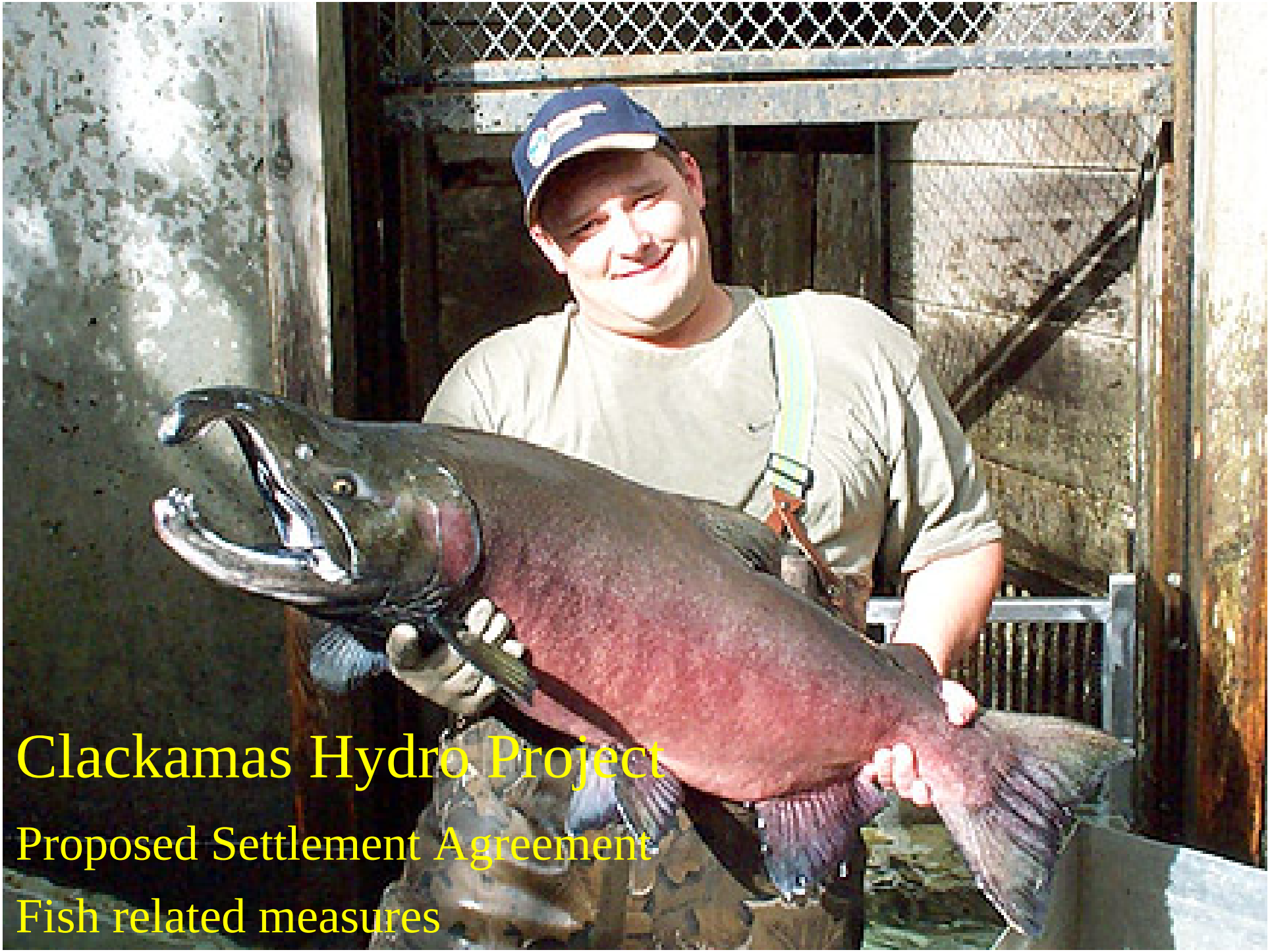


Clackamas Hydro Project

Proposed Settlement Agreement

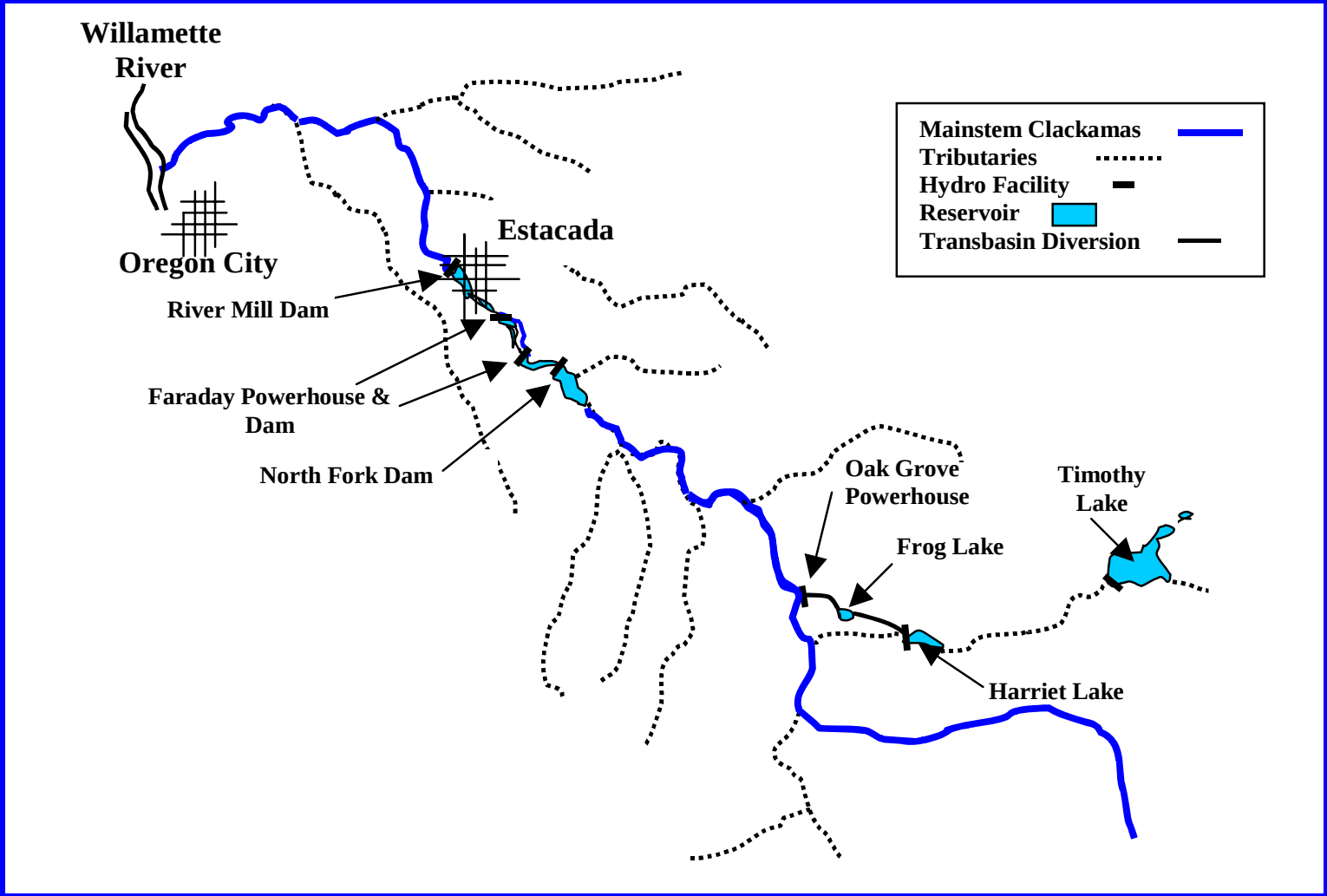
Fish related measures

Clackamas Hydro Project
August, 2006

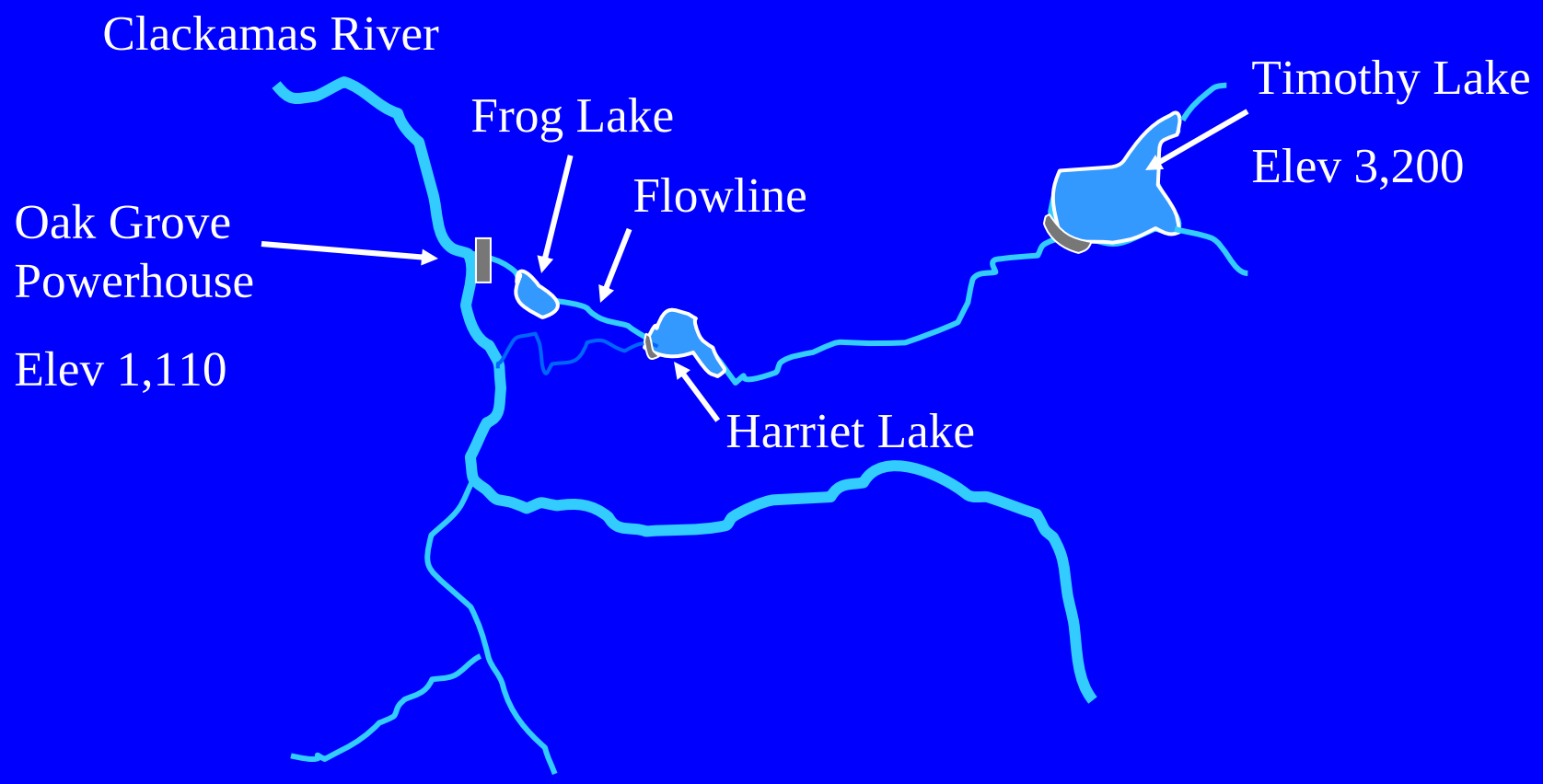
- **Oak Grove**
  - **Timothy Dam**
  - **Harriet Dam**
  - **Frog Lake**
  - **Powerhouse**
    - **44 Mw**

- **North Fork**
  - **North Fork Dam & PH**
    - **54 MW**
  - **Faraday Diversion Dam**
  - **Faraday Lake & PH**
    - **44 MW**
  - **River Mill Dam & PH**
    - **25 MW**

North Fork Hydro-Facilities on the Clackamas River, Oregon



Upper Clackamas - Oak Grove Project



Timothy Lake

- Reservoir level restrictions
- Brook Trout and kokanee spawning disruption
- Habitat enhancements
- Population monitoring
- Flow release restrictions

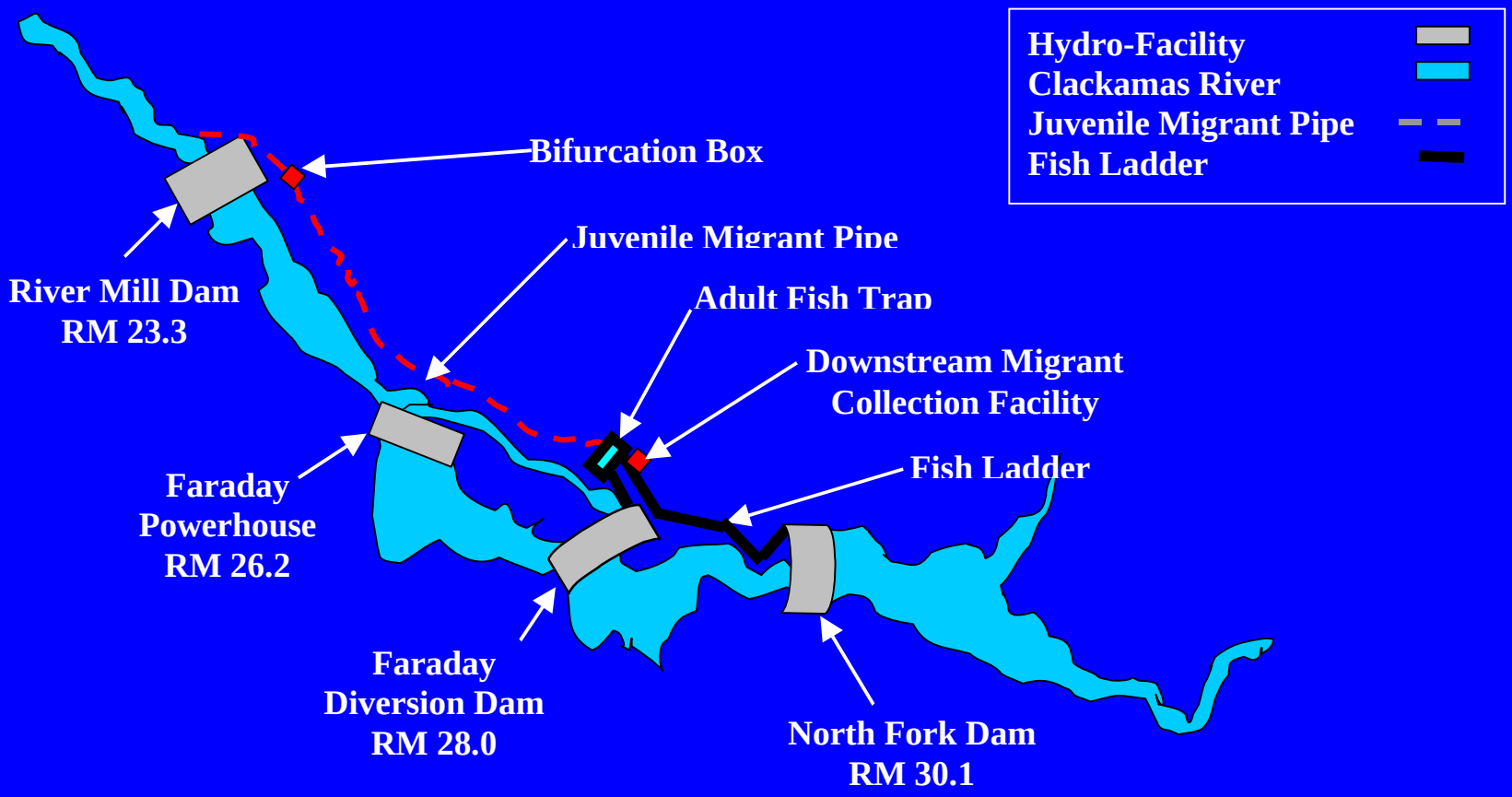
Harriet Lake

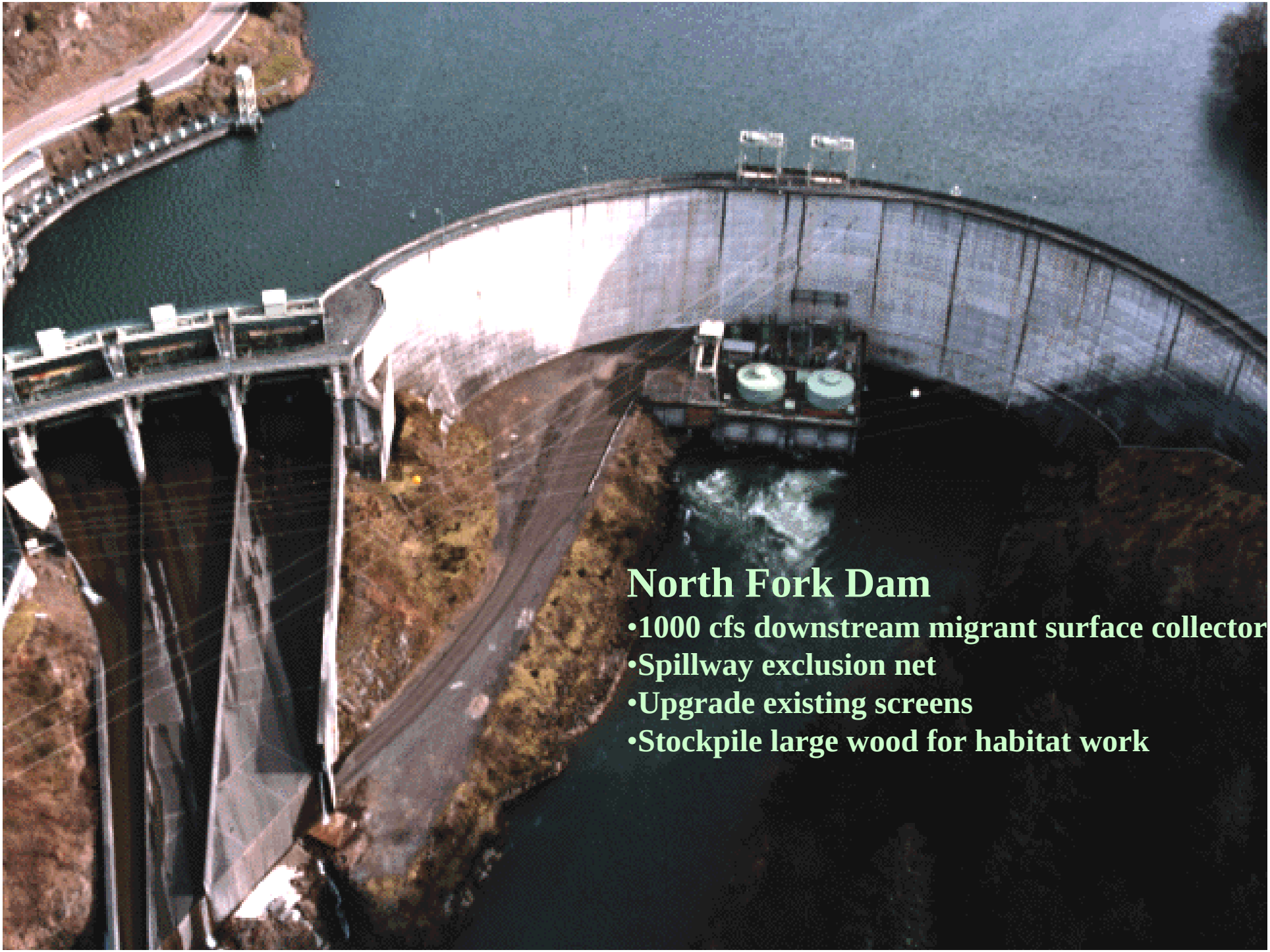
- Flow releases
- Gravel augmentation
- Habitat structures
- Side channel enhancements

Oak Grove Powerhouse

Ramping rate restrictions

North Fork Fish Facilities - Clackamas River





North Fork Dam

- 1000 cfs downstream migrant surface collector
- Spillway exclusion net
- Upgrade existing screens
- Stockpile large wood for habitat work

North Fork Fish Facilities

- New adult trap and sorting facility
- Cool water intake
- Extend downstream migrant pipeline
- New downstream migrant trap
- Remove old separator

Faraday Diversion Dam

Increase minimum flow 90 cfs
Pulsed flows for adult chinook

Faraday Powerhouse
No changes unless needed

River Mill Dam

- 500 cfs downstream migrant surface collector
- New adult ladder
- Improve spillway passage
- New downstream migrant outfall
- Reservoir restrictions to protect spawning
- Relocate boat ramp

Clackamas Below River Mill

- No ramping - run “natural” flows
- Gravel Augmentation – minimum 8,000 cu yds/yr
- Fund hatchery for 10 years- 100K 5years than 50K
- $50k/ year for 10 years to study effects of hatchery fish
- $250K to implement measures to reduce hatchery impacts
- Address high water temperature

Project Wide

- Studies to determine effect on adult migration/survival
- Studies to determine effect on juvenile survival
- Lamprey program
- 8 million dollar mitigation and enhancement fund to be used on “fish resources and habitats in the Clackamas Basin.”