Response to Citizen Comments on the Proposed SMP

City of SeaTac
11/9/10

Sheri Shamberg, Citizen

Comment #1: Concerned that a neighbor on Angle Lake would be in violation of the proposed SMP with an existing property line fence that extends to the summer high water line. The fence would most likely be below the ordinary high water mark.

Answer #1: This comment was a result of a question to DOE in regards to a City code enforcement action on a parcel next to the Shamberg residence. Any property owner can build a fence to the ordinary high water mark. Standards for fences are governed by SeaTac Municipal Code 15.13.080 (F) with the Shoreline Management Area.

Comment #2: Will other lake residents be able to construct fences to the summer high water line? What will happen to theses fences in the water when the lake level is higher?

Answer #2: As stated above, Standards for fences are governed by SeaTac Municipal Code 15.13.080 (F) with the Shoreline Management Area. Everyone within the City can build a fence to these standards no matter whether you live on Angle Lake or elsewhere in the City. The ordinary high water mark is a set number based on the weir that was built in the 1960’s to protect potential flooding from Angle Lake into Interstate 5. There are times when Angle Lake is lower than the ordinary high water mark, particularly during dryer summer months, but the elevation of the lake will not be greater than 350.54’, which is the elevation at the weir overflow.

AHBL, Inc.
11/9/10

James N. Pepper, Citizen

Comment #1: The proposed SMP reflects a dismal understanding of freshwater management. The City has instituted a saltwater management program on a freshwater lake.

Answer #1: Proposed standards in the City of SeaTac SMP are based on the requirements established by the Washington Department of Ecology in Chapter 173-26 WAC, commonly referred to as the Shoreline Master Program (SMP) Guidelines and the requirements contained in the Shoreline Management Act (SMA), Chapter 90.58 RCW. Under the SMA, the City’s SMP must manage Angle Lake so there is no net loss of ecological function. As part of the process of updating the SMP, the City hired a consulting team (including biologists and other scientists) that documented Angle Lake shoreline ecological conditions, functions and processes based on available existing information. The findings of this work, including documented sources of information and analysis of lake ecological functions, are included in the Shoreline Analysis and Characterization report. This document was reviewed by Ecology and is available on the City’s and Ecology’s website.
Response to Citizen Comments on the Proposed SMP

Impacts to lake functions result from a wide variety of factors, both within the larger basin and within the immediate shoreline environment. However, only areas within 200 feet of the shoreline of Angle Lake (and associated wetlands) can be addressed under this SMP. Impacts to Angle lake include loss of native vegetation, increased impervious surfaces (surfaces that prevent water from infiltrating), and the resulting urban stormwater run-off from roads, homes and businesses that carries pollutants. Shoreline modifications, such as docks and bulkheads, also negatively impact lake functions such as sediment transport and erosion, and aquatic and upland habitat. Accordingly, the SMP contains a variety of standards to address the range of activities that can result in impacts to shoreline functions.

While some of the functions (and the factors that impact them) are similar between fresh and saltwater bodies, some of them are different or vary in the degree of importance, depending on the type and size of water body and other factors. For example, smaller lakes generally have less potential for erosion and sediment transport than marine waters and there is usually less of a functional need for bulkheads if watercraft speed is not an issue. Some lakes, such as Angle Lake, do not have a surface connection to Puget Sound and do not provide habitat for federally protected salmonid species. However, small lakes may be more susceptible to water quality impacts. While there are differences in functions and impacts between water bodies, we must still meet state requirements for ensuring no net loss of the shoreline ecological functions provided by Angle Lake. We must protect functions provided by shoreline vegetation, such as sediment removal and stabilization, and habitat for a wide range of species. We are required by law to protect water quality for wildlife and beneficial human use. In addition, we must meet specific state requirements that require the City to put certain restrictions in place, such as limits on bulkheads.

Comment #2: SeaTac Shoreline Committee support of removal of lily pads from Angle Lake has exposed acres of the lake to additional solar heating that will have an effect on water temperature.

Answer #2: The fragrant water lily (Nymphaea odorata) is a non-native invasive freshwater plant species found in Angle Lake. The City and property owners have taken steps to control this plant in recent years. Continued management of water lily using aquatic herbicides or other approved methods is not expected to measurably increase water temperatures because of the size of the lake, total volume of water and the limited potential area that would be subject to additional solar heating. As an invasive plant, water lily can spread and displace native plant communities and reduce biodiversity. Where lily is dense and close to the surface, it can entangle swimmer’s legs and interfere with boating and fishing.

Control of water lily using herbicides or mechanical removal requires approval by the City, Washington Department of Fish and Wildlife and the Department of Ecology and will be regulated to minimize negative impacts on the lake ecosystem. If left uncontrolled, water lily could eventually cover the majority of the lake and deplete oxygen levels. When large areas of water lily decompose, they can create a mucky lake bottom which puts excess nutrients in the system and over time can lead to algae blooms which can decrease the health of the lake. There are several examples of small lakes in western Washington where dense invasive lily pads have not been managed, and this situation can lead to health departments closing a lake to
fishing, swimming and other recreation. Algae blooms also deplete oxygen in lakes and can impact and kill fish and wildlife that depend on the lake. Proper management of water lily can preserve swimming, fishing and boating opportunities and improve small lake ecosystems.

Comment #3: Acres of wildlife habitat for bullfrogs and dragon flies has also been eliminated with removal of lily pads.

Answer #3: See response to Comment #2. There is often a fine line between whether or not control is biologically necessary or justifiable. When managed to form a patchy distribution interspersed with open water, water lilies can provide good habitat for largemouth bass and frogs. However, they do restrict, and in some cases create a potential safety hazard for water oriented uses such as boating, swimming and fishing. Overall, there is only a relatively limited population of water lily on Angle Lake, due primarily to the lake’s low productivity. We do not expect control efforts to result in significant impacts to wildlife. The largest areas of water lily infestation are located along the City-owned vacant Hughes properties and adjacent properties, although sporadic infestation occurs around the remainder of the lake. According to the details of the permit obtained by the City, control efforts authorized the removal of water lily on approximately 1 acre in 2008. The Shoreline Analysis Report discusses these issues, including the pros and cons of aquatic weed management, in Section 3.10.4.

Comment #4: What science supports the notion that the lake has water quality problems to require this plan.

Answer #4: Water quality in Angle Lake is good. The data also shows that the lake is very clear and moderately low in primary productivity (high oligotrophic classification), all of which are generally good signs. Angle Lake is on the 303(d) list for fecal coliform, which is likely a result of urban stormwater run-off, pets and Canada geese. Like most urban lakes, stormwater run-off contributes urban pollutants to this lake based on the surrounding roads, lands uses and the location of stormwater inputs (e.g. fertilizers, hydrocarbons, metals, etc.). The SMP is intended to protect existing functions, including the relatively good water quality of the lake.

Local governments are required under RCW Chapter 90.58 to adopt Shoreline Master Programs for shorelines of the state. SMP’s must be consistent with shoreline master program guidelines in Chapter 173-26 WAC. The current water quality of water bodies does not invalidate or dictate the requirement to adopt an SMP.

Comment #5: What science supports the notion that creatures that live on the bottom of the lake need sunlight?

Answer #5: The SMP shoreline modification standards address the impacts of docks, piers and other overwater structures. One of the impacts of overwater structures is shading of aquatic vegetation and fish habitat. Many fish species avoid shaded docks where there is limited aquatic vegetative cover. Shading and lack of vegetative cover tends to benefit certain fish species over others, which over time can decrease the diversity of fish species within the lake. Scientists have determined that docks and piers provide the ideal shade and overhead cover for ambush predators. Largemouth and smallmouth bass are most likely to benefit from these structures. While anglers may applaud the availability of bass near docks, many juvenile fish species find it to be deadly.
Response to Citizen Comments on the Proposed SMP

Comment #6: The new SMP would require dock and pier replacement with open grating. Most of the docks on the lake are floating. It will be difficult to have open grating on a floating dock.

Answer #6: In order to meet no net loss, the City needs to avoid an overall increase in overwater coverage that could result from additional dock construction that will be allowed under the SMP. There are several products on the market that include floating grated decking that minimize shading below the dock. Some shading will still occur, e.g. from the float tubs. The pier and dock standards are intended to minimize the impacts of overwater structures on shoreline functions, including minimizing shading. Promoting grated decking for piers and docks and other standards contained in the SMP will help minimize shading from these structures.

Comment #6: The SMP bulkhead rules were taken directly from salt water standards. Lakes do not have tidal or wave action for which these rules were designed and intended.

Answer #6: Shoreline Master Program Guidelines used by the State of Washington to evaluate the adequacy of the local SMP are very specific with regards to requirements for shoreline stabilization, including bulkheads (WAC 173-26-231). Generally speaking, these requirements restrict new bulkheads by requiring applicants to demonstrate a need to protect an existing structure and to show why more environmentally friendly stabilization techniques cannot be used effectively in lieu of a bulkhead. These Guidelines are in effect “rules” because they are used to evaluate whether a local SMP can be approved by the State. These Guidelines apply regardless of whether the bulkhead is on a freshwater or saltwater shoreline.

Approximately 58% of the shoreline of Angle Lake is modified with a bulkhead or other shoreline armoring at or near the ordinary high water mark. While there is no tidal action of Angle Lake, there is some wave action on Angle Lake. As discussed in the response to Question #1, some of the same processes affect lake function, such as sediment supply and transport, albeit to a lesser degree. Bulkheads impound sediment and can modify beach formation and erosion on adjacent properties. Bulkhead construction typically removes upland and aquatic vegetation that protects the lake from the effects of polluted runoff, naturally stabilizes the soil along the lake’s edge, and provides habitat, shelter and food for fish. Loss of natural shoreline edges on lakes also equates to loss of potential wildlife nesting sites, rearing, refuge and foraging areas.

Comment #7: There is an obvious parallel between the proposed SMP and saltwater standards.

Answer #7: Please see Answers to Questions #1, 5 and 6.
Response to Citizen Comments on the Proposed SMP

Comment #8: There is a lack of scientific evidence for the need of the proposed SMP and the SMP development process has ignored the facts.

Answer #8: The SMP was prepared according to the requirements contained in Chapter 173-26 WAC. The current condition of water bodies does not dictate or invalidate the requirement to adopt an SMP. Please see responses to Questions #1-6 above.

Comment #9: The City of SeaTac is the largest offender in allowing pollutants into the lake through storm water drains.

Answer #9: Yes, pollutants do enter the lake through storm water drains that carry run-off from City streets as well as private property. This is a result of previous infrastructure and site development done prior to current stormwater regulations. The City is required under the Federal Clean Water Act to address pollution resulting from the operation of the municipal stormwater system. The City is actively working to improve stormwater management through the implementation of the National Pollutant Discharge Elimination System (NPDES) Phase II Permit administered by the Washington State Department of Ecology. The Stormwater Management Program (approved in March 2010 under Permit Number WAR04-5541) requires the City to (a) reduce the discharge of pollutants from its municipal storm water system to the maximum extent practicable, (b) meet state AKART (All Known Available and Reasonable methods of prevention, control and Treatment) standards, and (c) protect water quality.

Comment #10: The implementation of rules and programs to fulfill program requirements is a waste of tax money and time.

Answer #10: Comment acknowledged. This comment expresses an opinion. The SMP is intended to meet the City’s obligations under the Shoreline Management Act, which was proposed by the Legislature in response to a citizen initiative in 1971 and ratified by Washington voters in 1972.