

June 2009

**Shoreline Use Analysis Component of the Shoreline Master  
Program for the city of Kirkland**

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June 2009

## City of Kirkland Shoreline Use Analysis

### 1. Executive Summary

The City of Kirkland is currently updating its Shoreline Master Program (SMP). When amending an SMP, the State Shoreline Management Act requires that cities conduct an analysis of existing land use to estimate the future demand for shoreline space and potential use conflicts for each of the shoreline environment designations to ensure uses are consistent with the Act. WAC 173-26-201 identifies what should be included in the use analysis. Consistent with these requirements this land use analysis for Kirkland provides the following:

- a. Current land use pattern and estimated future demand for priority shoreline uses within each shoreline designation.
- b. An evaluation of shoreline and submerged lands to accommodate current and projected demand for economic resources of statewide importance.
- c. Existing and projected demands for public access, recreational and cultural needs and opportunities based on demand projections.
- d. Current and future projections and opportunities for Kirkland for siting regional economic "high-intensity" water oriented commercial, transportation and industrial uses while protecting existing ecological functions.

These findings are based on the Shoreline Analysis Report, a shoreline inventory and characterization dated December 1, 2006 by the Watershed Company, GIS mapping studies, and survey of local marinas to forecast their future needs or expansion plans. The City's Parks and Community Services Department was also contacted to determine the plans for shoreline parks. For additional information see the Shoreline Restoration Plan and the Shoreline Cumulative Impacts Analysis both dated June 2009 relevant to each use and location for future opportunities to improve ecological functions along the Kirkland shoreline.

### 2. Introduction and Purpose of the Shoreline Use Analysis

WAC 173-26-201 establishes that in amending or creating a shoreline master program (SMP), jurisdictions must estimate the future demand for the priority uses listed above to determine if there is adequate shoreline space available. WAC 173-26-176 establishes the preferred priority uses for shoreline areas, such as water dependent, water related and water enjoyment uses and defines these terms in WAC 173-26-020.

Kirkland is designated as containing a Shoreline of State Significance and therefore, must also provide evidence that the SMP results in:

- a. Preservation of adequate shore lands and submerged lands to accommodate current and projected demand for economic resources of statewide importance (e.g., commercial shellfish beds and navigable harbors).
- b. Adequate public access is provided, and
- c. Recreation opportunities based on demand projections and level of service standards.

Kirkland must also assess the amount of shoreline designated as high intensity use so that full utilization of existing urban area are achieved before expansion of intensive development occurs in other shoreline areas.

### **3. Shoreline Land Use Patterns Over Time**

#### **Historical Context**

Historically Kirkland's shoreline served as summer cabins for Seattleites, evolving into to year round full time residential homes by the 1960's. A passenger only ferry traveled between Marina Park dock and the Leshi neighborhood of Seattle called the "Madison to Kirkland" run offering an easy commute between the two cities in the 1900's before the I-520 floating bridge was constructed. Where Carillon Point is now, the site originally contained a ship building company and later, home to the Seahawk Football team practice facility. Carillon Point is now a regional attraction providing vibrant mixed use development with a hotel, restaurants, offices, and public and private moorage. Juanita Beach Park once contained overnight cabins. Where Juanita Bay Park is today was once a golf course.

#### **Existing Conditions and Land Use Pattern**

In preparation for updating the Shoreline Master Program, the City conducted a shoreline inventory of existing conditions along the shoreline, constraints and future opportunities called The Shoreline Analysis Report prepared by The Watershed Company, dated December 1, 2006. That document was used as a resource for much of the information in this use analysis. A survey of the existing marinas was also conducted to determine future demand for services.

Kirkland contains 5.75 miles of Lake Washington shoreline. No industrial uses exist along the shoreline. Natural conservancy areas flank the city at both ends consisting of Juanita Bay and Yarrow Bay Parks.

To gain a sense of development volumes over time, Table 1 of the Shoreline Analysis Report provides a history of the number and types of shoreline permit activity since 1991 for substantial development permits, variances, conditional use permits for remodels, new or expanded shoreline piers, and bulkhead modifications. A total of 64 shoreline activities occurred, mostly for upland development and new, replacement or modified piers. It should be noted that the table does not include projects that were exempt from a shoreline permit, such as most new single family homes and minor pier or bulkhead repair.

GIS mapping indicates that Kirkland's shoreline today is fully developed with land uses generally consistent with the planned land use noted in the Comprehensive Plan. An extensive shoreline park and pedestrian trail system connects to various activities and land

uses. Areas not occupied by residential or commercial/office developments are either active or passive parks, open spaces or large wetland areas.

**CBD** - Kirkland's Central Business District (CBD) contains a developed urban shoreline area. Marina Park and Lakeshore Plaza provide a shoreline promenade, open space and gazebo for community events, and mix of restaurants, retail, office and residential uses and parking. A public boat launch and a transient boat moorage facility adjoin the park. Argosy tour boat provides tours of the east Lake Washington shoreline from the Marina Park dock.

Marina Park underwent an extensive redevelopment in the mid 2000's adding a new restroom, waterfront promenade with seat walls, renovated pavilion and dock improvements. As with all Kirkland public docks, when maintenance occurs upgrading of the dock to improve ecological functions will be ongoing. South of Marina Park is the Kirkland Homeport Marina at 2<sup>nd</sup> Street South.

**North of the CBD** is dominated by single family homes with piers and several neighborhood oriented parks. This area has very little capacity for future development or opportunities for increased public access.

North of the single family neighborhood are the Juanita Business District, Juanita Beach Park and Juanita Pay Park. The Juanita Business District shoreline area contains a retail store, two condominium buildings, a restaurant and office use next to the Juanita Beach Park.

Direct public access to the water in the Juanita area is only available at Juanita Beach Park. Redevelopment of the Juanita Beach Park will be completed over several phases beginning in 2009. Redevelopment through a master plan process will include more recreational opportunities, increased pedestrian access, restoration of Juanita Creek and associated wetlands, and improvements to water quality and fish and wildlife habitat.

Juanita Bay Park is a nature conservancy area with nature trails and boardwalks.

**South of the CBD** is largely medium and high density residential with boat moorage and city park land, Carillon Point a mixed use development with a marina, Yarrow Bay Marina and Yarrow Bay Office complex and residential development. This area is the most urbanized section of the shoreline with the largest number of residential units. Several overwater multifamily condominiums exist that are no longer allowed. Since much of the property in this area is not large and is under condo ownerships, it is unlikely that they would develop as marinas or other water dependant or water enjoyment uses. Several parcels contain single family units that will likely convert to higher intensity uses over time. The proposed SMP would allow a broad range of water-oriented uses within this area, including marinas, public access piers and boardwalks, public access facilities, and a number of commercial water-enjoyment uses as a conditional use.

A public pedestrian trail system exists along much of the shoreline in this area because the City requires that public access be provided for all new development, with the exception of single family homes.

### **Vacant and further developable parcels**

As of 2006, the Shoreline Analysis Report indicated there are very few vacant/undeveloped lots remaining within the shoreline. Of the total 680 parcels, 32 lots within the shoreline area, or 10% of the land is vacant (see Table 3 of the report). Attachment 1 shows vacant parcels. Attachment 2 shows further developable parcels where the improvement value/land value is greater than 50%.

Many of the vacant or further developable shoreline parcels are constrained by critical areas. These parcels are located adjacent to the Yarrow Bay, Forbes Creek, and Juanita Bay wetlands. They that are currently zoned for low density residential Land uses along the shoreline are expected to change minimally from what exists today.

## **4. Assessment of the preferred priority uses and future capacity for future space for these uses**

WAC 173-26-211(5) establishes that shoreline master plans should assess the priority uses that are listed in the Shoreline Management Act for each shoreline environment designation to be sure there is adequate shoreline space for projected shoreline preferred uses. Priority uses are water dependent, water related use, water enjoyment and non-water oriented uses and defined in WAC 173-26-20 and .202(2)(d). The following is a review of the current and projected demand for these priority uses.

The priority shoreline uses are listed in the following order of preference:

- a) protecting and restoring ecological functions to control pollution and prevent damage to the natural environment and public hearth,
- b) water dependent and associated water related uses,
- c) water related and water enjoyment uses,
- d) single family residential uses and
- e) non-water oriented uses.

Each jurisdiction may establish a different shoreline designation system, but must generally correspond to the following shoreline environments: natural, rural conservancy, aquatic, high intensity, urban conservancy and shoreline residential environment. The criteria and list of priority uses for each shoreline environment are described in 173-26-211(5).

Sections 83.100 through 83.150 and 83.170 of the draft shoreline regulations describe the following shoreline Environment Designation areas and the permitted uses in each area:

- Natural
- Urban Conservancy
- Residential-L
- Residential- M/H
- Urban Mixed
- Aquatic

### **a. Protecting and Restoring Ecological Functions**

The Cumulative Impacts Analysis, dated June 2009, evaluates the existing land use and associated impacts of development on the ecological functions within each shoreline environment. As shown in Table 1, 40% of Kirkland's shoreline frontage and 60% of the city's total shoreline area is designated Natural or Urban Conservancy. Overall the shoreline is deficient in high quality biological resources and critical areas, with the exception for the wetlands within and adjacent to Yarrow Bay and Juanita Bay. The Shoreline Restoration Plan, dated June 2009 describes the recommended shoreline restoration program to improve ecological functions over time.

### **b. Water Dependant Uses**

Cities must reserve adequate shoreline areas for water dependent and associated water related uses. Water dependent and associated water related uses are typically uses like marinas, public plazas, parks or mixed use development that include and support water dependent uses, such as boat facilities or other services.

#### **Marinas**

Kirkland has four Marinas (Carillon Point, Yarrow Bay Marina, Kirkland Homeport Marina and Marina Park). Marina Park provides the greatest number of public moorage containing 77 slips for short stays, overnight, and a public boat launch. The Argosy Cruise operation is located at the Marina Park dock.

Kirkland Homeport Marina contains approximately 101 slips. In 2000 it underwent redevelopment to replace the marina and new breakwater to protect its marina. Seven slips are available for public use and 21 slips are open to the public by reservation for long term moorage.

Yarrow Bay Marina provides boat moorage, gas service and boat repair. In 2008, the marina was redeveloped to include a new marine service building, relocated underground fuel tanks, a dock extension for 6 additional uncovered moorage slips to serve additional demand for smaller boats (the total number of slips is 110), a new public use area with native shoreline plants and a new public pedestrian access pathway connecting to Carillon Point to the north and to a condominium development to the south. The project included removal of 2 buoys and 3 floats. Upland of the Marina an office building with structured parking was added.

Carillon Point Marina is the largest marina in Kirkland and contains approximately 185 slips and is part of a large mixed use office, retail, restaurant and residential complex with public access. Public short term moorage is available. Carillon Point falls into the Urban Mixed environment, and is fully built out.

#### **Marine Support Services**

Support services for boats, such as fuel, repair, etc are available at the Yarrow Bay Marina. Wastewater pump out facilities are available at Yarrow Bay Marina for use

also by Carillon Point Marina. Opportunities for additional wastewater pump facilities are always needed.

### **Recreational Boating**

Public short term and overnight moorage for power and sail boats is available at Marina Park, Carillon Point and Kirkland Homeport Marina. In addition, the City awards contracts to parties interested in occupying dock space in the Kirkland Marina and Second Avenue South Dock for commercial use. A public boat launch is available at Marina Park. Live aboards are prohibited in Kirkland. Hand carry boats may be launched by the public at many locations including public parks. Boat rentals are available at the Kirkland Homeport Marina, Yarrow Bay Marina, and Juanita Beach Park. The City may also expand concession facilities within its parks, allowing for additional public recreational use within its parks system. Under consideration is expanding boat rentals at the Juanita Beach Park pier. Kirkland's recreational programs also provide opportunities for small craft programs such as canoeing/kayaking, sailing, rowing, and sail-boating in its public parks.

### **Industrial**

Currently, Kirkland does not have any water dependant industrial uses on its shoreline.

### **Water Dependent Trends and Future Demand**

With recent renovations at Kirkland marinas, boat moorage and water dependent services have been upgraded. It is unlikely that these water-dependent facilities will be expanded in the near future.

The local marinas were recently surveyed for an indication of occupancy rates. Few marinas maintain a waiting list and operate on a first come first serve basis during the summer months. When the economy is poor as in the winter of 2009, occupancy rates are low during non summer months.

The City is currently studying the feasibility of reactivating a passenger only ferry service between Seattle and Kirkland or water taxi between points of interest along the Kirkland shoreline. The King County Harbor Patrol boat servicing Kirkland is moored at Carillon Point.

Potential future expansion of the Juanita Beach Park public access pier may provide opportunities for increased water dependent and enjoyment uses. Currently seaplanes are not permitted in the City. With the update of the Shoreline Master Program the City is considering allowing moorage of seaplanes.

It is unlikely that new water dependant industrial uses would propose to locate on the Kirkland shoreline for one or more of the following reasons:

- High cost of land in Kirkland
- Lack of available large parcels
- Insufficient water depth (see Attachment 3)

- Distance and poor access to the Puget Sound transportation markets in the Puget Sound and Pacific Ocean and lack of a port facility
- Conflicts with existing residential uses

For this reasons, the draft SMP does not include industrial uses as permitted along the shoreline.

**c. Water Related and Water Enjoyment Facilities**

As discussed above, the Kirkland waterfront provides many water related and water enjoyment facilities, such as restaurants, hotels and parks with waterfront views or direct shoreline access. Water-related and oriented uses, such as restaurants or retail uses are available at Marina Park, Carillon Point and several city park concessions. With implementation of the Juanita Beach Master Plan, water related and water enjoyment facilities will increase.

In addition, the Kirkland Comprehensive Plan and the City's Downtown Strategic Plan envision the Lakeshore Plaza area landward of Marina Park to be redeveloped into a public plaza constructed over structure parking and mixed use development.

**d. Adequate Public Access and Recreational Activities**

WAC 173-26- 251(3)(c)(ii) & (iii) establishes that the City identify the public access needs and opportunities, based on demand projections that take into account activities of state agencies and interests of the citizens to visit public shorelines with special scenic qualities or cultural or recreational opportunities. WAC 173-26-241(3) (i) also requires cities to assess the shoreline recreational provisions to ensure that they are consistent with growth projections and level-of-service standards contained in the Kirkland Comprehensive Plan.

Since the 1970's, Kirkland has developed an extensive shoreline public pedestrian access system. Kirkland currently has approximately 6.8 miles of trails within the shoreline jurisdiction. The trails and parks combined provide 2.5 miles of public waterfront access. Except for all single family residential development or environmentally sensitive area, the current Shoreline Master Program requires that all development provide public access to the water's edge in the form of a pedestrian path and shoreline signs. The existing trail extends intermittently from the CBD south to Yarrow Bay and north of the CBD only within the waterfront parks. This is because of the predominance of single family homes to the north and because within the Juanita Bay commercial area, limited opportunities exist where access can be provided.

Kirkland has 14 waterfront parks of which Yarrow Bay and Juanita Bay are considered nature parks. The Parks, Recreation and Open Space Element in the Comprehensive Plan contains several levels of service standards for parks and recreation standards, but not specifically for waterfront parks. Figure 8a in the Shoreline Analysis Report shows the shoreline pedestrian access as of 2006.

Boat launch facilities are available at 3 locations serving a regional service. A small facility for hand launching of non-motorized boats is available at Houghton Beach Park. A motorized launch is available at Marina Park. Additional facilities are needed for small craft, such as canoeing/kayaking, sailing, rowing, and sail boarding.

The City's Capital Improvement Program contains funded and unfunded projected parks projects. As shoreline park renovation projects occur, opportunities to meet future recreational demand while incorporating low impact development practices and replacing dock decking material to conform to new environmental regulations will occur.

Future completion of the Juanita Beach Park master plan will provide opportunities for increasing recreational activities, potential day boat moorage, swimming beach improvement, non motorized boat rental facility, hand carried boat launch, restoration of Juanita Creek and wetland and improve water quality and cultural arts. As multifamily and commercial properties redevelop, there will be opportunities to connect missing link paths and expand the shoreline pedestrian system.

The draft Kirkland Shoreline Restoration Plan contains recommended private and public restoration actions that could be done to improve shoreline ecological functions.

**e. Single-family Uses**

The state requirement to locate single family residential uses where they are appropriate and can be developed without significant impact to ecological functions or displacement of water dependent uses has already been met. Generally, shoreline areas zoned for low density residential land use are fully developed with single family homes. It is hoped that as expansion, redevelopment or alteration to existing single family units occurs ecological functions may improve if the draft regulatory incentives are put into place to allow for reduced setbacks in exchange for requirements for softening of shoreline and re-vegetation are implemented.

**f. Non water Oriented uses**

**i. Transportation**

Portions of Lake Washington Boulevard/Lake Street South are parallel to and within the shoreline jurisdiction providing a major transportation and pedestrian corridor from I-520 to downtown Kirkland. Some street ends at the shoreline provide opportunities for public open space. As discussed above under the proposed SMP update, the City is considering the implications of adding a pedestrian water taxi or ferry facility at a yet to be determined location.

**ii. Utilities**

A sanitary sewer line runs parallel to Lake Washington along the majority of the Kirkland shoreline as well as several sanitary sewer lift stations. There is

a potential for routine repair and maintenance of line failures which would result in short term discharges of sewage into the lake. Seventy storm water outfalls directly discharge into Lake Washington. With the adoption of the new Storm Water Master Plan and development manual, and efforts to control geese management, water quality should improve.

#### **g. Provisions for Adequate Resources**

Because Kirkland's shoreline is designated as a Shoreline of Statewide Significance, this use analysis must also provide evidence that the proposed SMP would preserve adequate shore lands and submerged lands to accommodate current and projected demand for economic resources of statewide importance (e.g., commercial shellfish beds and navigable harbors) based on statewide or regional analyses, requirements for essential public facilities, and comments from related industry associations, affected Indian tribes, and state agencies WAC 173-26-251.

Regarding fishing and aquaculture, Kirkland's shoreline lacks high quality biological resources and critical areas, except for the wetlands and shoreline area within and adjacent to Yarrow Bay and Juanita Bay. Several streams along the shoreline discharge into Lake Washington known to support fish use, such as Juanita Creek, Forbes Creek Carillon Creek and Yarrow Creek. Riparian habitats are generally "non-functional". No commercial shellfish beds are located in the City. The Shoreline Restoration Plan sets forth restoration recommendations to assure no net loss of shoreline ecological functions. Juanita Creek stream restoration is planned to improve fish habitat.

With Phase I of the Juanita Beach Master Plan, water quality improvements are planned to remove the baffles in the pier and restoration in Juanita Creek. Both should improve sedimentation and water quality problem that will improve fish and wildlife habitat. The Cumulative Impacts Analysis report, prepared by The Watershed Company, provides additional recommendations the improving ecological functions.

Regarding navigable harbors, Marina Park dock is port for the Argosy Tour Boat Company. Kirkland waterfront is limited in the size of water dependent uses and services it can provide because of its low water depth (see Attachment 3), access limitations to Lake Washington Blvd, land development patterns (many narrow lots that have been previously divided), shallow lot depth, most of the lot parcels are developed, existing condos ownership, etc . Below are the typical water depths needed for the size of boats:

- Recreational boats typically require depths of 6 to 12 feet. Tugs, barges, larger commercial fishing boats, small freighters, and ferries need 10 to 30 feet of water depth
- Larger commercial vessels (e.g. tankers and break bulk vessels) usually need more than 30 feet of water depth

- Larger container vessels (8,000 TEU+) have drafts of more than 45 feet and require a depth of 50+ feet.

GIS bathymetry analysis was conducted recovering the following water depths. See Attachment 3.

Under consideration with the SMP update is allowing for water taxis or pedestrian only ferries, and limited seaplane use at several locations along the shoreline to serve the regional transportation needs.

## **5. Future Shoreline Land Use Trends and Capacity**

In general, land use patterns along the shoreline are only expected to change minimally. It is likely that we will see primarily rebuilding or remodels and some redevelopment of one type of commercial into another commercial or multifamily uses. Table 4 and 5 of the 2006 Shoreline Analysis Report provide information on the future capacity of residential and non-residential uses along the shoreline. It is estimated that along the shoreline, the city has the capacity for an additional 34 single family units, 449 multifamily units, and capacity for an additional 58,236 sq. ft. of retail and 95,867 sq. ft. of office uses.

North of CBD has very little capacity for future development. South of CBD, single family homes will likely redevelop into multifamily units. Non residential development is likely to occur either in the downtown or on scattered commercial properties on the east side of Lake Washington Blvd. that are partially located within the shoreline area. As commercial and multi-family properties redevelop, there will be an opportunity to increase pedestrian connections to the path system. Implementation of the Juanita Beach master plan will also increase pedestrian access to the shoreline with construction of a pedestrian promenade parallel to the shoreline.

### Attachments:

1. Vacant shoreline map
2. Further developable shoreline parcel map
3. Bathymetry map

### References:

The Watershed Company, 2006. City of Kirkland, Final Kirkland Shoreline Analysis Report

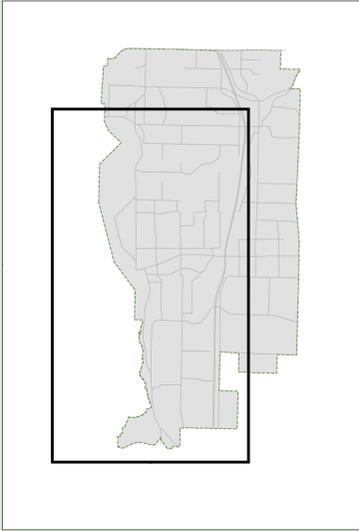
The Watershed Company, 2009. City of Kirkland, Shoreline Restoration Plan for the Shoreline Master Program update

The Watershed Company, 2009. City of Kirkland, Shoreline Cumulative Impacts Analysis for the Shoreline Master Program update

Kirkland Comprehensive Plan



# Shoreline Map - Redevelopable Parcels



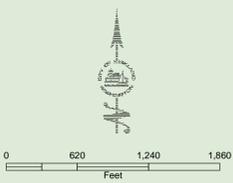
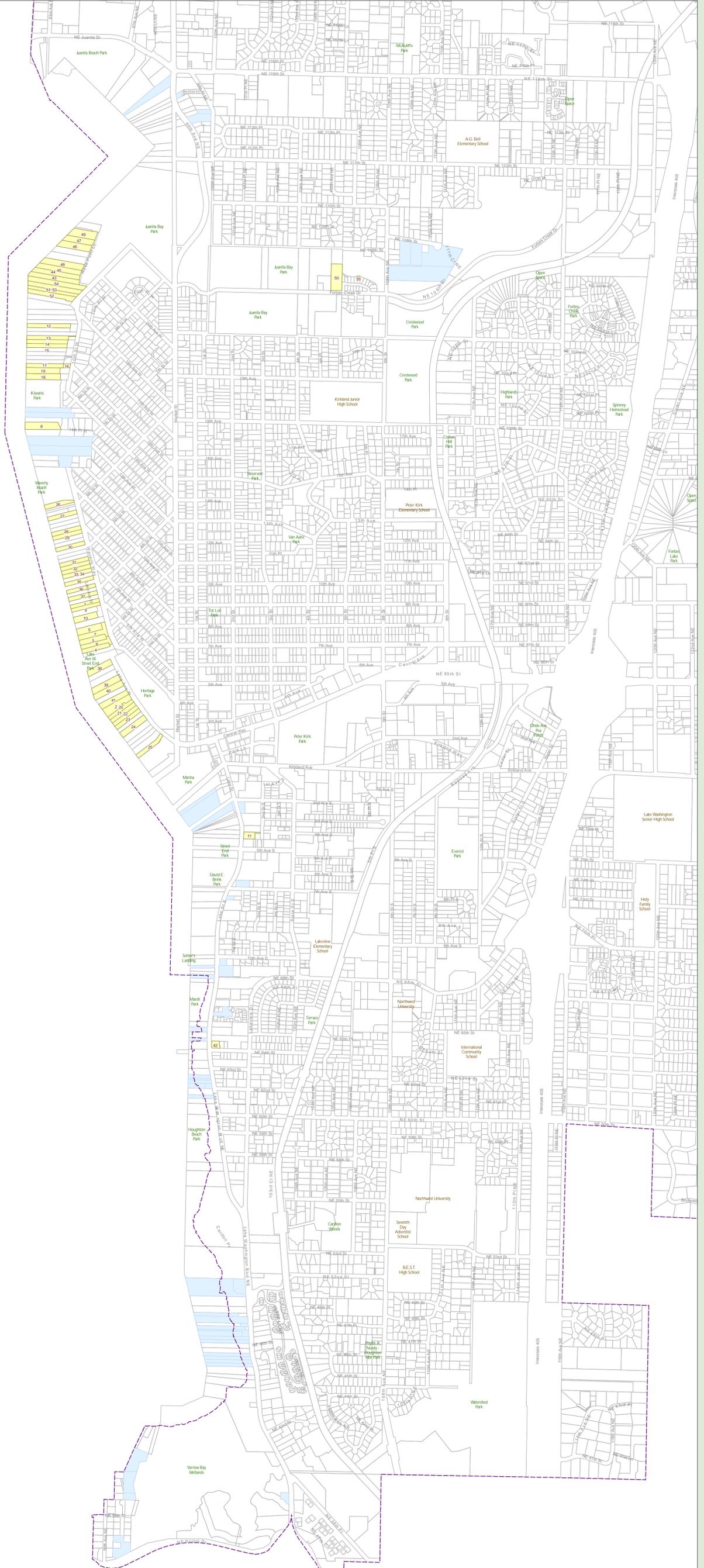
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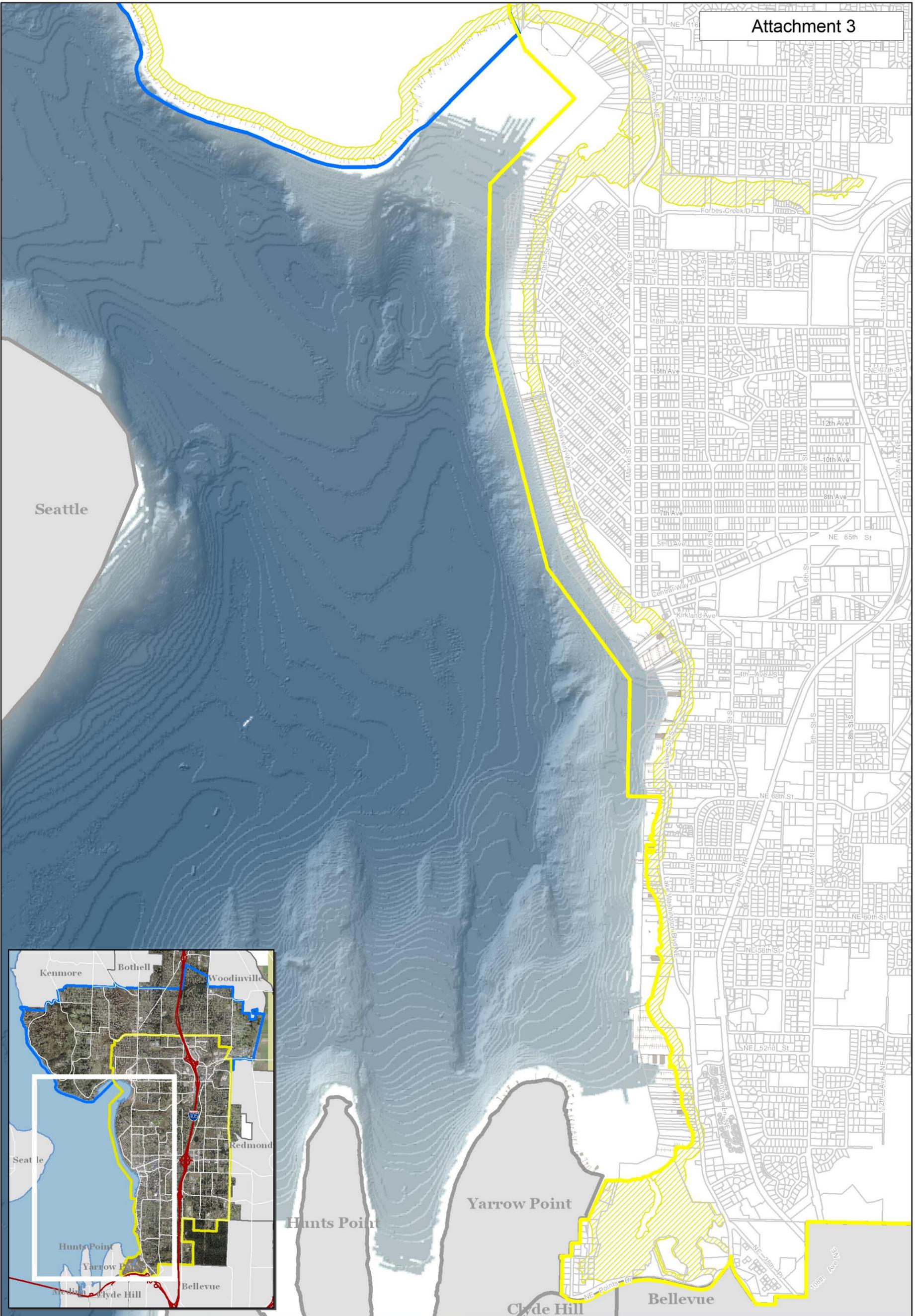


**Map Legend**

- City Limits
- Parcels (ImpVal/LandVal <= 0.5; Year Built before 1971)
- Redevelopable Parcels

Based on 2006 Assessor's Data





0 800 1,600 3,200 Feet  
Scale: 1" = 1,600'

NOTE: In the event of a mapping error or ambiguity, the common boundary descriptions and criteria contained in RCW 90.58.030 (2) and Chapter 173-22 WAC pertaining to determinations of shorelands, as amended, shall apply, superseding the incorrect or outdated map.

**Kirkland Shoreline - Lake Washington Bathymetry**  
*Shoreline Master Program - City of Kirkland*

- Water Body
- Shoreline Management Area
- Tax Parcels
- Kirkland City Limits
- Kirkland Potential Annexation Area
- Shoreline Docks



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