docks & SHORELINE PERMITS

www.govlink.org/watersheds/8/action/greenshorelines/

Bottom line

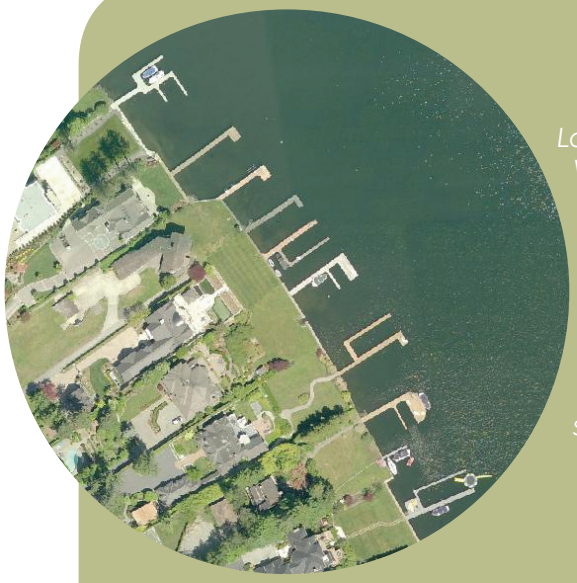
Docks cause overwater shading that harms bottom habitat and disrupts the movement of young fish, such as salmon. Smaller docks, and docks with grating or other design features that let light through, can help endangered salmon survive. Docks also disrupt the natural flow of sediments, causing beach erosion and creating shallower water around neighboring docks.

The requirements

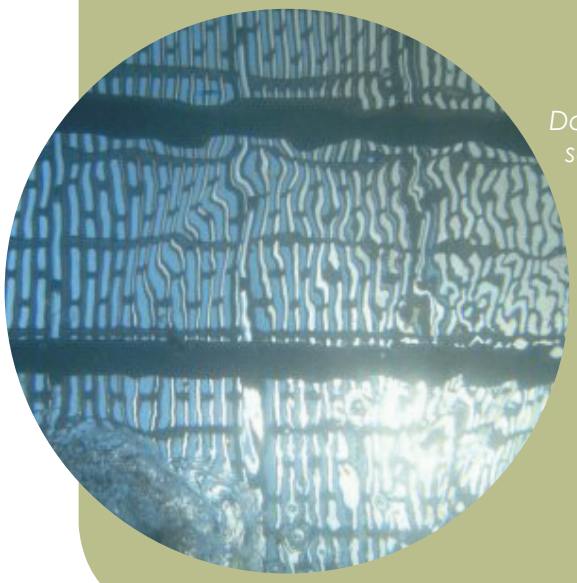
Federal and state law requires that overwater structures be designed to protect habitat and migration corridors for species that depend on the nearshore environment. Local shoreline programs must comply with state law.

Are new docks allowed?

New piers and docks must be tied to a water dependent use, which includes such things as maritime industry or fishing. A dock associated with a single-family home that provides access to watercraft is defined as a water-dependent use. New updates to Shoreline Master Programs may require new residential developments to provide joint use or community docks rather than individual docks for each home. Docks may be prohibited in areas where they will harm habitat, impede or interfere with navigation or have a negative aesthetic effect, such as blocking views.



Lake Washington is lined with 2,700 docks, which disrupt the movement of fish and shoreline sediments.



Docks that allow sunlight to pass through create a friendlier environment for young salmon. Photo: Jim Guy

Two reasons docks on lakes matters

Reason #1: Salmon eyes don't adapt well to changes in light. While it takes a human eye only a few seconds to a few minutes to adjust from light to dark, it can take 20-40 minutes for a salmon eye to adjust. Instead of going into the dark shadow cast by a dock, juvenile salmon swim out around the structure. This takes them into deeper water where predators may lurk. Young salmon need safe, shallow water where predators can't come and where they can find food and shelter.

Reason #2: Sediment needs to move around.
Sediment such as sand and silt is moved around naturally by shoreline currents. Dock pilings disrupt the natural current patterns. These changes can erode waterfront beaches, create shallow waters around neighboring docks, provide less sand to down-current beaches, and eliminate places for fish to spawn and feed.

It adds up

There are more than 2,700 docks around Lake Washington and a similar number around Lake Sammamish. The cumulative impact of multiple docks adds up.

Building better docks

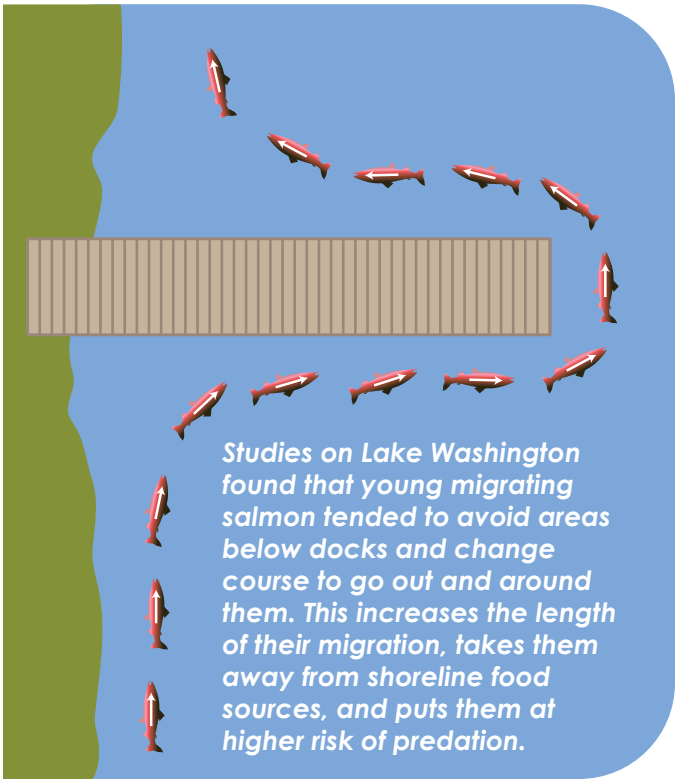
New or replacement docks may be eligible for a streamlined permit process if they meet standards that minimize the impacts on endangered species, such as the following:

Let light pass through to reduce shading for young salmon and aquatic plants.

- Use grated decking with openings for light transmission.
- Make ramps and walkways narrower, ideally four feet or less for walkways and three feet or less for ramps.
- Avoid the use of "skirts," i.e., boards on the sides of the dock that extend down to the water. Many laws and policies prohibit skirts.
- Design the dock so that the entire structure is at least 18 inches above ordinary high water.
- Use structural beams made of stronger materials, such as glulam (glued laminated timber), which allow longer spans between piles.

Protect water life (and your own health) by reducing toxic finishes, preservatives and cleaning agents.

- Choose decking materials such as metal, fiberglass or plastic grating, recycled plastic lumber and naturally rot-resistant wood.
- Use non-toxic or less-toxic products to care for your dock. Avoid products labeled "poison" or "warning" if possible.



Studies on Lake Washington found that young migrating salmon tended to avoid areas below docks and change course to go out and around them. This increases the length of their migration, takes them away from shoreline food sources, and puts them at higher risk of predation.

Lighting at night on docks and shore-edge structures may attract juvenile salmon and make them more visible to their predators. Photo: Being Michael, Flickr

Narrower ramps and walkways reduce overwater shading at the shoreline. Design and photo: The Watershed Company

Protect salmon from predators at night.

- Avoid overwater lights that will be on all night. This also saves money and energy.

To find out more about docks and shorelines, visit www.govlink.org/watersheds/8/action/greenshorelines/ to request a copy of the City of Seattle's guidebook, *Green Shorelines: Bulkhead Alternatives for a Healthier Lake Washington*.

Lake Washington/Cedar/Sammamish Watershed (WRIA 8)

Jean White, WRIA 8 Watershed Coordinator, jean.white@kingcounty.gov, 206-263-6458

This fact sheet is partially based on the Docks and Piers fact sheet produced by People for Puget Sound **http://pugetsound.org**.