Chief Joseph Hatchery Science Program Overview

Research, Monitoring & Evaluation Programs

Annual Program Review
March 5-8, 2013

CJHP RM&E Program Activity Overview

Hatchery Monitoring	Spawning and Carcass Survey	Adult Fish Management	Data Management
Okanogan Adult Fish Weir	Tag & Mark Programs	Habitat Status & Trend	**Analysis**
Juvenile Outmigration	Program Logistics	Habitat Restoration	**APR**

Central Facility – Bridgeport, WA

Example Attributes Monitored

- Brood Condition
- Mortality – all life stages
- Growth
- Tags and Marks
- Parentage
- Health
- Fecundity
- Returns to Hatchery Ladder
- *Et. cetera*

Okanogan Adult Fish Weir

Objectives and Attributes Monitored

- Adult Management – *objective: PNI, pHOS, harvest*
- Brood Stock Collection – *objective: genetics, race*
- Weir Efficiency
  - Capture
  - Transport - to hatchery
  - Release - of adult NOR's, retention of HORs', etc.
- Weir Effects
  - Delay
  - Mortality
  - 24/7 video observations, 5d/daylight direct observations
  - Passage of non-target species
  - Ecological Site Conditions, etc.
- Permanent Design and Protocols

Capture, tagging, genetics, etc.

Juvenile Sampling Objectives

- Stock Composition
- Species Composition
- Timing (e.g., sockeye for hydro passage programs)
- Abundance Estimates (new "R" based approach)
- Baseline NOR abundance v. future total abundance
- HOR release survival, timing and condition
- Baseline Genetics v. future genetic profile's
- Survival Estimates
- Tagging 25k NOR CK.

Redds and Deads

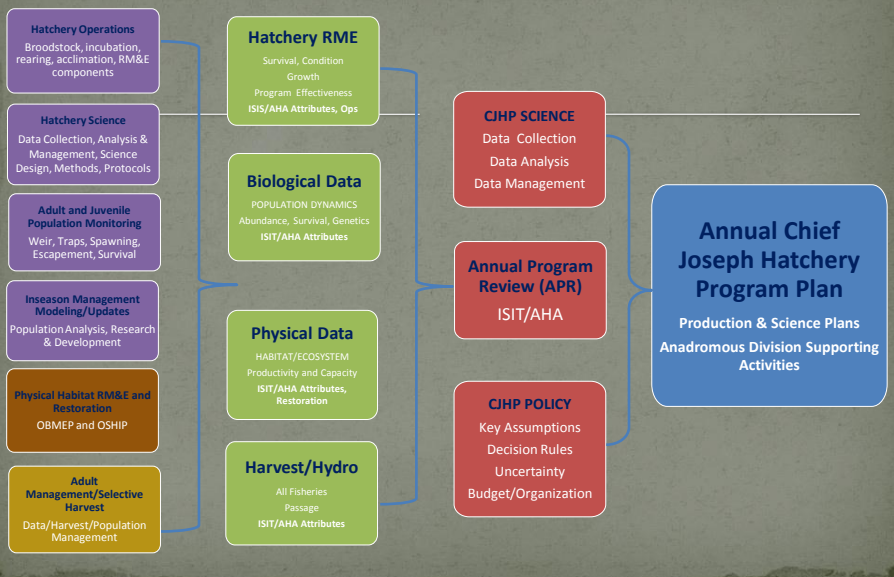
Adult Sampling Objectives

- pHOS
- pNOS
- PNI
- SAR
- Total Abundance
- Escapement
- Age-at-Return
- Freshwater rearing time
- Distribution

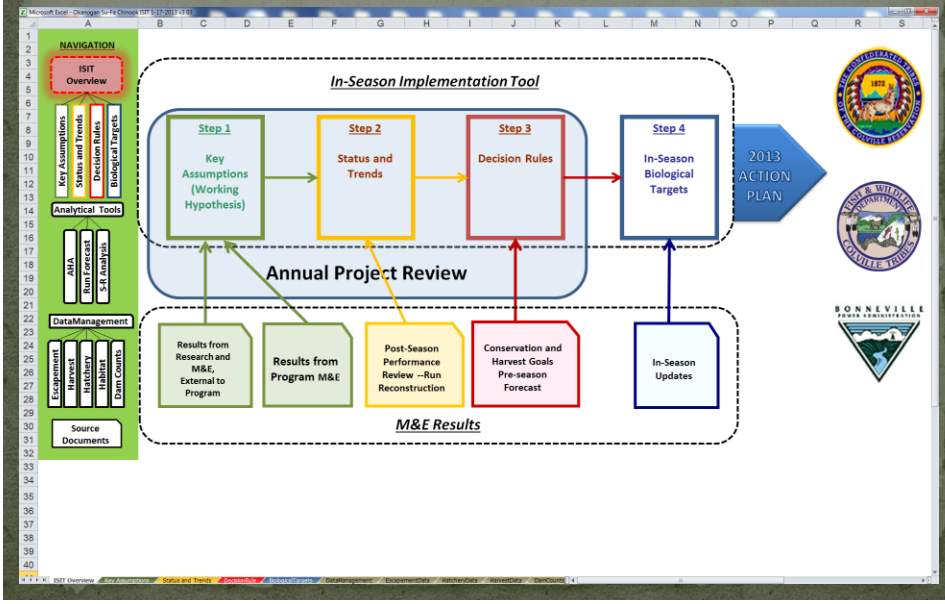
- *See "Glossary of Terms" in briefing books for definitions*

Field Offices, Acclimation Sites etc.

Annual Planning Workflow



Analysis



Data Collection & Management

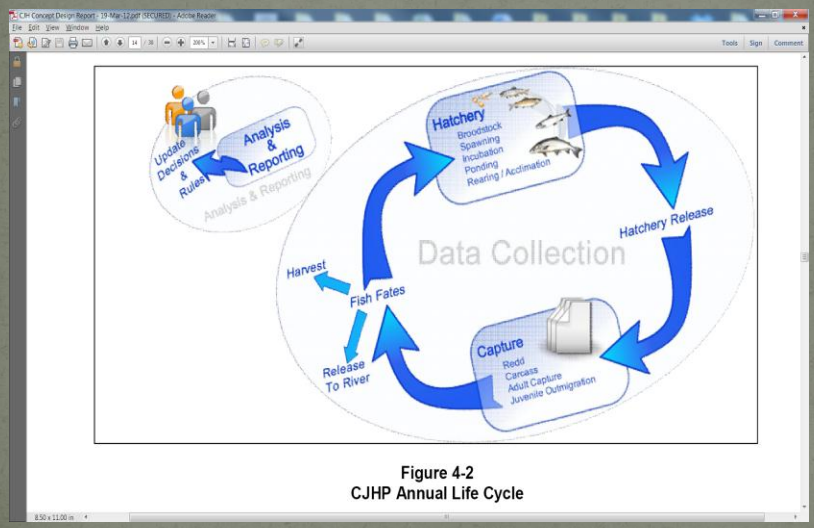


Figure 4-2
CJHP Annual Life Cycle

Data cont.

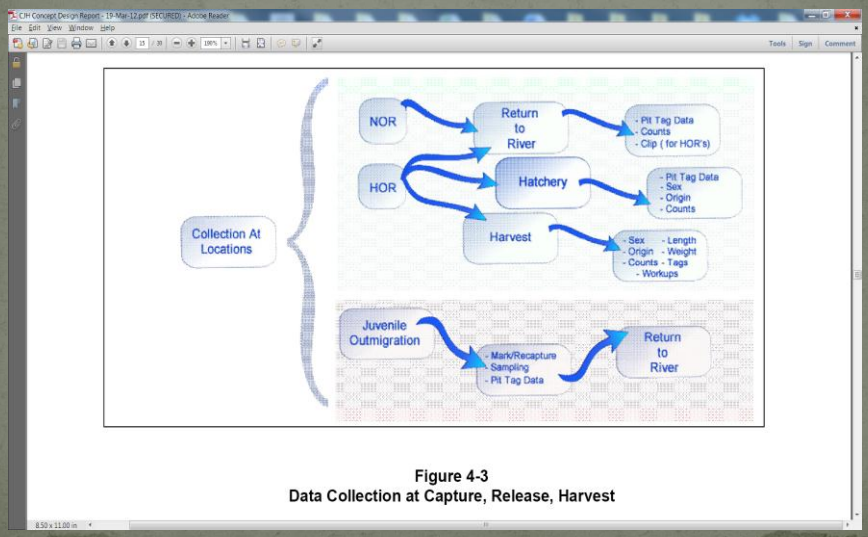
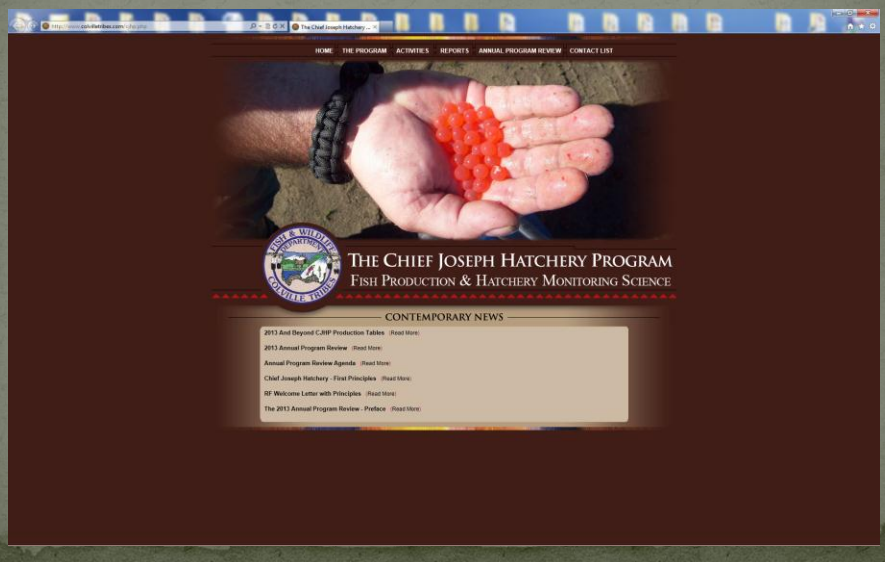


Figure 4-3
Data Collection at Capture, Release, Harvest

Reports, Information, Program Info

www.colvilletribes.com/cjhp.php



Conclusions

1. *Science and RM&E are integral parts of the CJHP*
2. *The Program is consistent with Hatchery Reform*
3. *The Program Principles are well-defined*
4. *The CJHP is an integrated part of the CCT's Anadromous Fish Division*
5. *The APR serves as an annual Division meeting to evaluate the CJHP and plan for the future.*

Thank you to BPA, the Upper Columbia PUD's and all of our APR collaborators.

Fresh Fish – NOR's of Course!

Picture courtesy of Brian Miller, CCT Fish Biologist