

# **Yakima River Basin Integrated Water Resource Management Plan**

**Update on Kachess Inactive, K to K  
Conveyance and Operational  
Guidelines  
March 13, 2013**

# Operational Guidelines Group

- **NMFS**
- **USFWS**
- **Yakama Nation**
- **Reclamation**
- **Ecology**
- **Irrigators**
- **WDFW**
- **Yakima County**
- **City of Yakima**
- **American Rivers/National Wildlife Federation**

# **Kachess Inactive Storage – Tunnel or Pump Station?**

- **Two Options in the Integrated Plan**
- **Tunnel**
  - Discharge 4.5 miles downstream of KRD intake
  - Tunnel capital cost = \$279 million, O&M cost = \$280k/year
- **Pump Station**
  - Discharge to Kachess River, upstream of KRD intake
  - Pump Station capital cost = \$205 million, however O&M cost = \$920k/year
- **If tunnel used, how are KRD water supply, Keechelus and Easton Reach flows affected?**

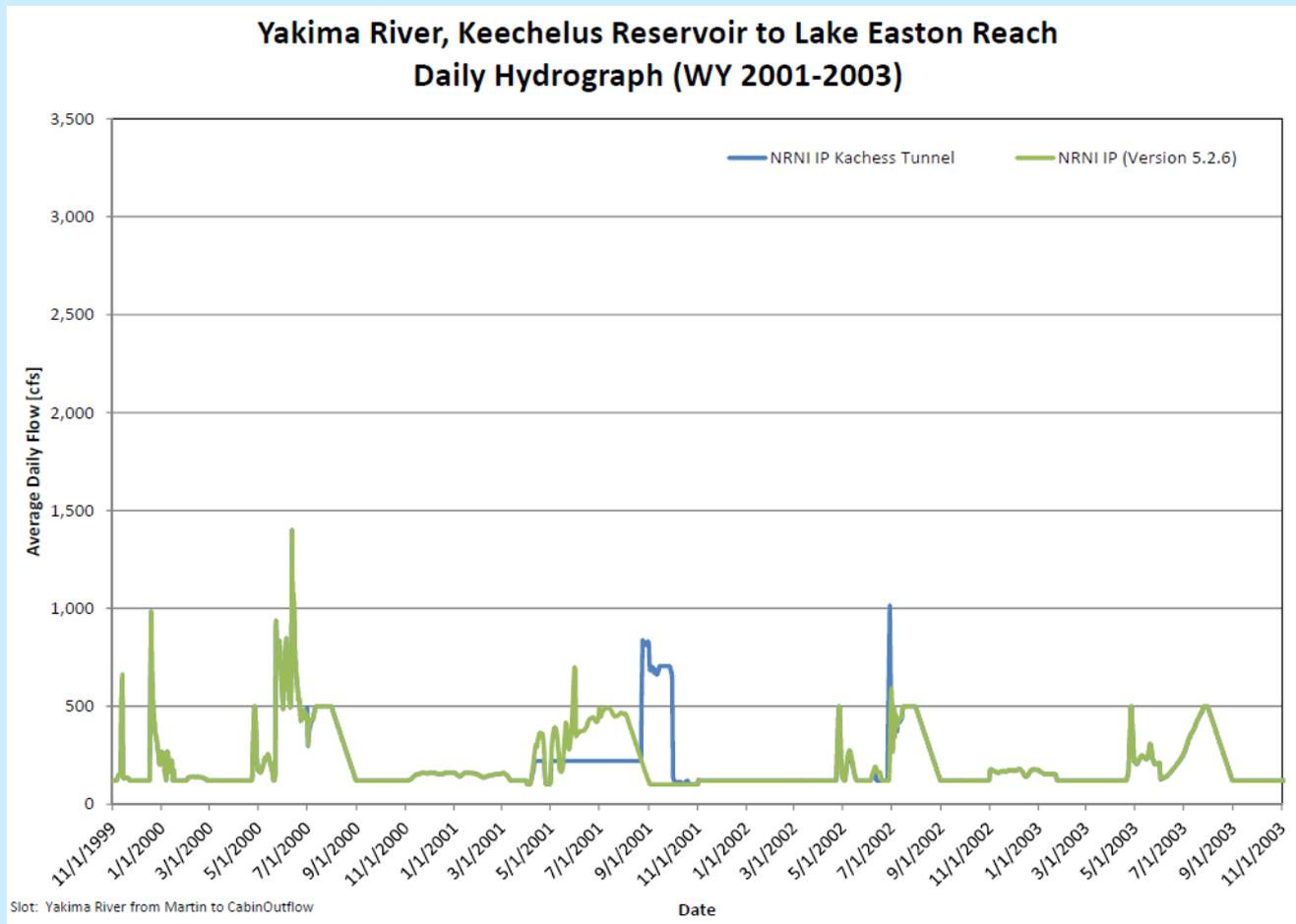
# **Kachess Inactive Storage – Modeling Evaluation for Tunnel Option**

- **Additional hydrologic modeling performed**
  - **Analyzed Tunnel option using Keechelus Reservoir as primary supply to KRD during drought years**
- **Results indicate:**
  - **No change in TWSA**
  - **Water supply to KRD reduced in drought years up to 20 kaf starting about Sept 1**
  - **K to K conveyance not used in drought years**
  - **More flow in Keechelus Reach of Yakima River during summer in drought years**

# Kachess Inactive Storage – Modeling Results for Tunnel Option

- Flow results example, flows in Keechelus Reach from 2001-2003

Green – IP run  
Blue – with tunnel



# Kachess Inactive Storage – Next Steps

- **Further evaluate**
  - **Operational refinements**
  - **Pump station at Swauk Creek into KRD North Branch Canal (100-300 cfs)**
- **Review potential for K to K Conveyance bifurcation to deliver water to Kachess River**
- **Discuss and make recommendations on preferred approach**

# **K to K Conveyance – Alternative Inlet Locations**

- **At Keechelus Dam**
  - More expensive
  - Dam safety concerns complicating factor
- **At Crystal Springs campground (8,000 ft. downstream of dam)**
  - Cost saving potential in \$25 million range but not yet determined
  - Possible issue with flow regime upstream of inlet
  - Possible maintenance issue with diversion dam
- **Feedback at last meeting**
  - Preferred inlet location at Keechelus Dam,
  - Second location an alternative in case first location not feasible
  - Need to better understand dam safety concerns

# Operational Guidelines

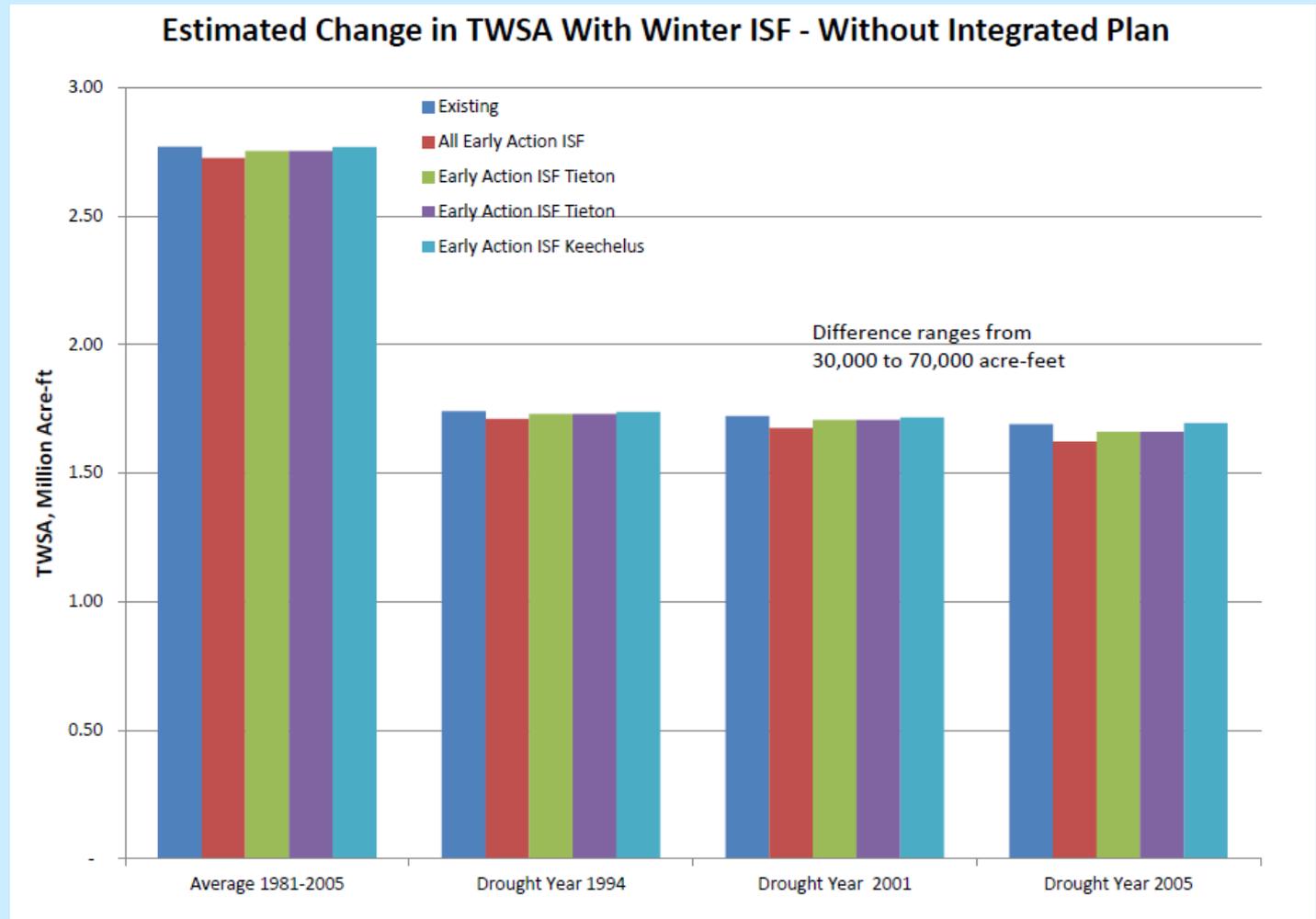
- **Purpose –develop guidance for IP new storage to meet instream and out of stream needs**
- **Discussion Topics**
  - **New fish/flow management group (amend or replace SOAC)**
  - **Buckets or no buckets, building in flexibility for operations**
  - **Water supply contracts with proratables**
  - **Wymer Reservoir operations**
  - **Strengthen characterization of commitment for meeting instream flows**
  - **Phasing of projects and interim operations including provision of winter flows in Keechelus Reach, Cle Elum River and Tieton River**

# Operational Guidelines – Next Steps

- **Revise guidelines and circulate to Operational Guidelines group for comments and further refinement**
- **Bring recommended guidelines to YRBWEP Workgroup for consideration**
- **Continue discussions around legal issues**

# Operational Guidelines

- Results prior to IP



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- Results prior to IP

