




Chief Joseph Hatchery 2015 Annual Program Review

Chief Joseph Hatchery Program
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The Goals for Okanogan Basin Summer-Fall Chinook are to:

- *Increase abundance, productivity, and temporal-spatial diversity of naturally spawning Chinook in the Okanogan Basin*
- *Increase harvest for all fishers*

The Purpose of the CJH Program is to:

- *Increase harvest consistent with the natural production goals*
- *Support re-colonization of habitat*

The Goals for Okanogan Basin Spring Chinook are to:

- *Restore a harvestable, sustainable naturally spawning spring Chinook population in the Okanogan Basin*
- *Harvest for all fishers*
- *Contribute to recovery of the UCR ESU*

The Purpose of the CJH Program is to:

- *Re-colonize habitat in Okanogan*
- *Provide harvest consistent with the natural production goals*

Program Commitments

- *Adaptively manage Program consistent with “Decision Rules” and “Biological Targets” by adjusting smolt production and broodstock management to meet targets for:*
 - *pHOS, NOR escapement, pNOB, PNI, and Stray rates*
- *Achieve FCRPS and PUD mitigation production*

CJH Program Components

- Hatchery Production
 - Summer/fall Chinook
 - Spring Chinook
- Research/Monitoring/Evaluation
 - Within hatchery monitoring
 - Natural population monitoring

Hatchery Production

- Summer/Fall Chinook
 - Integrated
 - Yearling
 - Sub-yearling
 - Segregated
 - Yearling
 - Sub-yearling
- Spring Chinook
 - Reintroduction
 - Segregated

CJH Su-Fa Chinook Strategy

- *Two Program Components,*
 - *An Integrated component—releases in Okanogan River*
 - *A segregated component—releases from CJH*
- *Three Phases:*
 1. *Current—Similkameen Mitigation Program*
 2. *Transition (1 and 2)—CJH program with emphasis on harvest augmentation and habitat re-colonization*
 3. *Long Term—CJH program with emphasis on harvest augmentation and local adaptation of natural populations (i.e. low pHOS, High PNI)*

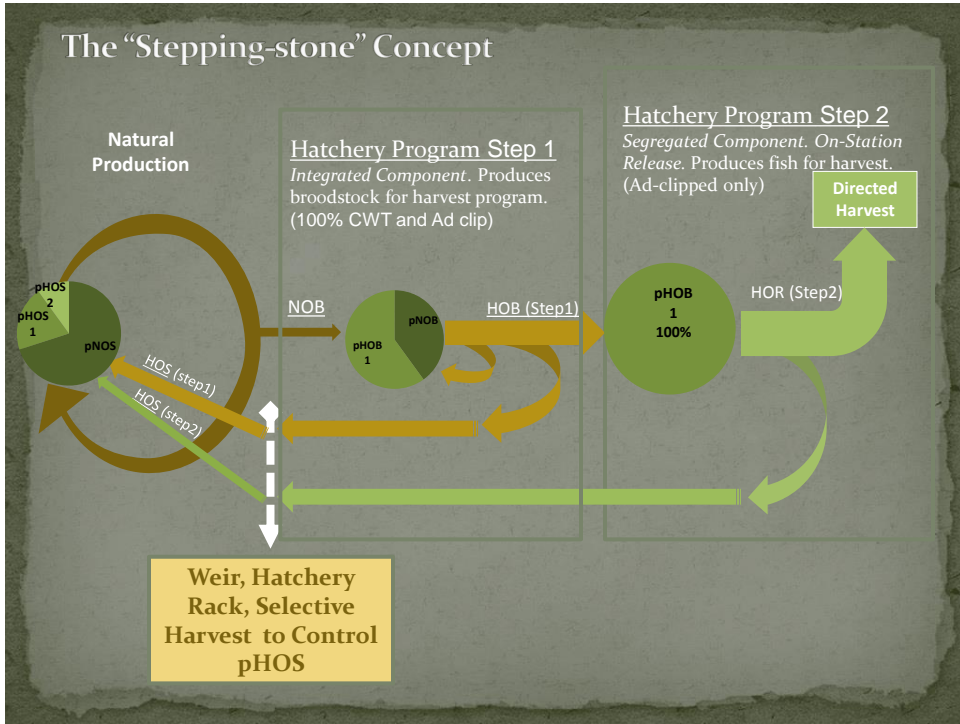
Program Type and Purpose

Summer Chinook

	Current	Transition		Long Term
	2009-2013	Period 1 2014-2018	Period 2 2019-2026	2027
Okanogan River Component	Integrated Conservation	Integrated Conservation	Integrated Conservation and Harvest	Integrated Harvest
Chief Joseph Hatchery Component	Not Applicable	Segregated Harvest (Stepping Stone)	Segregated Harvest (Stepping Stone)	Segregated Harvest (Stepping Stone)

Spring Chinook

	Phase 1- Re-colonization	phase 2- Reintroduction	Phase 3- Integrated Conservation
Okanogan River Component	Segregated Conservation	Integrated Conservation	Integrated Conservation
Chief Joseph Hatchery Component	Segregated Harvest	Segregated Harvest	Segregated Harvest



Hatchery Production (Maximum)

Phase	Current	Transition		Long Term
	2009-2013	Period 1 2014-2018	Period 2 2019-2026	2027
Okanogan River	576,000 yearlings	800,000 yearlings 300,000 sub-yearlings	875,000 yearlings	875,000 yearlings
Chief Joseph Hatchery	No Production	500,000 yearlings 400,000 sub-yearlings	600,000 yearlings	600,000 yearlings

	Phase 1- Re-colonization	Phase 2- Local Adaptation	Phase 3- Conservation
	2014 - 20??	?	?
Okanogan River Component	200,000 yearlings	?	?
Chief Joseph Hatchery Component	700,000 yearlings	700,000 yearlings	700,000 yearlings

Key Biological Targets

- Integrated Program (HSRG)
 - PNI > 0.67
 - pHOS < 30 Percent
- Segregated (Stepping stone) Program
 - pHOS < 5 Percent (within and outside Okanogan)
- Natural Population
 - Natural Origin Spawners (NOR) >5,000 Adults
 - Minimum NOR > 800

How Will Biological Targets be Met?

- Harvest/Adult Management:
 - Live capture, selective fisheries, hatchery surplus
 - Mainstem seining
 - Fish platforms
 - Beach seines
 - Sport fishing
 - HOR removal at CJH ladder
 - HOR removal at Okanogan Weir
 - Working with managers to reduce marine and lower Columbia harvest impacts to NOR's
- Hatchery Operations
 - Adjust program size consistent with NOR abundance, pHOS and PNI
 - Adjust smolt release numbers to address short-fall in pHOS and PNI
 - Adjust pNOB to address short-fall in pHOS and PNI, consistent with NOR abundance targets
 - On-station release of segregated fish (Stepping Stone)

Hatchery Production

- Segregated spring Chinook
- Re-introduction of spring Chinook
- Segregated summer Chinook
 - Early return
 - Late return
- Integrated summer Chinook
 - Early return
 - Late return

Segregated Spring Chinook

- Broodstock
 - Leavenworth National Fish Hatchery (LNFH)
 - Brood collected throughout return to LNFH
 - CCT CJH staff collect and transfer to CJH
- Smolt Release
 - Max. target production- 700,000 smolts
 - Release size- 30 grams
 - Smolt release location- CJH
 - Release date- mid-April 2015

Reintroduction of Spring Chinook

- Broodstock
 - Methow Composite HOB, Winthrop National Fish Hatchery (WNFH)
 - Brood collected throughout the return to WNFH
- Egg/Fish Transfer
 - CCT CJH staff to transfer eyed-eggs to CJH (post 2013 brood)
 - USFWS transferred BY-13 MetComp from Winthrop to Riverside Pond in fall of 2013.
 - Post BY-13, eyed-egg transfer from Winthrop NFH to CJH
 - Post BY-13, pre-smolt transfer to Tonasket or Riverside ponds
- Smolt release
 - Target release- 200,000 yearling smolts
 - Release size- 30 grams
 - Release location- Okanogan River
 - Release date- mid-late April

Segregated Summer Chinook

- Broodstock Collection
 - Hatchery origin brood (HOR)
 - Purse seine- Okanogan River confluence (July-early September)
 - CJH ladder (July-early November)
 - Tangle net- (July-October)
 - Okanogan weir (September-mid-October)
- Smolt Releases
 - Max. target release- 500,000 yearling and 400,000 sub-yearling smolts
 - Release size- 45 grams yearling; 11 grams sub-yearling
 - Release location- CJH
 - Release date- mid-late April 2015 (yearlings); mid-June 2014 (sub-yearlings)

Integrated Summer Chinook

- Broodstock Collection
 - Natural Origin Brood (NOR)
 - Purse seine- Okanogan River confluence (July-early September)
 - Tangle net- (July-October)
 - Okanogan weir- (September – mid October)
 - Wells Dam (late-August – September)*
 - Beach seine- Okanogan (mid-September-early October)
 - CJH ladder (mid September - early November)
- Smolt Releases
 - Max. target release- 800,000 yearling and 300,000 sub-yearling smolts
 - Release size- 45 grams yearling; 11 grams sub-yearling
 - Release location- Okanogan River
 - Omak Acclimation Pond (yearlings)
 - Omak Acclimation Pond (sub-yearlings)
 - Riverside Acclimation Pond (yearlings)
 - Similkameen Acclimation Pond (yearlings)
 - Release date- mid-late April 2015 (yearlings); mid-June 2014 (sub-yearlings)
- * - Contingency collection location based on degree of short-fall by end of the third week of August. Initiate collection at Wells to attain 75% of end of August collection target.

Research/Monitoring/Evaluation

- Address Key Management Questions
 - Is the hatchery meeting targeted production and within hatchery performance standards?
 - Are hatchery post-release survival standards being achieved?
 - What is the current status/trends of the naturally-spawning population in terms of VSP?
 - What is the current status/trends for hatchery returns and harvest/adult management?
 - Are hatchery program Biological Targets being achieved?
 - Are assumptions about natural production potential valid?

Research/Monitoring/Evaluation (Cont.)

- Facilitate Adaptive Management Within Scientific Framework
 - Assess the validity of Program Key Assumptions
 - Adjust Program Key Assumptions if warranted
 - Provide and update Program Biological Targets, consistent with Program Key Assumptions and hatchery and population status and trends
 - Annually, utilize the In-Season Implementation Tool (ISIT) to adaptively manage the program

Conclusions

CJH program will be implemented through

- ❑ *A science "Framework" defined by Key Assumptions, and supported by:*
 - ❑ *Annual Status and Trends updates and In-season Biological Targets and*
 - ❑ *Informed Decision Making, through adaptive management of which this APR is an important component*
- ❑ *A unified closely coordinated management program that incorporates mitigation for FCRPS, and mid-Columbia PUDs*

Thank you!

