# A Study to Evaluate Delayed (Extra) Mortality Associated with Passage of Yearling Chinook Salmon Smolts through Snake River Dams

Project No. 200304100

NOAA FISHERIES
NATIONAL MARINE FISHERIES SERVICE

# STUDY OBJECTIVE

Determine if passage through three Snake River dams and reservoirs results in extra mortality in yearling Chinook salmon smolts

# EXPERIMENTAL DESIGN

- PIT Tag Study Groups at LGR
- Transport One Group for Release below IH
- Release Two Other Groups below LGR—One Transported, One Not Transported
- Study Fish Those Detected at MCN
- Adult Returns Detected at BVL

# STUDY TASKS

- Design and construct a new, state-of-the-art juvenile fish marking facility at Lower Granite Dam


2005 4 19


2005 4 20


2005 5 4


2005 5 11


2005 5 11


SORTING STATIONS
2005 5 18
2005 5 4

# STUDY TASKS

- Design and construct a new, state-of-the-art juvenile fish marking facility at Lower Granite Dam
- PIT tag sufficient numbers of yearling Chinook salmon to satisfy the study design in each of 3 years (301,000 fish per study year)

# 2005 Juvenile Tagging

- Tagged from 3 May to 19 May

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- Released 47,352 hatchery Chinook salmon*
  - **LGR (no transport) 22,934**
  - **LGR (4 hour transport) 13,506**
  - **ICH (4 hour transport) 10,912**

*** On 7-8 May, heavy rains above Lower Granite Dam caused very high turbidity (chocolate-milk-like) in the Snake River which flushed nearly the entire second half of the smolt migration past the dam over a 2-5 day period.**

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  - ICH (4 hour transport) 10,912
- **Detections at McNary Dam**

| | | |
|---|---|---|
| **LGR (no transport)** | **6,221** | **27.1%** |
| **LGR (4 hour transport)** | **3,644** | **27.0%** |
| **ICH (4 hour transport)** | **3,831** | **35.1%** |

# STUDY TASKS

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- Recover adults during upstream passage at Bonneville Dam

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- Recover adults during upstream passage at Bonneville Dam
- Report results


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