

# Oregon's New Hatchery Research Center

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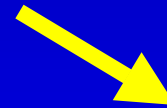
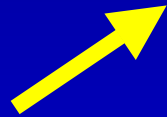
Contributors: With a special thanks to the IMST



# HATCHERIES

## Conventional

- Maximize smolt numbers
- Maximize in-hatchery survival



## Harvest

- Max adults
- Max post-release survival
- Min effects on natural production and watersheds

## Conservation

- Increase natural production
- Maintain nat. productivity

## Refuge

- Interim genetic repository

THEN

&

NOW

# Hatchery fish and wild fish, are they different?

**Yes**, they can be different in many ways



The only similarities in hatchery and wild environments for salmon were water and photoperiod. All else, food, substrate, density, temperature, flow regime, competitors, and predators, was dissimilar.

(Reisenbichler and Rubin) (In press).



# Hatchery Research Center

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***Mission:*** develop an understanding of the mechanisms that may create differences between hatchery and wild fish and devise ways to manage the differences so that hatcheries can be used responsibly in the conservation and use of Oregon's native fish.



# Hatchery Research Center

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**Principle objectives to accomplish that mission include:**

- Determine the pattern, rate and process by which wild fish change in the hatchery environment.**
- Determine the pattern, rate and process by which hatchery fish re-adapt to the natural environment.**
- Determine the consequences of hatchery fish and hatchery operations on native fishes.**
- Determine the best hatchery operations so that hatcheries can be used to contribute to fisheries and the recovery of native fishes.**



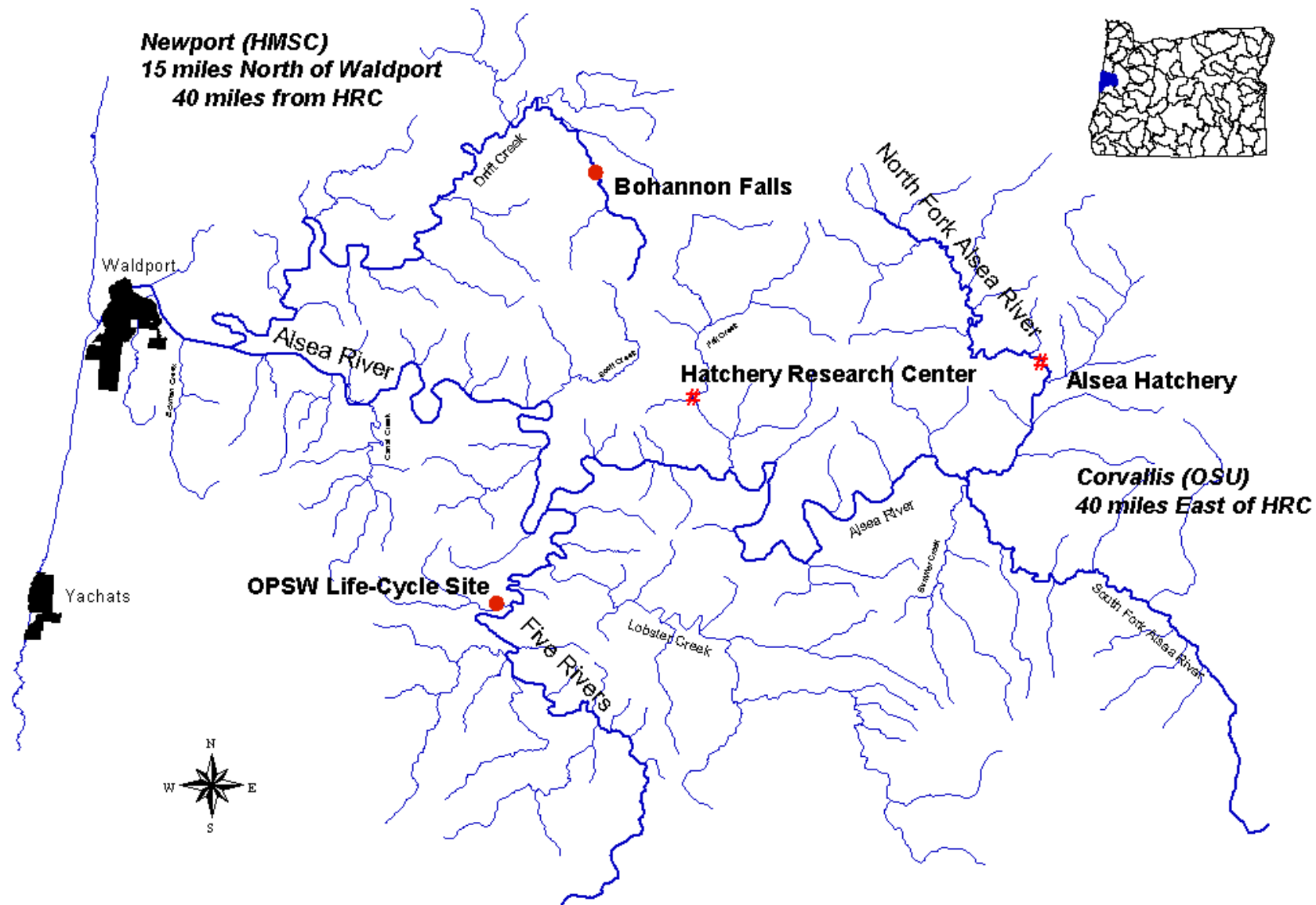
# Hatchery Research Center

## What will it be?

Remodel an existing (not currently in use) production hatchery into a state-of-the-art research facility including:

- Wide range of options for spawning, incubation and rearing experiments.
- Highly flexible facility that allows for scientific replication, treatment and controls.
- Intensive in-hatchery research and extensive basin-wide monitoring of both adults and juveniles.
- Small groups of fish with control of rearing and environmental conditions.
- Research focused on coastal management issues.







# Hatchery Research Center

Unique opportunities

## Coordination with other resources:

- Lab space at OSU and HMSC
- Conventional Hatchery located 20 miles upstream
- Life-cycle monitoring site 10 miles away
- Coho, chinook, steelhead and cutthroat native to basin

No production goals

Basin-wide monitoring in an area with an extensive research history



# Natural Rearing Experiments

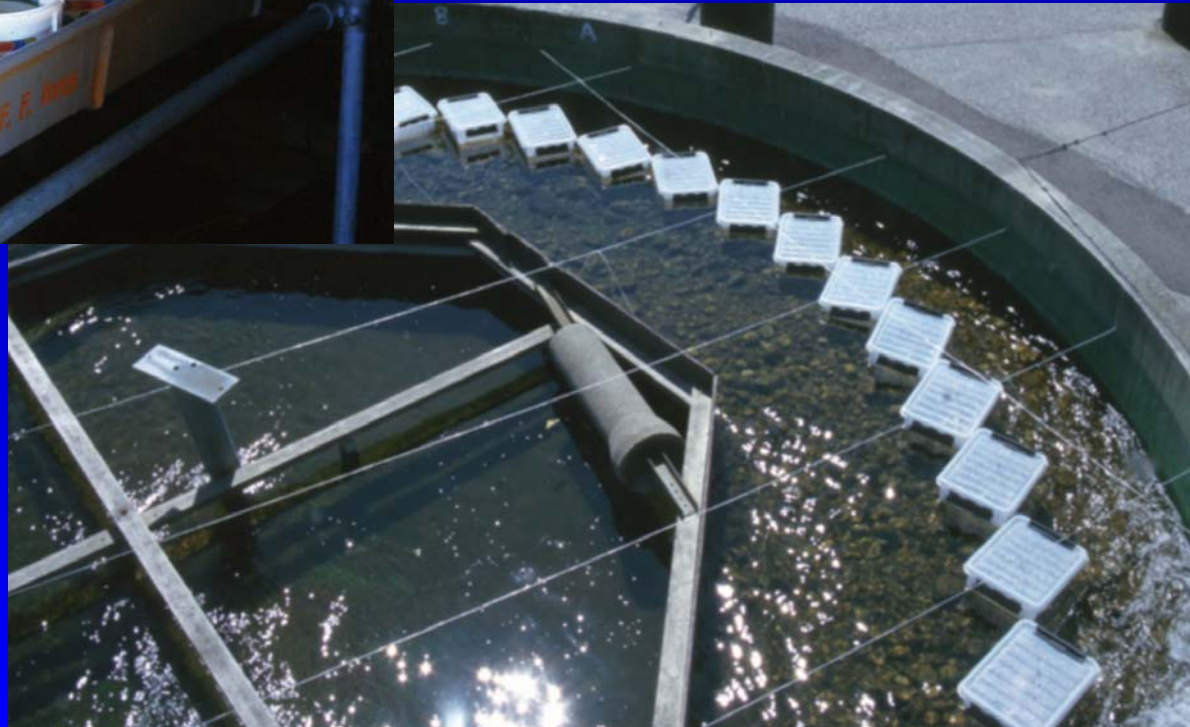




# Controlled Rearing Experiments



**Family Groups  
& Populations**





# Spawning Experiments







# Hatchery Research Center



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## Public Education and Outreach:

- Assist undergraduate students with the requirement for internship.
- Provide a facility and opportunity for graduate research at the M.S. and Ph.D level.
- Promote professional development programs for agency personnel throughout the state, region and globally.







# Funding

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**\$4.0 Million Measure 66 Capital Funds**

**\$1.125 Million Lottery Funds  
(Restoration & Protection Research Fund)**

**\$1.875 Million Other Funds**

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**Total \$7.0 Million Design and Construction**

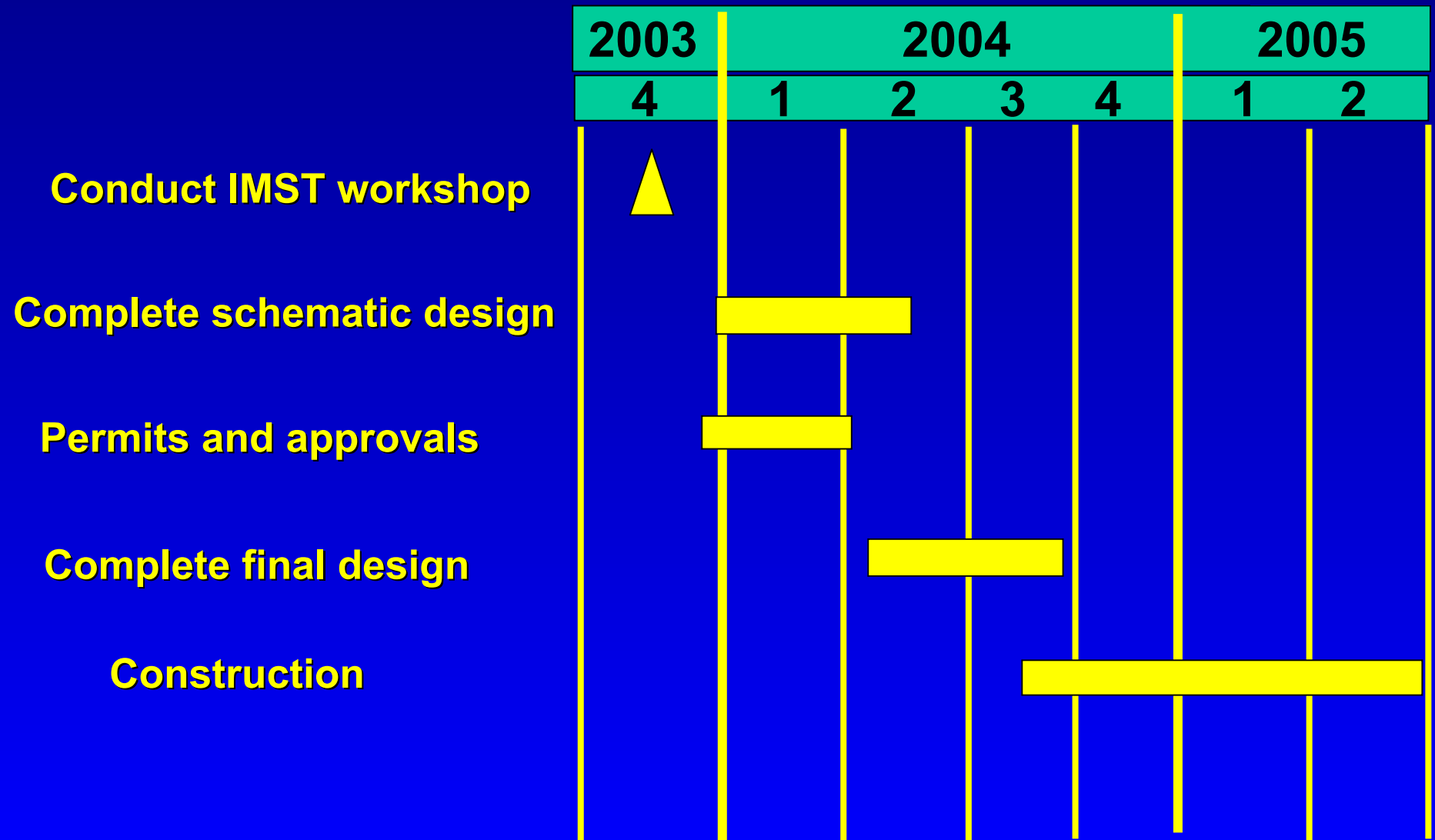




# Timeline to completion



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**You and your ideas can go to.....**

**The Hatchery Research Center**