

TWG Input on the Triennial Budget and Work Plan

Adaptive Management Workgroup Meeting

September 20, 2017

Seth Shanahan

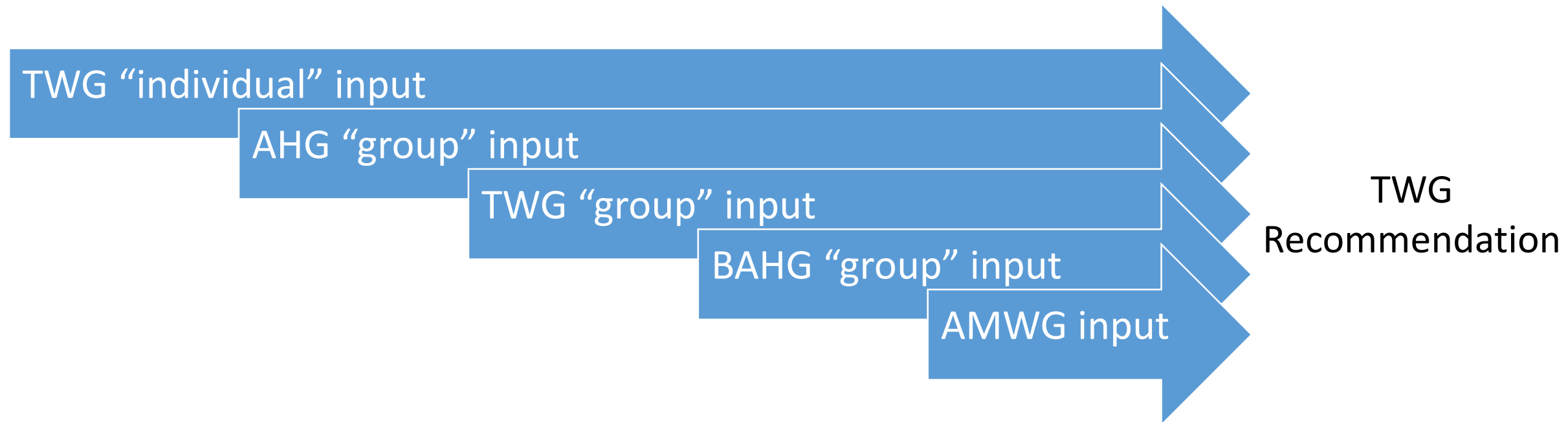
TWG Chairperson

- Jan – TWG provides initial guidance to GCMRC and Reclamation
- April – TWG meeting to consider draft TWP
- June – TWG meets to provide input on the draft TWG and provide a recommendation to the AMWG.

Month	Year-1 (2017) (development of TWP)	Year-2 (2018)
December (year prior)	GCMRC and Reclamation produces annual project reports document for GCDAMP review.	
January	Annual reporting meeting and information synthesis (2 days) followed by 1-day TWG meeting to review budget and provide initial guidance to GCMRC and Reclamation. TWG reviews progress in addressing Information Needs and research accomplishments.	Annual reporting meeting (1-2 days) followed by 1-day TWG meeting with a primary emphasis on reporting results/findings/scientific advances on previous work plan.
February	GCMRC meets with tribes and DOI agencies. GCMRC follow-up with BAHG on priorities and areas of emphasis on TWP. GCMRC meets with cooperators to develop projects. AMWG meeting to discuss initial priorities. DOI and Federal family input.	
March	GCMRC and Reclamation will develop an initial TWP based on DOI priorities and input from scientists, the TWG, and DOI/DOE family. Initial TWP presented to DOI and Secretary's Designee.	
April	GCMRC meets with tribes and DOI agencies. April TWG meeting to consider draft TWP, including anticipated funding sources. Unresolved issues or conflicting priorities will be resolved by DOI in consultation with the DOI Family. GCMRC begins development of second draft TWP.	BAHG and TWG considers potential changes to the Fiscal Year 2 TWP based on criteria in section 2.7.
May	GCMRC and Reclamation provide a second draft TWP to the BAHG, Science Advisors, DOI agencies, and tribes for their review and comment. GCMRC meets with tribes, BAHG, to get input on TWP. GCMRC develops third draft of TWP.	
June	GCMRC and Reclamation finish third draft for review. TWG meets to provide input on the draft GCMRC and Reclamation TWP and provide a recommendation to the AMWG.	TWG recommends Fiscal Year 2 (2019) budget of TWP to AMWG.
July	GCMRC and Reclamation provide a final draft TWP to the AMWG for their review.	
August	AMWG meets to provide input on the GCMRC and Reclamation draft TWP and provide a recommendation to the SOI.	AMWG recommends Fiscal Year 2 (2019) budget of TWP to SOI.
September	SOI reviews the budget and work plan recommendation from AMWG.	
October 1	Fiscal Year 1 begins under the TWP guidance.	Fiscal Year 2 begins under the TWP guidance.
November 1	Consumer Price Index becomes available.	
Late November	Science and management meeting with DOI and cooperators.	Science and management meeting with DOI and cooperators.
December	Budget is finalized. USGS produces GCMRC annual project reports document for prior year work.	GCMRC produces annual project reports document.

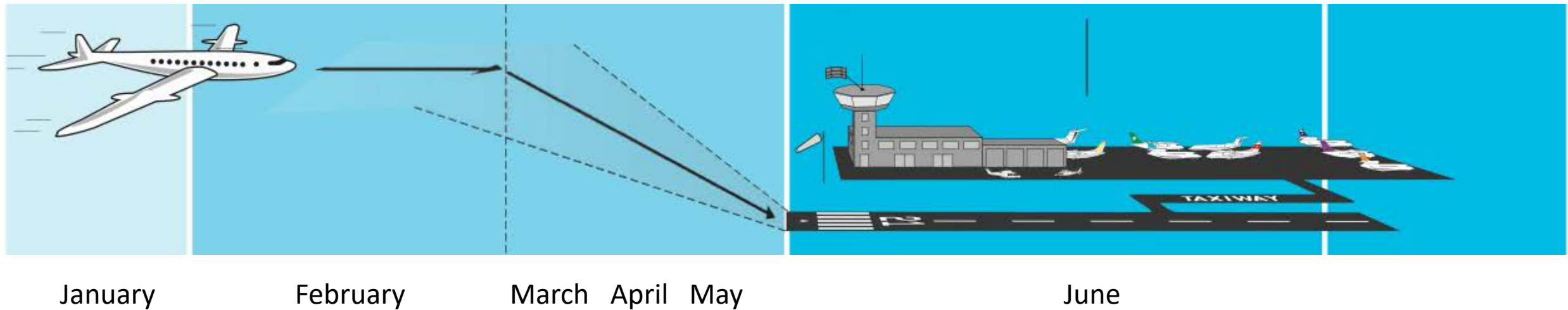
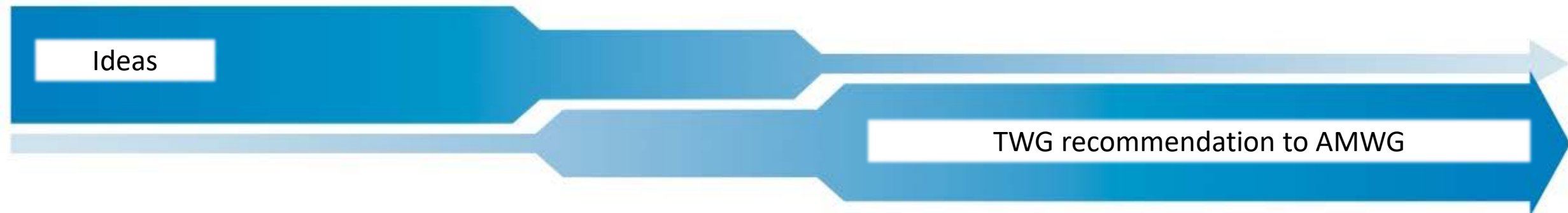


A Layered Approach





Getting to a TWG Recommendation



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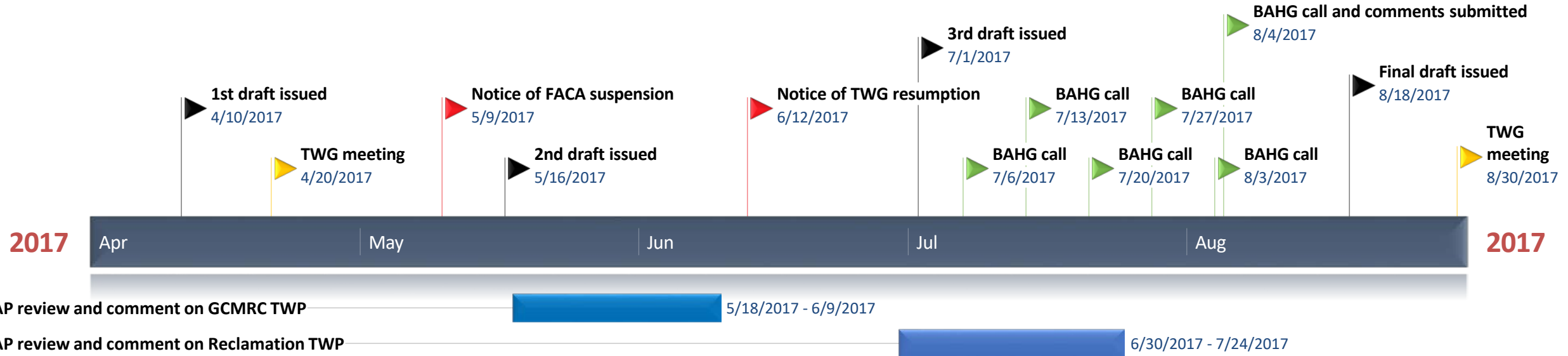
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Timeline



Reoccurring Themes

- Insufficient time led to stakeholder frustrations
- Majority voting was used as a last resort but consensus remains the goal
- Voting results indicate disagreements; several abstained
- Prioritization challenges and funding limitations persist
- Grand Canyon Protection Act fidelity remains important

Reoccurring Themes

- Whole-system perspective not clearly understood
- Organization and funding necessary to achieve cultural resource goals and compliance
- Hydropower resource goal attention needed
- Evaluation timelines questioned given the 20-year LTEMP term

TWG Recommendation

The TWG recommends that the AMWG recommend for approval the Glen Canyon Adaptive Management Program Triennial Budget and Work Plan – Fiscal Years 2018-2020 (Draft August 17, 2017) to the Secretary of Interior with the following changes:



TWG Recommended Changes

1. Approving GCMRC's Project C as written, contingent upon adding language to Reclamation's Project C.7., Experimental Vegetation Treatment, for funding tribal engagement as partners in planning and executing the experiment. 
2. Approving GCMRC Project D with no funding for D.1, D.2, or D.3, but with funding for D.4. 
3. GCMRC Project G.5 – Add one annual seining trip funded by the Native Fish Conservation Contingency Fund. 

TWG Recommended Changes

4. Approve GCMRC Project I with an additional Spring system-wide monitoring trip to I.1 and a Fall Diamond Down trip. 
5. GCMRC Project E. with reinsertion of Project E.7.1, Aquatic Vegetation Surveys, and Project E.7.2, Artificial Streams. 

TWG Recommended Changes

6. Without a net increase to the budget, add a new Project N, Hydropower, to the GCMRC work plan with work efforts that include (also add to Reclamation Project C with complementary language):
- a. Develop Glen Canyon Dam operational experiments to meet the hydropower objective.
 - b. Consider and estimate impacts of experiments on hydropower as part of experimental design.
 - c. Incorporate total hydropower value into Decision Support Systems being developed in GCMRC Project J.2
 - d. Utilize WAPA and Reclamation hydropower data, as available, and include WAPA technical staff in the development of models, design of experiments, and monitoring metrics.



TWG Recommended Changes

7. GCMRC Project J. Socioeconomics as written with additional language:



- a. Clarifying language will be added to Project J.2 that indicates integrating hydropower analysis into the modeling of trout management flows will be a primary focus. Incorporating hydropower analysis follows the development and integration of rainbow trout and humpback chub population models and cost-effectiveness analysis, used to identify efficient management actions to meet adult humpback chub abundance goals. Hydropower analysis in J.2 is an incremental step in the development of applied decision and scenario analysis research at GCMRC. Adding hydropower analysis into the applied decision and scenario analysis research is timely provided the proposed LTEMP EIS experiments, including trout management flows.
- b. A workshop will occur with GCMRC staff and GCDAMP stakeholders in fiscal year 2018 to review and discusses the trade-offs between trout management flows, expected downstream rainbow trout and humpback chub outcomes and associated costs of management actions, including hydropower. This workshop will provide an opportunity to explore opportunities to improve hydropower resources while meeting downstream rainbow trout and humpback chub resources goals as defined in the LTEMP EIS.

TWG Recommended Changes

8. Approve Reclamation Project D. with addition of identifying how Reclamation Project D elements and GCMRC project elements address stipulations in the PA and track their progress. 
9. Increase funding for Reclamation Project D.10 to a target balance of about \$200,000 by the end of FY 2018. 
10. Approve Reclamation Project C. with changes to allow allocation of some funds from Reclamation Project C.5 into Reclamation Project D.10. 