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Anadromous Fish Evaluation Program

Summary of 2006 Research

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Portland District Projects

- John Day Dam
  - Turbine and tailrace survival
  - Plan for 2007
- The Dalles Dam
  - Spillway Studies
  - Plan for 2007
- Bonneville Dam
  - Corner Collector PIT detection
  - Survival (Pool, Project, Spillway)
  - Plan for 2007
- System
  - Turbine Survival Program
  - JSATS Tag Effects
  - Post-FCRPS Survival
  - Future Plans

John Day Dam: *2006 Operations*

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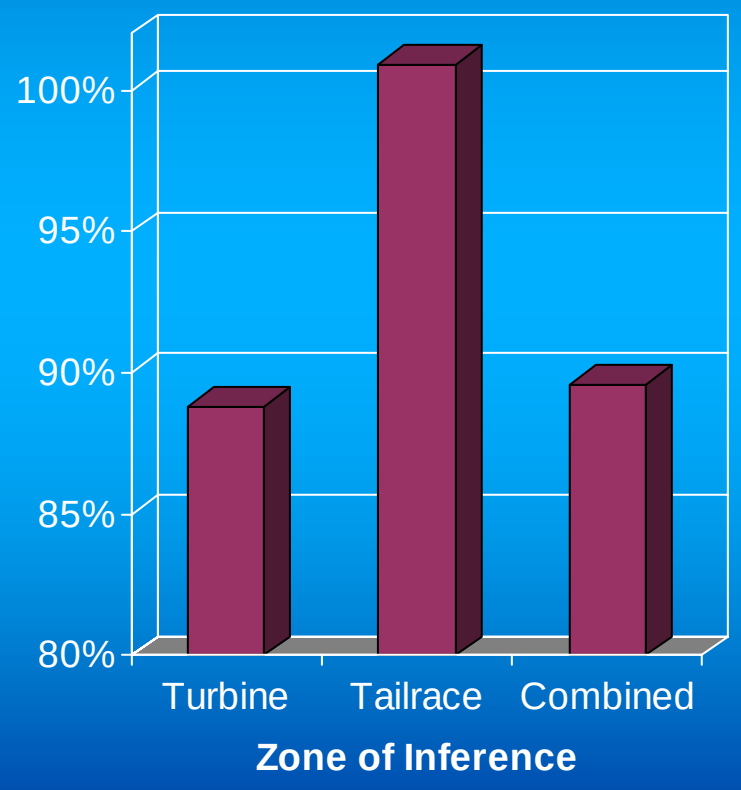
John Day Dam: *Turbine and Tailrace survival*

- **2006 Studies**
  - **Release Locations**
  - **Results**
  - **Conclusions**
- **Plan for 2007**
  - **TSW Development**



The Dalles Dam: *2006 Operations*

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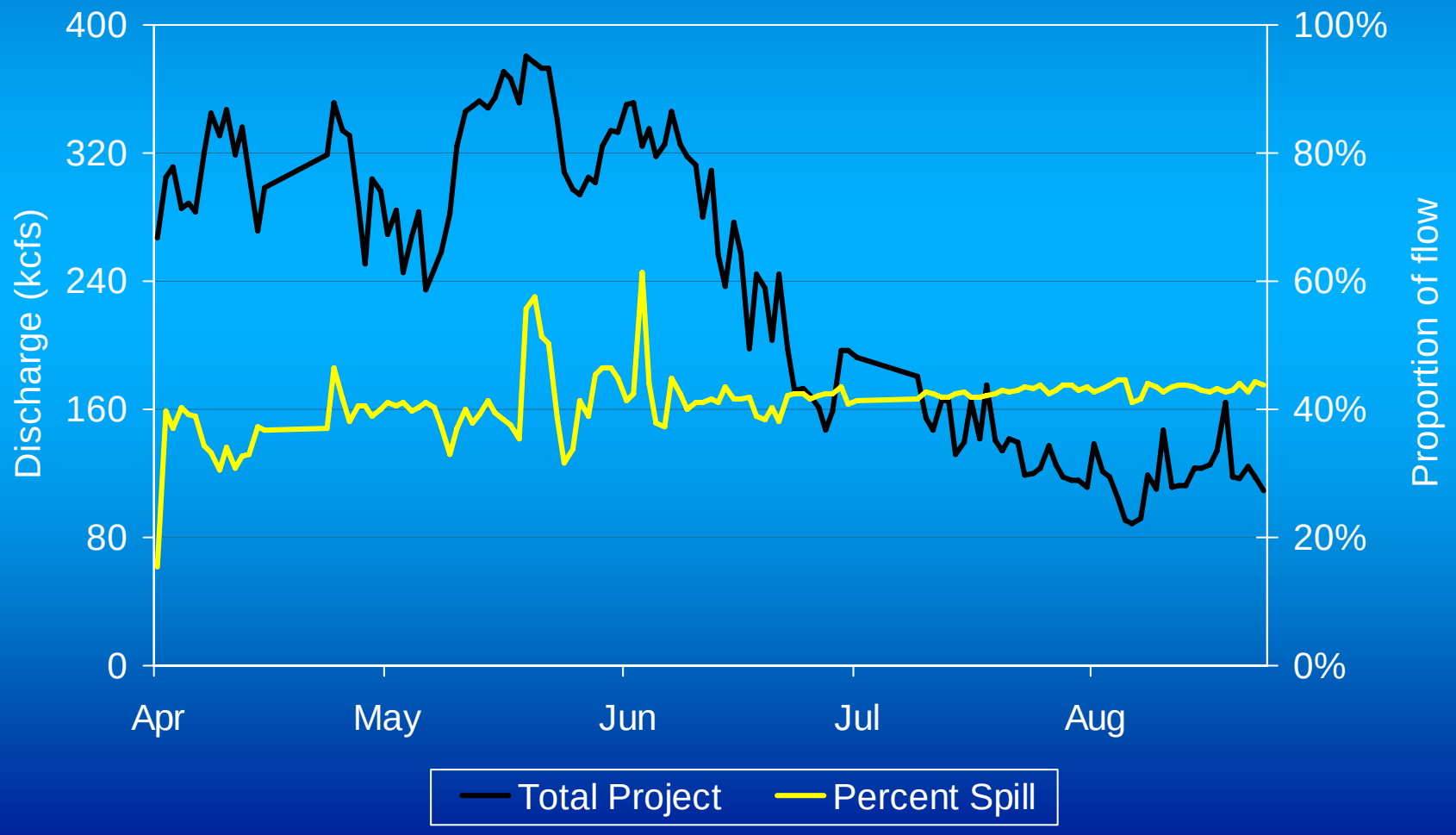

The Dalles Dam: *Spillway Studies*

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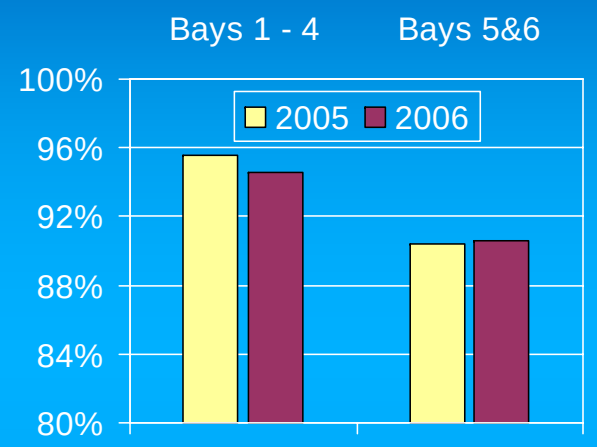
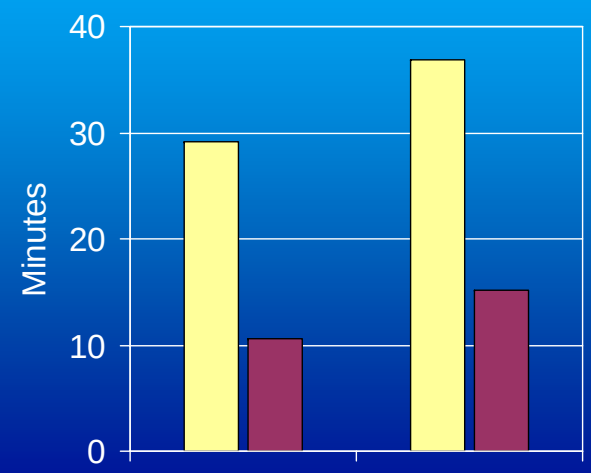
- **Spillway Vortex**
  - ***Distribution***
  - ***Survival (SR)***
  - ***Tailrace Egress***
- **Project Survival (PR)**
- **Plan for 2007**

Survival



Tailrace Egress



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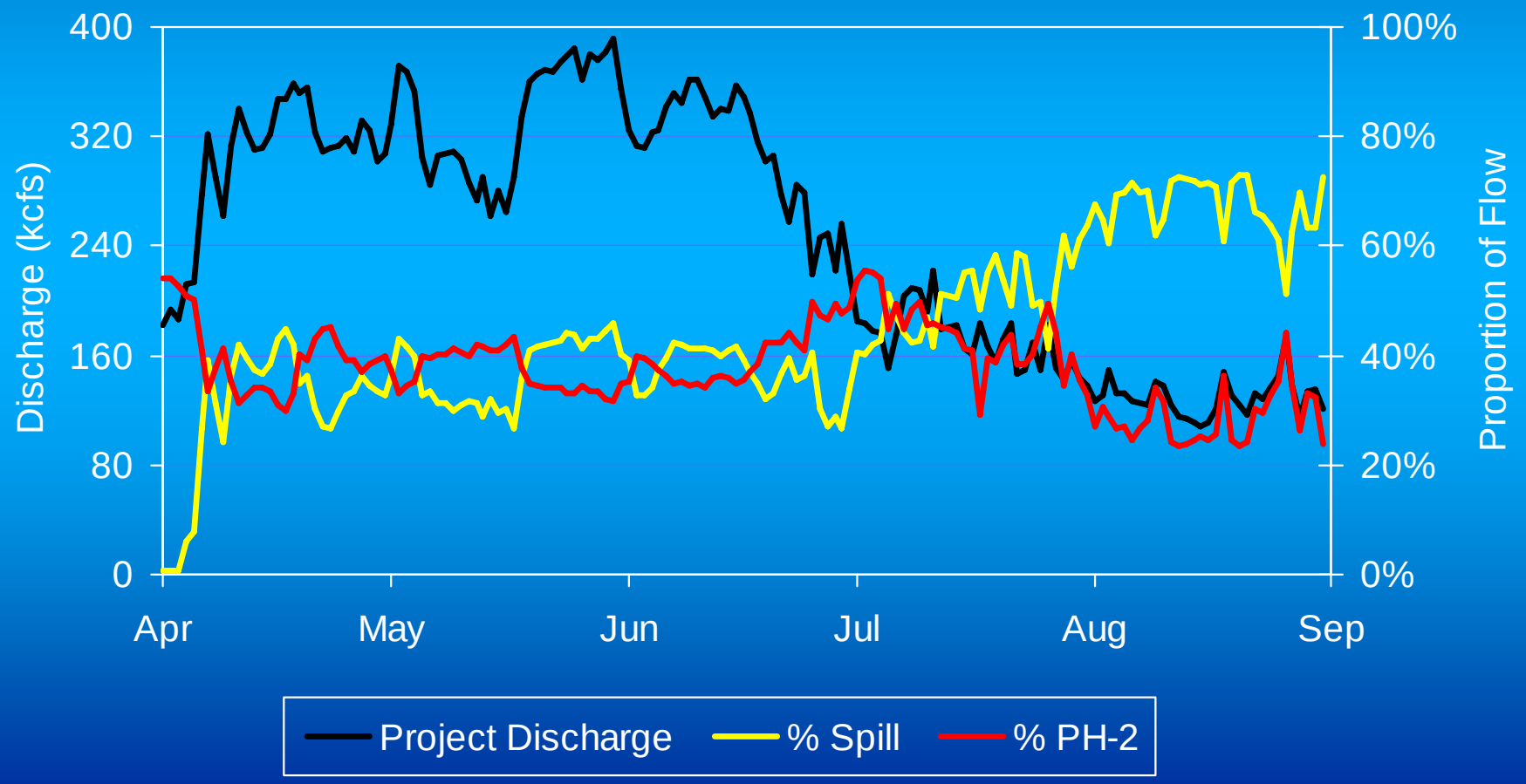
Bonneville Dam: *2006 Operations*



Bonneville Dam: *Detection and Survival*

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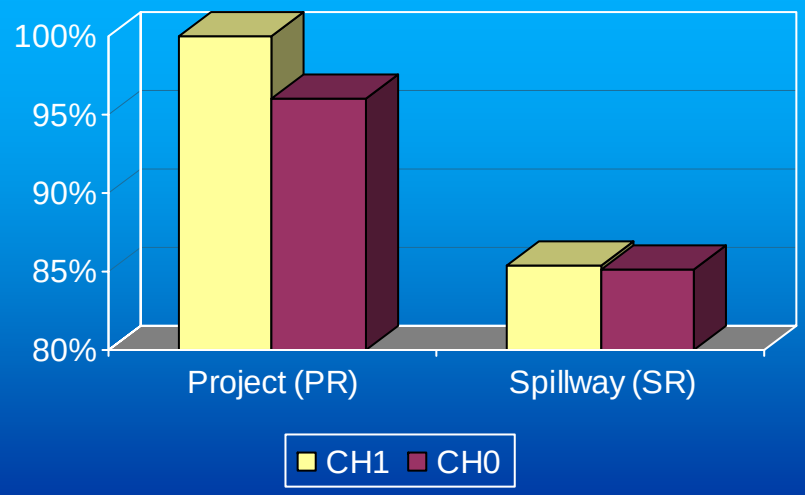
- **B2CC PIT Detection**
  - *ROR CH1 w/ST = 52%*
  - *ROR CH1 w/SST = 69%*
  - *Direct w/SST = 60%*
- **Survival**
  - *Yearling Chinook*
    - *Project (16 May – 05 June)*
    - *Spillway (01 June – 07 June)*
  - *Subyearling Chinook*
    - *Project (12 June – 15 July)*
    - *Spillway (12 June – 15 July)*
- **Plan for 2007**



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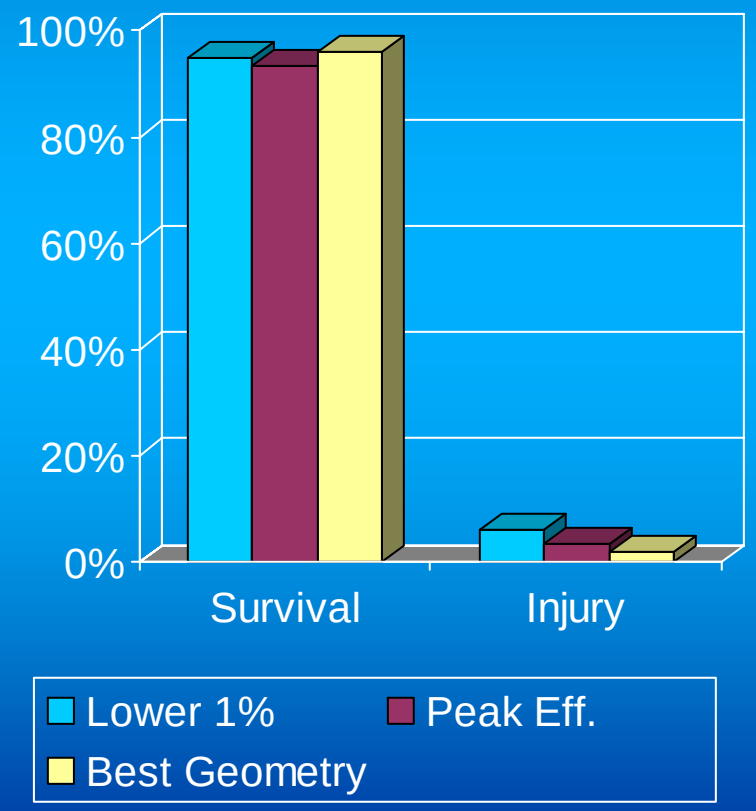
System Wide: *Turbine Survival Program*

- Biological Index Testing
- Results
- Conclusions
  - Best geometry provided the most benign passage



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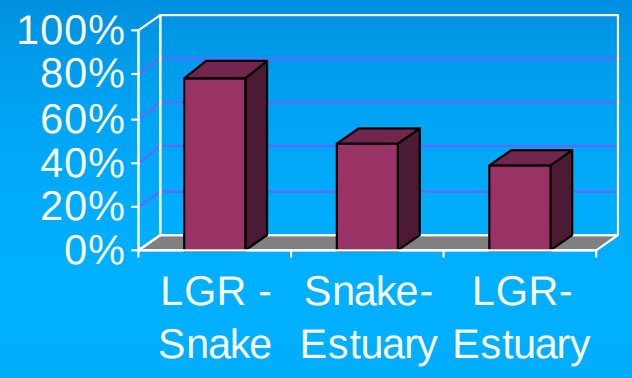
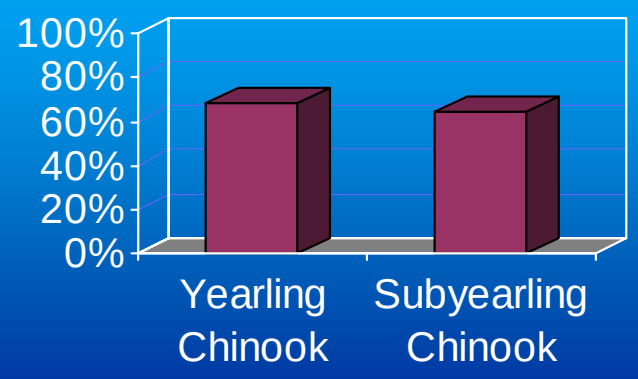
System Wide: *Post-FCRPS Survival*

- Two release locations
  - LGR Tailrace
  - Bonneville Tailrace



- Results
  - LGR to Estuary
  - Bonneville to Estuary



- Conclusions

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System Wide: *Tag Effects –Results and Conclusions*

- **Tag Effects Study: JSATS vs. PIT**
  - **Field**
    - ***Survival***
    - ***Timing***
    - ***Detection Probability***
  - **Laboratory**
    - ***Predator avoidance***
    - ***Survival***
    - ***Tag Loss***
    - ***Growth***

•Not significantly different, however, sample sizes preclude ability to measure small differences

•No evidence of bias for CH1 or CH0

•No evidence of bias for CH1

•Evidence of bias for CH0 < 95 mm in fork length

- ***Plan for 2007***

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