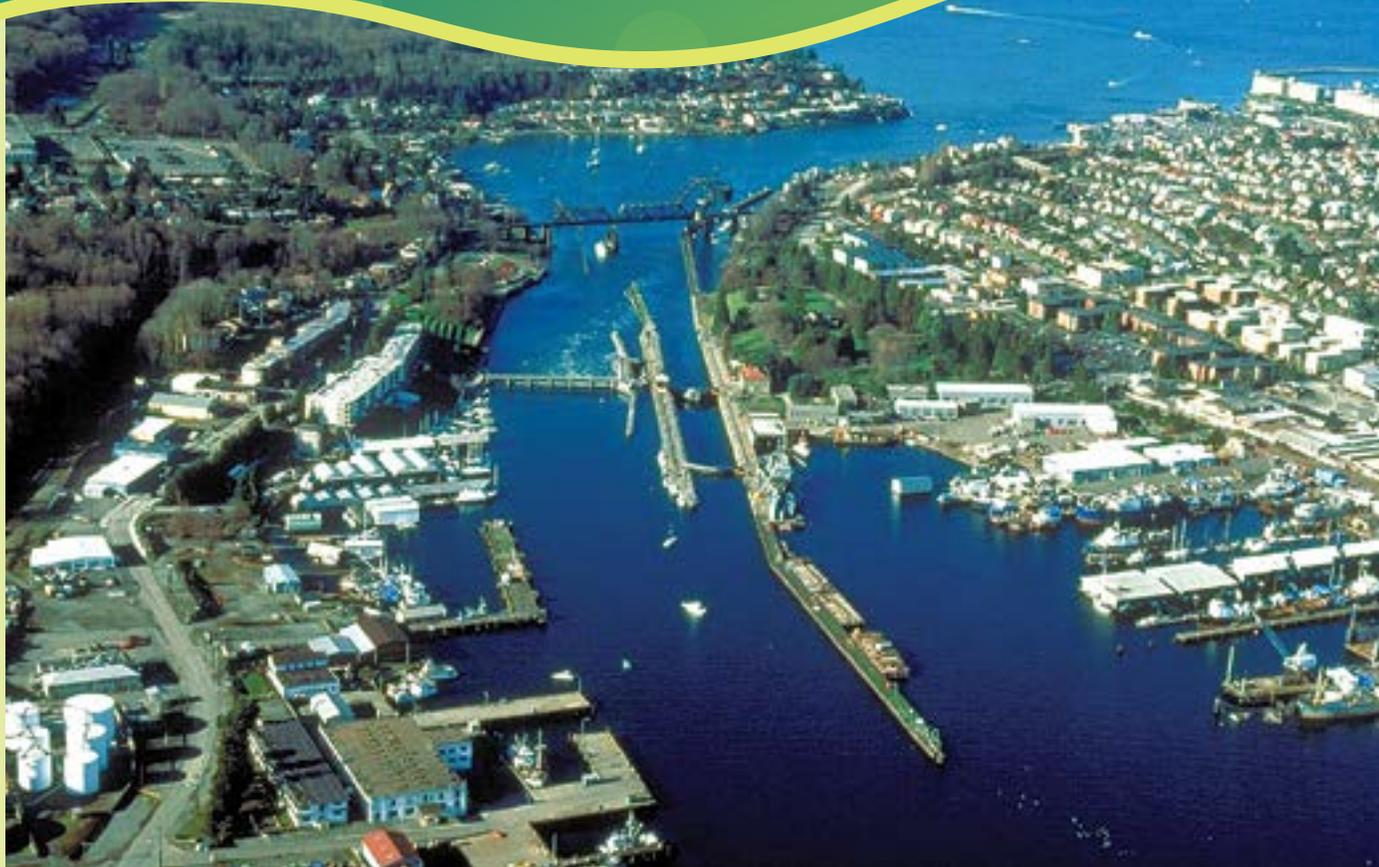


# Improvements to the Hiram M. Chittenden (Ballard) Locks are critically needed



*The Hiram M. Chittenden (Ballard) Locks, operated by the U.S. Army Corps of Engineers (Corps), are critical to the region's economy, transportation and flood control infrastructure, and environment. Connecting Puget Sound with Lakes Union and Washington, the Locks are an iconic Seattle attraction. With 50,000 boats passing through each year, the Chittenden Locks are also the busiest in the country in terms of number of vessels.*

*Much of the equipment and infrastructure at the Locks, which will celebrate its centennial in 2017, is long past its design lifespan and urgently needs repair. Some critical facilities, including the large lock emergency closure system and pump plant, have already failed. In 2012, the Corps lowered the dam safety rating of the Locks to "2" (out of 5, 1 being almost certain to fail under normal conditions) because they could fail in an earthquake, with significant economic consequences.*

## **Reliable operation of the Locks – and the required safe passage of ESA-listed Chinook salmon and steelhead – depends on the repair and replacement of key infrastructure.**

Every salmon in the Lake Washington/Cedar/Sammamish Watershed (WRIA 8) must pass through the Ballard Locks twice in its life, both as a juvenile migrating out to the sea

and as an adult returning to spawn. Ensuring safe fish passage through the Locks is of paramount importance to salmon recovery efforts in this watershed.



**US Army Corps  
of Engineers**

## Improvements to the Hiram M. Chittenden (Ballard) Locks are critically needed

Many of the operational and structural changes the Corps has made to improve fish passage at the Locks since the 1990's (with WRIA 8 support) are now at risk due to the facility's poor condition. The Corps is currently not meeting many of the measures called for in the 2008 NOAA Biological Opinion to reduce impacts to ESA-listed fish passing through the Locks.

### What fish passage improvements are most needed?

- Replace machinery that allows the large lock gate valves to open and close slowly, which greatly reduces the mortality of juvenile salmon passing through the Locks (\$5-\$6 million).
- Study and develop a permanent solution to keep adult salmon from getting trapped and killed in the "diffuser well" of the fish ladder (\$700,000).

*Dead salmon in the diffuser well of the fish ladder*



- Find a replacement for strobe lights originally installed to deter juvenile salmon from entering the Locks filling culverts, which can harm or kill them (cost unknown).
- Study and develop an alternative for the "smolt flumes" installed in 2000 to provide a safer route for juvenile salmon over the Locks spillway, which must be replaced for safety reasons (cost unknown).

*Smolt flume to get fish safely over the spillway*



### A failure at the Locks would threaten our regional economy and environment beyond fish.

The Locks regulate the water level of Salmon Bay, the Ship Canal, Lake Union and Lake Washington, keeping it between 20 and 22 feet of elevation.

Failure of the Locks' spill gate or large lock would render the I-90 and Highway 520 floating bridges unusable, jeopardizing commuter and freight traffic between Seattle and the Eastside and affecting at least a quarter million vehicles per day. Such a failure would also affect 500 floating homes and innumerable docks on Lakes Washington and Union.

The North Pacific Fishing Fleet relies on the Locks to make its home at Fisherman's Terminal.

The Locks also protect the lakes' water quality by preventing Puget Sound saltwater from mixing with their fresh water.

### The Locks have not received the funding they need for repairs.

The Corps' funding priorities emphasize commercial tonnage shipped. Though a million tons of cargo pass through the Locks each year, much of its traffic is recreational. The Corps thus considers the Locks to be low use and they rank low for funding. Moreover, the criteria the Corps currently use to allocate maintenance funding do not take into account the Locks' unique location and function in our region.

### What are our next steps?

The Lake Washington/Cedar/Sammamish Watershed (WRIA 8) supports efforts by the Corps' Seattle District office to fund critical prioritized repairs to the Ballard Locks.

We also encourage the Washington State Congressional delegation and other regional leaders to share their concern about the Locks' condition with Corps leadership in Washington, D.C. and request that the Corps increase operations and maintenance funding for critical Locks infrastructure improvements.

#### FOR MORE INFORMATION:

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