

RECLAMATION

Managing Water in the West

Fall 2013 HFE Lessons Learned

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Bureau of Reclamation

Glen Canyon Dam
Adaptive Management Program
TWG Meeting
January 30, 2014



U.S. Department of the Interior
Bureau of Reclamation

HFE Decision Making Process

1. Planning and Budgeting Component

- Annual resource status assessment
- GCDAMP Annual Reporting (Jan 28-29, 2013)
- GCDAMP Budget and Work Plan Process

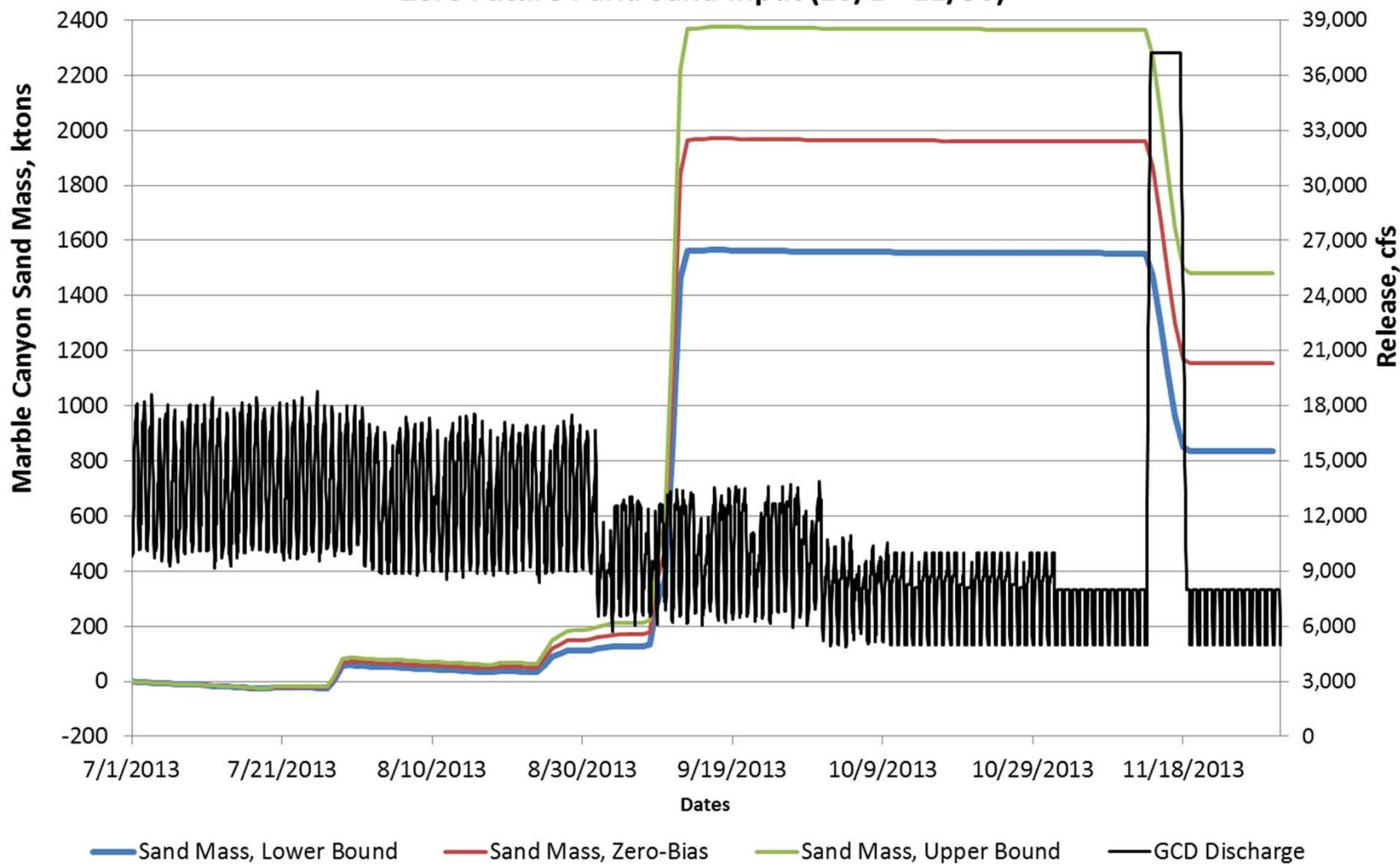
2. Modeling Component

3. Decision and Implementation Component

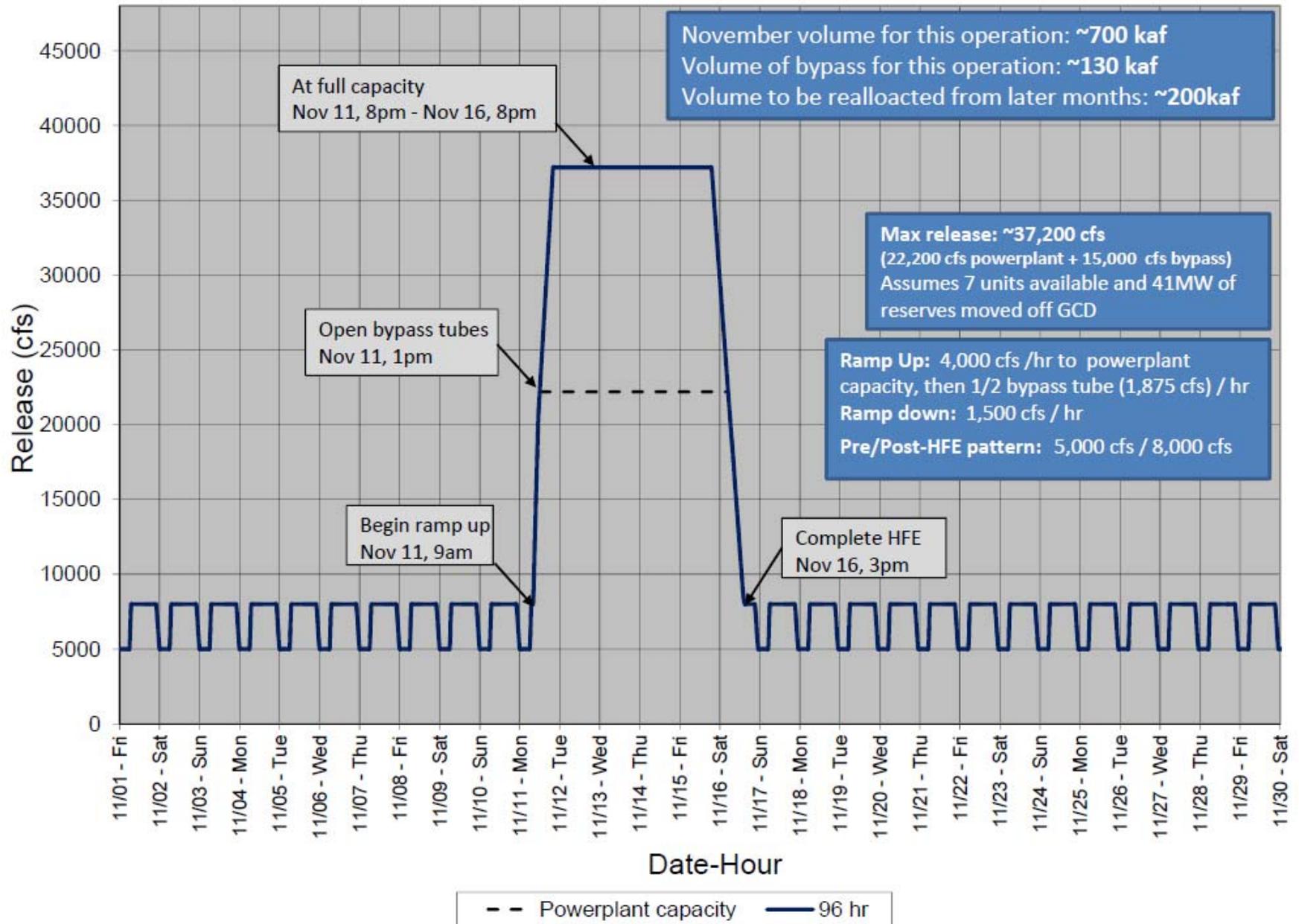
- Review Modeling Component
- Review Status of Resources
- GCDAMP- Consultation with agencies and tribes, AMWG and TWG presentations
- Basin States Consultation
- DOI/DOE Technical Team Recommendation/DOI GCD Leadership Team Decision (Oct 25, 2013)

****PROVISIONAL****

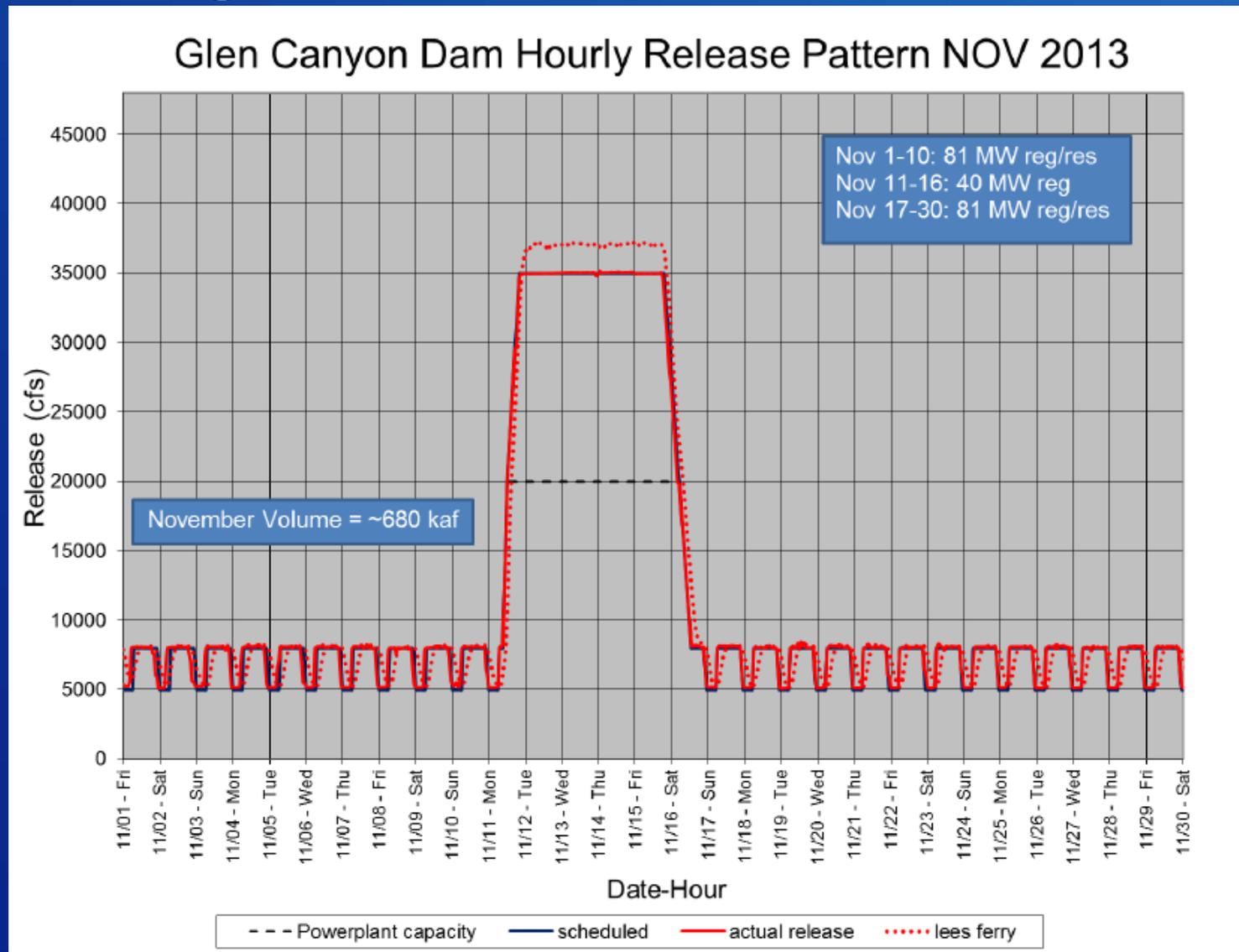
**Sand Budget Model Results, 2013 Jul - Nov
Paria Sand Input through 9/30/2013
Zero Future Paria Sand Input (10/1 - 11/30)**



Possible Glen Canyon Dam HFE Release Pattern



2013 High Flow Experiment



Lessons Learned, Key Questions, Next Steps

1. The Protocol is working, with some caveats.
2. The Protocol is easier to implement because stakeholders understand it better.
3. Stakeholders want more reporting.

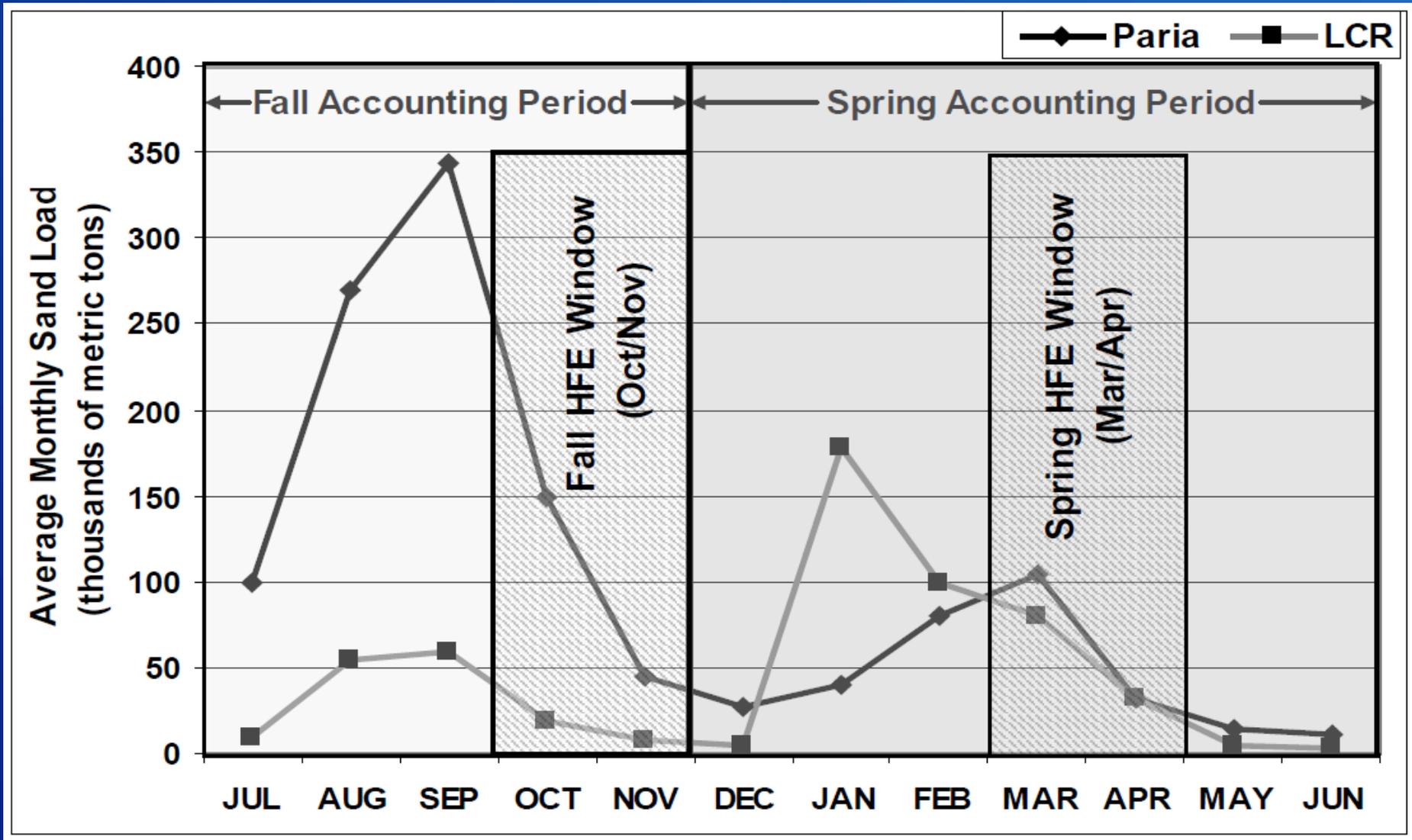
Key Questions

1. Do effects to hydropower get passed on to ratepayers?
2. Are HFEs creating trout at the LCR?

Next Steps

1. Meet with the HFE MOA consulting parties and consult with tribes on Feb. 12 in Flag.
2. Keep implementing the Protocol.

Modeling Component



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Resource Status Assessment

Sediment Resources

In-channel sediment storage

Sandbar campable area

High-elevation sand deposits

Cultural Resources

Archaeological site condition and stability

Access to archaeological sites by tribes

Biological Resources

Aquatic food base

Lees Ferry trout population

Lees Ferry fishery recreation experience quality

Endangered humpback chub and other fish abundance

Riparian vegetation

Hydropower and water delivery

Water quality

Water delivery

Dam maintenance

Hydropower production and marketable capacity

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HFE Protocol Reporting

1. GCDAMP Annual Reporting meeting every January.
2. Updates at TWG and AMWG GCDAMP meetings.
3. Meet with the HFE MOA consulting parties and consult with tribes as needed.
4. The HFE Technical Team report to the Secretary's Glen Canyon Leadership Team for their consideration in HFE decisions.
5. US Fish and Wildlife Service report early each year on the effects of prior HFEs and conservation measures of the FWS biological opinion (first report Feb 2014).