Water Management
Technical Feedback Meeting

June 5, 2009
Visalia, CA

Agenda Overview

• Water Transfers (10 min.)
• Restoration Flow Guidelines (10 min.)
• Recovered Water Account (25 min.)
• MC/FKC Capacity Correction Assessment (30 min.)
• Interim Flow Water Right Petition (20 min.)
• Recapture/Recirculation Activities (10 min.)
• Public Comment (10 min.)
Water Transfers

- Legislated provisions for water transfers take effect after the first release of Interim Flows and Friant’s 9(d) contract conversions.

- Reclamation is working on a policy paper to describe its position on how the Legislation changes transfer procedures.
Restoration Flow Guidelines – Overview & Update

- RFG Components:
  - Allocation (hydrograph smoothing)
    - Completed January 2009
  - Residuals
    - Completed May 2009
  - Recovered Water Account (next slides)
    - Anticipated completion June 2009

- Next Steps:
  - Early July 2009: Revised draft RFG & feedback
  - Late July 2009: Administrative Draft RFG
Recovered Water Account

Recovered Water Account History

- In past meetings, Reclamation presented different methods for measuring water supply impacts and declined shadow accounting.

- Feedback identified inferred relationships from river releases (simplified methods) as undesirable.

- The current direction compares modeled (no-Settlement) conditions to measured deliveries with Restoration Flows.
RWA Current Technical Requirements

- The RWA compares between conditions with and without Restoration Flows.
- ‘What would’ve been delivered’ requires assumptions.
- Measured canal deliveries requires separating out mitigation resources.
  - 16(a) deliveries outside of an allocation
  - 16(b) deliveries to Friant long-term contractors

RWA Conceptual Model

The conceptual model for the RWA:

- Uses canal based accounting procedures;
- Delivers without Restoration water according to the Settlement model demand curves;
- Tracks reductions to Class 1, Class 2, and 215 deliveries to long-term Friant contractors; and
- Maintains consistency with the Settlement assumed impacts.
### RWA Accrual Conceptual Model

#### Without Restoration (Settlement model)
- Class 1 deliveries
- Class 2 deliveries
- 215 * factor
  - Normal-Dry or drier, factor = 100%
  - Normal-Wet years, factor = 50%
  - Wet years, factor = 50%

#### With Restoration (Actual Records)
- Class 1 deliveries
- Class 2 deliveries
- 16(a) deliveries
- 16(b) deliveries
- 215 deliveries to Friant
- Deliveries to non-Friant
- +0.25 * buffer flows

#### Model – Measured Deliveries

* Assumed Ratios Pending BORWORKS Query
** Buffer flows are identified by the RA, not a model

### Expected RWA accrual

- Settlement model reported change:
  - Class 1 & 2 deliveries = avg. 145 TAF/year
  - Total Canal deliveries = avg. 208 TAF/year
  - Difference is ‘other water’, including 215 to non-Friant contractors

- A BORWORKS query will identify historical 215 deliveries to long-term Friant versus other contractors.
16(b) Facilities Assumed by PEIS/R

- 16(b) take used in PEIS/R
  - Approximately 4,500 cfs total take capacity
  - Maximum direct recharge ≈ 430 TAF annually
  - Maximum In-Lieu ≈ 2,200 cfs (on ag. pattern)

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<th>Management Areas</th>
<th>WRIA 1</th>
<th>WRIA 2</th>
<th>WRIA 3</th>
<th>WRIA 4</th>
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| Franton | 100 | 15 | 250 | 465 | 1100 | 1,500 | 480 | 1,980 |
| Min-Phoenix | | | | | | | | |

16(b) Maximum Assumed in PEIS/R
Simulated Accrual of Recovered Water Account

16(a) water = 0,
16(b) capacity = 4,500 cfs

Sequence of Years, 1922 through 2003

Simulated Accrual of Recovered Water Account

16(a) water = 0,
16(b) capacity = 4,500 cfs

Sequence of Years, 1983 through 2003
Madera & Friant-Kern Canals Capacity Correction Assessment Status Update

Authorization and Funding

- Public Law 111-11 requires a feasibility study and authorizes construction consistent with the feasibility study
- Reclamation FY 2008 budget provides budget for Planning Studies under Operations and Maintenance authority
- Friant Staff have identified a desire for the Restoration Program to fund canal capacity corrections and pump-back facilities
Milestones

- MC/FKC Capacity Correction
  - Proj. Description & Scope – 07/09
  - FS/Env. Review/Initial Eng. Design – 07/10
  - Final FS to Commissioner – 08/10

- FKC Pump-Back
  - Proj. Description & Scope – 07/09
  - FS/Env. Review/Initial Eng. Design - 07/10
  - Final FS to Commissioner – 08/10

Work Plan

- Contracting October 2008
- Initial site visit in November 2008
- Data collection, 2009
- Hydraulic Modeling, June 2009
- Contracting (Modification or Task Order)
- Feasibility Study and Environmental Assessment
- Engineering Design Report
Initial Site Visit

- Friant-Kern Canal

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- Madera Canal
  - Modeling Expected to Highlight Restrictions

Data Collection

- Kick-off meeting / Site review (MC & FKC)
- Canal design drawings
- Surveys of MC and FKC complete
- Operational data being assembled by FWA and MCWPA
- Existing Data TM
Hydraulic Modeling

- Development
- Calibration and Validation
  - Technical Memo
  - Feedback from FWA and MCWPA
- Evaluate canal capacity correction
  - Technical Memo
  - Feedback from FWA and MCWPA

Feasibility Studies and EA

- Restoration funding requires a feasibility study.
- Alternatives include:
  - Capacity Correction;
  - Pump-Back; and
  - Capacity Correction and Pump-Back.
- An engineering report follows from the feasibility study.
Resourcing

- MWH pursuing capacity correction
- TSC developing pump-back plan
- Additional contracting actions to combine and complete studies if required.

Going Forward

- At Hydraulic Modeling phase of work
- Operations data is required to move forward
- Proposed Communication Plan:
  - Monthly updates during SJRRP WM Tech Feedback meetings
  - Monthly status reports
  - Additional calls with FWUA and MCWPA lead representatives between monthly updates
Interim Flow
Water Right Petition

Recapture / Recirculation Activities
Public Comment