

Operations & Engineering Workgroup

January 11, 2023



Agenda

- 1.1 Review considerations for establishing a Project Baseline Schedule
- 1.2 Review process and considerations for converting to storage-based allocations
- Engineering and Construction Manager's Report
 - Advancing preliminary engineering activities
 - FERC qualifying facility application

Material Change Categories for Today's Topics (Bylaws)

1.1 Review considerations for establishing a Project Baseline Schedule

- ✓ Approved Budget
- ✓ Construction Schedule
- ✓ Direct Construction Cost

1.2 Review process and considerations for converting to storage-based allocations

- ✓ Annualized yield

Agenda Item 1.1

Project Baseline Schedule Considerations

JP Robinette

Today's Objective

Receive feedback on schedule considerations, initial findings, and policy assumptions in developing a project schedule

Baseline Schedule Objectives

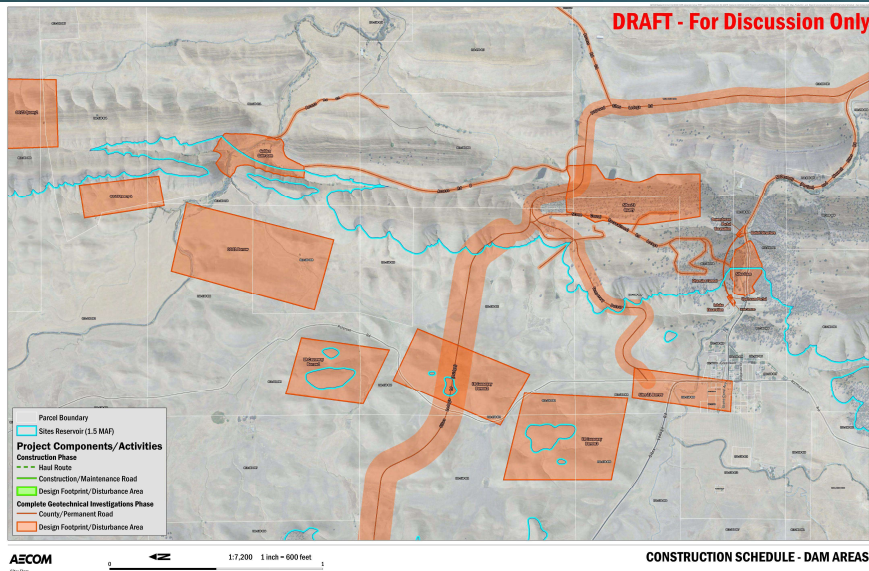
- Define the sequence of activities required through construct
- Identify the critical path through construction and opportunities for expediting schedule and managing risks
- Deliver Project benefits in a timely and cost-effective manner while upholding the Authority's values
- Develop tools to analyze Project decision impacts on schedule, project cost, and cash flow (trade-offs)
- Maintain credibility with stakeholders

Schedule Overview

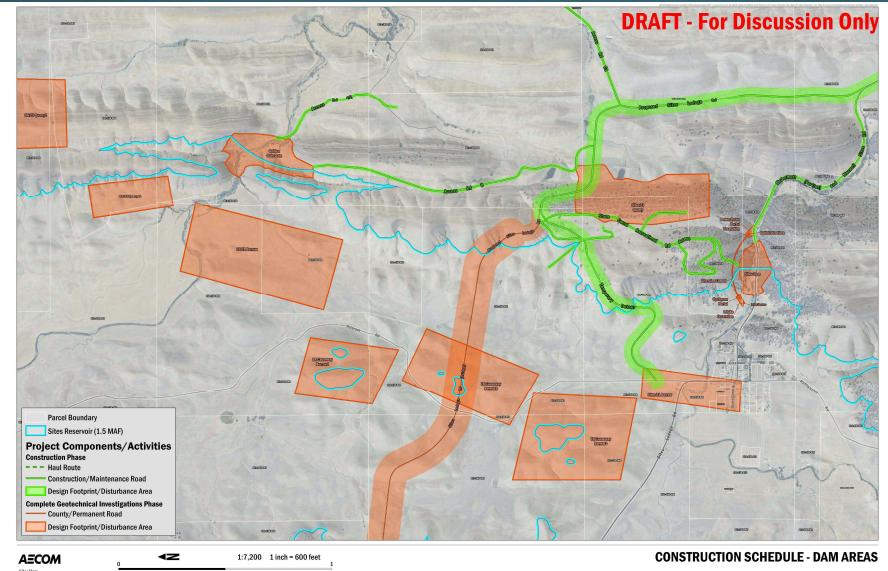
- Geotechnical investigations needed for advancing design
 - Temporary access for exploration is required
- Construction duration is approximately 8 years
- Unknown potential schedule drivers
 - Regulators and/or owner coordination: permit agencies, DSOD, CAISO, Caltrans, California Northern Railroad, utilities

Staff is developing a detailed schedule by focusing initially on the Golden Gate Dam

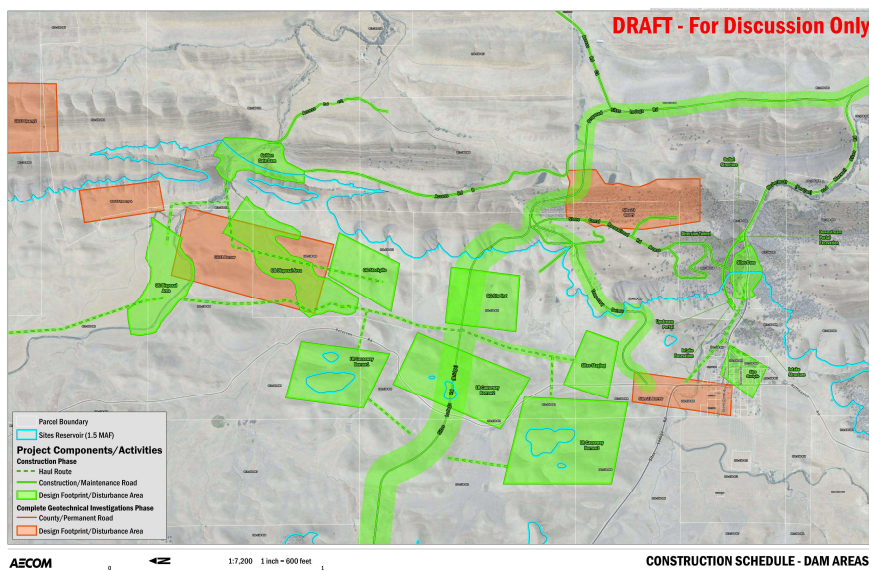
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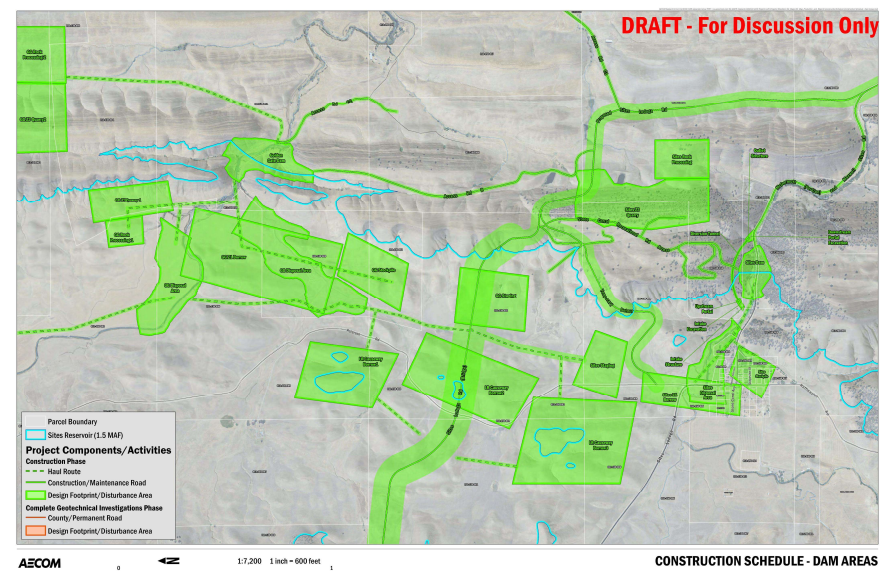
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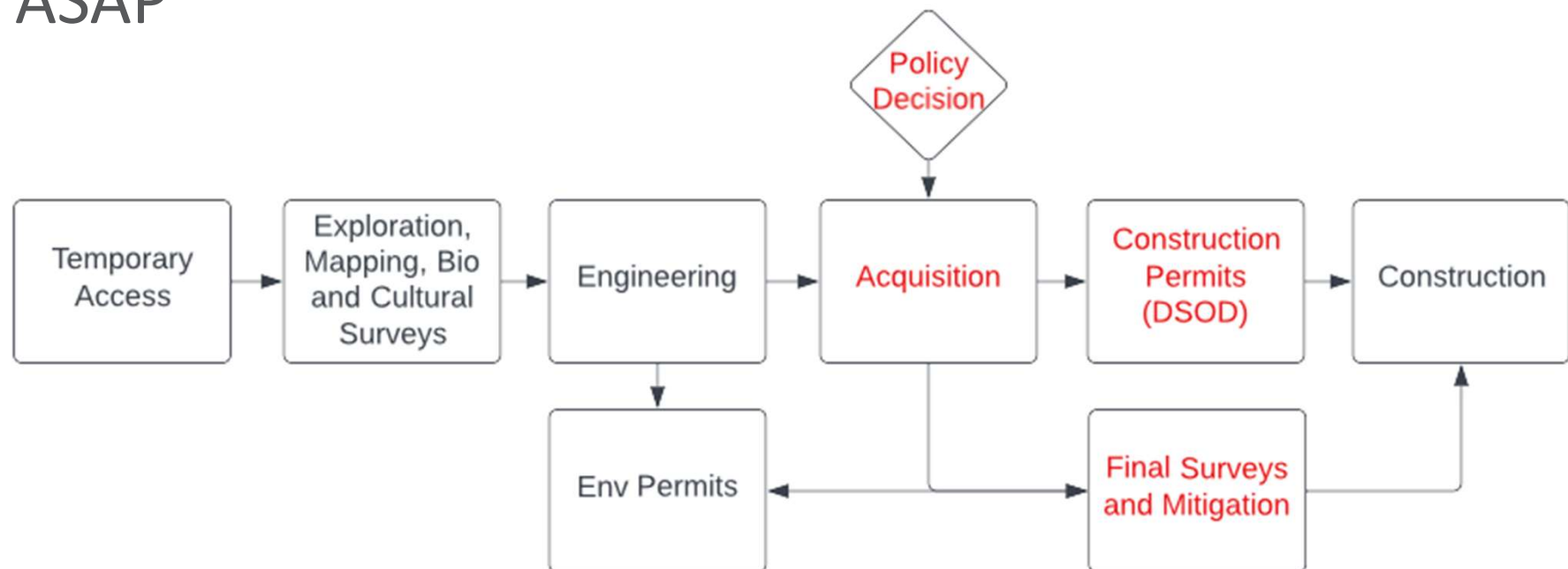


Staff has preliminary findings related to the schedule

- The CMAR needs to be on-board starting in Q1, 2025 to:
 - ✓ Develop the construction sequence and validate the schedule
 - ✓ Help define the materials program
 - ✓ Improve cost certainty and value engineering
 - ✓ Identify early works packages, such as material staging or roads
- Key acquisitions should be started early in the process and may take up to 3 years
- Strategies are needed for critical path activities to mitigate schedule risk

Series activities will result in an extended construction schedule

- Based on current policy assumptions, the schedule extends beyond 2033
- To be on-line sooner, the team must identify key facility parcels and execute the **development process**, starting ASAP



Sites will need a strategy for mitigating risks on the critical path

- DSOD
 - Phased Approvals
 - Phased Construction
 - Dedicated Resources
- PG&E
 - Divide responsibilities on design and construction
- Acquisitions (LMC)
 - Design level
 - Funding
 - Productive vs. Unproductive negotiations
- Mitigation

Near-term schedule drivers relate to activities that precede breaking ground

- Completion of the design is driven by geotechnical explorations
- Environmental and cultural surveys are required for agency approvals which:
 - Can take up to two years to complete
 - Mostly require temporary access, but some should be completed after acquisition
- Mitigating project impacts, which requires an understanding of the construction sequence

The real estate process is at the center of these activities

- Timing for right of entry (temporary access) is dependent upon negotiation and agreement with willing owners
- Considerations for land acquisition will require:
 - Authorization from the Board to begin the acquisition phase
 - Funding “in the bank”
 - Completion of the Environmental Document
 - Water Rights & Key Permits
 - Between 60% and 90% level of design
- Up to 19 months to complete productive negotiations
- Potentially 33-39 months to complete unproductive negotiations

Sites will need to make policy decisions in order to expedite schedule



Should Sites begin procuring CMAR contractors in early 2024 (ahead of the Water Right) to be on-board Q1, 2025?



What assurances are required to initiate strategic early real estate acquisitions (before obtaining key permits and water rights)?



Should the programmatic baseline schedule reflect aggressive or conservative assumptions?

Next Steps

- The team continues to analyze and optimize current assumptions and refine the working schedule
- **February:** discuss alternatives analysis and options for accelerating schedule, discussion of risks, and considerations for WIFIA loan application
- **April:** review Programmatic Baseline Schedule and obtain workgroup recommendation for advancing to the Board for adoption

Questions?



Agenda Item 1.2

Process and Considerations for Converting to Storage Based Allocations

Ali Forsythe & Angela Bezzone

Objective

- Transition to Storage Allocation based participation starting with Phase 3/Phase 4 beginning 2025
 - RC and AB approved methodology for allocating storage space to local Storage Partners in April 2021
 - State and Federal participation is more certain
 - Timing is appropriate prior to soft call mid-2023

Storage Allocation Methodology

- Approved April 16, 2021
- Established equitable treatment between local Partners, without disproportionate benefits to State and Reclamation
- Existing participation x 6.234 = Storage Allocation
- Applied to Amendment 3 Participation

Amendment 3 Participation

Participant	Amendment 3 Participation (Annualized AF ¹)	Amendment 3 Participation (Storage Allocation AF ²)
Antelope Valley-East Kern Water Agency	500	3,117
City of American Canyon	4,000	24,936
Coachella Valley Water District	10,000	62,340
Colusa County	10,000	62,340
Colusa County Water District	9,256	57,702
Cortina Water District	450	2,805
Davis Water District	2,000	12,468
Desert Water Agency	6,500	40,521
Dunnigan Water District	2,972	18,527
Glenn-Colusa Irrigation District	5,000	31,170
Irvine Ranch Water District	1,000	6,234
LaGrande Water District	1,000	6,234
Metropolitan Water District of Southern California	50,000	311,700
Reclamation District 108	4,000	24,936
Rosedale-Rio Bravo Water Storage District	500	3,117
San Bernardino Valley Municipal Water District	21,400	133,408
San Geronio Pass Water Agency	14,000	87,276
Santa Clara Valley Water District	500	3,117
Santa Clarita Valley Water Agency	5,000	31,170
Westside Water District	5,375	33,508
Wheeler Ridge-Maricopa Water Storage District	3,050	19,014
Zone 7 Water Agency	10,000	62,340
Public Water Agency (PWA) Total	166,503	1,037,980

Notes:

1. Participation (annualized AF) is used primarily as the basis of local agency participation and allocation of local cost share of planning/development costs.
2. The storage allocation for the State of California and Bureau of Reclamation are not shown.

Considerations and Timing

- Storage Partners will make management decisions based on their Storage Allocation
- Need to consider entire available supply in Storage Allocation, not just annualized supply
 - Important consideration for upcoming soft call
- Proposed transition to Storage Allocation based participation starting with Phase 3/Phase 4

Next Steps

- Finalize calculations considering change in dead pool and recent survey refinements to reservoir capacity
- Seek approval to make transition to Storage Allocation based participation
 - Likely brought for approval in April or May
 - Discussions going forward would be based around storage instead of annualized supply

Questions?



Thank you!

Next Meeting: Wednesday, February 8, 2023 (1:30 pm – 3:30 pm)

