a new stormwater outfall and associated conveyance channel within Oyster Bay's intertidal zone as proposed has the potential to cause limited direct impacts to such habitat.

The area comprising the footprint of the proposed baffled outfall, supporting rip-rap armoring and conveyance channel across the intertidal zone (extending approximately 215 feet waterward of the MHW) would be substantially altered from its existing condition on a permanent basis. This area would total roughly 3,400 square feet based on a preliminary design. The interstitial spaces in the supporting riprap could provide habitat for some invertebrates tolerant of salinity changes (known as euryhaline) and hiding places for small euryhaline fish (such as sculpins) at high tide. However, this area would remain substantially and permanently altered. Furthermore, a moderate amount of additional excavation area would be required within the intertidal zone to accommodate the placement of the baffled outfall, its supporting foundations, inlet piping, riprap armoring and the conveyance channel. Tidal fluctuations during construction could result in noticeable and potentially damaging siltation unless controlled through implementation of a competent temporary erosion and sedimentation control plan. Estimated grading volumes associated with the replacement of the off-site storm drainage outfall on Oyster Bay are 425 cubic yards of excavation (for manholes, pipe, baffled outlet, riprap) and 240 cubic yards of backfill (around manholes, pipe bedding and backfill, riprap), for a net 180 cubic yards of cut. However, these volumes do not account for removal of portions of the existing outfall pipe or for excavation and fill necessary to construct the conveyance channel.

Removal of those portions of the existing outfall structure and approximately 215 linear feet of piping landward of the MLLW line would result in additional impacts to the beach if heavy equipment were to be used. Those portions of the outfall waterward of the MLLW would be abandoned in place. It is presumed that the various sections of pipe and other structures making up the existing outfall landward of the MLLW line could be cable yarded or otherwise hauled back up the beach during periods of low tide with only shallow and low-pressure impacts to the subtidal substrate and the organisms it contains. There would be little erosion or sedimentation if outfall removal was done at low tide in this manner. As an alternative, steel plates or other methods to reduce heavy equipment impacts to beach soils and related habitat could be deployed.

However, the proposal will implement effective temporary erosion and sedimentation control and temporary flow control BMPs during the construction process, both on-site and along the stormwater discharge conveyances off-site. Therefore, downstream construction-related impacts to fish and/or fish habitat are not expected to be significant. Construction of the *Proposed Master Plan*, including replacement of the stormwater outfall to Oyster Bay, is not expected to result in significant impacts to the abilities of local aquatic species to successfully complete their life histories through successful reproduction. Life history stages may include hatching, feeding, rearing, migration, and successful reproduction to sustain populations and carry on subsequent generations. In general, the project is not expected to significantly diminish habitat availability or food supplies, increase susceptibility to disease or predation, lower water quality, interfere with successful migration or reproduction, or otherwise diminish the survival and fitness of the aquatic species making use of Oyster Bay as habitat for the completion of all or a portion of their life histories. These aquatic species include, but are not limited to, salmonid fish species including listed chinook salmon, surf smelt, and sand lance. See Table 3.5-1. The construction impact area will be small and supports only low-level use by endangered or ecologically significant populations (such as sand lance, surf smelt, salmonids, etc.). No migration routes would be blocked and no passage impeded.

Construction timing will adhere to the most restrictive of the seasonal and calendar restrictions (“work windows”) identified on the required local, state, and federal permits including those from the City of Bremerton, the Washington Department of Fish and Wildlife, and the U. S. Army Corps of Engineers. The Corps’ salmon work window for Tidal Reference Area 5, including Sinclair and Dyes inlets (and Oyster Bay), is currently listed as between July 2 and March 2. Work windows for bull trout are not applicable because bull trout are not known to use east Kitsap County streams or nearshore areas (see Section 3.5) and work windows for the forage species (surf smelt, Pacific herring, and Pacific sand lance) are also not applicable because spawning areas for these fish in Oyster Bay are not indicated on the Priority Habitats and Species (PHS) data.

Operational Impacts

The proposed redevelopment would significantly improve storm runoff water quality compared with existing site conditions (or the *No Action Alternative*), since the storm drainage system serving the existing development includes essentially no water quality controls. In addition, flow attenuation through detention will be provided for those limited site areas contributing flow to Ostrich Bay Creek and, subsequently, Ostrich Bay. The area proposed for detention amounts to roughly 6percent of the total site area. However, overall, the proposed 20-to-40 percent increase in impervious surface coverage, in combination with the construction of a modern conveyance system, can be expected to substantially increase stormwater run-off volumes and peak flows; please refer to the Stormwater Technical Report contained in Appendix A of the Draft EIS. Furthermore, the diversion of flows from the current Weslon Place outfall and approximately 3 acres of run-off from the SE Basin to the reconstructed Oyster Bay Avenue outfall would result in additional increases in stormwater run-off volumes and peak flows at this site.

Alternative designs for replacement of the City storm drainage outfall on Oyster Bay were considered. Replacing the existing outfall with one similar in form and function, though with increased capacity, which discharges stormwater from the site sub-tidally, was considered. This option was not pursued because of concerns regarding the impacts of in-water construction.

Another initial design concept, which was ultimately modified, would have discharged larger quantities of stormwater at or near the high tide line or OHWM. This would have been a marked change from the existing condition, whereby stormwater is discharged well below the low tide line. Near-zero-salinity or "fresh" stormwater would be discharged more or less as sheet-flow across the intertidal zone at times other than at high tide. This would have caused a potential impacts to intertidal benthic organisms --including clams, mussels, ghost shrimp, marine worms, barnacles, amphipods, copepods, and their natural predators (starfish, marine snails) – att each tidal cycle. Substantial changes to intertidal habitat would also have occurred from increased sediment loads from stormwater runoff, increases or decreases in nutrient exchange, and/or changes in pH, temperature, and salinity (Gillanders and Kingsford 2002). Additionally, the a new channel could have eroded down the beach, which could expose and/or wash away benthic organisms that would otherwise be buried and/or secured by the existing beach substrate. In addition, rip-rap armoring would have extended for approximately 12.5 feet downslope of the proposed baffled outfall, which would be placed near the high tide line along the shore of Oyster Bay.

Based on initial environmental review of the stormwater outfall design, the applicant revised the conceptual design. The *Proposed Master Plan* now includes construction of a rock-lined channel, or splash pad, extending from the baffled outfall more than 200 feet to MLLW to reduce the potential for erosion, sedimentation and related impacts to shoreline resources. Details of the proposed splash pad are shown in Figure 2-8 (Section 2.6.7). The current design calls for a conveyance channel constructed of quarry spalls, with rounded gravels on top and in the spaces between the quarry spalls. Total width of the splash pad would be about 15 feet, with a 10-foot wide channel bottom, sloped sides and a conveyance depth of approximately 1.2 feet. The width of the rock-lined area will be as narrow as possible to limit the footprint and the related loss of habitat for benthic organisms, such as clams, mussels, ghost shrimp, marine worms, barnacles, amphipods, copepods, and their natural predators (e.g. starfish, marine snails). The rock-lined area would be constructed in a temporary 20-foot construction easement. The proposed splash pad would allow stormwater to be conveyed across a narrow portion of the intertidal area and would reduce the area of beach substrate and related number of bottom dwelling organisms which would be subjected to low-salinity water. The proposed splash pad would reduce the probable erosion and sedimentation impacts associated with the proposed stormwater outfall below the level of significance.

The proposed outfall replacement design would avoid most of the construction impacts across the intertidal zone that would occur if the existing outfall were replaced in-kind. However, the initial design would substitute these one-time and limited construction impacts for potentially significant and on-going operational impacts.

In addition to the proposed mitigation measure described above and incorporated into the proposed outfall design, stormwater flows could potentially be reduced at the Oyster Bay outfall through the application of infiltration technologies or other flow control techniques at the upland project site. The reduction of stormwater discharge rates and volumes would result in correspondingly reduced potential for operational impacts as previously discussed. However, even significant reductions in discharge volumes would not eliminate the need to replace the Oyster Bay outfall. In addition, on-site soils may not be suitable for the widespread application of infiltration technologies. Cost and the limited space available for above ground detention are significant factors affecting the proposed stormwater system design. The applicant has calculated that the estimated cost of the extensive below ground detention that would be necessary to avoid construction of a new outfall would make the project unfeasible.

The probable environmental impacts to fisheries resources associated with ongoing operation of the proposed stormwater outfall, as described above, would not be significant. Mitigation measures have been incorporated into the proposal to reduce probable impacts below the level of significance.

Indirect & Cumulative Impacts

Any fisheries-related impacts due to *on-site* activities would occur in off-site sections of Ostrich Bay Creek, Ostrich Bay, Oyster Bay, or Sinclair Inlet. These are all areas somewhat to quite considerably removed from the site (See Figure 3.5-1). As such, since no fish or fish habitat is present on the Westpark site, the above-described, on-site construction-related and operational impacts may also be considered *indirect* impacts. An exception would be the off-site, but project-related, construction activities associated with the replacement of the Oyster Bay stormwater outfall. Since fish habitat is present at and adjoining that area, any construction-related impacts of outfall replacement could be considered *direct* impacts. Any operational, water quality impacts of the stormwater discharge would still be considered to be *indirect* impacts, however, since they would be off-site impacts resulting from on-site activities. As stated previously, water quality is expected to improve due to redevelopment because water quality controls and treatment will be provided where little or none is provided presently.

All of the drainage basins that lie partially on-site, including the Ostrich Bay Creek Basin, are already highly developed with little land remaining for additional development. If and when land in these basins is re-developed, it will be subject to more stringent and effective water quality and quantity control measures, such as those included in the current KCSWDM and other design standards required by the City. Significant improvements in water quality characteristics can be anticipated as such re-development occurs. Improvements in runoff flow regime would also occur where discharges are made to streams and detention is required. Due primarily to topographic and regulatory constraints, it is not anticipated that flow from substantial additional areas would be diverted between drainage basins in the project vicinity. As discussed in Section 4.9.1, *Land Use*, redevelopment of Westpark could positively encourage additional commercial and residential redevelopment in the surrounding area. The amount and timing of such indirect development is uncertain. It would, however, also result in conversion of indirect development to modern stormwater quality and quantity controls, which would positively impact fish habitat and resources.

4.5.2 Impacts of the Alternatives

Design Alternative Master Plan

Construction-Related Impacts

As with the *Proposed Master Plan*, potential construction-related impacts to fish and fish habitat resulting from implementation of the *Design Alternative* will be largely affected by the amount and type of earth exposed during construction, the effectiveness of temporary erosion and sedimentation control measures, and the extent and effectiveness of flow control measures from temporary ponds. These factors will affect the amount, quality, and timing of potentially silt-laden water reaching downstream areas of fish habitat in Ostrich Bay Creek, Ostrich Bay, Oyster Bay, and Sinclair Inlet. Development under this alternative would also comply with currently applicable design standards for stormwater control, including the requirements in Chapter 4 of the City of Bremerton Public Works *Design and Construction Standards*, and King County's *Surface Water Design Manual,* as referenced by City standards. Grading areas and quantities for the *Design Alternative Master Plan* would be similar to those for the *Proposed Master Plan*.

Fisheries-related construction impacts of the *Design Alternative* would be generally the same as for the *Proposed Master Plan*, since the on-site areas and quantities of grading and clearing would remain approximately the same. The stormwater drainage system design and function, including the replaced Oyster Bay outfall, would likewise be the same or very similar. Impervious surface area would be substantially the same as or slightly higher than the *Proposed Master Plan*. The increased level of infiltration provided for the *Design Alternative* would result in stormwater runoff volumes and other characteristics similar to or less than those for the *Proposed Master Plan*. At the current level of conceptual design, the differences in construction-related impacts with respect to fisheries are indistinguishable.

As for the *Proposed Master Plan,* assuming implementation of temporary sedimentation and erosion control and temporary flow control BMPs during the design and construction processes, downstream construction-related impacts to fish and/or fish habitat would be expected to be less than significant.

Operational Impacts

Similarly to the *Proposed Master Plan*, redevelopment under the *Design Alternative* would generally serve to materially improve water quality compared with existing site conditions (the *No Action Alternative*), where the storm drainage system serving the existing development includes essentially no water quality controls. Also, as under the *Proposed Master Plan*, flow attenuation through detention will be provided for those limited site areas contributing flow to Ostrich Bay Creek. As described above, additional infiltration provided under this alternative would compensate for any increases in impervious surface area resulting from an increase in commercial development.

The design of the proposed replacement stormwater outfall to Oyster Bay north of the intersection of Oyster Bay Avenue and Kitsap Way would be the same as under the *Proposed Master Plan*. Please refer to the description of this outfall and the assessment of its anticipated and potential impacts above.

As such, operational impacts resulting from implementation of the *Design Alternative Master Plan* are expected to be essentially the same as for the *Proposed Master Plan*. The probable operational impacts of the replacement stormwater outfall to Oyster Bay with respect to fisheries resources are not expected to be significant because mitigation measures have been incorporated into the outfall design.

Indirect & Cumulative Impacts

As for the *Proposed Master Plan,* the only direct fisheries-related impacts associated with Westpark redevelopment under the *Design Alternative Master Plan* would be those associated with construction of the replacement stormwater outfall to Oyster Bay. Since no fish or fish habitat are present on the Westpark site, fisheries-related impacts due to *on-site* activities would be a result of stormwater quality and quantity impacts to off-site receiving waters -- Ostrich Bay Creek, Ostrich Bay, Oyster Bay, or Sinclair Inlet. As such, the above-described, on-site, construction-related and operational impacts (with the exception of those directly associated with Oyster Bay stormwater outfall construction) may also be considered to be indirect impacts. As stated previously, water quality is expected to improve due to redevelopment because water quality controls and treatment will be provided where little or none is provided presently. This would be expected to reduce the amount of non-point pollutants, including hydrocarbons and heavy metals, which are discharged to receiving waters.

Cumulative Impacts of the *Design Alternative* are expected to be the same as for the *Proposed Master Plan*.

No Action Alternative

Construction-Related Impacts

No construction would occur other than minor rehabilitation and maintenance, and no construction-related impacts to downstream fish or fish habitat resources would occur.

Operational Impacts

Under *No Action,* relatively minor and slowly evolving site changes affecting stormwater runoff could occur. Stormwater runoff would continue to flow from the site into Ostrich Bay Creek, Ostrich Bay, Oyster Bay, and Sinclair Inlet without water quality treatment to the detriment of fish and fish habitat downstream. Runoff to Ostrich Bay Creek would also continue to occur without water quantity controls. The benefits to downstream fish and fish habitat of improved water quality and water quantity controls, as would be provided by either of the other EIS alternatives, would not occur. Expected, non-significant impacts associated with Oyster Bay stormwater outfall replacement and operation, including the creation of a narrow armored channel across the intertidal zone, resultant limited sub-tidal siltation, and exposure of benthic intertidal organisms to low-salinity “fresh” stormwater runoff would similarly not occur.

Indirect & Cumulative Impacts

The operational impacts described above associated with foregoing the improved water quality and improved water quantity controls associated with competent redevelopment would primarily be indirect impacts with respect to the site, since no fish or fish habitat are present on the Westpark site.

Cumulative Impacts

If redevelopment throughout all of the drainage basins which lie partially on-site, including the Ostrich Bay Creek Basin, were to not occur or were to occur only sporadically and/or at a slower rate, the storm runoff water generated in those basins would continue to be discharged with relatively little water quality treatment or flow control, to the detriment of downstream fish, shellfish, and other wildlife populations in Ostrich Bay Creek, Ostrich Bay, Oyster Bay, and Sinclair Inlet. *No Action* would not serve as an inducement to additional redevelopment in the surrounding area.

4.5.3 Mitigation Measures

Proposed Mitigation

Mitigation measures that have been incorporated into the *Proposed Master Plan* include BMPs to improve and protect water quality throughout the project site and water quantity controls for the on-site portion of the Ostrich Bay Creek basin on a long-term, operational basis. BMPs to address temporary sedimentation and erosion during construction are also incorporated into the proposal. These will be refined during the preparation of project development plans and applications. The mitigation measures provided will result in material improvements to water quality control parameters, to the benefit of fish and their habitat, downstream of the site in Ostrich Bay Creek, Ostrich Bay, Oyster Bay, and Sinclair Inlet.

The intertidal zone in the vicinity of the proposed stormwater outfall replacement location on Oyster Bay has a fine-grained, erodible substrate. Design of the proposed Oyster Bay stormwater outfall includes an open, relatively narrow, armored channel across the intertidal zone which avoid the potential impacts associated with allowing discharged stormwater to scour a new channel across the intertidal zone.

Potential Additional Mitigation

> A potential mitigation element would be to incorporate and utilize infiltration technologies and methodologies in the *Proposed Master Plan*. As noted previously, however, on-site soils are not generally conducive to widespread infiltration, so this approach could be problematic and prohibitively expensive to apply on a widespread basis. Other low impact development techniques could be evaluated and incorporated where possible.
>
> Approximately 200 linear feet of pipe and related structures associated with the Oyster Bay Avenue outfall are proposed for removal. The outfall, in general, will be a joint City/BHA project, and final design is subject to future decisions by the City. It is presumed that the various sections of the outfall could be cable yarded or otherwise hauled back up the beach during periods of low tide, with only shallow and low-pressure impacts to the subtidal substrate and the organisms it contains. There would be little

erosion or sedimentation if outfall removal was done at low tide in this manner. As an alternative, steel plates or other methods to reduce heavy equipment impacts to beach soils and related habitat could be deployed if heavy equipment is necessary to remove the large in-line catch basin or other associated structures.

Some shoreline buffer areas within the project area would likely be disturbed by construction of the replacement outfall at Oyster Bay; other buffer areas in the project vicinity have been previously degraded. An anticipated mitigation element of proposed outfall replacement/reconstruction would be to develop a native revegetation plan for these areas along with long term monitoring, maintenance, and implementation of contingencies and other remedial measures as needed to achieve established performance standards.

4.5.4 Significant Unavoidable Adverse Impacts

With respect to fish and fish habitat, some minor, temporary, unavoidable adverse water quality impacts can be expected to occur during construction associated with the *Proposed Master Plan,* but these are expected to be less than significant. Furthermore, the completed development under the *Proposed Master Plan* would result in net improvements in stormwater runoff quality and, within the Ostrich Bay drainage area, water quantity controls, when compared to existing conditions.

Other fisheries-related impacts identified in this draft EIS section, primarily associated with proposed Oyster Bay stormwater outfall reconstruction, reconfiguration and operation with increased run-off rates and volumes, are not expected to be significant.

Similar to the *Proposed Master Plan*, some minor, unavoidable adverse impacts regarding water quality can be expected to occur during construction, but these are expected to be less than significant. Net improvements in stormwater runoff quality and, within the Ostrich Creek Basin, water quantity would also occur compared to existing conditions. Other identified fisheries-related impacts associated with proposed Oyster Bay stormwater outfall reconstruction, reconfiguration and operation are likewise not expected to be significant.

4.6 NOISE

4.6.1 Significant Impacts of the Proposed Master Plan

Construction Noise

During construction of Westpark, there would be temporary increases in sound levels near the site due to the use of heavy equipment and along roadways used for hauling construction materials. The increases in noise levels would depend on the type of equipment being used and the amount of time it is in use. Excavation, grading, paving, and erecting would generate sounds audible on surrounding properties.

Phased construction could result in some construction activities during later phases of the project occurring very near (i.e., within 50 to 100 feet of) new residential housing units constructed during earlier phases.

Sound levels very near many types of construction equipment exceed the levels recommended for residential land uses, and levels decrease at a rate of about 6 dBA for each doubling of distance from the source(s). Typical construction sound levels are shown in for distances of 50, 100, and 200 feet.

Construction noise received in a residential district during daytime hours (7 a.m. to 10 p.m.) is exempt from Bremerton's maximum permissible sound levels.

Table 4.6-1
Typical Construction Equipment Noise (dBA)

Activity	**Range of Hourly Leqs**		
	At 50 feet	**At 100 feet**	**At 200 feet**
Clearing	83	77	71
Grading	75-88	69-82	63-76
Paving	72-88	66-82	60-76
Erection	72-84	66-78	60-72
Types of Equipment	**Range of Noise Levels**		
	At 50 feet	**At 100 feet**	**At 200 feet**
Bulldozer	77-96	71-90	65-84
Dump Truck	82-94	76-88	70-82
Scraper	80-93	74-87	68-81
Paver	86-88	80-82	74-76
Generators	71-82	65-76	59-70
Compressors	74-81	68-75	62-69
Source: U.S. Environmental Protection Agency, 1971 and Geomatrix Consultants, Inc., 2007			

Operational Noise

Village Retail Center

The *Proposed Master Plan* includes a commercial/retail center in the northwest corner of the project site, and noise from these retail facilities could affect nearby on-site residences near the retail center. Noise associated with retail facilities varies depending on the nature of the activity, hours of operation, and orientation on the site. In general, truck loading docks, garbage compactors, and building mechanical equipment (e.g., HVAC units) can generate noise that can reach or exceed local nighttime noise limits. Based on the conceptual nature of the *Proposed Master Plan* at this time, it is not possible to accurately predict the sound levels that might result at potentially affected receivers. However, if noise from such facilities complied with applicable Bremerton noise limits, they would not be expected to result in significant noise impacts. Noise from such sources would be considered in the ultimate design and operation of the retail center, consistent with the Westpark Sub-Area Plan's development regulations.

Off-Site Traffic Noise

The *Proposed Master Plan* would generate traffic to and from the project site. Access would be primarily via major existing roadways in the area. Project-related traffic would have a minor overall effect on noise along these roadways and would not cause significant noise impacts. Traffic noise is also exempt from the City's noise ordinance.

Site Suitability for Future Residences and Parks

With the Proposed Master Plan, new residences, outdoor use/play areas, and a park would be constructed in locations currently exposed to high levels of traffic noise and expected to be exposed to similar and possibly higher levels in the future. Locating noise-sensitive uses in areas with sound levels too high to be suitable for such uses could result in significant noise impacts. HUD noise suitability criteria were used as the basis of the noise impact assessment. The HUD noise criteria are based on overall sound levels, regardless of the sources.

Based on measurements and observations made during visits to the site, the only substantial noise sources anticipated to affect potential site suitability are traffic on SR-3, Kitsap Way, and to a lesser extent, Oyster Bay Road. Accordingly, the noise impact assessment was based on calculations using the FHWA Traffic Noise Model (TNM) to estimate future hourly noise levels (L_{eq}s). This modeling used traffic data included in Section 4.14 of the Draft EIS for the 2010 p.m. peak-period. Data pertaining to the redeveloped site layout, grading, and building heights were also reviewed. The primary focus of the noise modeling was exterior use areas near sensitive receiving locations (e.g., residences).

The model-calculated future peak-hour sound levels were used in conjunction with measured existing hourly L_{eq} and L_{dn} sound data to estimate the future L_{dn}s at each model receptor location. Future L_{dn} values were calculated based on 1) the relative ratio between the measured existing hourly L_{eq}s between 5 and 6 p.m. and measured L_{dn}s at each SLM location, and 2) the difference between the measured existing hourly L_{eq}s and the TNM-calculated future L_{eq} values at each receptor location for the p.m. peak hour. The resulting estimated L_{dn} values in Table 4.6-2 represent the future on-site acoustic environment with the *Proposed Master Plan*. The receptor locations used in the analysis are depicted in

Figure 4.6-1. The noise modeling results are discussed below by locations.

Table 4.6-2.
Calculated 2010 Noise Levels at Future Residential Locations (dBA)

On-Site Receiver	L_{dn}	On-Site Receiver	L_{dn}
R1	73	R15	75
R1-2nd	**76**	R16	69
R1-3rd	**76**	R17	67
R2	67	R17-3rd	70
R2-3rd	69	R18	55
R3	70	R19	58
R3-2nd	**76**	R20	52
R4	60	R21	60
R5	65	R22	62
R5-2nd	73	R23	62
R5-3rd and 4th	75	R23-2nd	65
R6	71	R23-4th	68
R6-2nd	**76**	R24	65
R6-3rd and 4th	**76**	R25	66
R7	69	R26	65
R8	53	R27	64
R9	61	R28	64
R10	75	R29	64
R10-2nd	**76**	R29-2nd	68
R11	75	R29-3rd	69
R12	**76**	R30	60
R13	74	R30-3rd	66
R14	**76**	R31	67
R14-2nd	**77**	R32	66

Notes:

L_{dn} values rounded to nearest whole number.

The labels 2nd, 3rd, and 4th refer to the building floor represented by the receptor.

The measured levels (L_{eq}s/L_{dn}s) used for determining the future L_{dn}s were SLM1 for receivers R1 through R9, SLM2 for R10 through R19, and SLM3 for R20 through R32.

Shaded cells indicate sound levels considered "normally unacceptable" for residential uses (65 dBA < L_{dn} <= 75 dBA). Shaded cells with **bold** values indicate sound levels considered "unacceptable" for residential uses (L_{dn} >75 dBA).

Source: Noise modeling by Geomatrix Consultants, Inc., 2006

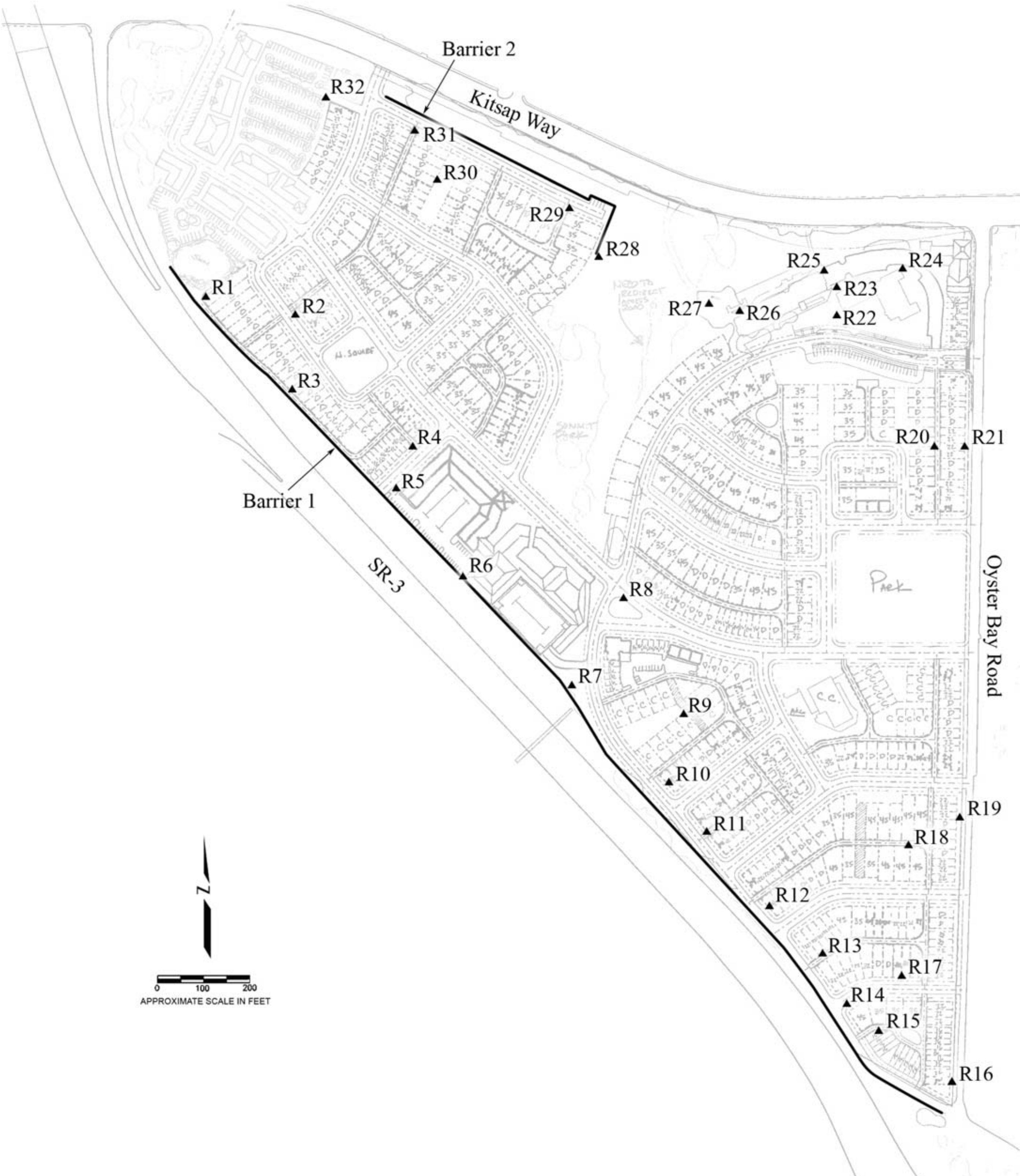

Figure 4.6-1 TNM Receptor Locations & Noise Barrier Locations

Residential Locations Nearest SR-3

At most of the proposed residential locations near SR-3 (represented by R1 through R17 in

Table 4.6-2 and
Figure 4.6-1), predicted Ldns would be considered either "normally unacceptable" (i.e., > 65 dBA and <= 75 dBA) or "unacceptable" (i.e., > 75 dBA) under HUD guidelines for residential suitability. At receptors in the northern portion of the site along SR-3 (R1 through R9), the Ldns at ground floor receptors generally fall within the "normally unacceptable" range, while exterior sound levels at the upper floor would be considered "unacceptable."

Predicted future noise levels at most second-row receptors (R4, R8, and R9) and at the first-row receptor R5 fall within the HUD "acceptable" range. Second-row receptors are farther from SR-3 and typically receive some noise reduction benefit from intervening buildings. At R4, R8, and R9, the additional distance and reductions due to intervening buildings result in predicted levels considered suitable or acceptable for residential uses. The second row receptor R2 has some exposure to SR-3, so even with additional distance from SR-3, the predicted ground and upper floor sound levels fall within the "normally unacceptable" range. At R5, the ground floor sound levels are considered acceptable while the upper floors are considered "normally unacceptable," even though this receptor location is as near to SR-3 as R3, R6, and R7. Unlike other receptors, R5 would benefit from noise reduction due to the earthen berm between this receptor and SR-3.

Residential Locations Nearest Oyster Bay Road

Receptors R18 through R21 were used to describe the future acoustic environment at proposed residential locations near Oyster Bay Road. Given the low projected traffic volumes on Oyster Bay Road and the distances and intervening buildings and terrain between these locations and both Kitsap Way and SR-3, all of the predicted sound levels are less than 65 dBA Ldn. Thus, all would be considered acceptable for residential uses under HUD guidelines.

Residential Locations Nearest Kitsap Way

The *Proposed Master Plan* includes a park (Summit Park), two *existing* assisted living buildings, and multiple new residential units near Kitsap Way. Those portions of Summit Park most likely to be used by Westpark residents would be located far from Kitsap Way, near the center of the site. Nearer Kitsap Way, the park would consist of steep and mostly wooded terrain. Because HUD suitability requirements for areas other than residential use apply to areas where "quiet outdoor space is required," the area of Summit Park nearest Kitsap Way would not be subject HUD criteria. At the primary use areas of this park, near the center of the site, sound levels are expected to be well within "acceptable" HUD noise criteria.

The existing Firs Apartments would not be modified as part of the Proposed Master Plan, but future noise levels were examined. Receptors R22 through R27 represent the Firs Apartments in the northeast portion of Westpark, and receptors R28 through R32 represent the proposed new residential units in the northeast portion of Westpark.

At the Firs Apartments and Bay Vista Commons assisted living facility (currently under construction), large portions of the two buildings are set back from Kitsap Way, and the predicted future sound levels in these areas are typically within the levels considered "acceptable" for residential uses by HUD. The exceptions are the ground floor location nearest Kitsap Way (R25) and upper floor locations facing Kitsap Way, where predicted sound levels at the upper floor locations facing Kitsap Way are as high as 68 dBA and would fall into the lower range of "normally unacceptable" levels for residential uses. Because the Firs Apartments and Bay Vista Commons are existing uses that would not be altered by the *Proposed Master Plan*, the exposure of these residential uses to unsuitable levels of noise is not considered a project-related impact.

At residences in the northeast portion of Westpark (represented by R28 through R32), predicted sound levels are generally within the "normally unacceptable" range, with the highest level of 69 dBA predicted at the upper floors of the first row receivers. Although receptors R28 and R29 are somewhat shielded from traffic noise due to the barrier effect of an intervening retaining wall, the upper floors would still be subject to noise levels greater than 65 dBA. Residences represented by receptor R32 (with a predicted sound level of 66 dBA) would be adjacent to the proposed commercial/retail center. Although retail center operations were not considered in this analysis and could add to the overall noise level at these residences, the retail center's compliance with Bremerton's noise limits would minimize the potential for impacts.

4.6.2 Impacts of the Alternatives

Design Alternative Master Plan

The *Design Alternative Master Plan* would create more higher density, multi-family housing, and a larger commercial/retail area. Higher density housing could result in additional residences being exposed to noise levels considered "normally unacceptable" or "unacceptable" under HUD guidelines. However, the degree of impacts (i.e., the predicted sound levels) would be similar to that discussed for residences with the *Proposed Master Plan*. A larger commercial area could result in additional commercial/retail noise sources, but noise from these sources would still be required to meet Bremerton's noise limits. Future design would also be required to be consistent with Westpark Sub-Area Plan development standards, which also address potential noise impacts. Overall, future noise levels and related noise impacts with the *Design Alternative* would be similar to those identified for the *Proposed Master Plan*.

No-Action Alternative

With the No-Action Alternative, the proposed redevelopment of Westpark would not occur. On-site noise may be generated by maintenance activities for the existing infrastructure, and off-site traffic noise would be expected to increase slowly due to expected growth in the area. On-site noise levels would likely remain unsuitable for some residences based on HUD suitability criteria.

4.6.3 Mitigation Measures

Construction

Construction activities under either the *Proposed Master Plan* or *Design Alternative* could result in noise that would often be audible and could occasionally be disruptive. This is particularly important in this case because the proposed redevelopment would occur in phases, and could result in the exposure of numerous residences to elevated construction noise levels. A number of construction noise abatement methods could be used to limit construction noise and potential disturbances.

Construction noise could be reduced with properly sized and maintained mufflers, engine intake silencers, engine enclosures, turning off idle equipment, and confining activities to daytime hours. A construction contract could specify that mufflers be in good working order and that engine enclosures be used on equipment when the engine is the dominant source of noise.

Construction staging areas and stationary equipment should be placed as far away from existing and new residences as possible. Where this is infeasible, portable noise barriers could be placed around the equipment with the opening directed away from the residential property. These measures are especially effective for engines used in pumps, compressors, welding machines, and similar equipment that operate continuously and contribute to high, steady background noise levels. In addition to providing about a 10-dBA reduction in equivalent sound levels, the portable barriers demonstrate to the public the contractor's commitment to minimizing noise impacts during construction.

Substituting hydraulic or electric models for impact tools such as jack hammers, rock drills and pavement breakers could also reduce construction and demolition noise. Although back-up alarms are exempt from the noise ordinances, noises from such devices are among the most annoying sounds from a construction site. Where feasible, equipment operators could drive forward rather than backward to minimize this noise. Noise from material handling could also be minimized by requiring operators to lift rather than drag materials wherever feasible.

Operation

Retail Center

The proposed project is not expected to result in any on-site operations that would cause substantial amounts of noise, as long as noise from potential retail sources is considered in the design of the retail center. Compliance with the Bremerton's noise limits and with Westpark Sub-Area Plan regulations would require noise sensitive design.

Site Suitability

Predicted on-site sound levels indicate that numerous residential locations would experience sound levels considered "normally unacceptable" or "unacceptable" according to HUD guidelines. The only source of noise causing these predicted sound levels is traffic along SR-3 and Kitsap Way. Therefore, some form(s) of noise mitigation will be required to reduce traffic noise received at on-site locations so that day-night sound levels at outdoor use locations and inside residences on the project site would be within the levels considered "acceptable" by HUD.

The HUD noise limits are intended to provide suitable acoustic environments in *both* outdoor use areas "where it is determined that quiet outdoor space is required in an area ancillary to the principal use on the site" and in interior residential spaces (24 CFR 51.103(c)). As noted previously, the goal for interior sound levels is a day-night sound level of 45 dBA.

HUD guidance regarding the means to mitigate exterior sound levels suggests three approaches to reducing noise to acceptable levels: noise barriers, site design modifications, and/or acoustical construction. Of these, only the first two can improve sound levels in *both* exterior and interior environments. Because HUD considers a quiet environment to be important for residential uses, measures that reduce *both* exterior and interior levels are preferred. Acoustical construction (i.e., using special building materials and techniques to reduce interior sound level) by itself is the least preferred because this approach only affects interior levels. While recognizing that in many cases noise barriers or site design cannot provide all the attenuation necessary, HUD suggests these methods be combined with acoustical construction whenever possible. When feasible, every attempt should be made to reduce the exterior sound levels at least to levels considered "normally unacceptable" prior to focusing on reducing interior sound levels.

Noise Walls

In most cases, the most effective form of mitigation for traffic noise is using noise barriers that are long enough and tall enough to block the line-of-sight from the receiver to the noise source. To be effective, barriers must be solid and continuous, without openings. For the residences on this site where potential noise impacts have been identified, particularly for those residences adjacent to SR-3, a barrier would not require numerous openings and could be solid and continuous.

To be effective, a barrier must be solid from the ground up, constructed of sufficiently dense material to prevent noise from passing through it, and must be tall enough to break the line of sight between the noise sources and the shielded receiving locations. Thick wood (with a mass of at least 4 pounds/square foot) can suffice for noise barriers, but wood must be treated and maintained to ensure the barrier remains solid over its life. Although the front end costs are usually somewhat higher, some form of masonry walls usually make more effective barriers because they block more sound and have lower life-cycle costs.

Noise barriers were considered and analyzed using TNM for two locations on the Westpark project site. In each case, the modeling examined barriers at constant heights ranging from 6 to 16 feet tall (in 2-foot increments). The barrier considered along SR-3 was located at the edge of the highway right-of-way, along the top of an existing berm for some portion of its length. The barrier along Kitsap Way was located within the project property, close to impacted residences. A summary of the noise mitigation modeling results is presented in Table 4-6.1 and discussed below.

Barrier 1 – Shielding Locations Along SR-3

Barrier 1 was examined to assess the potential for reducing the on-site transmission of noise generated by traffic on SR-3. This barrier followed the presumed highway right-of-way line (identified based on available information) from the southeastern corner of the Westpark site, northwest to a location just south of the commercial area. The SR-3 barrier extended approximately 3,390 feet.

As shown in Table 4.6-3, an 8-foot tall wall shielding residential locations in the northern portion of the site (receptors R1 through R9) would reduce traffic noise at all ground floor locations (except those represented by R1) to "acceptable" levels. A 16-foot tall wall would reduce traffic noise at all first *and* second floors to "acceptable" levels. But even with a 16-foot barrier, third- and fourth-floor residential uses would receive little benefit, and sound levels would remain "unacceptable" under HUD criteria. If the proposed site plan includes buildings with outdoor use areas only at ground level (i.e., if there are no elevated balconies), an 8-foot barrier might suffice to reduce outdoor and interior sound levels at the first-floor receivers. But for elevated receivers, including both balconies and/or windows, acoustical construction techniques (outlined later in this section) could be necessary to reduce interior noise from exterior sources to levels suitable for residential uses.

If, as shown on the *Proposed Master Plan*, there would be no outdoor use areas near the northern half of Barrier 1, a noise barrier may not be warranted. Instead, a combination of acoustical construction and site design modifications, described further below, could be effective at ensuring interior noise levels are within HUD guidelines.

At the southern residential locations near SR-3 (R10 through R17), a 12-foot tall wall would reduce traffic noise to "acceptable" levels at all ground-floor receivers and reduce noise at the upper floor locations to levels considered "normally unacceptable." No locations were identified as having "unacceptable" levels with a 12-foot tall wall in the southern portion of Barrier 1. Modeling indicates a 16-foot tall wall would reduce the sound levels at all residential locations, including the upper floors, to levels considered "acceptable" by HUD.

Using a Washington State Department of Transportation (WSDOT) estimate of barrier costs, an 8-foot, 12-foot, or 16-foot tall wall the entire length of SR-3 adjacent to the site could cost approximately $1.4 million, $2.2 million, and $2.9 million, respectively. Note that these estimated costs are for constant-height barriers which do not reflect "optimized," possibly lower-cost barriers of varying height. Barrier costs are based on WSDOT estimated construction costs of $53.40 per square foot. Actual costs associated with building a noise barrier will depend on height, material, terrain conditions, and contractor costs and may be substantially less than the WSDOT estimates indicate.

Barrier 2 – Shielding Locations Along Kitsap Way

Barrier 2 was examined to assess the potential for reducing the on-site transmission of noise generated by traffic on Kitsap Way and potentially affecting residential uses west of Summit Park (represented by receptors R28 through R31). Some of these residences would be exposed to levels in the lower range of what is considered "normally unacceptable" by HUD.

Barrier 2 as considered in the modeling extends east from the on-site access road separating receivers R31 and R32, follows a proposed retaining wall, and wraps south along the edge of the residences located near receptors R28 and R29. The resulting noise wall would be 845 feet long as shown in
Figure 4.6-1. Due to the location of the planned access road, and physical limitations of the site layout in this area due to steep terrain, this barrier would not provide any benefit to receptor R32, so this receptor location was not considered in this mitigation assessment.

Several proposed residences in this area would be near the edge of a retaining wall that would partially shield first-floor locations (receivers represented by receptors R28 and R29) from traffic noise. However, receptor R31, which is lower in elevation than R28 and R29, would not receive any benefit from intervening terrain. Receptor R30 represents second-row receivers that benefit from additional distance from Kitsap Way and intervening structures, although upper floors would still receive sound levels greater than 65 dBA.

Modeling indicates a 6-foot tall barrier would reduce sound levels at all first-floor receiving locations to levels considered "acceptable" under HUD criteria. However, second and third floor locations would receive little benefit and would still be subject to "normally unacceptable" levels. With a 10-foot tall barrier, second-floor sound levels would be reduced to "acceptable" levels but all first-row third-floor locations would still be exposed to "normally unacceptable" levels.

Using a Washington State Department of Transportation (WSDOT) estimate of barrier costs, a 6-foot tall noise wall in this area is estimated to cost approximately $270,000, and a 10-foot tall wall is estimated to cost $450,000.

Table 4.6-3.
Calculated Day-Night Sound Levels with Barriers (dBA)

Barrier	Receiver	Barrier Height (feet)						
		0'	6'	8'	10'	12'	14'	16'
Barrier 1	R1	73	72	71	68	67	65	64
	R1-2nd	**76**	**76**	**76**	**76**	75	73	70
	R1-3rd	**76**	**76**	**76**	**76**	**76**	**76**	**76**
	R2	67	65	65	64	64	64	63
	R2-3rd	69	69	69	68	68	67	67
	R3	70	66	65	64	64	63	62
	R3-2nd	**76**	**76**	**76**	75	70	67	66
	R4	60	59	59	58	58	58	58
	R5	65	63	62	61	61	61	60
	R5-2nd	73	73	73	73	70	66	64
	R5- 3rd&4th	75	75	75	75	75	75	75
	R6	71	64	62	60	59	58	58
	R6-2nd	**76**	**76**	**76**	**76**	**76**	71	66
	R6- 3rd&4th	**76**	**76**	**76**	**76**	**76**	**76**	**76**
	R7	69	66	64	62	61	60	59
	R8	53	53	53	53	52	52	51
	R9	61	59	58	57	56	55	54
	R10	75	68	67	65	63	62	62
	R10-2nd	**76**	**76**	75	72	68	66	64
	R11	75	68	67	65	64	63	62
	R12	**76**	68	66	65	64	63	62
	R13	74	67	66	64	62	61	60
	R14	**76**	69	67	66	64	63	62
	R14-2nd	**77**	**76**	**76**	73	70	67	65
	R15	75	72	69	67	65	63	62
	R16	69	65	64	63	62	61	61
	R17	67	62	61	60	58	57	56
	R17-3rd	70	70	69	66	64	62	60
Barrier 2	R28	64	63	63	63	63	63	63
	R29	64	61	59	58	56	55	55
	R29-2nd	68	67	66	64	63	61	59
	R29-3rd	69	69	68	68	68	67	66
	R30	60	57	56	56	55	55	54
	R30-3rd	66	65	65	64	63	62	62
	R31	67	63	61	60	59	58	58

Note: L_{dn} values rounded to nearest whole number. Shaded cells indicate sound levels considered "normally unacceptable" for residential uses (65 dBA < L_{dn} <= 75 dBA). Shaded cells with **bold** values indicate sound levels considered "unacceptable" for residential uses (L_{dn} >75 dBA).

Site Design Modifications

Modeling has indicated that on-site outdoor residential use areas facing SR-3 or Kitsap Way would be subject to potential noise impacts. Locating outdoor use areas on the sides of buildings opposite major roads would reduce noise levels at such outdoor areas. Proposed buildings could effectively act as noise barriers between SR-3 and Kitsap Way and the outdoor use areas.

Many of the homes planned along SR-3 or Kitsap Way would be attached in rows (four units per building) or would be in apartment or condominium buildings. Taller buildings and/or buildings constructed closer together would more effectively reduce traffic noise from SR-3 or Kitsap Way. Buildings more than four units long would include fewer breaks in the resulting "barrier," and such buildings would provide better noise shielding for outdoor use areas "behind" these units in relation to the major road. Some residential units in the southwestern portion of the site facing SR-3 and in the northwestern portion facing Kitsap Way might be constructed as single-family, unattached residences, and this configuration would likely provide less noise reduction at outdoor use areas behind the residences (i.e., on the opposite side from SR-3 or Kitsap Way).

Acoustical Construction

In the event that it is not feasible to reduce exterior sound levels to 65 dBA Ldn or less, special consideration should be given to using materials and construction techniques that would reduce interior sound levels in residential spaces to 45 dBA Ldn or less.

For units in areas with exterior Ldns greater than 65 dBA but less than or equal to 70 dBA, interior noise reductions of up to 25 dBA would be required to meet the HUD interior noise criteria of 45 dBA Ldn. With careful, high quality construction meeting current building code construction requirements *and* active ventilation systems, interior sound levels could likely be reduced sufficiently to comply with the HUD suitability criteria. Effective control of interior sound levels (received from outside sources) would require that windows can remain closed (i.e., using alternative dynamic ventilation systems), that double-paned windows be installed, and that doors and windows be kept tightly closed. Properly installed sound-absorbing material in the walls of residential spaces facing either SR-3 or Kitsap Way would further help to ensure noise levels inside these units remain within HUD criteria.

For units in areas with exterior Ldns greater than 70 dBA, and especially for those units in areas with levels considered "unacceptable" by HUD (i.e., Ldns greater than 75 dBA), reducing interior sound levels to 45 dBA Ldn would require special noise reduction construction techniques and materials. Using careful construction techniques designed to ensure good thermal insulation would be a first step. Other techniques would include: (1) minimizing openings to the outside; (2) ensuring that gaps around doors, vents, and windows are caulked and sealed; and (3) requiring dynamic ventilation systems so windows and doors can remain closed. In addition, special construction techniques for exterior walls facing SR-3 or Kitsap Way would likely be required. This could entail constructing exterior walls in one of several possible configurations: (1) using staggered, offset studs and a 6- or 8-inch cavity filled with uncompressed insulation material: (2) using 2 x 6 wall construction with resilient channels installed on the inside of the unit and the wall cavity filled with uncompressed insulation material; or (3) using 2 x 6 wall construction with extra sheeting to increase mass and/or using "sound deadening board" on the interior wall and filling the wall cavity with uncompressed insulation material. The specific type(s) of exterior wall construction required would be based on the overall exterior sound levels. In addition, selecting windows with higher sound reduction abilities (i.e., 30 dBA or greater, depending on the exterior levels) and using fewer and smaller window openings on the sides of the houses facing the freeway would help to provide the necessary interior noise reductions of 26 to 31 dBA.

As noted above, for all residential units in areas with Ldns of 66 or greater, dynamic ventilation systems would be necessary in these residences because the noise mitigation techniques identified above are only effective if doors and windows need not be opened to provide adequate venting or cooling. Once a window is opened, even high quality construction provides only a 12-15 dBA reduction in exterior noise levels, so interior sound levels could reach 51-65 dBA Ldn. Such levels far exceed suitability criteria for interior uses, particularly for bedrooms. Finally, any air inlet openings required for a dynamic ventilation system should be located on exterior walls or rooftops opposite the freeway to ensure these openings do not transmit freeway traffic noise to the interior of the residence.

4.6.4 Significant Unavoidable Adverse Impacts

The *Proposed Master Plan* would not cause significant adverse noise impacts. Significant impacts are associated with the site’s location near a major highway and principal arterial and resulting (existing) of-site traffic noise. If noise mitigation is provided so that the sound levels at exterior use areas are reduced to 65 dBA Ldn or less, and/or the interior Ldns in residences are reduced to 45 dBA or less, no significant adverse noise impacts would be experienced by on-site residences.

4.7 ENVIRONMENTAL HEALTH

4.7.1 Significant Impacts of the Proposed Master Plan

Construction

Redevelopment would include demolition of most on-site buildings and infrastructure. These activities could involve potential releases of asbestos or lead-based paint in building materials (Wolfe Consulting, 2006). Federal, state and local regulations require removal of asbestos-containing materials by certified workers prior to demolition of affected buildings. Federal and state standards consider any detectable concentration of lead to be a hazard during construction; air monitoring and use of respirators is typically recommended. All materials must be disposed of at an appropriate facility, which varies depending on the concentrations of asbestos or lead materials. The low levels of lead are not likely to warrant additional testing or special disposal.

The Phase I ESA did not identify any known or suspected releases of hazardous substances on the site. Such evidence could be encountered, however, in connection with future construction activities.

An assessment of the playfield/landfill is currently being conducted to determine if methane gas is present. Additional geotechnical and archaeological investigations are also being coordinated with these activities. New information concerning the landfill, and recommendations regarding appropriate remediation, will be reported in the Final EIS.

Operation

Conclusions about the status and nature of wastes in the landfill beneath the playfield are still pending. Closure and remediation of the landfill would likely be required to mitigate risks associated with this feature.

The presence of gas at the off-site VIP Landfill is being evaluated, to determine if it could adversely affect structures on the Westpark site. Groundwater from the VIP Landfill would not affect the Westpark site.

4.7.2 Impacts of the Alternatives

No Action

Asbestos-containing materials would remain in the near-term and could pose some risk to health, particularly if disturbed. Concentrations of lead in interior and exterior paint are low and likely do not constitute a significant health risk. The landfill would be closed/remediated consistent with applicable laws.

Design Alternative

Impacts to environmental health would be the same as identified for the *Proposed Master Plan*.

4.7.3 Mitigation Measures

The BHA will prepare a demolition plan that addresses the contaminants identified in the Phase I ESA and Asbestos and Lead-Based Paint Survey. Removal and disposal will follow the requirements of federal and state law.

The BHA is currently conducting detailed studies of the playfield, including geotechnical investigations, archaeological surveys, and gas monitoring. It will close the landfill consistent with applicable state and Kitsap County Health Department regulations.

The above requirements would apply to all alternatives, including *No Action*.

4.7.4 Significant Unavoidable Adverse Impacts

With implementation of applicable federal, state and local regulations, no significant unavoidable adverse impacts are anticipated.

4.8 LAND USE & SOCIOECONOMICS

4.8.1. Land Use

4.8.1.1 Impacts of the Proposed Master Plan

Direct Impacts

Redevelopment of the site consistent with the *Proposed Master Plan* would cause direct, indirect and cumulative impacts to land use on and adjacent to the site. Direct impacts are those caused by construction and operation of Westpark, including conflicts related to the type, character or pattern of land use and the density of development. Indirect and cumulative impacts can include peripheral development and/or change in the overall land use character of an area, caused indirectly by the proposal itself (e.g., by serving as a precedent for or inducement to further development nearby), or in combination with other proposed or foreseeable development.

Construction

Construction of the *Proposed Master Plan* would result in temporary impacts to adjacent land uses from dust, emissions, noise and construction traffic. Most such impacts would be concentrated on the Westpark site. The phased approach to construction and relocation would minimize the number of on-site residents exposed to such impacts. There could also be sporadic interference with access for adjacent residents and businesses, and access to some on-site activities (e.g., the community center). Any such impacts would be short-term. Assuming implementation of appropriate mitigation measures, such as dust control and construction traffic management, construction would not cause significant adverse impacts.

Operation

On-Site Land Use. The *Proposed Master Plan* would result in staged demolition of all existing housing units and most existing community facilities on-site, and relocation of existing residents. The site would be redeveloped into a mixed-use, mixed-income urban community with a variety of housing units, commercial uses, community facilities, and parks and open space. The general types and arrangement of land uses are shown in Figures 2-2 and 3.8-3. The most intensive uses on-site (retail and high density residential) would generally be located on the periphery of the site, and buffered from adjacent land uses. Housing and open space would be dispersed throughout the site; a 12-acre community park would be located in the center of the site. Various uses and neighborhoods would be connected by sidewalks and trails.

Table 2-1 illustrates the proposed mix of land uses, which would generally be somewhat broader in type and developed at higher densities than at present. The number and variety of housing units would increase (from 631 to 759) and would include a much broader variety of for sale and for rent unit types – including single family detached units, townhouses, duplexes, cottages, apartments and condominiums. Use of the site would change from primarily detached single family units and community services, to a mix of residential, commercial and community services in a pedestrian-oriented pattern.

Commercial services would be a new element of the site's land use pattern; these activities would be focused in a 5-acre, approximately 50,000- square foot Village Center in the northwest portion of the site. Significant areas of the site (34 percent) would be retained in open space. On-site neighborhoods would be connected by a system of trails and walkways. Overall, the greatest land use changes would be the addition of commercial land uses, redevelopment with a greater variety of residential housing types, and the pedestrian character of the site plan.

Gross residential density (total site area divided by number of dwelling units) would decrease somewhat, from approximately 7.7 dwelling units per acre in a uniform pattern at present, to 7.1 dwelling units per acre. Average net density (residential area divided by the number of housing units) would be approximately 20 dwelling units per acre, and would range from 12 dwelling units per acre (for detached single family) to 65 dwelling units per acre (for high density apartments and condominiums).

Land use conflicts can occur where land uses of significantly different type, scale or intensity are located proximate to one another. The degree of conflict may depend on the extent and degree of difference between adjacent uses. Conflicts can also result from differences in activity patterns, design, traffic, lighting and odors. To an extent, this variety and contrast is inherent in urban development.

As proposed, Westpark would be a modern planned community that incorporates a mix of uses, including housing of different type and intensity. Locating a mix of uses at higher densities within walking distance of residents can promote pedestrian activity and use of transit, and can reduce vehicle use. Incorporating commercial uses in the site plan is intended to accomplish this objective. Similarly, Westpark's proximity to more extensive commercial uses along Kitsap Way could encourage walking and reduce auto dependence.

The greatest potential for land use conflicts would occur where the contrast in uses or intensities are the greatest -- at the edges of the Village Center, where it is adjacent to residential activities, and near the high density apartment and condominium buildings (which could be up to 55 feet tall). In these locations, there would be a contrast in the scale and intensity of adjacent uses. Adjacent uses would be medium density residential development (3 stories, up to 30 dwelling units per acre). Such contrasts in building height and scale are observable in urban neighborhoods throughout the Puget Sound region and commonly occur in urban neighborhoods as they redevelop over time. These types of contrasts are inherent in urban development, are not inherently incompatible, and are not considered significant land use conflicts.

In general, the *Proposed Master Plan* would create separations and transitions – using streets and buffering -- that would ameliorate the contrast. In addition, the Westpark Sub-Area Plan requires buffers and landscaping to address potential conflicts. These issues would be addressed in greater detail when a subdivision application is submitted.

<u>Adjacent Land Uses</u>. These potential land use conflicts would generally be internal to the site. The Westpark site is somewhat isolated from adjacent land uses by its location adjacent to Kitsap Way on the north, and SR 3 on the west. Surrounding land uses are generally urban in character and intensity (urban residential to the east, industrial to the west, and commercial to the north). The gross density proposed for Westpark is generally consistent with, but higher than, existing densities in the surrounding

neighborhood (typically 4 to 6 dwelling units per acre). The sites larger buildings and more intensive land uses (Village Center and high density residential buildings) would be located adjacent to Kitsap Way and SR 3. They would be separated from adjacent uses by arterials/highways. Adjacent uses are generally higher or similar in intensity and are not likely to be adversely affected by Westpark land uses.

The Westpark site is currently considered “blighted” and has been found to be a disincentive to economic development in the surrounding area; see the discussion in the Draft EIS *Project Description* (Section 2.3.1) and the *Plans & Policies* section (4.8.4) for more information. Following redevelopment, the site would appear and function as a modern, revitalized urban neighborhood. On-site commercial activity would provide new jobs. The *Proposed Master Plan* could generate some amount of spin-off development, particularly in the form of additional commercial development or redevelopment along Kitsap Way. Such redevelopment has been anticipated and, in fact, is an objective of the City, as discussed further below.

Indirect & Cumulative Impacts

There is the potential that Westpark could cause some pressure for infill or redevelopment in nearby residential neighborhoods and/or commercial areas. The additional population associated with a proposal and the increased spending for goods and services that it generates can create a market for additional commercial activities. If independent projects were implemented as a result, they could cause intensification of land use and/or change in affected areas, which could in turn generate additional pressure for change. Any such impacts would result from a combination of market and economic conditions, the investment decisions of individual property owners, the overall context and stability of the land use pattern, and public policy decisions.

To the extent that the Westpark site is transformed by proposed redevelopment and the surrounding neighborhood is perceived as more desirable, the *Proposed Master Plan* could indirectly lead to increased infill and/or redevelopment. Some existing uses could be displaced as a result. It is generally assumed that growth would be guided to appropriate locations by the City’s Comprehensive Plan and zoning, and would occur consistent with adopted development regulations.

Some amount of infill and redevelopment can be expected as part of the normal process of urban development, as communities grow and change over time. Bremerton is a growing community, and population is expected to increase by almost 13,000 people and 9,000 jobs by 2023. More than one-half this population growth and 45 percent of job growth is expected to occur in designated Neighborhood and District Centers, including downtown Bremerton.

The City’s Comprehensive Plan anticipates that redevelopment of Westpark will provide a population base and support for planned mixed-use redevelopment of the Oyster Bay Neighborhood Center, located on both sides of Kitsap Way to the east of the site. The Comprehensive Plan’s policies and land use designations would tend to guide spill-over growth to the designated center. The Comprehensive Plan Land Use appendix anticipates a 20-year population increase of 1,480 in the Oyster Bay Center, along with a potential increase of and 100,000-200,000 square feet of commercial and retail use and 200-600 jobs.

How much of this anticipated growth would be indirectly *caused* by redevelopment of Westpark is speculative and cannot be quantified precisely. Overall, any such inducement of growth would be consistent with adopted City policy, compatible with the existing land use pattern, and would likely be positive in terms of economic development and changes to neighborhood character.

The likely mix of uses in Westpark's Village Center are retail activities providing everyday goods and services. This could include uses such as a supermarket, restaurant, espresso shop, drug store, dry cleaner, and similar activities. The size of commercial uses is limited by the regulations of the Westpark Sub-Area Plan. The Village Center is likely to draw many of its customers from Westpark, and from the surrounding community to a lesser extent. While the Village Center could complete to a limited degree with some existing activities along Kitsap Way, it would also expand the spending available for retail goods and services in the community overall.

4.8.1.2 Impacts of the Alternatives

Design Alternative Master Plan

Direct, indirect and cumulative land use impacts of the *Design Alternative Master Plan* would be similar to those associated with the *Proposed Master Plan*. The same number of housing units would be developed, but in a different mix of unit types. More medium and high density units would be constructed in Westpark overall. High density units would be located in the apartment and condominium buildings; each of these buildings would be one story taller than with the Proposed Master Plan and would include structured parking. Building heights would be approximately 65 feet. This is taller than the height permitted in the Westpark Sub-Area and would require an amendment to the regulations or a variance. These buildings would be larger in scale and character than adjacent medium density residential uses, but land uses per se would be generally compatible. Density would average 25 dwelling units per acre, compared to approximately 20 dwelling units per acre for the *Proposed Master Plan.*

The other significant land use change compared to the *Proposed Master Plan* is a larger retail area, of approximately 12 acres and 120,000 square feet (plus 10,000 square feet located in mixed-use buildings). The *Design Alternative* would essentially replace a pedestrian-oriented neighborhood-scale shopping center, geared to serving the everyday needs of on-site residents, with a community-scale center that would draw from a larger market area and attract more shoppers from off-site. With this change, commercial uses would represent almost 15 percent of Westpark's land use (compared to 6 percent for the *Proposed Master Plan*), and residential uses almost 37 percent (compared to 45 percent for the *Proposed Master Plan*). The commercial area would be a larger, more significant component and determinant of the community's character. There would be more larger-scale buildings, including the potential for one or more big box stores. Given the larger parking area required to serve the larger center, this portion of the community would likely be less pedestrian oriented.

The larger retail area could create greater competition with the planned Oyster Bay Neighborhood Center. Market information is not available to evaluate projected market support. If the larger shopping center and greater competition were to slow the redevelopment of the planned Oyster Bay center or make it less feasible, this could adversely affect the City's adopted plans to accommodate growth.

No Action Alternative

Positive and negative land use impacts associated with demolition of existing structures and redevelopment of the site to achieve increased residential density, a mix of pedestrian-oriented uses, construction of new infrastructure, and revitalization of the neighborhood would not occur. Westpark would remain blighted and could continue to constrain economic development in the surrounding area.

4.8.1.3 Mitigation Measures

No specific mitigation measures are required to address identified land use impacts. The *Proposed Master Plan* already includes a number of techniques that would avoid or mitigate potential impacts, including the following:

- All components of a balanced, pedestrian-oriented community, including housing, commercial and community services, parks and open space.
- Location of the most intensive uses on the periphery of the site, adjacent to roads with high traffic; and
- Transitions in density on site, using topography and landscaping to buffer lower density uses.

Development would also incorporate the development and design standards of the *Westpark Sub-Area Plan*, which are also intended to achieve compatibility between land uses, consistency with the Bremerton Comprehensive Plan, and superior design.

4.8.1.4 Significant Unavoidable Adverse Impacts

Implementation of the Proposed Master Plan would unavoidably alter land use on the Westpark site. Land uses would intensify and become more varied. Redevelopment would be consistent with the Bremerton Comprehensive Plan and applicable zoning regulations and no significant adverse impacts would occur.

4.8.2 SOCIOECONOMICS

4.8.2.1 Population & Employment

Impacts of the Proposed Master Plan

Socioeconomic impacts include potential changes in area population, employment, demographic/income composition, and economic climate.

Construction

Construction would result in generally positive impacts to employment, wages and income. Based on information provided by BHA, the total budget for the Westpark redevelopment project is approximately $225 million. Construction costs are estimated at $102.5 million. Labor costs typically comprise roughly one-half of the hard construction costs of the project, and the Proposed Master Plan would, therefore, generate an estimated $51.25 million in direct income. Project construction employment could also indirectly increase the number of construction-related jobs in the surrounding area (e.g., materials manufacturing or delivery).

The remaining on-half of hard construction costs for redevelopment would be spent on materials, including lumber, cement, tools, and other building products. It is assumed that the majority of construction materials would be purchased within the Puget Sound region, and within Kitsap County and Bremerton. It is likely that the businesses selling construction materials would benefit through increased revenues; employment could also increase in order to meet the increase in demand for goods.

Relocation of residents during staged construction could result in reduced revenues to area merchants, as well as temporary disruption to the lives of residents. It is possible that all or part of this reduction in local business revenues could be offset by spending from the temporary influx of construction workers. In so far as relocation to temporary housing occurs in a relatively even distribution to the surrounding area, there would be few, if any, adverse impacts to the existing surrounding infrastructure and community. Positive impacts could include an increase in local hiring, expansion of businesses, new business formation, and greater local tax revenues.

Operation

Population Characteristics

Population on-site would increase from an estimated 1,100 residents currently (in 631 units) to approximately 1,973 residents (in 759 units) at build-out, assuming an average household size of 2.6 persons. There would be an increase in higher-income households (see the Housing discussion below) and market-rate housing for sale and for rent. The number of units available on-site to low-income households would decrease. Together, these changes would alter the socioeconomic dynamics and demographics of the community and surrounding neighborhood. Middle-income residents attracted to the *Proposed Master Plan* would reduce the percentage of low-income residents. The increase in housing types could tend to economically diversify the community over what currently exists. These effects are among the objectives of the Westpark redevelopment program. The extent of change in racial and ethnic diversity as a result of the *Proposed Master Plan* is unknown.

The availability of market-rate rental and for-sale housing could influence the age distribution of residents on-site. Relative to the age distribution and housing types found in the surrounding area and throughout Kitsap County, the number of residents aged 17 years and younger (currently 31.3 percent in CT 810 Block Group 2) would likely decrease, while the number of residents aged 18 years and older would likely increase. In the study area (CT 810) and Kitsap County, approximately 27.6 percent and 26.7 percent of the population, respectively, is made up of residents aged 17 years and younger. Senior residents (65 and older) currently comprise 3.9 percent of the existing population at Westpark; the City of Bremerton and Kitsap County have a greater number of seniors, approximately 12.5 percent and 10.5 percent respectively. It is anticipated that, with the shift in housing stock from all public housing to a mix of housing types, the age distribution within Westpark would reflect the surrounding area to a greater extent.

<u>Employment and Income</u>

Proposed commercial and retail facilities would result in the creation of new jobs. Westpark would include 60,000 square feet of retail and commercial uses in a Village Center and 10,000 square feet of commercial uses in mixed-use buildings. Assuming 50,000 square feet of retail (at 2 employees per 1,000 square feet), and 10,000 square feet of office/service uses (at 3 employees per square feet), Westpark would generate approximately 130 new jobs. A greater proportion of office/service jobs would imply greater employment. Approximately 80 jobs currently exist on site and would continue.

A new office building, at the corner of Kitsap Way and Oyster Bay Avenue, to accommodate BHA's existing administration functions will be constructed early in phase II; this would replace the existing BHA building which will be demolished in phase III, a new office building has been proposed. Existing BHA employment and operations would not be adversely affected.

It is anticipated that the average on-site annual income would increase as a result of the shift from all public housing units to a mix of public housing, and market-rate rentals and for-sale units. Increased income levels and increased spending by Westpark residents could result in a positive impact on area business and local tax revenues.

Indirect Impacts

During periods of high construction activity, area businesses and services could experience some indirect impacts from construction traffic, rerouting of traffic, utilities service disruptions, and limited access. These impacts would be temporary. At the same time, area businesses could experience some increased spending from construction workers.

Positive indirect impacts, mentioned above, would include improvement to the character of the site (i.e., open space, landscaping, improved building conditions, architectural styling); a more diverse housing stock and economically diverse population; and increased spending for goods and services within the area surrounding the site, as well as within the greater Bremerton and central Kitsap County areas. Residents of the market-rate housing would likely have higher levels of disposable income.

Revitalization of the site, and removal of current blighted conditions, could also contribute to economic development in the surrounding area, including building renovation/expansion, new construction, and business start-ups. As a result, residents could enjoy increased employment opportunities.

The *Proposed Master Plan* could have a favorable effect on real estate in the surrounding area. Residential properties could appear more desirable, resulting in an increase in demand for housing in the study area. Increased demand for housing within the study area, could also result in increases in property values, and rental rates and taxes. This could decrease affordability for some residents, forcing them to relocate.

Relocation of existing residents could result in temporary or permanent stresses to their social activities and/or affiliations. Relocation could, for example, make it more difficult to maintain participation in neighborhood clubs, organizations, and religious institutions. Whether such ties are stressed or ruptured would depend on a variety of factors, including the physical distance involved, mobility options, substitute opportunities in the new location, length of the relocation, and personal choice. Residents temporarily or permanently relocating to more distant neighborhoods could find it less convenient to maintain their current affiliations. Conversely, those temporarily or permanently relocating to nearby neighborhoods could more easily maintain current affiliations. For additional discussion of related issues, please refer to the Housing section, below, and to Section 4.10*, Environmental Justice*.

Cumulative Impacts

A potential increase in business development and in employment provided on-site could contribute to a decrease in unemployment in the immediate area. In addition, a number of new residents who are currently employed may be drawn to move to Westpark because of its affordability, services, and/or unique design characteristics. These employed residents would have a positive impact on the local unemployment rate.

Significant Impacts of the Alternatives

Design Alternative Master Plan

Redevelopment under the *Design Alternative* would result in socioeconomic impacts similar to those described for the *Proposed Master Plan*. On-site employment would be higher due to the larger (12 acre) retail center. Assuming 100,000 square feet of retail use (at 2 employees per 1,000 square feet), and 30,000 square feet of office/service use (at 3 employees per 1,000 square feet), 290 new jobs could be provided.

No Action Alternative

Redevelopment would not occur and no new employment or income would be created. The population on-site would remain unchanged; the existing demographic, income and household characteristics would continue. Low-income households would remain concentrated on the project site without improvements to housing conditions.

Potential indirect impacts (e.g., increased spending, business revitalization) would not occur. Economic conditions in the immediate area would remain unchanged.

Mitigation Measures

BHA would inform local businesses and merchants about opportunities to conduct business with the site development contractors (i.e., subcontracting, materials purchasing).

As part of BHA's relocation planning efforts, it would continue to work with residents to improve earning potential, income levels, family stability, and self-sufficiency through all available programs and support services (i.e., Key to a Better Life, Kitsap Community Resources Community Jobs Program, Kitsap Credit Union and BHA IDA program, WSU Cooperative Extension Service).

During construction, BHA would encourage contractors to hire residents and would coordinate with contractors to ensure the necessary training.

In order to create employment opportunities for new and returning residents, BHA would encourage new start-up and existing businesses in the surrounding area to hire Westpark residents.

Significant Unavoidable Adverse Impacts

No significant unavoidable adverse impacts related to socioeconomic conditions are anticipated.

4.8.2.2 Housing

Impacts of the Proposed Master Plan

Implementation of the Proposed Master Plan will result in the demolition of all the 631 units currently located on the site in order to reconfigure the streets, replace the infrastructure, create new parks and open space, and build new housing, community facilities, and commercial space. After redevelopment there would be 759 new residential units, including rental and for-sale housing. The proposed mix of housing is summarized in Table 2-2.

The potential housing impacts of the *Proposed Master Plan*, which are discussed below, include:

- Increased density on the site;
- Demolition of the existing units requiring relocation of existing residents;
- Deconcentration of low-income housing units and low-income households on the site;
- Changes in the housing type and tenure of residents;
- A decrease in the number of public housing units on the site and a corresponding increase in the number of units with like affordability dispersed throughout Kitsap County and Bremerton;
- Replacement of 441 public housing units using Section 8 project based vouchers in suburban neighborhoods with strong schools and expanding job markets;
- The creation of affordable homeownership opportunities;
- An increase in the number of units available for purchase in the study area; and
- Achievement of community revitalization goals.

Increased Density

The impacts of increased density are discussed in Section 4.8.1, *Land Use*.

Demolition and Relocation

Implementation of the *Proposed Master Plan* will require that all existing residential structures be demolished, necessitating relocation of all current residents.

Relocation would occur in phases, to accommodate the number of families that need to be relocated, and to coordinate with planned construction. The phasing plan is described in Section 2.6.9 and depicted on Figure 2-8. Build-out would occur over a 3 year period, beginning in 2007 and ending in 2010.

Redevelopment includes 190 new public housing units; an additional 60 public units will be provided in the existing Firs apartment building, which will remain. New public housing units would be dispersed across the site within townhomes, duplexes and apartments (see Table 2-2). Westpark would also include 100 affordable apartment units in addition to the public housing and will be owned and operated by BHA.

For the remaining 441 existing families who will not be returning to Westpark, BHA plans to apply for additional replacement and/or relocation housing choice vouchers. Twenty percent of BHA section 8 vouchers, approximately 250, will be project-based.

Because of the federal funding involved in redevelopment, all residents will be offered relocation assistance in compliance with the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (URA). Residents in good standing will also be given the right to return to the new community. The URA applies to federally-funded projects that involve the involuntary relocation of people from their homes or businesses. To comply with the URA, BHA must assist the tenant to move, pay the tenant's cost of moving or provide a cash benefit to offset moving costs. Moving costs include the actual costs associated with moving household goods and personal possessions, as well as the cost of disconnecting and reconnecting utilities and other services.

In addition, tenants are entitled to advisory services that include timely notification, assistance finding a comparable unit help completing relocation and housing forms, counseling about social services and amenities in new communities and other assistance needed to minimize the impacts of the move. Any rent differential incurred by the tenant would be paid by BHA in accordance with the URA.

Deconcentration of Low-income Housing

The *Proposed Master Plan* will further BHA's mission and City of Bremerton goals by redeveloping an area of concentrated poverty and replacing it with a new mixed-use, mixed-income community. Reducing the high concentration of assisted housing units and extremely low-income households that comprise public housing communities is an important goal of the BHA redevelopment program and the Bremerton Comprehensive Plan (refer to Section 4.9.1.5, *Land Use*).

In the case of Westpark, a reduction in the number of public housing units on the site is required to achieve a mixed income community, and the addition of new affordable and market-rate rental and ownership housing units. Implementation of the *Proposed Master Plan* will result in construction of 190 units with like affordability to the public housing units currently on the site. The balance of public housing units (441) will be replaced by BHA offsite; the location of these units is not known with certainty at this time. BHA plans to provide replacement housing by assigning the Vouchers to the following types of units:

- Units in the BHA-owned, or managed, rental housing stock that have received no capital or operating subsidies and whose rents are unregulated, thereby adding a new unit to the regional affordable housing stock;
- Already regulated units in properties that can provide replacement units for large families and/or are in locations that increase dispersal of housing choice for extremely low- and very low-income households and avoid over-concentrating these households in other communities. (In these instances, BHA will dedicate an unregulated unit to replace the previously regulated unit at a comparable rent.);
- New units that would be developed by BHA that without the Voucher would not be affordable to public housing applicants; and
- New units developed by other nonprofit housing development agencies that without the Voucher would not be affordable to public housing applicants.

The off-site units will broaden the regional choice of housing location for public housing applicants.

Changes in Housing Type and Tenure

The site is currently developed with 631 rental housing units, primarily one-story duplex and four-plex in design. Implementation of the *Proposed Master Plan* would result in increases in both the number of units on the site (759), changes in unit and structure type, and changes in the tenure of residents.

A more diverse mix of housing types would be developed, including approximately 110 market rate/rental apartment units, 150 multi-family condominium units, 97 detached single-family units, and 442 units of attached duplexes, townhouses, and cluster cottages in a variety of sizes and styles. Of the latter, approximately 100 units would be rental and the balance for sale. A total of 190 public housing units are proposed to be developed on site; these would be located in a variety of housing types throughout the site.

The number of rental units on the site would decrease (by 421 units). Almost three quarters of the 759 new units (549 units) would be for sale.

Changes in Unit Affordability

The 631 existing public housing units are affordable to households with incomes of between zero and 80 percent of the area median income, with the majority of residents having incomes below 30 percent of the area median. After redevelopment, the number of units at this affordability level would be reduced from 631 to 190; the balance of low income units will be replaced off-site. In addition, 100 new mixed affordability rental units would be developed. The exact affordability mix of these new units has not been determined and will be influenced by available financing and market demand. Some portion (likely the majority) will be affordable to households with 50 percent to 60 percent of the area median income and the balance will rent at market rates. Those rental units affordable at between 50 percent and 60 percent of the area median will increase the County's overall stock of affordable rental housing and will be a positive impact over and above the one-for-one replacement of the public housing units. The replacement of 441 low income housing units off-site will maintain, on a more dispersed basis, the current countywide supply of units affordable to housing tenants earning less than 30 percent of median income.

The development of the 549 for-sale units would create homeownership opportunities on the site for the first time. Some of the units would be for sale to low-income (income of 80 percent or less of the area median income), first-time homebuyers eligible for downpayment and other types of financial assistance from existing programs. The balance would be sold at market rates. Development of these units would increase ownership opportunities in the study area. According to the 2000 Census, the homeownership rate for the study area census tract and block group was only 33.8 and 21.1 percent, respectively. That contrasts with a homeownership rate of 67.4 percent in Kitsap County as a whole.

Community Revitalization

A number of social problems (e.g., low educational attainment, high unemployment) currently affect Westpark. In part, these problems result from the existing concentration and isolation of large numbers of low-income households on the site. The creation of a mixed income community through implementation of the *Proposed Master Plan* is intended to partially alleviate the social issues that have historically affected the neighborhood. The emphasis in the new Westpark will be on replacing the demolished public housing units with a variety of affordable units and tenures, all of which encourage public housing residents to remain in the community as their lives stabilize and improve. The affordable and market-rate rental and for-sale units will attract moderate- and middle-income households, which will help diversify the community economically. The community will experience some short-term disruption due to resident relocation and construction activity, however.

The revitalization of Westpark envisioned by the *Proposed Master Plan* is consistent with the housing and community development objectives that are expressed in the City of Bremerton *Comprehensive Plan;* the consistency of the Proposed Master Plan with Bremerton's Housing goals are discussed in Section 4.9.1.5, *Land Use*.

The Proposed Master Plan would also be consistent with Kitsap County's *Consolidated Plan,* which lists the following priority needs within the community:

1. Homelessness: To ensure that decent, accessible, affordable and suitable housing is available in the County and its cities, and support services meet the needs of individuals and families who are homeless or at risk of homelessness;
2. Housing: To ensure access to affordable, decent safe and appropriate transitional and permanent housing for all individuals and families;
3. Community Development: To ensure the safe livability of neighborhoods, the preservation of important facilities, public access to facilities and services, and planning activities, that primarily benefit low-income persons

The Kitsap County *Consolidated Plan* specifically states the objective to "support the redevelopment of Westpark" pursuant to the following goal: "To ensure access to affordable, decent, safe and appropriate transitional and permanent housing for all individuals and families, the Kitsap County community…"

Cumulative Impacts

There are several redevelopment/revitalization projects underway by other proponents within a few mile radius of the Westpark redevelopment. No known projects are planned in the immediate area. Current projects include the following:

- Kitsap Community Resources is developing a new building in Port Orchard with new administrative and program offices to support its continued outreach to the community in need and to BHA residents in particular.
- Harborside, in Bremerton's central business district, is a waterfront condominium development which will help provide housing opportunities to new middle and upper income households.
- Other projects recently completed or under construction in Bremerton's central business district include Kitsap Credit Union headquarters. Anthony's Homeport restaurant, numerous retail businesses, and over the 140 condominiums.
- East Park, a 47-acre Public Sector Redevelopment Site along Wheaton Way, will be developed with 462 housing units in a mix of types and densities. The City adopted a Sub-Area Plan for the site in 2006.
- The City of Bremerton Comprehensive Plan identifies a future Oyster Bay Neighborhood Center along Kitsap Way, just to the northeast of the Westpark site. This mixed-use center (residential and commercial) is expected to develop in conjunction with, and receive support from, redevelopment of Westpark. No dates for implementation have been identified.

While some of the projects would create new housing opportunities, they are marketed to middle and upper income levels. No significant adverse cumulative housing impacts have been identified.

Potential Loss of Public Housing

The Bremerton Housing Authority has committed to one-for-one replacement, at like affordability, of all housing units demolished as a result of redevelopment of Westpark. Because all existing public housing units will be replaced with rent-comparable units, there will be no net loss of units. In addition, because the units will no longer be as concentrated in the Westpark community, households qualifying for public housing will have expanded choices of affordable housing locations. There would be no cumulative negative impact on the supply of public housing in Kitsap County.

Impacts of the Alternatives

No Action Alternative

Under *No Action,* redevelopment of the site would not occur and only limited repair of the existing housing units would be done, subject to BHA's ability to identify funding.

The housing impacts of this alternative would include continued deterioration of the housing units due to their age, construction quality, and the limited availability of funding for repair and rehabilitation; and loss of the opportunities to achieve revitalization of a distressed community, to expand housing options (in both quality and location of housing) for low-income households, and to increase homeownership opportunities in the area

Condition of Housing

The residential buildings at Westpark have exceeded their useful life. The community was constructed in the early 1940's as "temporary" housing for WWII defense workers. The original quality of construction was poor because, as temporary housing, the units were never intended to be in service for over 60 years. While they are well-maintained, Westpark housing units are aging and in need of major structural and mechanical repairs. Such problems could include:

roof replacement
foundation replacement
replacement of electrical, plumbing, and heating systems
addition of insulation to both the units and the major systems
abatement of lead-paint and asbestos
new floors
new windows
improved ventilation to retard the growth of mold
correction of site drainage problems

Redevelopment would address these and other substandard physical conditions, including:
lack of handicap person visitability, adaptability and accessibility;
lack of storage;
lack of second bathrooms;
absence of sidewalks;
lack of organized park and play space;
lack of good connections to surrounding community; and
lack of adequate space in family units.

Rehabilitation of Existing Housing

Under the *No Action* alternative, BHA would continue to try and maintain the units and incrementally make limited improvements based on available funding. The only designated source of public housing rehabilitation funds available to BHA is HUD's Comprehensive Grant Program (CGP). Through the CGP, housing authorities are granted funds for repair of public housing based on a formula allocation. BHA's annual allocation is approximately $1.5 million (including operating costs). This is the only funding provided by HUD to assist BHA with the repair of all of its public housing units.

Without renovation, units may have to be closed and/or demolished as they age and their condition deteriorates further. This would result in the permanent loss of the housing units and the displacement of residents.

Redevelopment of Westpark would help accomplish the following outcomes:
- redevelopment of the site into a mixed income community
- a reduction in the concentration of extremely low- and very low-income households living on the site
- development of market-rate housing
- provision of homeownership opportunities
- integration of Westpark into the existing neighborhood;
- leverage substantial new resources into the community; and
- one-for-one replacement of 441 public housing units off-site, preferably in strong job and school markets.

Community Revitalization

No Action would not achieve community revitalization goals. It would leave in place the concentration of extremely low-income households and the attendant social problems of the community. It would preclude the opportunity to develop new, affordable homeownership options for the Westpark area and to achieve a mixed-income community that could reduce the current social and economic isolation of residents.

Design Alternative

Impacts of the *Design Alternative* would be the same as those for the *Proposed Master Plan*.

Mitigation Measures

Redevelopment under either the *Proposed Master Plan* or the *Design Alternative* would include mitigation for the impacts of housing demolition and construction activity on existing residents, and off-site replacement housing for the on-site reduction of 441 housing units with rents comparable to those of the current public housing units. BHA proposes to mitigate for these impacts by providing relocation assistance to residents, and through the one-for-one replacement of housing units affordable to public housing applicants. Mitigation measures included in the *Proposed Master Plan* are discussed below.

Tenant Relocation Assistance

The Westpark redevelopment program requires that all residents receive relocation benefits as prescribed by the URA. BHA, with the extensive involvement of residents, has developed "*A Place to Call Home," the Bremerton Housing Authority Relocation Plan for the Redevelopment of Westpark* describing relocation benefits and choices. All residents would be relocated in phases off-site during construction the redevelopment. Any resident wanting to return to Westpark who remains in good standing with BHA would be offered the opportunity to return to a new unit in the redeveloped community. A lottery would be held if the number of resisdents wishing to return exceeds the total number of public housing units.

The following is a step-by-step review of the relocation process, which illustrates the joint responsibilities of BHA and residents in the relocation process. This process is currently under way.

Relocation Steps

Step 1: <u>Relocation Interviews (Need Assessments)</u>
BHA Relocation coaches will schedule one-on-one interviews with each Westpark family to determine relocation and service needs. The information from these interviews will be used to plan for relocation and support services, and begin to build each resident's resume.

Step 2: <u>Relocation Rights Contract Training</u>
Residents learn about the moving process and their rights and responsibilities under the Relocation Rights Contract.

Step 3: Relocation Orientations/Community Meetings

BHA will hold Community Meetings every month for all residents and Relocation Orientations every three months coinciding with each phase of relocation. These meetings will allow residents to discuss the relocation process, housing options, relocation benefits, the Section 8 program, and answer questions.

Step 4: General Information Notice and Notice of Eligibility for Relocation Assistance

The General Information Notice (GIN) will be sent out as soon as feasible and will include general information on relocation assistance and information booklets. The Notice of Eligibility for Relocation Assistance will be sent out approximately at the time of Initiation of Negotiations and will inform residents of his or her eligibility for assistance, describe the assistance and procedures for obtaining the assistance. With the Notice of Eligibility for Relocation Assistance residents will also receive a Notice of Comparable Unit Housing Options, which will give residents at least three, if available, relocation housing options.

Step 5: Residents meet individually with Relocation Coaches

The “General Information Notice” will tell residents when the Relocation Coach will contact them to begin the relocation process. Coaches will also help residents begin their “resume” of marketable skills and training classes.

Step 6: Good Neighbor Workshops

Residents will continue building their resumes through these workshops which will help residents prepare for a successful move. During these workshops residents learn about such things as lease compliance, housekeeping and money management.

Step 7: Relocation Coaches work with residents to find new housing

When it is time for each relocation phase, a Relocation Coach will work with those respective residents to make the best moving choices for their family’s individual needs. BHA will provide housing search assistance, transportation to view properties and at least one available comparable unit as a housing option.

Step 8: Residents get ready to move

Once an appropriate relocation home is identified, a move date can be scheduled. Residents should begin to pack and contact utility companies for disconnect and reconnect services.

Step 9: 90-Day Notice

This notice will be sent to residents 90 days before their scheduled move out date and after residents have received their Notice of Eligibility for Relocation Assistance. This notice will state the specific date by which the property must be vacated or it will specify the earliest date by which the occupant may be required to move.

Step 10: 30-Day Notice

A final notification to residents confirming their move out date.

Step 11: Moving Out

Resident may choose to be moved by a BHA contracted moving service or receive a fixed moving payment.

Step 12: Public Housing is Redeveloped

All of the existing public housing will be demolished as part of the overall redevelopment project. A new mixed income community of 759 new housing units will be constructed. Of the 759 units, 190 will be public housing and 100 apartments will be affordable units.

Step 13: Relocation Complete

Once a BHA resident or family has moved to a permanent home, either in their original placement in the community or in a redeveloped public housing within Westpark, residents have completed their relocation, but assistance by Relocation Coaches and Staff will continue as needed.

Step 14: Resident Monitoring and Follow Up Services

Residents will continue to receive coaching as needed after their move and follow up surveys will be conducted. Each resident will be monitored throughout their relocation process to evaluate their progress.

Once relocation has been completed in each phase, abatement and demolition activities will begin. Construction is anticipated to begin in July 2007, and to be completed by spring 2010.

The proposed moving assistance would meet the cost allowance and payment requirements of the URA. Many of the measures described above, particularly those related to communication with residents, go well beyond the specific requirements of the URA.

Overall, the proposed program would mitigate the financial and physical impacts of relocation on existing tenants.

Replacement Housing

The BHA is strongly committed to the concept of one-for-one replacement of demolished public housing units. BHA will use a combination of relocation vouchers and Section 8 vouchers for permanent and temporary relocation of the families at Westpark.

Under either the *Proposed Master Plan* or the *Design Alternative*, BHA would replace 190 units on-site and the remaining 441 would be replaced off-site. Determining if this approach would mitigate the loss of public housing units on the site requires some additional information on public housing operations. Public housing units do not have a rent, per se. Residents of public housing pay 30 percent of their income for rent and utilities. The vast majority of public housing residents have incomes of less than 30 percent of the area median income, with the balance typically making between 31 percent and 50 percent of the area median. Therefore, the amount paid by the tenants for rent does not pay for the costs of operating the housing (i.e. owner-paid utilities, maintenance, and management). Costs not covered by the tenant rent payments are covered through operating subsidies provided by HUD to BHA. Because of the operating subsidies, all public housing units are affordable to households making as little as zero percent of the median income who can pay nothing in rent.

BHA's policies mirror the federal income eligibility requirements for public housing which are that households with incomes between 0 percent and 80 percent of the area median income are eligible to apply for public housing and that most of newly admitted families in any fiscal year have incomes below 30 percent of the area median. In addition, preferences are established for households that have been involuntarily displaced from their housing unit, are living in substandard housing, or are paying more than 50 percent of their income for rent and utilities.

While the policy allows for households with incomes up to 80 percent of the area median income to apply for public housing, in practice, a great majority applicants and residents have incomes less than 30 percent of the area median income. This is due to implementation of the preferences, the length of the waiting list duration of the waiting period, and because households with incomes at the upper end of the eligible income range (60 percent to 80 percent of the area median income) can generally afford market-rate units.

Therefore, even though replacement housing units, like all BHA public housing units, are designated as affordable to households with up to 80 percent of the area median income, they will receive HUD operating subsidies (either through direct Annual Contributions Contracts (ACC) between BHA and HUD or through a project-based Voucher) so that they will be affordable to households with as little as zero percent of the median income. For purposes of the EIS, any unit developed either on-site or off-site that would be affordable to these extremely low income households, regardless of the type of rent subsidy, would be considered a replacement unit for those demolished at Westpark.

The use of project-based Vouchers would result in the replacement of units affordable to extremely low-income and very low-income households who make up the bulk of public housing residents. The permanent allocation of project-based Vouchers in this way would mitigate the impact resulting from the demolition of the 441 public housing units that will not be redeveloped in Westpark. Under both development alternatives, the potential adverse impact of the demolition of public housing units would be mitigated; at the same time, the over-concentration of extremely low- and very low-income housing in the area would be lessened and neighborhood choices for low-income households would increase.

Some families want to explore and take advantage of home buying opportunities as replacement housing. While this choice is appealing and may serve as a perfect solution for select residents, BHA is aware that most interested candidates will not be eligible at this time. However, the longer residents can plan for a homeownership goal, the greater the chance they will achieve success. As part of the plan, BHA is developing a comprehensive homeownership program aimed at educating and counseling interested residents and linking them to down payment assistance and loan programs. The first step in this process has already begun. Through the Needs Assessment surveys, BHA has developed a pool of residents interested in homeownership. BHA continues the implementation of a ROSS homeownership grant which has the goal of assisting 30 Public Housing residents into homeownership.

Significant Unavoidable Adverse Impacts

Many impacts of the *Proposed Master Plan* and the *Design Alternative* would be either neutral or positive; adverse impacts would be mitigated by the planned relocation assistance to be provided to current residents and/or the planned one-for-one replacement of current public housing units with units of like affordability.

No Action, on the other hand, would produce several significant unavoidable adverse impacts. It would deter revitalization of the community. In addition, rehabilitation would neither address the long-term structural needs of the units and the failing infrastructure, nor the social and economic isolation of current residents.

4.8.3 Relationship to Plans, Policies & Regulations

This portion of the Land Use section addresses the consistency of the Proposed Westpark master Plan with major federal, state, local and regional plans, policies and regulations. The discussion is selective and focuses on laws and policies that are relevant to the proposal and its impacts. Each relevant law or policy area is briefly summarized, followed by a discussion of how the proposal relates to identified policies.

Regional Plans

Kitsap County County-wide Planning Policy

The Kitsap County County-wide Planning Policy (CPP, last amended in 2004) provides general direction for planning conducted by individual cities and counties to comply with the Growth Management Act (GMA). The CPP is adopted by the Kitsap Regional Coordinating Council (KRCC) – a forum comprised of all municipal and tribal jurisdictions in the County -- pursuant to RCW 36.70A.210. The CPP addresses a range of topics necessary to implement local growth management plans, including urban and rural land use, open space preservation, contiguous and orderly development, transportation, and affordable housing. Element I addresses affordable housing. Policies relevant to the Westpark proposal include the following:

AH 3 Provision of below market rate housing:
b. Below market rate housing strategies should include:
ii. provision for a range of housing types;
iii. housing design and siting compatible with surrounding neighborhoods;
c. Each jurisdiction shall promote the development of below market rate housing in a dispersed pattern so as not to concentrate or geographically isolate low-income housing in a specific area or community.
d. Below market rate housing should be located throughout Kitsap County in a manner to provide easy access to transportation, employment and other services.

Discussion: Westpark is being planned as a mixed-income community that will contain 759 units of low income and market rate housing. Housing would include single-family detached and attached in a variety of styles, and multi-family units. BHA is committed to replacing all existing low income units on-site (190 units) and off-site. Low income housing is currently concentrated on the site; dispersal throughout the City and county would help achieve CPP policy.

Local Plans, Policies & Regulations

Overview

The Westpark site has been the subject of several City legislative actions over the past few years, and was also addressed specifically in the City's updated Comprehensive Plan and zoning code in 2004. These actions have provided a framework for planning redevelopment of the site.

In September 2003, the City amended its Community Renewal Plan, pursuant to the state Community Renewal Law (RCW 35.81), to incorporate the Westpark site as a "blighted" area for purposes of community renewal efforts (Ordinance No. 4830 and 4870). The designation was supported by findings that the site was isolated from adjacent areas that building size and design were deficient, and that physical deterioration was a contributing factor to disinvestment in the area. These actions also reaffirmed the City's intent to cooperate and assist the Bremerton Housing Authority in the redevelopment of Westpark, (pursuant to RCW 35.83), and to provide a framework for redevelopment in the Comprehensive Plan and zoning regulations. The relationship of the Proposed Master Plan to this framework is described below.

City of Bremerton Comprehensive Plan (2004)

The City of Bremerton updated its Comprehensive Plan in 2004 to comply with the Growth Management Act and to establish a new framework for the City's future growth. The Plan is based on a "centers" concept, and the Plan designates numerous such locations throughout the City. A significant portion of the City's future growth is being guided to designated centers. Relatively little change, therefore, is anticipated in established neighborhoods.

Centers vary in scale, function and character, and each is intended to be a distinct district or "village" with a unique character. Designated centers range from the City Center, which provides a wide range of activities that serve the entire City and the region, to smaller neighborhood centers, which provide goods and services and amenities to residents within a neighborhood. In general, centers are intended to be mixed-use, pedestrian-friendly, well designed areas, with open space, public gathering places, access to transit and adequate infrastructure.

The Comprehensive Plan Land Use Map designates Westpark as a *Public Sector Redevelopment Site (PSRC).* These large sites provide potential for innovative redevelopment by public entities. Redevelopment is intended to meet a unique community need, such as providing affordable housing. Specific land uses and development density are to be established in sub-area plans prepared for each site. PSRC sites are intended to have a mix of uses but to be primarily residential in nature with significant open space; commercial uses may be a secondary development component.

The Comprehensive Plan anticipates that more detailed, area-specific plans will be developed to implement designated centers and Public Sector Redevelopment Sites, such as Westpark. Key aspects of these sub-area plans include a process that involves the community, consistency with the Comprehensive Plan goals and policies, and inclusion of development standards and design guidelines. The relationship of the Proposed Master Plan to the *Shaping Bremerton Themes* of the Comprehensive Plan is described below.

1. *Distinctive Growth, with Viable Neighborhoods and Centers that Provide Greater Choice and Convenience.*

   <u>Discussion</u>: Redevelopment pursuant to the Proposed Westpark Master Plan would help to revitalize an existing neighborhood that is characterized by outdated, deteriorated housing and infrastructure, and has been designated as "blighted." The new Westpark neighborhood would be characterized by mixed-use development, a wide range of housing options affordable to a mix of income groups, ample open space and amenities, pedestrian accessibility, quality design, improved infrastructure and enhanced environmental resources. Some everyday goods and services, and local employment opportunities, would be provided on-site.

2. Enticing New Development, with a Focus on the Downtown Regional Center.

Discussion: The Bremerton Housing Authority has worked closely with the City and the broader community to shape a plan for Westpark that fits the site and is responsive to the City's requirements and needs, including economic development, housing opportunities and compatibility with the nearby Oyster Bay Neighborhood Center.

3. Supportive Transportation, with Seamless, Efficient and Varied Choices.

Discussion: The Proposed Master Plan for the site would provide vehicular circulation, an enhanced pedestrian circulation system, and access to transit. The site is bounded by two regional transportation facilities -- SR 3 and Kitsap Way. Kitsap Transit currently provides public transit service to the City of Bremerton (Routes No. 24 and 26). The Master Plan would create an approximate 11-mile long system of trails and sidewalks, connecting the sites residential, commercial and recreational areas, and to off site services in the Oyster Bay Center.

4. Improved Accessibility, especially for the Pedestrian.

Discussion: The Westpark site is organized in a manner and will be developed at densities that will support multiple transportation modes, including vehicles (through adequate access and parking); transit (through higher urban densities and access to the regional road system); and pedestrians (by integrating trails and pedestrian amenities in a mixed-use development pattern).

5. Quality Housing, with Broader Choices.

Discussion: Existing housing at Westpark is old and deficient; the Comprehensive Plan and several City ordinances have identified the site's housing as substandard and in need of revitalization. The redeveloped Westpark would provide 759 housing units in a variety of types and styles, including single family attached and detached (duplexes, townhouses, clustered cottages), condominiums and apartments. Units would be for sale and for rent, market-rate and public housing. All existing public housing units would be replaced either on-site (190 units) or off-site, which would be consistent with the City's desire to disperse public housing.

6. Business Support, with Increased Opportunity.

Discussion: Westpark would contain approximately 50,000 square feet of retail, commercial and office development in a Village Center and an additional 10,000 square feet of commercial uses in mixed-use buildings. These businesses would provide local jobs and goods and services for residents of Westpark and the surrounding neighborhood. Westpark's residents would also provide market support for existing and new commercial development in the Oyster Bay Neighborhood Center. The EIS also examines a Design Alternative that includes a larger commercial area (12 acres/130,000 square feet).

7. Environmental Management, Integrating Natural Systems.

Discussion: The Westpark Master Plan includes 28 acres of parks and open space, and would retain many existing significant trees; disturbed areas of the site will be landscaped. This open space and vegetation would provide habitat for species of urban wildlife, as well as recreational opportunities for local residents. Environmentally critical areas located on and adjacent to the site (such as wetlands) will be protected consistent with City regulations. Stormwater will be controlled and treated consistent with City requirements.

8. Community Service, Focusing on Assets

Discussion: The Proposed Master Plan includes installation of new infrastructure concurrent with development. This Draft EIS evaluates the service demands of the new population to ensure that any adverse impacts are disclosed and addressed.

9. Design Review: Advancing quality urban development.

Discussion: The Westpark Sub-Area plan's development standards and design guidelines will apply to all future development on the site. The BHA will also develop Covenants, Conditions and Restrictions (CC&Rs) that will also apply detailed design requirements to land and buildings throughout the site.

Community Character Goals

CC1 Demonstrate excellent urban design qualities in new development.

Discussion: Redevelopment of the site will replace old, substandard housing with modern dwelling units and mixed-use buildings. The Westpark Sub-Area Plan, which applies to the site, contains design guidelines that address site and building design; these standards will be enforced by the City and/or the Westpark Design Review Committee (DRC). Future development applications will be prepared consistent with applicable guidelines.

CC2 Assure that new development relates to surrounding uses and provides for urban livability.

Discussion: The proposed Westpark Master Plan would achieve compatibility between land uses through planned siting of different activities, use of open space and buffering, and transitions between uses of different intensity. Westpark would contain a mix of activities that meet everyday needs, connected by streets and trails, and by enhanced open space and urban amenities. Buildings would be urban in scale and character. The type, amount and location of commercial and retail facilities is intended to be consistent with existing and planned uses in the Oyster Bay Neighborhood Center; on-site uses would primarily meet the everyday needs of residents and surrounding neighborhoods, but are not intended to generate significant amounts of traffic or to meet regional demand.

CC3 Provide for a safe, pleasant and rich pedestrian experience.

Discussion: Westpark would contain 57,000 linear feet of pedestrian walkways and trails. Streets are designed to accommodate pedestrians and to make walking safe, pleasant and convenient. Pedestrian amenities include landscaping, benches, open space, pocket parks and lighting.

CC4 Promote the development of areas of special character, encouraging a diversity of communities within the city.

Discussion: Westpark is a large site that presents unique redevelopment opportunities. Its history and status as a 1940's era public housing project with aging and substandard facilities provides an opportunity for redeveloping a modern, well-designed urban mixed-use community located at a major entrance to the City.

CC4D *Include design guidelines in neighborhood planning processes to address local urban design issues and make neighborhoods attractive, safe places.*

Discussion: The Westpark Sub-Area Plan, which will regulate future development on the site, includes design guidelines that would be meet the intent of Policy CC4D.

Land Use Goals

LU1 Identify and enhance distinctive neighborhoods, communities and centers throughout the City.

LU1C Focus on central organizing features in planning communities, Centers and neighborhoods.

LU1F Identify and promote architectural and scale characteristics of surrounding neighborhoods for the development of Centers serving a community or neighborhood.

LU1K Promote neighborhoods which foster interaction among residents, contribute to well-being of citizens, and create and sustain a sense of community and personal safety.

LU1L Strategically locate amenities such as parks, sidewalks, community centers and gathering places to support residential areas.

Discussion: The City's housing renewal plan currently designates the Westpark site as blighted. The Comprehensive Plan designates Westpark as a Public Sector Redevelopment Site in recognition of the special redevelopment opportunities presented by its large size and public ownership. The Westpark Sub-Area Plan establishes applicable regulations and standards for redevelopment. The Proposed Site Plan is consistent with the land uses identified in the Sub-Area Plan. The proposed mix of uses emphasizes housing in a mixed income community, with limited retail uses. Westpark's on-site population will also support development of the Oyster Bay Neighborhood Center, which is planned adjacent to the site along Kitsap Way.

LU2 Integrate an open space system into the land use pattern that increases the amount of open space, protects Bremerton's natural resources, and provides a source of beauty and enjoyment for all residents.

LU2C Include pedestrian, bicycle, passive recreation opportunities and developmentally appropriate play areas into open spaces.

Discussion: The proposed Westpark site plan includes 28 acres of parks and open space that is integrated into the land use pattern. The open space plan includes areas for active recreation – including a ball-field, tennis and basketball courts, pocket parks, tot lots and gathering places -- and for gathering and passive enjoyment. Tree retention will be addressed in subsequent subdivision applications; most retained significant trees will be located in the identified park and open space areas.

LU3 Create an environment that will promote growth.

LU3B Pre-qualify key areas and sites for environmental permitting through such devices as planned actions.

LU3C Encourage increased density with development incentives and zoning flexibility.

Discussion: When the City designated the Westpark site as “blighted” it specifically found that the deterioration of the site was contributing to disinvestment in the surrounding area and, therefore, inhibiting economic development. The Comprehensive Plan’s Public Sector Redevelopment Site (PSRS) designation is intended to facilitate the cooperative redevelopment of large sites with potential to provide a public benefit. Redevelopment is intended to revitalize the site and to attract new development and jobs to the surrounding area. Environmental impacts associated with redevelopment of the site were previously evaluated in the Supplemental EIS prepared for the City’s updated Comprehensive Plan and in an addendum prepared for the Westpark Sub-Area Plan. The present EIS will ensure that project-specific impacts are addressed.

The site would be developed into a mixed-income, mixed-use urban community. Average gross and net density would be approximately 9 dwelling units per acre and 20 dwelling units per net acre, respectively.

LU4 Provide for walkability throughout Centers and neighborhoods.

LU4B Develop pedestrian connections between residential areas and neighborhood services.

Discussion: The Westpark master Plan integrates the needs of the pedestrian into its land use pattern and transportation system. The Master Plan includes 57,000 linear feet of pedestrian paths and trails, connecting areas of the site with one another and with the surrounding neighborhood.

LU5 Designate neighborhood, district, and employment Centers on the Land Use Map that provide mixed-use environments which serve as the primary focus for growth.

Discussion: Westpark is planned to be a mixed-use, mixed-income, pedestrian-oriented community. It would include approximately 5 acres of commercial uses on-site to meet some everyday shopping needs of residents. The site is adjacent to the designated Oyster Bay Neighborhood Center and would provide a resident population to support the center’s planned growth.

LU7 In order to encourage new development to occur in locations and patterns consistent with the Vision(s), Goals and Policies of this Plan – specifically in Centers – remove or revise existing land use designations that would site multi-family uses in locations that do not support the Centers Concept.

Discussion: Westpark has been planned as a mixed-use community and includes a wide range of housing types, including a detached and attached single family and multi-family and housing. The location of multi-family housing adjacent to Kitsap Way would support commercial activities anticipated in the Oyster Bay Neighborhood Center.

LU11 *Provide for the viability of communities, neighborhoods, and Centers through strategic land use designations and infrastructure provisions.*

Discussion: The Comprehensive Plan Land Use Map designates Westpark as a Public Sector Redevelopment Site (PSRS). This designation recognizes its public ownership and the public interest in innovative redevelopment that meets community needs. The master plan has been developed through a sub-area planning process which has included significant public involvement. The proposed site plan would be compatible with adjacent uses, and would provide a variety of housing types and ownership options that will meet the needs of a variety of economic groups.

LU12 *Support community-wide access to amenities and services.*

Discussion: Westpark will provide open space and recreational amenities that are available to all community residents. The site has also been planned to maintain and enhance views of the water. The existing community center will remain and will be renovated; it will continue to provide a range of educational and recreational programs in the future.

LU17 *Adopt and implement appropriate standards and regulations for stormwater management. The City of Bremerton should adopt and implement regional plans, strategies, and standards as appropriate, including but not limited to the Seattle/King County Storm Water Manual, FEMA maps, and the Puget Sound Action Team's 2000 Water Quality Plan.*

Discussion: Stormwater will be managed in a manner consistent with city standards. Water quality treatment will be implemented prior to discharge, and the existing outfall to Oyster Bay will be modified to accommodate flows from Westpark and off-site sources.

Housing Element Goals

H1 *Preserve and enhance Bremerton's quality housing stock.*

H1A *Promote private and public efforts to preserve the existing quality housing stock …and replacing severely deteriorated units.*

H2B *Promote private commitments to improve the housing stock by using public resources to remove or abate blighting influences within or near residential areas.*

H3 *Provide a variety of housing types and densities to meet changing needs of Bremerton residents.*

H3B *Support the private sector's efforts to meet changing housing demands and special housing needs.*

H5A *Provide opportunities within existing neighborhoods for below market rate and affordable housing without negatively impacting the existing neighborhood character.*

H5C *Disperse below-market-rate housing throughout the city to avoid concentrations in any particular area.*

H7 *Promote safe, attractive, livable neighborhoods that will attract homeowners.*

H8B *Advance the concept of "the third place" within neighborhoods, providing for gathering places and convenient services where neighbors can interact.*

H8C *Encourage walk-ability within neighborhoods.*

Discussion: Westpark's existing housing stock is deteriorated and deficient, and redevelopment is intended to provide safe, modern housing for local residents. The City is cooperating with the BHA to ensure that redevelopment satisfies City policies and regulations and that review and permitting are efficient. The Proposed Master Plan includes a variety of single-family and multi-family housing types, both for sale and for rent, to meet a wide range of needs. The Plan includes constructing 190 low income units on site, to replace a portion of the deteriorated housing that is redeveloped, and dispersing the balance of existing low income subsidized units throughout the City and County. The Master Plan includes a community-scale park and open space, neighborhood parks, and other gathering places in on-site neighborhoods. The Master Plan includes a system of paths and trails to provide recreational opportunities and to connect on-site neighborhoods.

Environment Element Goals

E6 *Protect, preserve and restore the habitats that support Bremerton's diverse ecosystems.*

E6B *Preserve and enhance trees, native vegetation and integrate suitable native plants in urban landscape development.*

E6G *Protect and restore nearshore habitat.*

E7E *Encourage connectivity between open space areas with a system of paths and trails for pedestrians, bicyclists and other non-motorized users.*

E8 *Protect and preserve Bremerton's unique marine and fresh water resources.*

E8C *Promote alternatives to traditional stormwater practices for new construction, encourage on-site filtration, and require use of Best Management Practices.*

E8D *Restrict the water runoff rate and volume for all new development and redevelopment*

E10B *Encourage dense development around designated Centers, which incorporate open space.*

E11 *Integrate the natural and built environments to create an urban center with comfortable and secure places for people to live, work and recreate.*

E11C *Encourage streetscapes that are human scale, enable walking and bicycling, and are aesthetically pleasing.*

E11E *Protect public views and vistas of both shoreline environments and mountains.*

Discussion: The Westpark site does not contain significant areas that are considered sensitive to development. Identified steep slopes and adjacent off-site critical areas will be managed consistent with City regulations. A significant amount of on-site urban habitat and vegetation will be preserved in planned open spaces. The Master Plan will follow landscaping regulations and guidelines contained in the Westpark Sub-Area Plan. The potential effects on shoreline resources and near shore habitat of replacing the existing stormwater outfall are considered in the Draft EIS and will be addressed through review and permitting for that facility. The Master Plan includes 57,000 linear feet of pedestrian and bicycle paths and trails, which will connect neighborhoods with on-site open spaces and commercial activities. The proposed stormwater system will improve on-site stormwater management relative to existing conditions, providing detention and water quality bio-filtration consistent with adopted City standards. The site will be developed at urban densities, consistent with standards in the Westpark Sub-Area Plan, and compatible with future development encouraged in the adjacent Oyster Bay Neighborhood Center. The Master Plan encourages a pedestrian-friendly environment, with well-designed buildings fronting landscaped sidewalks and streets. Views of the shoreline and mountains will be present from some portions of the site.

Economic Development Goals

EC2C *Coordinate sub-area (community, neighborhood and Centers) planning for localized economic development.*

Discussion: Consistent with the City's Comprehensive Plan, a Sub-Area Plan was prepared for the Westpark site to provide a framework for future redevelopment of the site; it is being considered by the City Council as of this writing. Planned development of the designated Oyster Bay Neighborhood Center, located adjacent to the Westpark site, has been considered in the Sub-Area Plan. Westpark's planned commercial activities are intended to complement those in the Oyster Bay Neighborhood Center and to be compatible in scale.

Westpark Sub-Area Plan (2006)

In November, 2006 the Bremerton Planning Commission recommended approval of Westpark Sub-Area Plan, and the Plan is being considered for adoption by the City Council as of this writing. When adopted by the City Council, the Sub-Area Plan will become an element of the Comprehensive Plan and provide zoning standards and design guidelines to guide redevelopment. The following summary and discussion is based on the Planning Commission's recommended plan.

Section III of the Westpark Sub-Area Plan (Table 1) indicates a mixture of land uses, including 759 single family and multi-family residential units; approximately 50,000 square feet of retail/commercial uses in a Village Center and 10,000 square feet in mixed-use buildings;

approximately 44,749 square feet of community/civic uses; 28 acres of parks and open space; 57,000 linear feet of trails; and approximately 14 acres of streets. Land uses would be organized around a large community park and open space, located in the center of the community; refer to Figure 4. The Summit Park would be flanked by residential uses at varying densities. Smaller parks and open spaces would be dispersed through neighborhoods. More intensive uses – high density residential, commercial and retail, and mixed-use buildings – would generally be located adjacent to heavily traveled transportation routes – SR 3, Kitsap Way and Oyster bay Road. Landscaping would be used to help buffer and create transitions between land uses of different intensity.

<u>Discussion</u>: The Proposed Master Plan (and site plan application) has been prepared to be consistent with the Westpark Sub-Area Plan. The site plan contemplates the general types, amounts and arrangement of land uses reflected in the Westpark Land Use Plan (Figure 3.8-3).

Because the Master Plan is conceptual in nature, a detailed analysis of the relationship of the Master Plan with the Sub-Area Plan's development regulations and design guidelines is not possible at this time. The consistency of future subdivisions and buildings with the Sub-Area Plan's regulations and standards will be determined in the context of future development applications. In general, types, amounts and design of various land uses would be proposed consistent with the regulations contained in Section IV of the Sub-Area Plan. Implementation of the Design Alternative would require an amendment to the Sub-Area Plan.

Bremerton Shoreline Master Program (2006)

The Bremerton Shoreline Master Program (SMP) implements the requirements of the Washington State Shoreline Management Act (SMA, RCW 90.58). The SMA is intended to manage the state's shoreline resources for multiple uses. The Act is implemented through local shoreline master programs -- containing goals, policies and regulations for shoreline activities -- and a local permit program applicable to "substantial development." State rules guiding the development of updated shoreline master programs WAC 173-26) were adopted by the Department of Ecology in 2003. The City's SMP was first adopted in 1977, and was last amended in August 2006. The recent amendments brought the SMP into compliance with the critical area requirements of the Growth Management Act and the Shoreline Management Act. The SMP's goals, policies, regulations and environmental designations relevant to the Proposed Master Plan are summarized below.

SMP Goals. The overall goal of the SMP is to "plan and foster all reasonable and appropriate uses while protecting and enhancing the quality of the shoreline of Bremerton." Other goals include the following:

Economic Development.

Encourage economic development that is integrated with the shoreline environment and is water dependent or related and which can benefit the community by a shoreline location.

Public Access.

Improve public access to the public portions of the shorelines through appropriate acquisition and development.

Circulation.

Provide an efficient circulation system for shoreline areas which is adequate for marine and land traffic without detracting from shoreline amenities.

Recreation.

Protect and improve recreational opportunities consistent with community needs through development of publicly owned shorelines.

Conservation.

Preserve shoreline natural systems and areas having unique aesthetic or environmental qualities.

Historic/Cultural.

To protect, preserve and restore shoreline areas identified as having historical, cultural or educational value.

Shoreline Environments. The SMP designates various shoreline environments; these designations are used to identify areas of different sensitivity and to regulate activities. Oyster Bay is designated *Urban Residential* except for the area adjacent to Oyster Bay Road which is designated *Urban Commercial* (SMP Map 3-1(C)). General types of activities permitted in the Urban Commercial environment include water-dependent and water-related uses, and non-water oriented commercial uses subject to a shoreline conditional use permit. The existing and proposed upgraded stormwater outfall is located in the Urban Commercial environment. Utilities are a permitted use in the Urban Commercial shoreline environment designation.

Site development standards limit height of structures in the Urban Commercial environment to 35 feet. Higher structures, to the maximum permitted in the zoning district, are permitted if views of the water from residential properties upland of the nearest street will not be impaired, or the increase is offset by providing a general public access designated in the SMP, and which provides equal or better views of the shoreline.

Policies & Regulations for Shoreline Activities. The SMP also contains policies and regulations that implement shoreline goals and apply to individual shoreline activities. Those relevant to the proposal are summarized below.

Archaeological & Historic Resources

Policies:

1. Identify and protect areas of special significance for enjoyment by the public.
3. Substantial development permits will contain provisions which require developers to notify local governments if any possible archaeological data are uncovered during excavations.
4. Consideration should be given to the National Historic Preservation Act of 1966 and Chapter 43.51 RCW which provide for protection, rehabilitation, restoration, and reconstruction of districts, sites, buildings, structures and objects significant in history, architecture, archaeology or culture.
5. Work with the Suquamish Tribe and other applicable Tribes prior to construction in cases where archaeological resources are present, and coordinate with the Tribe in cases of inadvertent discovery.

Regulations:

1.a. The developer or owner shall immediately notify the Director of Community Development of any archaeological artifacts or data found…

2. Identified historic or archaeological resources shall be addressed in park, open space, public access and site planning.

Public Access

Policies:

1. Incorporate public access into all private and public developments …[except] where deemed inappropriate due to health or safety hazards, security requirements, environmental impacts, or undue conflict with adjacent uses.

3. Control development, uses and activities on or near the shoreline so as not to impair or detract from the public's visual and physical access to the water.

4. Preserve and enhance views from the shoreline and upland areas.

6. Maintain, enhance and preserve public access afforded by shoreline street ends, public utilities and rights-of-way.

Regulations:

1. Public Access Requirement: Provisions for public access shall be incorporated into all shoreline developments except as provided below. Exceptions: *not relevant to proposal.*

Identified public access requirements for *Utility* use activities (Table 4-1) include compatible multiple uses of sites and rights-of-way, including physical or visual access points and trail systems. Public access design will be the subject of further study by the City's Parks and Public Works Departments. Enhancement of shoreline habitat environment is intended to be combined with the design of access.

Appendix G of the SMP contains the City's strategy for a linking system of public shoreline access and waterfront enjoyment points. The appendix identifies specific areas where public shoreline access is recommended, but does not identify the specific nature or form of improvements. Two potential access points are indicated in West Bremerton in the project vicinity, at Forest Avenue and Oyster Bay.

Utilities

Goal: Provide necessary utility systems in a manner which does not interfere with the quality of the shoreline environment.

Policies:

1. Major utility lines and facilities should be located outside shoreline areas to the maximum extent feasible.

2. The development of utility systems should not destroy or degrade sensitive natural shoreline systems.

3. View Protection: Locate utility facilities and corridors so as to protect scenic views.

4. Public Access: Include appropriate visual and physical public access consistent with public safety on utility installations.

Regulations:

1. Maintenance Projects: Upon completion of installation and maintenance projects on shorelines, they shall be restored to pre-project configuration, replanted with native species…
2. New utility lines, including electricity, communications and fuel lines, shall be located underground, except where the presence of bedrock or other obstructions make such placement infeasible. Existing above ground lines shall be moved underground during normal replacement processes.
4. Utility development shall provide for compatible, multiple use of sites and rights-of-way through coordination with local government agencies.
5. Storm drainage and sewer outfalls shall be located beyond the extreme low tide line.
8. Where major utility facilities must be placed in a shoreline area, the location and design shall be chosen so as not to destroy or obstruct scenic views.

<u>Discussion</u>**:** The Westpark site itself is not within the shoreline and is not subject to the requirements of the SMP. The *Proposed Master Plan* includes replacement and upgrading of the existing stormwater outfall located in Oyster Bay; that element of the proposal, which is described in Section 2.6.7 of the Draft EIS, is within the shoreline.

The proposed outfall replacement would be consistent with applicable shoreline goals. The outfall would provide stormwater discharge for redevelopment of the Westpark site and for surrounding neighborhoods. Indirectly, the outfall would support proposed upland redevelopment, which will result in an increase in commercial services and jobs. Public access is discussed further below. The existing outfall is likely a minor obstruction for recreational boating; the proposed design includes removal of the outfall up to the MLLW. The shoreline in this location is not and would not be developed as a recreational amenity. It does provide visual access however. Upgrading of the existing outfall would remove a portion of the existing outfall from the view shed, which would be positive. As discussed in the *Fisheries* section of the Draft EIS (3.5), replacement of the outfall would not adversely affect shoreline resources. As discussed in the Historic & Cultural Resources section of the Draft EIS (4.11), no historic or cultural resources have been identified on this portion of the shoreline.

Utilities such as stormwater outfalls are a permitted use in the Urban Commercial shoreline designation. The proposed outfall would be consistent with applicable height limits.

The proposed outfall would also be consistent with applicable policies and regulations for shoreline activities. As noted previously, no historic or cultural resources have been identified on this portion of the shoreline. The applicant has consulted with the Suquamish Tribe during planning and evaluation of the site. Recommended mitigation measures include notification of Tribal authorities if any cultural resources are identified during construction. The applicant has identified several concepts for public access and will work with the City to determine appropriate shoreline access.

Environmental impacts associated with removal and upgrading of the outfall are discussed in various sections of the Draft EIS. No significant adverse impacts have been identified; temporary impacts would occur during construction, however. In general, the new outfall would have lower visual impacts than the existing outfall; replacement would improve views of the shoreline. Overall, stormwater systems proposed in as part of redevelopment of the Westpark site would result in improvements to the quality of water leaving the site and discharged into Oyster Bay.

The applicant is presently consulting with agencies with jurisdiction regarding permits required for the outfall. Additional mitigation requirements may be identified during permitting.

Bremerton Critical Areas Ordinance (BMC 20.14)

The City's critical areas ordinance applies to wetlands, critical aquifer recharge areas, frequently flooded areas, geologically hazardous areas, and fish and wildlife conservation areas. The ordinance includes definitions, classifications, development standards and mitigation requirements for regulated critical areas. Potential critical areas located on the Westpark site include geologically hazardous areas, and fish and wildlife conservation areas, and the following discussion is limited to them.

"High" geologically hazard areas include areas with slopes greater than 40 percent; or slopes greater than 30 percent with unstable soils, groundwater seepage, erosion hazards, or seismic hazards subject to liquefaction. "Moderate" geologic hazards include areas with slopes of 30 percent or greater and vertical relief of 10 feet or more; areas with slopes of 15 percent or greater and vertical relief of 10 feet or more and unstable soils, groundwater seepage, and erosion hazards; and areas with subject to liquefaction from earthquakes, areas with hydric soils, and areas of loose fill. Development standards and mitigation requirements generally include establishment of setbacks from buildings and impervious surfaces (25 feet from the top and toe of slopes) and reservation of native vegetation from the top and toe of slopes. The setback requirements may be altered based on recommendations in a geotechnical report.

Shorelines subject to the Shoreline Management Act are classified as Fish and Wildlife Conservation Areas. This designation would apply to the Oyster Bay shoreline containing the proposed stormwater outfall upgrade. Class I fish and wildlife conservation areas include documented habitats for federal or state-listed endangered, threatened and sensitive species that have a primary association with and if altered are likely to reduce the likelihood that the species will maintain or reproduce over the long term. Class II fish and wildlife conservation areas include documented habitats for state-listed candidate or monitored species. The regulations also establish a process for nominating and designation habitats and species of local importance, and promulgating rules for their protection. No such species have been adopted by the City Council as of this writing.

Regulations applicable to water bodies used by anadromous fish, or areas that affect such water bodies, are intended to give special consideration to the preservation and enhancement of habitat. Standards include the following: timing of activities to occur during the applicable work window designated by WDFW; design that avoids degrading the functions or values of fish habitat; shoreline erosion control measures; and mitigation of impacts pursuant to an approved habitat management plan. Structures that prevent the migration of salmonids are not permitted in the portion of the water body currently or historically used by anadromous fish. Fish bypass facilities are required. A habitat management plan is also required for all sites with known locations of Class I fish and wildlife conservation areas.

The regulations contain special provisions applicable to utilities. Placement of utilities within designated fish and wildlife conservation areas may be allowed as follows:

(1) Utility maintenance activities involving no material change in size or function, subject to best management practices;
(2) Construction of utilities, when no feasible or reasonable location is available and subject to the requirements of a habitat management plan;
(3) No new utility corridors are allowed in known locations of federal or state listed endangered, threatened or sensitive species, except where an approved habitat management plan indicates that no significant impacts would occur; and
(4) New utility corridor construction and maintenance would protect the habitat conservation area through use of specified standards.

Discussion: ***Geologic Hazards***. Section 4.1, *Earth,* of the Draft EIS identifies the presence of steep slope, erosion and seismic areas on the Westpark site. With implementation of required regulatory setbacks, best management practices and recommended mitigation measures, no significant adverse impacts would occur.

Fish & Wildlife Habitat Conservation Areas. Based on the assessments contained in the *Plants & Animals* section of the Draft EIS (3.4), the site does not contain habitat for any listed threatened, endangered or sensitive species of wildlife. Some state candidate species – including pileated woodpecker, western toad, and merlin – could potentially use the type of habitat found on the site. The analysis concludes, however, that on-site habitat is too small, isolated or inaccessible and that potential species do not likely occur. The *Fisheries* section of the Draft EIS (3.5) does not identify any significant impacts to anadromous fish from construction or operation of the upgraded stormwater outfall.

Federal Plans, Policies & Regulations

Endangered Species Act

The Endangered Species Act (ESA, 16 USC 1531) requires federal agencies to ensure that any action authorized, funded or carried out is not likely to jeopardize the continued existence of any species listed as endangered or threatened, or result in direct mortality or destruction or adverse modification of critical habitat of listed species. Applicants must consult with the National Marine Fisheries Service (NMFS) and/or U.S. Fish & Wildlife Service (USFWS), who review the proposal for potential impacts.

Discussion: No endangered or threatened species of plants or animals occur on the Westpark site. No significant adverse direct or indirect impacts to endangered fish species on site of off-site have been identified.

The BHA has begun preparation of a biological assessment (BA) to document the analyses and compliance with applicable laws. The BA will be prepared and reviewed concurrent with the EIS. Consultation with affected agencies has also been initiated.

Clean Water Act

The Clean Water Act (33 USC 1251) is intended to protect the biological, physical and chemical integrity of the nation's waters, including wetlands. The act, which is administered by the U.S. Army Corps of Engineers (COE) and the Environmental Protection Agency (EPA) regulates activities that could affect wetland resources. Section 404 regulates dredging or placement of fill into the "waters of the US" which includes wetlands. A permit program – either a "nationwide" or individual permit, depending on amount of fill – is required for projects that affect wetlands subject to the act.

Discussion: No wetlands have been identified on site. No impacts to off-site wetlands would occur.

National Historic Preservation Act

The National Historic Preservation Act (NHPA) Section 106 (16 USC 470(f)) requires protection of sites, buildings or objects with national, state or local historic significance. These include properties listed on or eligible for listing on the national Register of Historic Places.

As defined in the National Advisory Council on Historic Preservation regulations, "criteria of adverse affect" include destruction or alteration of the property; isolation from or alteration of the property's surrounding environment; introduction of visual, audible or atmospheric elements that are out of character with the property or its setting; neglect of a property resulting in deterioration or destruction; or transfer or sale without adequate restriction regarding preservation, maintenance or use. Analysis of potential affects (direct and indirect) requires identification of boundaries of the area of potential affect (APE) in consultation with the State Historic Preservation Officer (SHPO). Affected tribes were also consulted regarding location of any known cultural resources.

Discussion: An APE for the Westpark site was identified in consultation with the SHPO. No sites of historic character were identified on national, state or local historic registers. A reconnaissance and analysis of the site's historic use did not identify any cultural or archaeological resources or indicate that such were likely to be present. Please refer to the discussion of Historic and Cultural Resources in the Draft EIS.

HUD Noise Assessment Guidelines

The U.S. Department of Housing & Urban Development (HUD) has promulgated guidelines for noise abatement and control (24 CFR 51, Subpart B). HUD's general policy is to provide minimum national standards for their programs to protect against excessive noise. These standards, and ameliorative actions as necessary, are to be considered by responsible entities as part of the environmental review process.

HUD has developed criteria for "site suitability" for its programs. These criteria consider an exterior noise level of 65 dB or less as "suitable," 65 to 75 dB as "normally acceptable," and exterior noise levels of more than 75 dB as "unacceptable" for HUD assistance. The criteria include the entire noise environment affecting the site and are not limited to activities on the site itself. For major rehabilitation projects in the "normally unacceptable" noise range, HUD requires environmental review, special environmental clearance and attenuation. Attenuation of 10 dB is required if noise levels are between 70 and 75 dB.

Discussion: Initial noise analysis indicated that traffic-generated noise levels along SR 3 and Kitsap Way are within the "normally unacceptable" range. These area existing levels of noise that are unrelated to the proposal. The Draft EIS (Section 4.6, *Noise*) discusses a number of mitigation measures – noise walls and/or construction techniques -- that could be used to reduce noise levels to meet HUD criteria. The proposal itself would not generate significant noise.

Coastal Zone Management

Activities and development affecting coastal resources which involve federal permits and are located in any of Washington's coastal counties, including Kitsap, require certification of consistency with the Washington Coastal Zone Management Program (WCZMP). The Department of Ecology administers the WCZMP and provides the required certification.

The state program identifies "authorities and enforceable policies" that are used to determine consistency. Those state laws and policies relevant to the *Proposed Master Plan* include the following: the Shoreline Management Act, Clean Water Act (including the state stormwater permit program and hydraulic project approval), Clean Air Act (limiting emissions and authorizing local clean air authorities to establish standards), and State Environmental Policy Act (SEPA).

Discussion: This Draft EIS contains data and analyses related to the relevant enforceable policies and will be used to determine the consistency of the proposed action with the WCZMA. Relevant analyses and conclusions maybe found in the following sections:

Shoreline Management Act:	Fish Resources (Sections 3.4. and 4.4) Plans & Policies (Section 4.8.4)
Clean Water Act:	Water Resources (Sections 3.3 and 4.3) Fish Resources (Sections 3.4 and 4.4)
Clean Air Act	Air Quality (Sections 3.2 and 4.2)
SEPA	This document has been prepared consistent with the requirements of NEPA and SEPA

4.9 ENVIRONMENTAL JUSTICE

4.9.1 Significant Impacts of the Proposed Master Plan

The impacted area has a significant concentration of low-income, minority, and disabled individuals. The site has been designated as "blighted" for community renewal purposes by the City of Bremerton (Ordinances 4830 and 4870). Demolition and construction activities necessitated by the implementation of the *Proposed Master Plan* will affect a disproportionately higher number of these individuals than if the project were located elsewhere. The EPA publication entitled *Final Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses,* (April 1998), gives the following direction on how to consider adverse impacts on the subject populations.

> *"Under NEPA, the identification of a disproportionately high and adverse human health or environmental effect on a low-income population, minority population, or Indian tribe does not preclude a proposed agency action from going forward, nor does it necessarily compel a conclusion that a proposed action is environmentally unsatisfactory. Rather, the identification of such an effect should heighten agency attention to alternatives (including alternative sites), mitigation strategies, monitoring needs, and preferences expressed by the affected community or population."*

Construction

Redevelopment under the *Proposed Master Plan* would result in the phased demolition of all existing residential structures and all residents would need to be relocated in phases from the site to accommodate demolition and construction. All relocated residents would incur moving costs and the inconvenience associated with relocating from their homes and finding comparably affordable housing.

Under either the *Proposed Master Plan* or the *Design Alternative,* BHA would provide a package of relocation benefits to displaced residents, including options for payment of moving costs, assistance with the physical move, temporary or permanent relocation to units in other BHA-owned properties, and Section 8 Vouchers for either temporary or permanent relocation. Proposed relocation benefits would comply with the Uniform Relocation Assistance and Real Property Acquisition Polices Act (URA). All residents in good standing with BHA would have the right to return to a unit in the redeveloped community, but residents also have the option of moving permanently from the site. (In this EIS, residents who plan to return to a new unit after redevelopment will be considered "temporarily relocated" and those who do not plan to return will be referred to as "permanently relocated.")

The BHA has created a plan, "A Place to Call Home," that will provide a guide for the BHA and its residents throughout the relocation process. The plan addresses the ongoing and new needs a family may encounter during relocation. The needs identified in the plan include: education, economics, recreation, employability and basic life skills. See the discussion below for more details in these need areas.

Implementation of the *Proposed Master Plan* and the *Design Alternative* are intended to create a mixed-use, mixed-income community. They would both reduce the current 571 public housing units on-site (excluding the 60 existing units in the Firs which will remain), to 250 after redevelopment. (An additional 100 units will be income qualified affordable units). BHA proposes to replace all existing low income units on a one-for-one basis by providing 381 comparably affordable housing units off-site within the City of Bremerton to the extent possible and throughout Kitsap County. In general, this dispersal is encouraged by City policy and to alter the existing concentration of low income persons on the site. The location of these off-site replacement units is not known at this time. All 571 current and eligible residents will receive a Housing Choice Voucher when they are relocated during construction; those returning to new public housing units in Westpark will surrender their vouchers.

Indirect Impacts

Employment Effects

Employment effects are discussed in more detail in Section 4.8 of this Draft EIS. In general, new on-site jobs would be generated. as a result of implementing the *Proposed Master Plan* or the *Design Alternative.* Overall, there would be a substantial net increase in on-site employment, primarily associated with the proposed Village Center. Proposed redevelopment also includes new space for social service agencies, and Westpark residents could potentially fill some of these jobs. Construction would also create temporary employment opportunities, and contractors would be encouraged to hire Westpark residents.

BHA will help residents develop employable skills through pre-employment training programs, such as “Key to a Better Life”. This program was developed as a part of the Westpark redevelopment process. It is intended to help residents develop skills that can be used to apply for many jobs, including construction and staffing of the Bay Vista Commons assisted living facility, currently under construction.

Community Cohesion

Implementation of the *Proposed Master Plan* would likely impact community cohesion through changes in the existing demographics. A broad variety of residential unit types, both for sale and for rent, is likely to attract a population reflecting a mix of incomes, particularly compared to the low income population that currently predominates. In the near term, a temporary disruption of community cohesion would likely occur from the staged relocation of residents during demolition and construction. BHA recognizes the personal impact of such changes on families and is developing a comprehensive program to address their concerns. However, reducing the concentration of extremely low-income and very low-income households on the site, and thereby reducing or eliminating some of the social consequences of such concentrations, is an objective of the Westpark redevelopment program. BHA desires to create opportunities for economic diversification of the community, remove blighted conditions, and meet the housing needs of public housing residents.

Access to Social Services

Westpark residents are currently served by a number of on-site social services for low-income people, including Head Start, assistance for their children with after school tutoring or recreational activities, and job training classes for adults, and a support service network for senior families. Other services and facilities include a community center (and ball fields), senior center, two play areas, and some local services (laundry, storage facility, and maintenance shop). BHA’s relocation plan will address the need to maintain service connections for residents as part of relocation assistance. Relocation staff – referred to as “Relocation

Coaches" -- would identify the service needs of each household and link residents with comparable services in areas to which they relocate. The relocation coaches' specific mission includes helping to prepare families with the skills they will need to make this relocation a progressive experience. They would also inventory services in various geographic areas of the County and assist residents to access appropriate services; would arrange service connections for residents before they relocate; and would follow-up once the resident has moved off-site. Residents relocating in Bremerton, or the surrounding area, would be able to maintain their service connections with on-site providers.

Public Health

Redevelopment pursuant to the *Proposed Master Plan* would eliminate some existing on-site health hazards, including potential exposure to the lead-based paint and asbestos. See the discussion in Section 4.8 of the Draft EIS. Any residents on-site when demolition and construction occurs would not be disproportionately exposed to hazardous materials or public health hazards because removal of any hazardous materials must comply with adopted state and federal regulations for abatement and/or disposition of such substances. Residents both on-site and in the surrounding area could be exposed to increased levels of air pollution and noise during construction and, to a more limited degree in the future, primarily due to increased traffic (see Air, Noise, and Traffic sections of the EIS for further discussion).

Public Well Being

An important objective of the community design represented by the *Proposed Master Plan* and the *Design Alternative* is enhancement of the public well-being. This includes removing blighted conditions and altering the current social and physical isolation of Westpark. The *Proposed Master Plan* includes new and expanded community facilities, infrastructure and housing units. A more traditional street grid would replace the existing curvilinear streets to better connect Westpark to the surrounding community. A system of trails and walkways would encourage walking between the site's neighborhoods. Parks and open space would be expanded and enhanced, and provide a greater variety of recreational opportunities and amenities. Many elements of the new community (i.e. street patterns, building design, open space, pedestrian and vehicular access) have been planned to promote a pedestrian orientation and improve public safety.

Other aspects of the project intended to increase public well-being are the additional and intensified services provided to BHA residents as a result of the redevelopment. These services include credit counseling, money management classes, employment assistance, referrals to community agencies, and similar programs. Two new programs growing out of the Westpark redevelopment process include the employment skills training of the "Key to a Better Life" program and the "Good Neighbor Program" (which deals with lease compliance, housekeeping and money management). In general, the variety of new housing, resulting economic and social diversity, and new job opportunities would all help to promote community stability and well-being.

Cumulative Impacts

The impacts of redevelopment on Bremerton public housing residents are discussed in the Housing analysis in this Draft EIS (see Section 4.9.3.1) The conclusions of that analysis, which are also applicable to environmental justice, are that the mitigation measures incorporated in the

Proposed Master Plan – including relocation benefits, resident involvement in relocation planning, and one-for-one replacement housing -- would address potential cumulative impacts.

4.9.2 Significant Impacts of the Alternatives

Design Alternative Master Plan

The impacts of the *Design Alternative Master Plan* related to environmental justice are the same as those identified for the *Proposed Master Plan*.

No Action Alternative

The *No Action* alternative would not involve redevelopment of the site and would not require relocation of existing residents, so there would be no related effects on the existing concentration of minority and low-income populations on the site. At the same time, the *No Action* alternative would not significantly improve existing housing conditions or the standard of living for current or future residents. The community would continue to be a concentration of extremely low- and very low-income households, challenged by the existing social, economic, and physical barriers that separate them from full integration with the surrounding community.

Because adequate resources to make significant improvement to existing housing units are not available, residents would continue to experience the old, dilapidated housing. Existing structures and infrastructure would continue to deteriorate. Over time, this would increase the possibility that Westpark's housing will become uninhabitable due to substandard condition and/or the failure of on-site infrastructure.

4.9.3 Mitigation Measures

The long-term impacts of the *Proposed Master Plan* and the *Design Alternative Master Plan* on the resident low-income and minority populations at Westpark would be positive and would address the physical conditions and social issues that currently exist relative to Westpark. Mitigation measures identified for housing in Section 4.9 would address the short-term impacts resulting from redevelopment of the site under the *Proposed Master Plan* or the *Design Alternative* .

4.9.4 Significant Unavoidable Adverse Impacts

No significant unavoidable adverse impacts are anticipated over the long-term. In the short-term, existing residents will experience the inconvenience attendant to relocation and construction, but will be provided with multiple types of moving and relocation assistance.

4.10 HISTORIC & CULTURAL RESOURCES

4.10.1 Significant Impacts of the Proposed Master Plan

Section 106 requires agencies to take into account the effects of their undertakings on historic properties. An historic property is any district, archaeological site, building, structure, or object included in, or eligible for the NRHP. Eligibility for the NRHP is determined by applying specific criteria (36CFR60.4) which designate as "significant" those districts, sites, buildings, structures, or objects:

a) that are associated with events that have made a significant contribution to the broad patterns of our history; or
b) that are associated with the lives of persons significant in our past; or
c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
d) that have yielded, or may be likely to yield, information important in prehistory or history.

In addition to these criteria, the property must also maintain integrity of location, design, setting, materials, workmanship, feeling, and association.

Impacts to the two archaeological sites and historic buildings identified within the APE are discussed below.

Archaeological Sites

WPR-06-01 – Graham Way Housing is a collection of concrete foundations, parking areas, and the remnants of Graham Way. The site contains no intact subsurface deposits and is unlikely to yield information important in local or regional history. This site is not recommended eligible for the NRHP.

WPR-06-02 – Section 16 Refuse Disposal Site is a dump from the 1930s. Although the general location and extent of the site is known, its contents are not well understood. Dumps are often able to provide information about the origin of the refuse and thus the people who created it. This site may contribute information about consumer consumption and product availability in the Bremerton area during the Great Depression. Until this site is fully evaluated, it should be regarded as potentially eligible for the NRHP.

Significant cultural resources are subject to additional determination of effect and design of mitigation measures. One property, the Section 16 Refuse Disposal site (WPR-06-02), is the only such resource within the APE. There are no project plans to excavate into or otherwise disturb the deposits in WPR-06-02. The area will continue to be a playfield and therefore should not be affected by the project. Formal closure of the landfill may be required, however.

The pervasive modifications to the natural surface by modern land use indicate there is low probability that intact significant archaeological resources are likely to be encountered during implementation of the proposed project with Westpark. Furthermore, since Westpark is on drift upland composed of recessional glacial outwash, there is little probability for buried intact archaeological materials to be present. It is possible that intact archaeological deposits are buried along the shoreline of Oyster Bay.

Westpark Buildings

The 247 residential units, eight laundry buildings, landscaping, and Westpark plan are associated with several themes in American history; architecture/landscape architecture, community planning and development, and the military. Westpark played an important roll in providing planned housings for defense workers and some military personnel. Designed by well known regional architects, Westpark was one of the earliest public housing communities constructed in the Pacific Northwest and became a model for other similar housing developments throughout the country. However, the buildings within the APE lack integrity of design, materials, workmanship, and feeling and are not recommended eligible for the NRHP.

One of purposes of Westpark's design was to create individual-looking homes from the same general floor plan through the use of varied materials and color. None of this apparent in the current homogeneous Westpark of today. One type of vinyl cladding, in blue, grey, or tan, is used instead of various types wood siding painted in a variety of colors The original cladding is encapsulated by the vinyl siding because it is covered with lead based paint and there is little chance that the siding will be restored. Vinyl windows replace wood frame fixed and sash windows. Although most of the windows and door openings remain the same size, the original six light fixed windows in each building have been replaced with three-part sliding windows. All of the 1/1 double hung bathroom windows have been replaced with smaller two-part sliding windows. Multi-pane horizontal corner windows have been replaced with 1/1 double hung and two part sliding windows. Doors with windows have been replaced with solid units and wood steps and porch rails are now concrete and metal. Other changes include removal of chimneys, addition of storage units, and replacement of all wiring, pumping, and fixtures, as well as some walls.

Westpark as a district or site contains many of its original elements, particularly the plan for building locations, streets, and open space, and its stands of large evergreens. The development, however, has severe integrity issues with the loss of over 100 buildings, the construction of SR 3 through Westpark Extension, extensive remodeling of Haddon Hall, removal of shrubs and other landscaping and portions of two roads, and the intrusion of at least four modern buildings. Westpark may look like a government housing development, but it does not retain the design, materials, workmanship, and setting of the 1940s community and is not recommended eligible for the NRHP.

4.10.2 Impacts of the Alternatives

No Action

No impacts to historic or cultural resources would occur.

Design Alternative

Impacts associated with the *Design Alternative,* and applicable mitigation measures, would be the same as those identified for the Proposed Master Plan