Electricity customers *make a big contribution to* salmon recovery

By Terry Flores

Northwest electricity customers may not know it, but every time they pay their power bill, they contribute to the protection and recovery of endangered salmon. The percentage of the bill that goes toward salmon programs in the region varies from utility to utility. But for public power customers whose electricity is generated at federal dams on the Columbia River, roughly 20-25 percent of their bill is dedicated to fish recovery.

These dollars buy a number of the tools in the Northwest's salmon recovery toolkit. First, they pay for physical changes at the dam structures that aid fish passage and survival. Surface bypass systems being installed at dams on the Columbia and Snake rivers are easing in-river migration for juvenile salmon.

One of the most effective surface bypass technologies is called a removable spillway weir. This structure was engineered to allow young salmon to enter a dam's spillway close to the surface of the water and exit by way of a discharge chute or fish slide. The latest research shows that migrating salmon survive the ride over a dam with a removable spillway weir at extraordinarily high rates of 98 to 99 percent.

In addition to direct improvements at the dams, customers pay for an extensive transportation program that has been operating for nearly 40 years.

The Corps of Engineers has refined its methods for barging juvenile salmon based on research over the years into the needs of individual stocks and the timing of runs. Today, the survival rate is 98 percent for juveniles that travel by barge to below Bonneville Dam.

Second, electricity customers are paying for changes to the operation of the hydroelectric system.

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There was a time when power generation and flood control drove the operation of the Columbia River hydro system. Today, top priority is given to fish passage and survival. Dam operators release water from reservoirs to aid fish migration during the spring and summer using operations tailored to the season's runoff and weather conditions.

They also put water over the spillways of dams, instead of passing it through turbines

or holding it in storage, so migrating fish move more quickly.

Operations like these, which dedicate water to fish passage rather than power generation, come at a significant cost for electricity users.

In some cases, as with spilling water in the late summer, the Bonneville Power Administration must buy more expensive power to serve customers instead of generating it on the Columbia River.

Keeping salmon predators at bay is another significant salmon recovery effort funded by electricity customers.

Both juvenile and adult salmon are a popular menu item for predatory birds and non-native fish. The predator-control programs are clearly saving juvenile salmon. In the case of Caspian terns, which are being relocated to outside the Columbia River estuary, researchers are finding less evidence on nesting islands that these birds are preying on juvenile salmon. And the BPA estimates that its bounty program on northern Pikeminnow in the Columbia and Snake rivers has reduced predation on juveniles by about 30 percent.

The future holds even more improvements, including turbine upgrades that will be friendlier to fish and investments to enhance water quality. A recent proposal by federal agencies that operate the river system indicates that many of the existing programs will also be augmented over the next decade.

According to federal experts, salmon survival through the hydro system is now comparable to what it was in the 1960s, when only four of the eight federal dams on the Columbia and Snake rivers existed.

Long story short, electricity customers are doing their part for threatened and endangered salmon runs.

They continue to pay — to the tune of hundreds of millions of dollars a year — for efforts that are helping to recover these fish.

While they might not realize it, people everywhere who value the Pacific salmon owe a debt of gratitude to northwest electricity customers.

Their dollars are helping to transform one of the world's largest and cleanest renewable electricity resources, the Columbia River hydro system, so salmon and dams can coexist. C

Terry Flores is executive director of Northwest RiverPartners, a coalition of farmers, electric utilities and large and small businesses in the Northwest working together to ensure that the Columbia and Snake rivers remain living, working rivers.

Completed in 1970, Little Goose Dam on the lower Snake River was designed with a fish ladder to allow adult salmon to return upstream. The circular fish flume (above) over the fish ladder was added later to facilitate juvenile fish migrate down river. On the facing page is the fish ladder at Ice Harbor Dam, also on the lower Snake River.