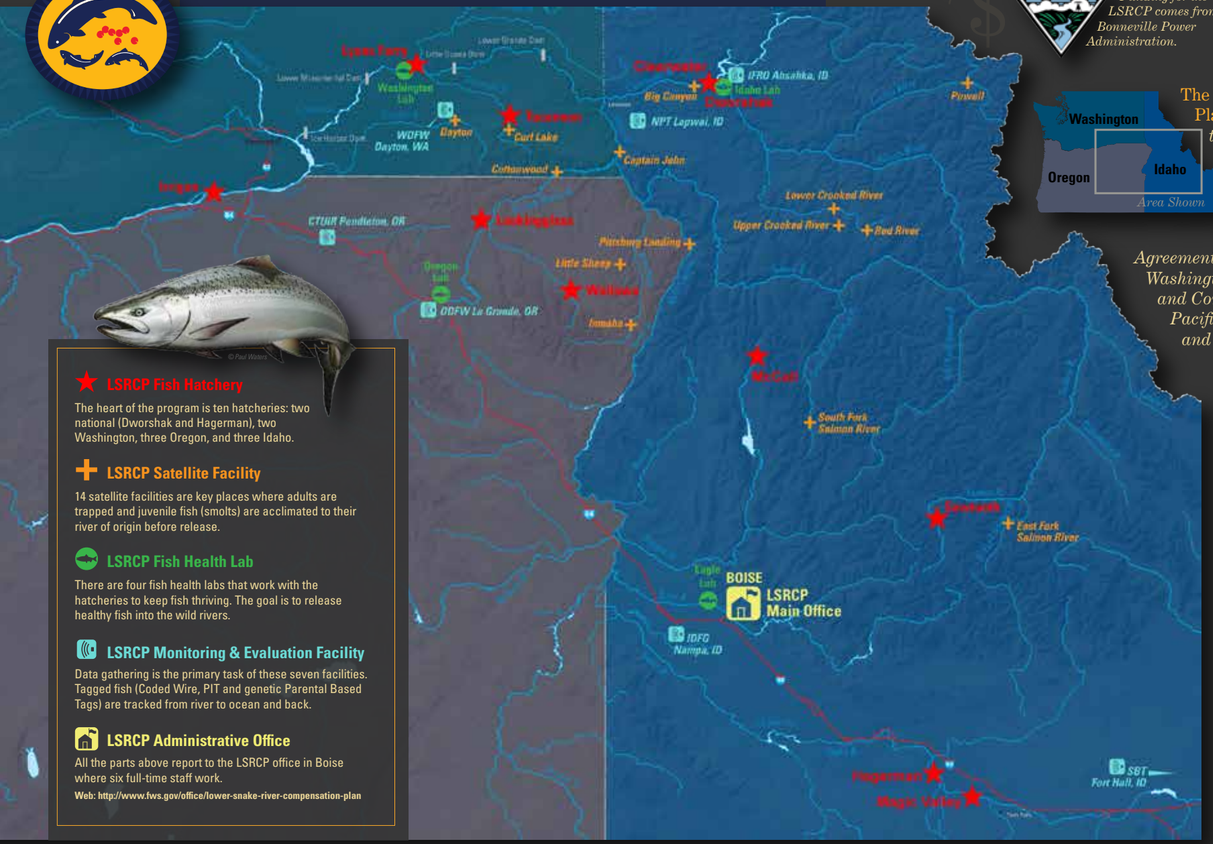
Lower Snake River Compensation Plan or LSRCP



LSRCP Fish Hatchery

The heart of the program is ten hatcheries: two national (Dworshak and Hagerman), two Washington, three Oregon, and three Idaho.

LSRCP Satellite Facility

14 satellite facilities are key places where adults are trapped and juvenile fish (smolts) are acclimated to their river of origin before release.

LSRCP Fish Health Lab

There are four fish health labs that work with the hatcheries to keep fish thriving. The goal is to release healthy fish into the wild rivers.

LSRCP Monitoring & Evaluation Facility

Data gathering is the primary task of these seven facilities. Tagged fish (Coded Wire, PIT and genetic Parental Based Tags) are tracked from river to ocean and back.

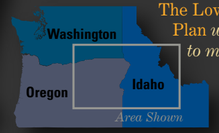
LSRCP Administrative Office

All the parts above report to the LSRCP office in Boise where six full-time staff work.

Web: http://www.fws.gov/office/lower-snake-river-compensation-plan

Funding for the LSRCP comes from the Bonneville Power Administration.

The LSRCP program is administered by the U.S. Fish & Wildlife Service



The Lower Snake River Compensation Plan *was authorized by Congress in 1976 to mitigate for the adverse impact four lower Snake River dams had on commercial, recreational and tribal fisheries. Our hatcheries and evaluation programs are conducted under Cooperative Agreements with the States of Idaho, Oregon and Washington, the Nez Perce, Shoshone-Bannock and Confederated Umatilla Tribes, and the Pacific States Marine Fisheries Commission and Service hatcheries and field stations.*

LSRCP yearly adult PRODUCTION:

91,500	Fall Chinook
293,500	Summer/Spring Chinook
165,300	steelhead…

for harvest in the ocean and Columbia below McNary Dam and to escape Chinook and steelhead adults along the lower Snake River. Subtract return goal (below) for coast wide harvest.

LSRCP yearly adult RETURN GOALS:

18,300	Fall Chinook
58,700	Summer/Spring Chinook
55,100	steelhead…

returning above McNary Dam to the LSRCP project or above.

LSRCP facilities raise 86,000 pounds of rainbow trout for local recreational fishing in Washington and Idaho.

NOAA's National Marine Fisheries lists Snake River Chinook and steelhead as threatened and sockeye as endangered. The LSRCP supports recovery of these endangered stocks through outplanting juvenile and adult fish.

Irrigon Fish Hatchery yearly LSRCP production goals: 1,015,000 steelhead smolts, and 1,200,000 fall Chinook sub-yearlings

1. Irrigon Hatchery supports recreational and tribal fisheries by raising summer steelhead for the Wallowa, Imnaha, Grande Ronde Rivers and fall Chinook for the Salmon River in Idaho and Grande Ronde River.
2. Irrigon Hatchery receives eyed steelhead eggs from Wallowa Hatchery gathered at Little Sheep, Imnaha and Big Canyon satellite sites.
3. Irrigon Hatchery fish health is monitored by the Oregon Lab. Egg to smolt survival is 70% for steelhead and 80% for fall Chinook for these LSRCP programs.
4. Lyons Ferry ships fall Chinook eggs to Irrigon to raise. As sub-yearlings, 200,000 are released in the Grande Ronde, and 1,000,000 directly into the Salmon River.
5. Irrigon Hatchery portion of LSRCP adult steelhead goal is 11,184 adults above Ice Harbor Dam. Our part of the 18,300 adult fall Chinook goal is up to 3,660 fish or 20% of the goal.
6. The closest monitoring and evaluation facility is in La Grande. Knowing the when and where of our fish allows us to adapt Irrigon programs to current data trends.

U.S. Fish & Wildlife Service

Irrigon
Fish Hatchery

Irrigon Fish Hatchery
74135 Riverview Lane
Irrigon, OR 97844

541/922-5732
http://www.dfw.state.or.us

U.S. Fish & Wildlife Service
http://www.fws.gov/office/lower-snake-river-compensation-plan

December 21, 2023

Part of the ~
LOWER SNAKE RIVER COMPENSATION PLAN

Cover photo, ODFW

Welcome to Irrigon Fish Hatchery

Open daily 8 to 4. Arrange for guided group tours by calling (541) 922-5732.

Spring

ODFW Fish Health checks fish prior to release

8 inch — Summer steelhead are released in June into Wallowa & Imnaha Rivers at 5" or 5 fish per pound

Eyed eggs are received from Wallowa Hatchery

In 2-6 weeks, eggs hatch depending on water temperature

Sacfry do not eat

¾ inch

Summer

1.5 inch

Fry are ponded indoors in circular tanks & fed every 15 minutes

Fish grow ~1.5" per month & are moved to 5 outdoor raceways in X (June? July?)

Fry are marked & distributed to the 26 raceways

Fall

800

During this stage, fry are fed 800 pounds of food per day

5 inch

Growth rate gradually slows to 1" per month

Health is monitored constantly throughout the rearing process

Winter

Weighing tracks numbers by averaging fish per pound

2,200

2,200 pounds of food per day is fed now

7 inch

5.5 fish per pound by mid-March

Steelhead

© Paul Waters

All dollar/value data from 2016

$31,002,134 value of Lower Snake steelhead recreational fishery

$85.84 steelhead value per angler day

THE HATCHERY GROUNDS

Fall Chinook

© Paul Waters

$3,892,344 value of Lower Snake Chinook recreational fishery

$91.28 Chinook value per angler day

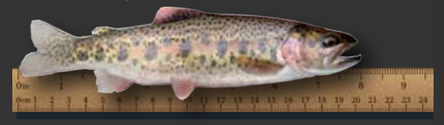
A success story: roughly 600 fall Chinook returned above Lower Granite Dam in 1990. LSRCP supplementation began in 1996. By 2013 that number was 76,000.

Estimates of 130,000 steelhead angler days circa 1976 in the LSRCP project area. Since 2010, that has increased to 475,000.

© Paul Pagano

Steelhead growth over just two years is amazing!

Release size change was prompted by a study from the late 1980s that determined fish over 7 inches had greater outmigration survival. This length correlates to a target of 4.5 fish/lb to ensure that most, if not all, smolts released were larger than 7 inches. Today they average close to 8 inches.



Where do juvenile steelhead go? Using 5 tank trucks driving 2- 3 trips of around 170 miles per release group, steelhead are transported from mid-November to mid-April each year. Big Canyon, Wallowa Hatchery and Little Sheep are acclimation sites that receive these steelhead.

Part of the~ LOWER SNAKE RIVER COMPENSATION PLAN

Of Eggs and Baskets

Don't put all your eggs in one basket. Is a phrase commonly attributed to Miguel de Cervantes in his 1605 novel Don Quixote. This wisdom goes back millions of years in the case of Columbia Basin salmon. These fish have never put their eggs in just one basket. Rich diversity across many rivers, and across the seasons is their strength. One of the breakthrough moments in salmon/steelhead management was recognizing this:

In the Conservation of any natural, biological resource it may, I believe, be considered self-evident that the population must be the unit to be treated. By population I mean an effectively isolated, self-perpetuating group of organisms of the same species regardless of whether they may or may not display distinguishing characters and regardless of whether these distinguishing characters, if present, be genetic or environmental in origin. Given a species that is broken up into a number of such isolated groups or populations, it is obvious that the conservation of the species as a whole resolves into the conservation of every one of the component groups; that the success of efforts to conserve the species will depend, not only on the results obtained with any one population, but with the total of individuals in the species that is contained within the populations affected by the conservation measures.

—Willis Rich, U.S. Fish Commission, after studying Columbia Chinook from 1927 to 1939

The Lower Snake River Compensation Plan took Rich's discovery to heart. The 11 hatcheries and 17 satellite LSRCP facilities are spread across the major tributary systems of the Lower Snake Basin. You can think of Irrigon as helping with the northeast Oregon "egg basket."

Here we propagate the effectively isolated, self-perpetuating population of steelhead that return to specific stretches of the Imnaha and Grande Ronde basins. The fall Chinook we raise are release in the Salmon River, an Idaho tributary; and, we are reintroducing these fish to the Grande Ronde River, once part of their historic range.

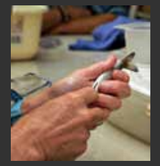
Diversity is also temporal. We release steelhead throughout the month of April. For example, there may be a release at Wallowa Hatchery both at the beginning and end of April, one at Big Canyon Trap and another at Little Sheep release site.

The egg is unique as is the population it's from because conditions in the "home" or natal river are unlike any other—they are also unique.

Finely tuned nutrients grow healthy fish.

Healthy Fish from Egg to Release

Marking Fish Aids Management



Passive Integrated Transponder (PIT) tags, injected with a large needle, aid in tracking hatchery fish.

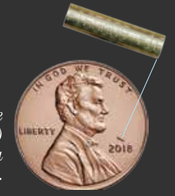
Irrigon does not trap and spawn adult fish on site. We receive eggs from other hatcheries or satellite facilities. Once here, we do not put all these eggs in one basket. Each brood year's stock is divided into lots. We track the lots from incubation tray, to rearing tank, to raceway, to stainless steel transport. We know the Imnaha Basin fish destined for release into Little Sheep Creek from the fish that will be released into the Wallowa River and Grande Ronde Basin. We even know the fish for the Wallowa River separately by where they will be released. They are released at both Big Canyon and Wallowa Hatchery.

All eggs brought to this facility are surface sanitized in buffered *iodophor*, an iodine based disinfectant. But, our job as stewards of fish health has only begun. Healthy fish is the goal, and moving water is key. A constant flow of cold clean water through incubation trays, tanks (approx. 40,000 per tank), and raceways flushes away potential build up of disease agents. If the water stops flowing, alarms sound and staff come running.

Adipose fin clipping simply helps us decipher a hatchery fish from a natural fish. CWT (coded wire tags) are inserted in to the snouts of a percentage of fish released that identify its origin. They are a tag as small as mechanical pencil lead that have to be read under magnification. They have a code that ties back to the agency releasing the fish, stock of fish, release location, and the brood year released.

An even smaller percentage of fish released receive a PIT tag. Which is a micro chip that can be scanned at arrays anywhere they are installed. This allows for real time data to observe migration, estimate mortality, estimate returns, etc...

The file recorded from a PIT tagged juvenile will have the same information as a CWT but with finer details like, weight, length, and date tagged, etc.



A Coded Wire Tag (CWT) compared to a penny.