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memorandum

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to City of Sammamish

from Aaron Booy and Amanda Brophy

subject City of Sammamish 2018-2019 SMP Periodic Review: Lakeside Recreational Lot Impact Analysis memo

attached References

The City of Sammamish has recently seen an increase in the intensity of recreational development on undersized lots abutting Lake Sammamish. Parcels zoned R-4, zoning intended primarily for single family residential (SFR) use, are being used by multiple owners as mooring sites for boats. The City is concerned that such development damages shoreline ecological functions and enjoyment of the shorelines on adjacent properties and by the public in general. This memorandum reviews the potential extent of the issue, applicable policies and regulations, and potential impacts, and makes recommendations for changes to regulations to appropriately manage these uses.

Introduction

The Lake Sammamish shoreline within the City of Sammamish (City) is characterized primarily by SFR uses, with a predominantly established development pattern consistent with R-4 zoning. Within this pattern of existing SFR shoreline properties, several legally established parcels on the Lake Sammamish shoreline are undevelopable with SFR structures due to inconsistency with the current Development Code (Sammamish Municipal Code [SMC] Title 21A) and Shoreline Master Program (SMP; codified as SMC Title 25) requirements. Dimensional limitations include a combination of small parcel size (typically less than 3,000 square feet), narrow depth from the shoreline edge to the landward property line (generally ranging from 40 to 80 linear feet), and lack of vehicular access.

Without opportunity for SFR development and use, a number of these parcels have been used as private “lakeside recreational lots” by property owners. These private recreational lots generally do not have dedicated parking, restrooms, or other improvements. For some of the properties, owners have private docks and/or floats and mooring buoys, and the City has recently seen an increase in shoreline development applications for new docks and/or larger ‘joint use’ docks on these properties. The City has also seen an intensification of use at several of the private recreational lots, with ownership shared between two or more parties, all with rights of access and use for shoreline access, boating, and other lakeside recreational activities.

The goal of this analysis is to characterize the recreational use pattern, associated impacts, and potential future extent of private lakeside recreational lots along the Lake Sammamish shoreline. Based on this analysis, recommendations for focused SMP updates to ensure adequate management of future private lakeside recreational use are provided.

Extent of the Issue

Current and potential future private lakeside recreational lots were identified by City Community Development Department staff and ESA through queries of the City’s tax parcel dataset. Parcels along the Lake Sammamish shoreline with less than \$100,000 in assessed improvements were identified, with additional queries focused on lot size and ownership. Small, undeveloped lots are dispersed along the Lake Sammamish shoreline.

To support this analysis, City staff identified six existing lots where the lakeside recreational use pattern is occurring. These lots are concentrated in the northern portion of the Lake Sammamish shoreline, extending from near the northern city limits to just south of the intersection of East Lake Sammamish Parkway NE and NE Inglewood Hill Road. Staff additionally identified seven other lots where some activity consistent with lakeside recreational use patterns is occurring and is anticipated to intensify in the future. These additional lots overlap slightly with the existing lots along the northern Lake Sammamish shoreline, and extend south to the East Lake Sammamish Parkway SE and SE 32nd Street intersection.

Along with these 13 City staff identified lots, the shoreline parcel dataset shows an additional 26 undeveloped lots under 4,000 square feet in areas that are privately owned. These lots are distributed along the shoreline, but tend to be clustered where the parcel depths between the lake shoreline and the East Lake Sammamish Trail corridor are narrow. In total, private lakeside recreational lot use patterns could extend across 35 to 40 lots.

Analysis Approach

This memo identifies current Shoreline Management Act (SMA) and City SMP policy and standards relevant to management of private lakeside recreational uses, including allowances for docks and other recreational boating facilities, and for upland areas.

ESA reviewed conditions at a subset of lots currently supporting private lakeside recreational uses, and a subset of undeveloped lots with minimal current use where future lakeside recreational uses could occur. ESA compared oblique shoreline photos (accessed from Ecology’s Coastal Zone Atlas) and aerial imagery taken in 2007 and 2016 (Ecology, 2018) for each lot to identify any changes regarding vegetation and landscaping, shoreline/bank condition, development of new docks or other structures, and any other indications of the intensity of recreational use. The shoreline photo series were taken at similar times of year – late June of 2007 and late July of 2016. For lots currently supporting private lakeside recreational uses, ESA also reviewed recent permit records provided by City staff.

Based on identified conditions within this subset of lots, along with additional context provided through communications with City staff, ESA characterized patterns of use, common modifications, and potential impacts associated with private lakeside recreational lots. Potential impacts are organized around ecological impacts to shoreline functions, use impacts to adjoining existing and encouraged uses, and potential cumulative impacts.

Within the context of the City's current SMP standards, this memo concludes with recommendations to ensure that future private recreational lot development requests and associated uses occur consistent with SMA guidelines and City SMP policy.

SMA Policy and Relevant Standards from Current SMP

SMA Policy

SMA guidelines direct cities and counties to establish SMP policies and regulations that allow for appropriate uses, and where necessary, reasonable shoreline modifications to support allowed uses. The SMA requires that all allowed shoreline development must be managed to ensure that 'no net loss of shoreline ecological functions' occurs over time.

Within Sammamish and elsewhere, shoreline setbacks and riparian protections (referred to as buffers) are commonly used to protect shoreline ecological functions. A setback is the distance that a proposed structure or development must be placed from the shoreline. Buffers are the portion of the setback that are required to be maintained predominantly in natural vegetation. Vegetated shoreline setbacks play a large role in maintaining shoreline ecological functions, including fish and wildlife habitat and water quality. These functions are vital to public health for citizens recreating and residing along the shoreline.

SMA guidelines require that all new and expanded docks and other overwater and in-water structures be managed through local SMP policies and regulations to ensure compatibility with allowed adjacent upland uses and mitigation of all impacts. Guidelines direct that SMPs must include standards that all pier and dock structures be built to the minimum size possible to meet the needs of the proposal. Other mitigation measures must also be provided, including design and siting to avoid ecological impacts to the greatest extent feasible, and mitigation for unavoidable impacts.

Existing, legally established structures and associated ongoing uses and activities are allowed to be maintained. Even if nonconforming to current SMP standards, SMA guidelines direct jurisdictions to allow for ongoing use, maintenance, and repair of existing structures and developments. This only applies to ongoing and active uses and developments; if a development is abandoned or if a new use is proposed, any new use must conform to the current regulations if it is to be brought back into use (Ecology, 2017).

Currently Adopted Sammamish SMP

The following sections summarize relevant standards from the City's currently adopted SMP, which is codified as Sammamish Municipal Code (SMC) Chapter 25.06.

25.06.020 - Environmental protection and conservation regulations: Property owners that propose new shoreline use or development are required to include measures to mitigate environmental impacts that would not otherwise be avoided or mitigated.

The Lake Sammamish shoreline setback is the area that extends 50 feet landward from the ordinary high water mark (OHWM). Uses such as docks, boat launches, public access structures, shoreline stabilization structures, and picnic areas are allowed within the shoreline setback.

The City requires that the 15-foot-wide portion of the shoreline setback immediately landward of the OHWM be reserved as a vegetation enhancement area (SMC 25.06.020.10). Vegetation enhancement areas are established and maintained by property owners as part of a new development, exterior redevelopment project, or the construction or expansion of an existing shoreline stabilization structure. All portions of the vegetation enhancement area must be planted with native trees, shrubs, and groundcover, except for allowances for an ‘active use area’ providing access from the developed portion of the property down to the lake shoreline. Existing legally established structures (whether residences, or accessory structures) and landscaping may be maintained, even if such existing development extends into the shoreline setback and/or vegetation enhancement area.

The City’s policy for removal of existing vegetation that is not associated with any development activity is not stated within the SMP; however, provisions of the City’s Environmentally Critical Areas standards (SMC Chapter 21A.50) are integrated with the SMP, and they limit vegetation removal within critical areas – in instances where lake fringe wetlands occur along the lake shoreline, then these critical areas provisions would apply. Environmentally Critical Areas regulations allow for “normal and routine maintenance of existing lawns and landscaping” as exempt from regulation (SMC 21A.50.050), and “select vegetation removal activities” (21A.50.060) are allowed where occurring within critical areas and buffers. Based on the lack of specificity in the SMP and the complex interpretation of Environmentally Critical Areas regulations, it is unlikely that consistent understanding and compliance with vegetation protection standards occurs for shoreline property owners.

SMC 25.06.050 - Water quality, stormwater, and nonpoint pollution regulations: All new shoreline uses and developments must incorporate “methods of preventing, controlling, and treating stormwater” (SMC 25.06.050.1). It is unlawful for any person to discharge any contaminants, including petroleum products and sediment, into surface water, stormwater, and groundwater. Best management practices (BMPs) must be implemented for all new uses and developments to prevent pollutants from entering the lake, including measures to control upland erosion resulting in sedimentation. Any new structure installed waterward of the OHWM, or that regularly and frequently come in contact with water, must be constructed of materials that have been approved by the Washington Department of Fish and Wildlife (WDFW). Finally, adequate facilities should be provided to minimize impacts from any proposed regular ongoing activities with potential for water quality contamination.

SMC 25.07.040 – Standards for boat facilities and boat launches: This section of the SMP prohibits new private boat launches, even where proposed for joint use. Existing legally established private boat launches can be maintained and repaired.

This section clarifies that regulations in SMC 25.07.050 do apply to “private beach clubs, associations of five or more residences with existing facilities, and jointly owned waterfront parcels.” Finally, this section states that “structures accessory to the docks, mooring buoys, and floats may be constructed on the upland parcels” only with a Shoreline Substantial Development Permit (SSDP) and when otherwise consistent with the SMP.

SMC 25.07.050 –Standards for private docks, floats, mooring buoys and watercraft lifts: While these standards are primarily intended for private docks associated with a residential lot or joint-use by two or more adjoining residential lots, they also apply to jointly owned waterfront parcels and private beach clubs. No new private docks, floats, mooring buoys or lifts can “be located closer than 15 feet from the side property line” (SMC

25.07.050.1.a). This excludes joint-use docks, lifts and floats that “abut or cross property lines for the common use of adjacent property owners when mutually agreed” (SMC 25.07.050.1.a) upon.

“New private docks, floats and/or lifts” must “be designed and constructed using WDFW-approved methods and materials” (SMC 25.07.050.1.f). The top surface of new private docks must be grated and not exceed a height of five feet above the OHWM. “Existing legally established private docks and floats may be repaired or replaced” (SMC 25.07.050.1.j); however, construction methods and materials for replaced components must be consistent with SMC 25.070.050 to further minimize ecological impacts of new piles and decking.

Each individual residential lot on Lake Sammamish can have “one residential dock, one float, two boat lifts, and two personal watercraft lifts” (SMC 25.07.050.2.a); or four personal watercraft lifts in lieu of the two boat lifts. Adjacent lots using shared/joint-use docks are allowed “one additional boat lift and one additional personal watercraft lift”; or two additional personal watercraft lifts if no additional boat lift is desired. “Lots that provide shared/joint-use for more than nine residential homes are allowed one additional dock for service of existing legally established launch ramps and rails” (SMC 25.07.050.2.c).

Docks must be less than 4 feet in width and less than 80-feet in length. The first set of pilings for a dock must be located no closer than 18 feet from the OHWM. The maximum allowed total overwater coverage for private docks depends on the number of residential lots served:

- 480 square feet for private residential docks serving one lot;
- 700 square feet for private residential docks serving 2 – 9 lots in a joint-use agreement; or
- 1,000 square feet for private residential docks serving more than 9 lots in a joint-use agreement.

Where proposed, floats must be counted as part of the overall dock area.

Review of Lakeside Recreational Lots

The following assessment of existing private lots relies on representative examples of properties where private lakeside recreational use pattern is occurring, and undeveloped properties where the lakeside recreational use pattern could occur in the future.

Example Lots where Lakeside Recreational Use Pattern is Occurring

Example A – Private HOA Lakeside Recreational Lot with Existing Dock

The 3,920 square foot homeowners’ association lakeside recreational lot is located within the 2000 block of East Lake Sammamish Parkway NE. Adjacent land use includes residential properties containing concrete and rock bulkheads with docks along the shoreline.

Current Conditions

The parcel is dominated by large deciduous trees with low shrubs and herbaceous vegetation on the north and south ends of the lot. The shoreline and entrance to the water is unvegetated bare earth. The East Lake Sammamish Trail block bulkhead with an access stairway is present on the east side of the property. The photo of the property on the King County Property Report shows chairs, kayaks, a fire pit, a picnic table, a bench, firewood, a dock, and buoys present on the parcel (King County, 2016). Boats are anchored near the shoreline, but

it is not known if they are associated with the property. No upland structures, besides site access stairs and informally cleared areas, are visible in the shoreline photos.

A 2018 vegetation survey of the property identified garden loosestrife (a regulated Class B noxious weed) along the shoreline (King County, 2018).

WDFW SalmonScape maps an intermittent (ephemeral) stream running through the property (WDFW, 2018). That said, presence of the mapped stream is only marginally evident from review of shoreline oblique photos; however, potential riparian characteristics are present on the north side of the property near the dock, and it appears that a stream mouth might be located very near the existing dock.

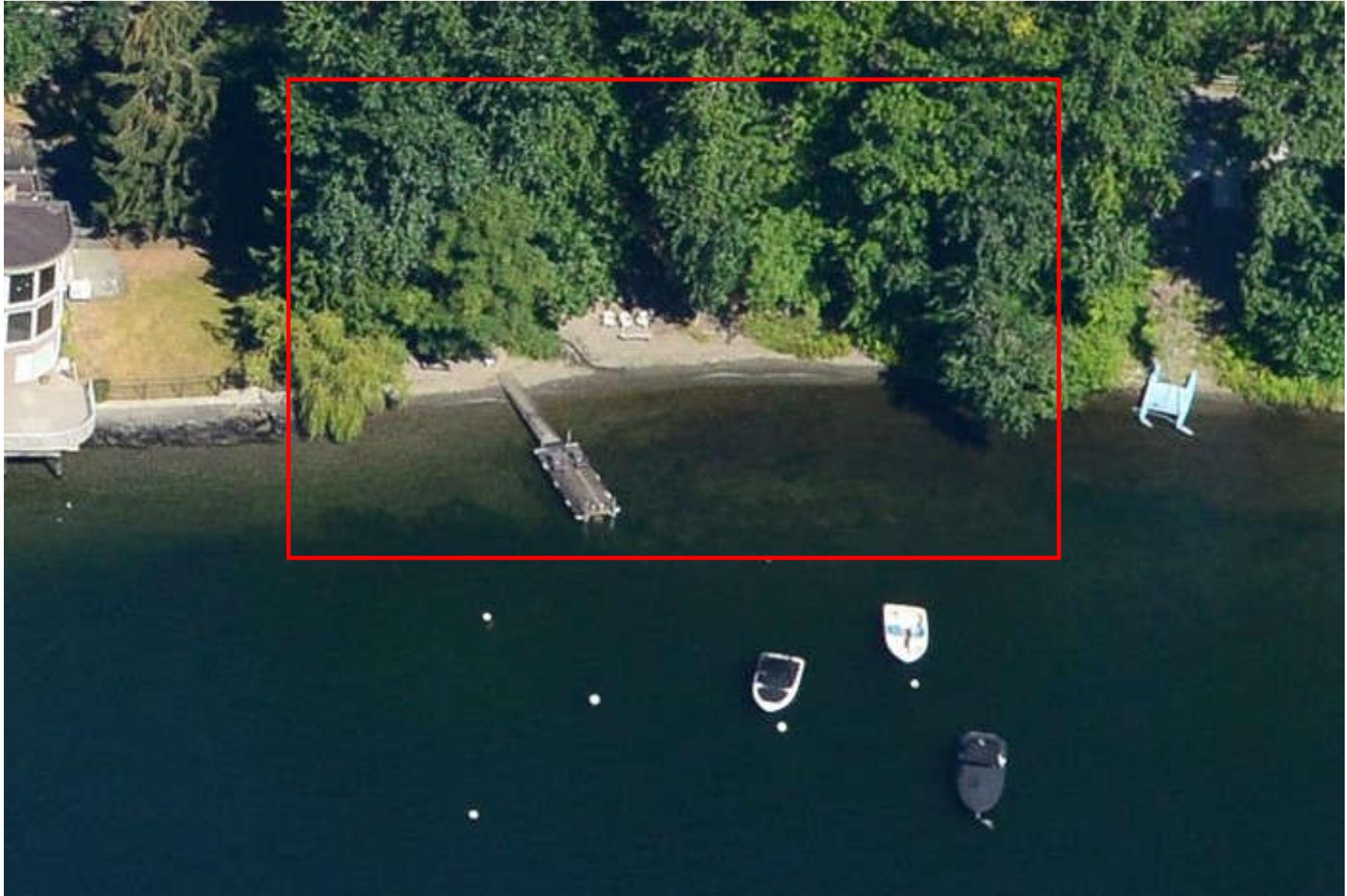
Change in Conditions between 2007 and 2016

According to aerial imagery, in 2007, chairs, non-motorized boats, and the dock are visible on the property; however, objects, such as the picnic table and fire pit, are hard to identify based on the 2016 shoreline photos. An in-water boat cover evident in 2007 was not present in 2016. The approximately 40-foot-long dock on the property was removed in 2014 but is present again in the 2016 shoreline photos. The buoys identifying the property's shoreline were approximately 100 feet from the OHWM in both 2007 and 2016. The potential stream running through the property appears to flow from the east and enter Lake Sammamish under the dock in the 2007 shoreline photos, while the stream alignment appears to have migrated over the years and drains just south of the dock in 2016.



Source: Ecology, 2018 – photo dated June 2007

Photo 1
Example A Lakeside Recreational Lot in 2007
Sammamish, Washington



Source: Ecology, 2018 – photo dated July 2016

Photo 2
Example A Lakeside Recreational Lot in 2016
Sammamish, Washington

Example B – Private Lakeside Recreational Lot with Existing Dock

This lakeside recreational use lot has an existing private dock. It is located along the 1100 block of East Lake Sammamish Parkway NE. Adjacent land use includes residential properties and recreational properties with docks along the shoreline.

Current Conditions

The parcel is dominated by large deciduous trees, including big leaf maple (*Acer macrophyllum*), with low shrubs and herbaceous vegetation on the east end of the lot along East Lake Sammamish Trail. The shoreline is unvegetated bare earth. A small structure is present on the east side of the lot near the gated entrance from East Lake Sammamish Trail (Google Maps Street View, 2018). The lot also has an approximately 60-foot-long dock.

Change in Conditions between 2007 and 2016

The dock has an attached boat lift in 2007 that is no longer present in the 2016 shoreline photos.



Source: Ecology, 2018 – photo dated June 2007

Photo 3
Example B Lakeside Recreational Lot in 2007
Sammamish, Washington



Source: Ecology, 2018 – photo dated July 2016

Photo 4
Example B Lakeside Recreational Lot in 2016
Sammamish, Washington

Example C - Private Lakeside Recreational ‘Park’

The 0.5-acre private lakeside recreational lot is located along East Lake Sammamish Trail, just north of 3233 East Lake Sammamish Shore Lane SE. Of the reviewed properties, this example private lakeside recreational lot shows the highest level of improvements, with parking, a boat ramp including launch dock, an additional dock, extensive landscaping, and a formal beach and swim area. The parking lot and entrances to the recreational lot are located within King County Parks property. Adjacent land use includes residential properties containing concrete and rock bulkheads with docks along the shoreline.

Current Conditions

The parcel is dominated by lawn grasses and a few small trees with a large parking area and boat launch area on the south end of the property. The shoreline contains a rock bulkhead adjacent to the water that ends at the boat launch area. A dock with two piles is located at the boat launch. A second relatively large dock is located just north of the boat launch and is associated with six freestanding piles that, along with the dock, provide moorage for multiple boats. Five additional piles and two small floating docks outline the property’s swimming area and associated beach along the shoreline. Non-motorized boats, barbeques, picnic tables, benches, firewood, a dumpster, a small structure and many other objects are all present on the parcel.

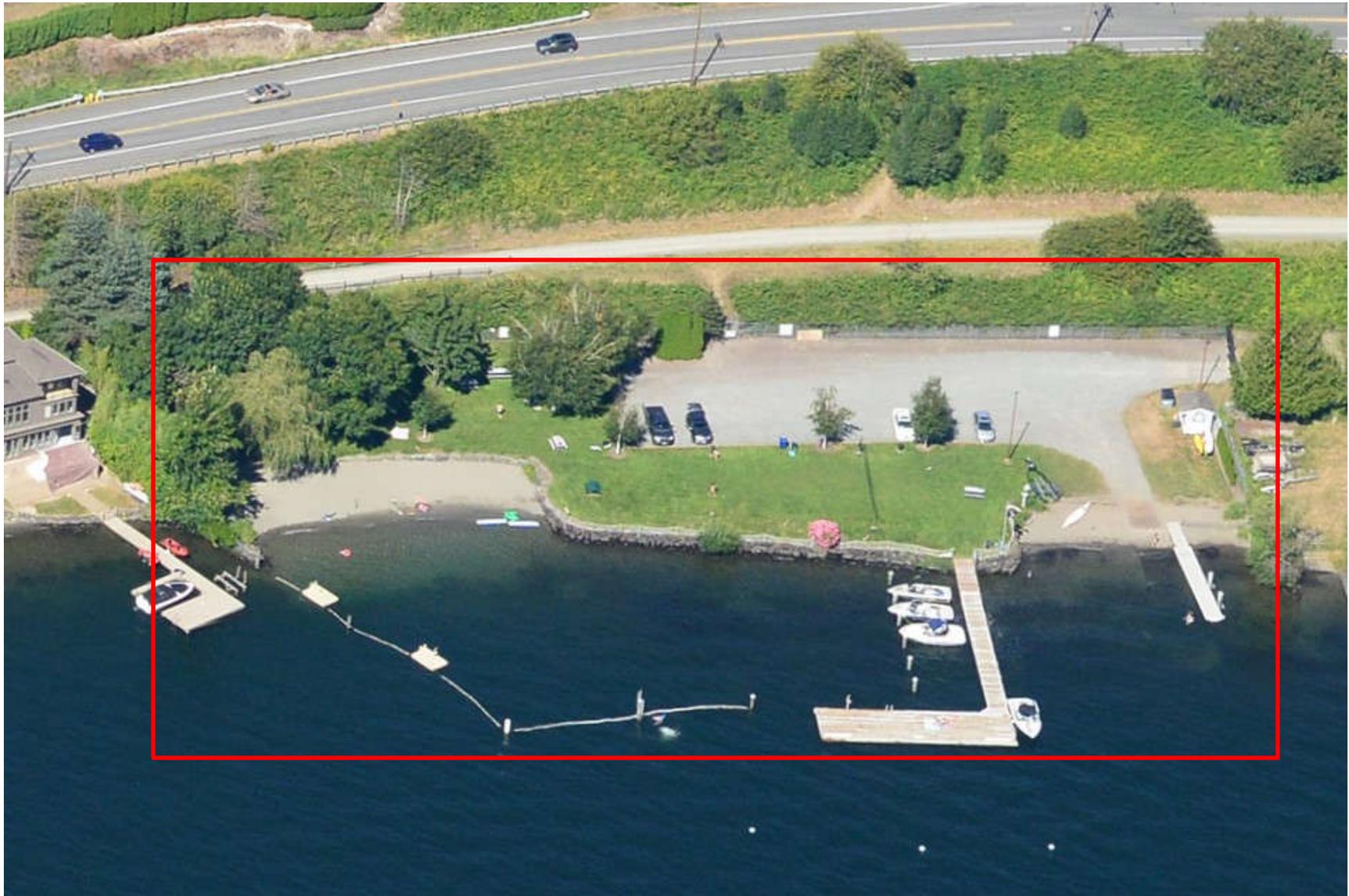
Change in Conditions between 2007 and 2016

All in-water and upland structures remained the same between 2007 and 2016. Objects, such as picnic tables, barbeques, benches, and non-motorized boats, remained on the property as well. In the 2016 shoreline photo, 4 motorized boats are parked at the large dock, 4 cars are parked within the parking lot, and a boat trailer is parked in the grass, while no motorized boats, cars, or trailers were present in the 2007 shoreline photo.



Source: Ecology, 2018 – photo dated June 2007

Photo 5
Example C Lakeside Recreational Lot in 2007
Sammamish, Washington



Source: Ecology, 2018 – photo dated July 2016

Photo 6
Example C Lakeside Recreational Lot in 2016
Sammamish, Washington

Example Lots where Future Lakeside Recreational Use Pattern Could Intensify

The following three examples of largely undeveloped lakeside properties detail current conditions on these lots and the surrounding shoreline, highlighting anticipated future implications of additional recreational use. These example lots were identified with support from City staff, and for all three relatively recent permit requests for new joint use docks suggest likely intensification of private lakeside recreational use.

Example D - Private Shared Use Recreational Lot with Proposed Shared Use Dock

This private lakeside recreational lot with recently proposed and approved shared use dock is located to the west of the East Lake Sammamish Trail in the vicinity of addressed parcels in the 2800 block of East Lake Sammamish Parkway NE. Adjacent land use includes residential properties containing concrete bulkheads and docks along the shoreline. In 2018, the owners of this recreational lot submitted an application for a SSDP to build a shared use dock, shared by four upland residential lots according to submittal information, along the shoreline of the property. The permit was approved with conditions, such as mitigation plantings within the required 15-foot-wide vegetation enhancement area along the shoreline, in May 2018.

Current Conditions

The 1,740 square foot property is dominated by deciduous trees and herbaceous cover. Trees, with a bare understory, begin near the OHWM and continue northeast for approximately 70 feet until the property intersects the driveway for an adjoining residential property. A narrow, informal walking trail runs northeast from the shoreline through the property. From review of oblique photography, the trail has been present since at least 2007. Bare ground with patches of herbaceous vegetation are present along the shoreline in both 2007 and 2016. No structures appear to occur on the property based on review of shoreline photos.

Change in Conditions between 2007 and 2016

The understory contained denser herbaceous vegetation in 2007, with much more area of bare ground coverage along the shoreline and informal trail in 2016; decrease in herbaceous vegetation cover could be due to more active clearing, or intensification of recreational use in more recent years. Chairs and other objects are present in the cleared areas just landward of the shoreline in 2016 that were not present in 2007. A boat is on the mooring buoy in 2016; however, in both photos a mooring buoy is present fronting the property's shoreline. In aerial imagery from 2017 and 2018, dirt is seen tracked from the property's dirt walking path across the driveway of the adjoining residential property (Google Earth Pro, 2018).



Source: Ecology, 2018 – photo dated June 2007

Photo 7
Example D Lakeside Recreational Lot in 2007
Sammamish, Washington



Source: Ecology, 2018 – photo dated July 2016

Photo 8
Example D Lakeside Recreational Lot in 2016
Sammamish, Washington

Example E - Private Shared Use Recreational Lot with Proposed Shared Use Dock

This private lakeside recreational lot is associated with a nearby homeowners' association, providing shared access near the intersection of East Lake Sammamish Parkway NE and NE 33rd Place. Adjacent land use includes other private recreational use lots, several of which contain docks along the shoreline. Approximately two years ago the homeowners' association submitted a SSDP application to build a 520 square foot shared use dock, shared by six residential lots. The permit was approved by the City with conditions in 2017; however, the dock has not been built as of May 2018 based on aerial imagery (Google Earth Pro, 2018).

Current Conditions

The 870 square foot parcel is dominated by deciduous trees with little or no understory. A low rock retaining wall and the East Lake Sammamish Trail block bulkhead are present on the northeast side of the property. WDFW PHS maps a stream running from the northeast to the southwest just north of the property and draining to Lake Sammamish. According to Wetland Resources, Inc., four wetlands associated with a Type F stream and the Lake Sammamish shoreline are north, east, and south of the parcel; however, no streams or wetlands were observable in the 2016 shoreline photo. A fire pit, picnic table, barbeque, and other objects are present throughout the property, as well as a float and multiple boats anchored along the shoreline. No upland structures appear to be on the property based on shoreline photos.

Change in Conditions between 2007 and 2016

In a comment letter from a nearby neighbor, a 1997 photo of the parcel was presented showing a highly vegetated shoreline including emergent bulrush. The emergent vegetation and low-lying shrubs also show in the 2007 shoreline photo of the site but are gone in the 2016 shoreline photo (Ecology 2018). In 2016, a relatively wide informal path of bare ground is present along the previously vegetated area immediately landward of the shoreline that is not present in 2007. In 2007, tarps and other hard-to-identify objects can be seen scattered across the property; however, the picnic table, barbeque and other recreational objects (including the boats in the water) present on the lot in 2016 are not present in the 2007 shoreline photo.



Source: Ecology, 2018 – photo dated June 2007

Photo 9
Example E Lakeside Recreational Lot in 2007
Sammamish, Washington



Source: Ecology, 2018 – photo dated July 2016

Photo 10
Example E Lakeside Recreational Lot in 2016
Sammamish, Washington

Example F - Private Shared Use Recreational Lot with Proposed Shared Use Dock

This private recreational lot is located near the intersection of East Lake Sammamish Parkway NE and NE 49th Place. Adjacent land use includes other undeveloped lots that do not have docks (but are considered additional potential future private lakeside recreational lots). The ownership group submitted for a SSDP to build a shared use dock. Application materials show that the property is shared by six upland residential properties, with proposed improvements that include a soft access trail, access stairway, protective boundary fencing, and mitigation plantings. The permit was approved with conditions in 2016. The proposed 698 square foot dock has not been built as of May 2018 based on aerial imagery (Google Earth Pro, 2018). The soft surface access trail on the property and access stairway along the East Lake Sammamish Trail were completed based on 2018 Google Maps imagery.

Current Conditions

The 1,740 square foot parcel is predominantly forested, and appears to be dominated by deciduous trees with a limited shrub understory. Emergent vegetation occurs along the shoreline and is associated with a lake-fringe wetland present onsite. The East Lake Sammamish Trail retaining wall is present on the east side of the property. As reported in permit submittals, the lot has been used as a lakeside picnic area with tables and chairs present (Wetland Resources, Inc. 2016). A chain-link fence, approximately 3 feet in height, lines the property boundary, including along the length of the shoreline. Fences are required to be located outside of the OHWM and shoreline setback of 50 feet; it is likely that the current fence paralleling the shoreline is inconsistent with allowances in the SMP (SMC 25.07.080.5). No upland structures appear to be present on the property based on review of shoreline photos.

A 2018 vegetation survey of the property identified garden loosestrife (*Lysimachia vulgaris*), a regulated Class B noxious weed, along the shoreline (King County 2018).

Change in Conditions between 2007 and 2016

In 2007, a platform or at-grade patio area, possibly made of concrete, was present along the shoreline that is not as visible in the 2016 shoreline photo. Between 2007 and 2016, it also appears that additional understory vegetation was allowed to grow in the area immediately landward of the shoreline. No other changes in conditions are apparent from reviewed oblique and aerial photos.



Source: Ecology, 2018 – photo dated June 2007

Photo 11
Example F Lakeside Recreational Lot in 2007
Sammamish, Washington



Source: Ecology, 2018 – photo dated July 2016

Photo 12
Example F Lakeside Recreational Lot in 2016
Sammamish, Washington

Potential Impacts Associated with Lakeside Recreational Lots

Ecological Impacts to Lake Sammamish Shoreline Conditions and Functions

Based on the review of example lakeside properties and input from City staff, there are unintended shoreline ecological impacts that are likely resulting from intensification of recreational use on these properties. The majority of the undeveloped properties are predominantly covered with deciduous forest and do not have existing bulkheads. Understory vegetation and lake-fringe emergent communities are also common. Most of these undeveloped properties are in the northern portion of the Lake Sammamish shoreline and occur predominantly in segments that the SMP designates as Urban Conservancy shoreline environments. Conditions provide important fish and wildlife habitat, and serve as a buffer from the East Lake Sammamish Parkway and East Lake Sammamish Trail corridors to the east. With increasing recreational use of these properties, impacts to understory shrub communities and lake-fringe emergent vegetation has been documented and is expected to increase into the future. For most properties, it appears that informal shoreline access is resulting in bare ground ‘pathways’ and unvegetated shoreline beach areas through the length of the reviewed properties. The incremental removal of shoreline vegetation to maintain and improve access to the shoreline of these lots was not part of any permit application and could adversely affect water quality, wildlife and habitat. If an increase in the use of the recreational use of these lots was to occur, it is likely that unapproved vegetation removal would increase.

Loss of shoreline vegetation is likely also resulting in increased shoreline/bank erosion, both from upland use and from increased exposure to wave energy. Over time, it is likely that this circumstance may result in more requests for new shoreline armoring. While this has not been documented currently, except at the most developed of the identified joint use beach/community beach areas, bulkheads are commonplace along developed residential shoreline properties. Additional hardening of the Lake Sammamish shoreline would further degrade habitat for salmonids and other fish and wildlife species. The installation of bulkheads often reduces the amount of vegetation on the shoreline and displaces the shallow areas of the lake that are used as habitat by out-migrating salmonid populations and other fish and wildlife species (Kahler 2000).

Intensification of use within private lakeside recreational properties is also likely resulting in new sources of pollution to the lake. The lack of restroom and washing facilities and solid waste disposal services could result in some contamination at all undeveloped lots used seasonally for recreation; however, these impacts would be of a higher intensity at multi-user recreational lots. With the decrease of shoreline vegetation, the runoff of pollutants has higher potential for adverse effects on water quality and fish and wildlife. The increased use of boats and personal watercraft could also contribute to impacts on water quality. They have the potential to introduce exotic species to the area as well as pollutants from refueling activities, engine leaks, and emissions. Based on input from City staff, it is likely that in-water refueling of boats and personal watercraft from gas cans is a normal practice (wading in from beach with watercraft located in shallow water), which poses a relatively high risk of fuel spillage and lake contamination.

The building of piers, docks, and other in-water and over-water structures can have adverse effects on fish habitat. Docks and piers have the potential to create shade, having the effect of reducing the quantity of light that is able to be absorbed by phytoplankton. This could decrease the amount of primary productivity, which could cause a decrease in the total invertebrate and fish diversity (Kahler, 2001).

Use Impacts on the Public and Neighboring Properties – will include implications for ELST and park users, as well as neighboring residences

Based on review of example lots and input from City staff, private lakeside recreational lots and associated use is currently resulting in impacts to public enjoyment of the shoreline and to neighboring properties. Increasing intensity of use on these lots is anticipated to increase the intensity of use impacts. Use impacts identified in this section include lack of access and dedicated private parking, lack of restrooms and waste disposal facilities, and environmental noise impacts to adjacent noise-sensitive uses. This could result in encroachment onto neighboring properties.

The large majority of the identified lakeside recreational properties do not have on-property parking or vehicular access. Many of them can only be accessed on foot or bicycle from the East Lake Sammamish Trail. According to communication with City staff, the lack of parking and access to these lots is resulting in some increased demand for on-street parking, and could result in increased parking on streets if intensification of these uses continues. This could have adverse effects on adjacent property owners, as additional cars parked on relatively narrow residential access roadways could make driveway access and availability of on-street parking challenging. In addition, many of the walk-in recreational lots require stairs adjacent to East Lake Sammamish Trail to access individual properties. This reliance on the East Lake Sammamish Trail has potential for causing disruption to trail users, through temporary day storage of belongings, such as wheeled carts, along the trail shoulder.

Within identified private recreational lots and undeveloped lots that could be used more intensively as private recreational lots in the future, there are no restroom facilities. This could have the impact of increasing reliance on nearby public facilities (for example, at Sammamish Landing Park), and will likely result in users of private recreation lots relieving themselves outdoors or while swimming in the lake. Lack of restroom facilities is anticipated to have negative impacts for adjoining residential and public park/trail properties, and may result in water quality and public health concerns depending on the routines and intensity of private lakeside recreational activity.

A lack of proper garbage and recycling facilities could result in an increased litter and trash present in the recreational lots and adjoining properties – including the East Lake Sammamish Trail corridor. This may impact the aesthetics of the area as the presence of trash would disrupt visual enjoyment. An increased presence of trash, particularly food waste, also has the potential to attract scavenger wildlife such as crows, raccoons, rats, and squirrels. The presence of these animals could become a nuisance to people using both private and public recreational areas and surrounding property owners.

All activities that take place on the lots are outdoors, resulting in noise that could impact the adjacent private residential properties. Noise may be from the presence of people boating, swimming and using these recreational lots. The higher the intensity of use (in terms of the number of users present at any given time) the more noise will be produced. This noise could be disruptive to users of adjoining properties, including residences, users of other recreational lots, and users of the East Lake Sammamish Trail.

Consideration of Anticipated Cumulative Impacts

Consistent with Ecology SMA guidance, cumulative impacts to the shoreline must also be examined. Cumulative impacts would occur as the number of lots in private lakeside recreational lot use increases, and as the intensity of use on these lots increases. If recreational lot use continues to grow in intensity and frequency, clusters of these

uses could become a more prevalent pattern in portions of the shoreline. Depending on the number of owners or users associated with each potential private lakeside recreational property, the intensity of seasonal recreational use could grow significantly. The extent of cumulative impacts is also likely to be driven by the number of currently undeveloped, privately owned properties that could become shared-use private lakeside recreational lots in the future. Quantifying to what extent this will occur across the 35-40 potential lots identified was not attempted. As the number of shared-use private recreational lots increases, the intensity of this use pattern is anticipated to result in more prevalent ecological and use impacts consistent with those characterized by this memo.

Recommendations for SMP Updates and/or Other Shoreline Management Measures

ESA recommends that the City update the SMP to clearly define private lakeside recreational activities occurring on Lake Sammamish shoreline properties as a distinct use. By defining this use, the City will be able to consistently review and condition permits for associated development activities, and will be able to establish and enforce limits on the number of users (recreational lot owners or members) that may be associated with any one private lakeside recreational lot in the future. This will ensure that adequate measures are provided to mitigate shoreline ecological impacts, and ensure that developments occur with necessary appurtenances to support the intensity of recreational use. The following details specific recommendations for updating the City's SMP.

Defining Private Lakeside Recreation as a New Shoreline Use: We recommend that the SMP be updated to define and regulate 'Private Lakeside Recreational Use'. This new use should be added to the Permitted Uses Table (SMC 25.07.010-1), and a new section could be provided under SMC Chapter 25.07 (SMP Use/Development Regulations). The following is a proposed definition:

“Use of existing privately owned shoreline properties for use by owners (or an ownership group) for water-oriented recreational activities, with associated facilities necessary for active use of shorelands, site access and use, and allowances for private docks, floats, and mooring buoys.”

Recommended Approval Criteria: We recommend that private lakeside recreational use be a permitted use (P) when providing private recreational access for one owner (one party), and when proposed as a private shoreline access tract for an immediately adjacent residential development/homeowners' association (which could include a development / home owners' association that is immediately landward of the East Lake Sammamish Trail) serving nine lots or less in a shared use agreement. For these instances, the intensity of use and associated impacts occurring from the private lakeside recreational property is anticipated to be low. This extends to a lakeside recreational access tract shared by immediately adjoining residences, as the adjoining location of parking, bathrooms, and other facilities for the private users of the tract provides additional opportunity to minimize potential for water quality and use impacts.

For any future proposed private lakeside recreational use that would serve two or more owners (or association members) and that is not a private access tract for an immediately adjoining development, we recommend that the use be a conditional use (C). This requirement would allow for City staff to complete a more rigorous review and apply higher standards for minimum facility improvements, and would also build in review support and approval from Ecology. Similarly, for development proposals establishing or improving a private shoreline access tract that would serve 10 or more lots of an immediately adjacent residential development/homeowners' association, we recommend that this higher intensity use be a conditional use (C).

Recommended Minimum Standards for All New or Expanded Private Lakeside Recreational Uses: Any proposal for a new or enlarged dock, or for new or expanded shoreline stabilization on a privately owned parcel without a residence would require review per these suggested private lakeside recreational use criteria. Likewise, proposals for new structures and/or non-exempt clearing on the upland portion of such a property would also require review per these suggested criteria:

- Maximum overwater area (from docks/floats) consistent with standards in SMC 25.07.050
- Any proposed development would be required to establish a ‘vegetation enhancement area’ (VEA) consistent with requirements in SMC 25.06.020 (10), including allowance for an active use area extending to the shoreline.
- Minimum requirements for establishing the natural VEA and differentiating between VEA areas and areas of active use should be clarified in the SMP. At minimum, this should include:
 1. Placement of split rail or peeler-pole fencing or other acceptable landscaping barrier be installed (lateral to the shoreline) to demarcate the boundaries between the VEA and areas intended for access use;
 2. Completing a landscaping plan that specifies reasonable improvements for recreational use within the active use area and further landward on the property. By requiring a landscaping plan, the City can ensure that areas necessary for intended recreational use are provided (and minimize potential for encroachment into other areas).
- Proposed clearing of native vegetation throughout the rest of the site outside of the VEA, including within the active use area, must be minimized as reasonable (and consistent with the City’s Tree standards in SMC Chapter 21A.37) while still allowing for the intended recreational use of the property.
- If not already included as part of the development proposal, the City should require the applicant to provide reasonable plans for site access, garbage/recycle disposal, and accommodation of bathroom facility needs.

Recommended Additional Standards for New/Expanded Private Lakeside Recreational Uses that Require a Conditional Use Permit: Any proposal requiring a conditional use permit (per criteria recommended above) would additionally have to provide the following:

- **Parking:** Proposals must provide a minimum of 2 off-street parking spaces, plus 1 additional space for proposed private lakeside recreational lots with five or more owners/members.
- **Garbage and Recycle:** On-site location must be provided for garbage and recycle bins consistent with standards for single family detached homes in SMC Chapter 21A.30
- **Restroom facilities:** Any private lakeside recreational use serving between 2 and 3 owners/members (parties) should be required to provide a plan for reasonable accommodation of bathroom facility needs; at minimum, this should include seasonal placement of a portable restroom (i.e. porta-potty) within a designated enclosure. Any new or expanded private lakeside recreational use that would serve four or

more owners/members (parties) should be required to provide an on-site restroom (toilet and sink) with public utility hook-up including water and sanitary sewer. Restroom facilities should be located landward of the required Lake Sammamish shoreline setback and required side-yard setbacks.

- Limit on Number of Owners / Members: No new or expanded private lakeside recreational lot requiring a conditional use permit should be allowed to have ownership / membership above [nine? – City input / perspective needed] parties.

If you have any questions, please do not hesitate to call me at (206) 789-9658.

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