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Second chance for Willamette Falls Locks, an Oregon treasure

By Nicole Dungca, The Oregonian
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ndy Carter, Willamette Falls Heritage Foundation

Workers have been welding repairs on Gate 1 of the Willamette Falls Locks for several weeks. At more than 66,000 pounds per side, it is the largest of the seven gates.

WEST LINN - After teetering on the edge of permanent closure for almost two years, the Willamette Falls Locks appear ready to open next year after several months of repairs.

As workers prepared to replace the biggest gate of the Willamette Falls Locks this month, Congress approved more than $900,000 to keep the 136-year-old facility open. The bill, signed Wednesday by President Barack Obama, will reserve $230,000 for minimal seasonal operations.

The locks have been closed since January 2008, and it wasn't long ago that local historians and tourist agencies were petitioning local politicians to keep the Army Corps of Engineers from closing them for good. Although the Willamette River passageway was locally treasured and a registered historic site, maintenance problems and a lack of commercial traffic made paying for them a tough sell.

But now that the Army Corps of Engineers budget has cleared the House and the Senate, the lock system's status is secure - at least for now.

Stimulus money

When a private company opened the Willamette Falls Locks on New Year's Day in 1873, expectations were high.

Merchants were eager to use the $600,000 system to transport goods on the Willamette River, blocked by the 40-foot falls. For a few decades, steamboats and barges dominated Willamette Valley commercial traffic, using the multichambered lock system.

About the locks

- About the locks Opened on New Year's Day, 1873
- Cost approximately $600,000
- Purchased in 1915 by the U.S. Army Corps of

When trains overtook commercial river transportation, the locks became less essential.

"The idea, of course, was to make the Willamette a major transportation artery," said Bill Lang, a history professor at Portland State University. "But it never really developed that way."

Log booms went through the locks for years, but pleasure boats had become the major customer before the locks were closed in January 2008.

Funding troubles continued to plague the locks until April, when federal stimulus money provided the $1.8 million necessary to complete the inspection and repairs. The amount was far more than the annual operating cost, which could run anywhere from $100,000 to $300,000, according to Diana Fredlund, a corps spokeswoman.

The stimulus money, in addition to the recently approved $900,000, will ensure that repairs will be done by the end of February. After the completed inspection and repairs, the corps will determine a schedule of operation.

Officials who lobbied heavily for the reopening see it as a way to provide jobs and revive an area ready for commerce. If the locks are reliable and kept in good condition, companies may consider using them again, said U.S. Rep. Kurt Schrader, D-Ore.

"There is a big overwhelming interest on the part of Congress to help support local communities' economic development, and this is an opportunity for huge development," Schrader said.

Engineers
- Uses four lock chambers, a canal basin and a guard lock
- Each lock is 40 feet wide and 210 feet long
- Includes seven gates
- Gate 1 is the biggest, at about 30 feet high and 20 feet wide
- Gates 2 through 7 are 20 feet high and 20 feet wide

- Average time for passage upstream: 45 minutes
- Average time for passage downstream: 30 minutes
- Vessels up to 175 feet long can pass through the locks

"Unique challenges"

Since workers began to inspect and repair the 136-year-old locks nearly two years ago, they have been discovering features singular to a project constructed in the latter part of the 19th century.

"Just in the fact that you have a very old structure, you'll have a lot of unique challenges for safety and continued operations," said Pat Duyck, Army Corps of Engineers project manager for the site.

The locks underwent changes as technology advanced - including the introduction of a hydraulic system instead of manually operated locks, and a switch from wooden to steel gates - but much of the original technology has stayed the same.

With four chambers, a canal basin and a guard lock, its structure differs from other local systems. The lock at the Dalles Dam and others on the Columbia River feature only one chamber, Fredlund said.

Because of the seven gates, inspections typically take longer. Some newer locks feature bulkheads, or water barriers, that make gate repair more manageable by helping to easily empty the chambers. But working with the locks in West Linn necessitates a barge removing entire gates - which can weigh more than 130,000 pounds - in order to do repairs, Duyck said.

Although the steel gates were installed in the 1940s, they are still different from the gates on the Columbia River locks, he said.

"The locks on the Columbia are just a lot more robust with block-wall construction," Duyck said. "It's not a solid concrete wall, which was just a function of the era that the Willamette locks were built in."

Workers have been laboring on the gates' pintle-bearing, which helps gates swing open and closed, and welding the first gate this month. Returning the first gate to its original position has been pushed back multiple times, and there are two more gates to inspect and repair. For some of the gates, workers found more damage - various cracks in the steel - than expected.

The project's completion, previously expected in October, will likely be pushed back to February.

Historical marvel

Local history buffs such as Sandy Carter, the executive director of the Willamette Falls Heritage Foundation, are relieved to see a future for the locks.

In 2004, Carter and other supporters began holding Lockfest, which was aimed at bringing awareness to the historical significance of the locks. The locks, billed as the "the oldest continually operated multichambered canal and navigation lock system in the country," were listed in the National Register of Historic Places in 1974.

Lang says the locks are a throwback to another era, before lock systems were installed with hydroelectric power in mind. Although the locks aren't a strong source of commerce anymore, some historians say that their mere existence is impressive.

"It is a bit of an anachronism, but it's sort of an essential one because it provides a public service," said Bill Willingham, a former historian for the Army Corps of Engineers. "It's such a unique piece of Oregon history, and it's managed to continue to function. It would be a shame to lose it."

-- **Nicole Dungca**