Seepage and Conveyance Technical Feedback Group

September 6, 2011
11704 Henry Miller Avenue
Dos Palos, CA

Agenda

• Introductions and Technical Feedback Group (TFG) Purpose
• Action Item Review and Update
• Interim Flows Update
• Seepage Parcel Groups Wrap Up
• Site Evaluation Process Wrap Up
• Environmental Compliance
• Design
• Plan Formulation / Design Data Collection Discussion
• Information & Data Exchange
• Next Steps and Follow-through
TFG Objectives

• Convey Interim and Restoration Flows while avoiding seepage impacts
• Identify potential projects that would avoid seepage impacts
• Identify locations for projects with potential for seepage impacts
• Develop a common understanding of the process, procedures and expectations for projects

Process & Decision-making

• Monthly Meetings
  • Focused on Seepage Project Handbook and identifying projects to avoid seepage impacts
• Additional topics and meetings identified and considered as we proceed
  • Update Charter in Fall 2011
• Reclamation and its partner agencies retain decision authority for Program implementation

Discussion Topics

Projects Intro
  Introduction
  Background
  Purpose
  Potential Projects

Site Evaluation
  Data Collection
  Investigations
  Groundwater
  Soil Salinity
  Conductivity
  Water Quality

Prioritization
  Project Types
  Site-Specific Considerations

Plan Formulation
  Selection Criteria
  Weighing
Action Items

<table>
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<tr>
<th>Action Items</th>
<th>d'ed</th>
<th>Due</th>
<th>Assigned to</th>
<th>Status</th>
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<tbody>
<tr>
<td>1. Brainstorm on seepage project scenarios at future meeting</td>
<td>8/4/11</td>
<td>9/6/11</td>
<td>Team</td>
<td></td>
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<tr>
<td>2. Coordination with NDLI: report on opportunities for cross evaluation work and exchange information on drilling permit</td>
<td>8/4/11</td>
<td>9/6/11</td>
<td>Scott Rice, DWR</td>
<td></td>
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Elements of the Seepage Project Handbook

- Introduction
- Site Evaluation
- Plan Formulation
  - Design Data Collection ✅ Today
- Design
- Environmental Compliance
- Construction
- Financial Assistance
Interim Flows Update

- Fall Pulse
  - Default schedule: November 1 – 10
  - Fall run chinook-salmon attraction pulse
  - 2011 pulse may change due to Mendota Pool draining

SEEPAGE PARCEL GROUPS

Katrina Harrison

Parcel Group Comments

- No written comments received
- The book is still under development
- An additional opportunity to comment will occur once existing site-specific data is collected for all seepage parcel groups
**Project Implementation Scenarios**

- **Purpose:**
  - Think through seepage projects from a regional perspective
  - Identify scenarios with potential issues
  - Brainstorm solutions

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**Project Implementation Scenarios**

- **Assumptions / Simplifications:**
  - Continued agricultural use between a property and the river reduces water quality beyond acceptable levels for interceptor lines
  - ‘Easement with riparian habitat’ represents all types of non-agricultural use

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**Project Implementation Scenarios**

- **Project Types**
  - Easement with riparian habitat
  - Easement with ag use
  - Interceptor Line
  - Slurry Wall
  - Others?
  - Potential Solutions
Site Evaluation Process Comments

- Include assessment criteria for regional benefits such as habitat quality, air quality, etc.
- Needs timelines
- Clarify opportunities for non-landowner third parties to provide input
- Suggested review panel to evaluate projects and public workshops before plan formulation

Site Evaluation Process Comments

- Include additional project types such as riparian habitat & plantings along drains
- Solve habitat constraints if found on site for a seepage project
- Include a search for prior encumbrances in records review
- Records review to search for property’s inclusion in other projects such as water quality, species recovery, general plans
Site Evaluation Process Comments

• Determine flooding frequency and extent on property during records review
• Search for inclusion in ESA habitat corridors, potential to host ESA species, other ESA sighting resources
• Conduct biological site assessments

Site Evaluation Process Comments

• Next Steps:
  • Updated text in the next draft Seepage Project Handbook to address comments

Michelle Banonis
ENVIRONMENTAL COMPLIANCE PROCESS
Overview of the Federal Compliance Process for Seepage Management

SCTFG Meeting
September 6, 2011

Background:

Why Do We Have Regulations?

Background:

Federal Undertaking

What is a “federal undertaking”?
A federal undertaking is any action that:

- Has federal discretion
  (i.e., permits, approvals, etc.)
- Is on federal property
- Is funded wholly or in part through a federal source
Federal Compliance Process Flow Chart

Project Description

**What is a Project Description?**

- Explanation of proposed action and the methods used to get to an expected outcome.
- Used to explain to agencies and the public what you are planning on doing in order to assess impacts that could be reasonably foreseeable.
- Consists of:
  - Alternatives considered
  - Objective of proposed action
  - Project limits (depths, quantities, length, staging areas, etc.)
  - Construction methods and best management practices (types of equipment needed, dust abatement, etc.)
Endangered Species Act (ESA)

What does ESA mean for implementing projects identified in the Seepage Management Plan?

- Field reviews/surveys needed to identify both:
  - i) presence/absence of species
  - ii) presence/absence of potential habitat
- Reclamation then prepares an effects analysis and makes one of the following determinations:
  - No Effect
  - May effect, not likely to adversely affect (NLTAA)
  - Likely to adversely affect (LTAA)
- If the determination is NLTAA or LTAA, consultation must be undertaken with U.S. Fish and Wildlife Service and/or National Marine Fisheries Service.

Federal Compliance Process Flow Chart

National Historic Preservation Act (Section 106)

What does Section 106 mean for implementing projects identified in the Seepage Management Plan?

- Field surveys will be needed to identify:
  - i) Surface cultural and archaeological resources
  - ii) Subsurface cultural and archaeological resources
  - iii) Eligibility status of resources
Reclamation gathers findings in a report and sends a letter to the California State Historic Preservation Officer (SHPO) with a request for concurrence with the finding of:

- No Historic Properties Affected – No eligible resources in the area that will be affected
- No Effect – No change to an eligible resource
- No Adverse Effect – A change to the resource, but not damaging
- Adverse Effect – Will alter, damage, destroy, or change the resource and its eligibility

SHPO has 30 days to respond with their concurrence with Reclamation’s findings.

If action has an Adverse Effect, then need additional coordination through a Memorandum of Agreement (MOA).

**Federal Compliance Process Flow Chart**

- Project Description
- Endangered Species Act (ESA)
- National Historic Preservation Act (106)
- Indian Trust Assets (ITA)
- National Environmental Policy Act (NEPA)
- Corps of Engineers (404, Section 10, 408)
- Central Valley Regional Water Quality Control Board approvals: National Pollution Discharge Elimination System (NPDES), Section 401 Water Quality Certification, and Basin Plan for San Joaquin River
- San Joaquin Valley Air Pollution Control District permits

* State permits that are obtained by Reclamation because the state has been delegated authority of implementing a federal statute.

**National Environmental Policy Act (NEPA)**

- NEPA documents impacts to environmental resources including, but not limited to:
  - Aesthetics
  - Air Quality
  - Biological Resources
  - Cultural Resources
  - Environmental Justice
  - Geology and Soils
  - Hydrology (water quality, groundwater, etc.)
  - Noise
  - Public Health
  - Recreation
  - Socioeconomics
  - Transportation
  - Utilities
  - Etc.
**National Environmental Policy Act (NEPA)**

Public disclosure process is the heart of NEPA

- Requires all federal agencies to fully and publicly disclose any reasonably foreseeable adverse impacts that could result from the federal undertaking.
- Reclamation may prepare and distribute the following documents for NEPA:
  - i) Categorical Exclusion Checklist (CEC)
  - ii) Environmental Assessment (EA) and Finding of No Significant Impact (FONSI)
  - iii) Environmental Impact Statement (EIS) and Record of Decision (ROD)
- An EA and EIS both require public comment periods.

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**Federal Compliance Process Flow Chart**

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**Other Approvals with Federal Authority**

- Indian Trust Assets – Approval of a Department of Interior undertaking for the protection of property interests held by the U.S. for the benefit of Indian Tribes or Individuals.
- San Joaquin Valley Air Pollution Control District (SVAPCD) – Permits for ozone, particulate matter.
- U.S. Army Corps of Engineers Permits – Permits for work within Waters of the U.S., navigable waterways, and for modifications to federal flood control projects.
- Central Valley Regional Water Quality Control Board (CVRWQCB) – Permits for construction activities in relation to water quality protections (stormwater and activities within state waters), basin plan authorities and enforcement.
General Compliance Timelines for Projects

If project expected to have no or minor impacts to cultural resources, ESA, etc.:

- Field surveys for Section 106 and ESA: ~1 day -2 weeks (includes time to schedule staff and coordinate with property owners, depends on size of site, etc.)
- Compilation of field results: ~ 2 weeks
- NEPA (assuming CEC): ~ 3 days
- Section 106 SHPO concurrence: 30 days

Total compliance time for minor project with no adverse or significant impacts to resources: ~ 2 months

General Compliance Timelines for Projects continued

- If greater impacts to resources are suspected from a project based on field reviews, then would need to assess timelines on a case-by-case basis
- Reclamation would develop a schedule for these projects that outlines the process and expected timelines

Check-In Points For the Process

- Project Description Development
- Field Review: ESA and Section 106 Surveys
- Compilation of Field Review Results
- Start of NEPA and ESA/Section 106 Processes
- Outcome of Permitting Processes
- Funding Authorization and Project Start
Contact Information

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916-978-5457

Design Process

• Purpose of Design Section of the Seepage Project Handbook
  – Common understanding of Reclamation design process
  – Process provides accountability during design
  – Defines design team and individual roles in the final design process
  – Provides guidelines for final design and specifications
### Final Design Process

- **PREWORK** – Request work and establish funding source
- **SCHED** – Scheduling, staffing, define design data requirements
- **CONCEPT** – Conceptual design (30%)
- **DESIGN** – Final Design (60%)
- **DRAFT SPEC** – Preparation of draft specifications (90%)

### Final Design Process

- **REVIEW** – Specifications review
- **FINAL SPEC** – Final specifications and design
- **BOOKPRE** – Prepare bid solicitation
- **BID** – Bids solicited, amendments issued, etc.
- **AWARD** – Contract Awarded
- **CONSTR** – Construction

### Design Process Details

- Identify design team
  - Reclamation
  - End User
  - Establish End User level of involvement

- Develop scope of design
  - Functional requirements
  - Operational requirements
### Design Process Details

**Design - CONCEPT Stage (30%)**
- Field exploration
- Materials testing
- Hydraulic studies
- Cost estimate and schedule
- TM's
- Value engineering

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**Design - DESIGN Stage (60%)**
- Selected conceptual design is refined
- Design data collection, testing and analysis should be completed
- Cost estimate and schedule updated
- Permit requirements are initiated
- Preliminary drawings completed

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**Design - DRAFT SPEC Stage (90%)**
- Lab testing reports completed
- TM's finalized and approved
- Specifications sent for review
- Quantities and bid schedules complete
Design Process Details

- Specification Review
- Final Specifications and Design Summary
- Decision Memorandum Completed:
  - Final design briefing, drawings made available
  - Outstanding items and responsible parties
  - Final Specifications completed and sent to contracting office
- Bid
- Award
- Construction

Projects Next Steps

- Next Meeting – Discuss Seepage Project Handbook sections on Design and Environmental Compliance
Plan Formulation Follow Up

- Purpose: Selection of a project from a list of initial alternatives
  - Need a defensible approach
  - Use selection criteria
  - Weight criteria according to importance
- Obtain final project type and move on to design data collection and then design

Potential Projects

- Real Estate
  - Easements
  - Acquisition
- Physical
  - Tile drains
  - Slurry walls
  - Drainage ditches
  - Shallow well pumping
  - Conveyance improvements

High Priority Criteria

- Effectiveness of project in protecting lands and giving ability to increase flows to 4500 cfs
- Landowner acceptability, including upstream and downstream landowners
- Regional solutions ranked higher
- No decrease in water quality (i.e. temp, Se)
- Site Suitability (near the seepage source)
- Long term viability & low O&M costs
- Opportunities for habitat improvements
- No barriers to fish passage (stranding)
Medium Priority Criteria

- Project ownership with landowner
- Does not increase subsidence
- Alignment with other programs (district water quality plans, regional plans)
- Creates rearing habitat for fish
- Cost

Low Priority Criteria

- Environmental Compliance
- Regulatory permitting (time)

Example Criteria Table

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<tr>
<th>Topic</th>
<th>Criteria</th>
<th>Unit</th>
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<tr>
<td>Ability to increase flows to 4500 cfs</td>
<td>4500 cfs WSE below ground surface</td>
<td>Y/N</td>
</tr>
<tr>
<td>Effectiveness of project in protecting lands</td>
<td>1 point for each 0.5 groundwater level above threshold at 4500 cfs</td>
<td>feet</td>
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<tr>
<td>Landowner acceptability, including upstream and downstream landowners</td>
<td>1 point for each landowner</td>
<td>point</td>
</tr>
<tr>
<td>Regional solutions ranked higher</td>
<td>+1 for each additional seepage parcel group solved</td>
<td>point</td>
</tr>
<tr>
<td>Temperature</td>
<td>1 point for each increase in temperature</td>
<td>degree</td>
</tr>
<tr>
<td>Water Quality (especially Selenium)</td>
<td>1 point for each 0.5 increase in Selenium</td>
<td>ppb</td>
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Process Comments

- Projects sited at worst locations first
- This process does not preclude the ability for fish to be in the river while projects are installed
- Temporary solutions can be used until such time as funds are available for higher dollar options

Next Steps

- Plan Formulation Seepage Project Handbook section for review by 9/16
Design Data Collection Request

- Can be lengthy process
- Important to define initial design data needs early in the process
- Begins before design concept phase

Data Types

- Geotechnical Investigation
- Surveying
Challenges

• Ownership
• Operations and Maintenance
• Water Discharge
• Water Rights
• Long-term Monitoring
• Cost-share
• Terms of an Agreement

NEXT STEPS AND FOLLOW-THROUGH

Next Steps

• Design Data Collection, Plan Formulation sections of SPH posted
  – September 16
• Feedback from Landowners on Design Data Collection, Plan Formulation sections of SPH
  – Due October 12
• Next Meeting Date:
  – November 10
**Milestones for Handbook Preparation**

- **August**
  - 8/12 Parcel Group Comments
  - Site Evaluation

- **September**
  - Plan Formulation & Design Data Collection

- **October**
  - 11/2 Plan Formulation & Design Data Collection

- **November**
  - 11/7 Design & Environmental Compliance

- **December**
  - 12/17 Construction
  - 1/6 Financial Assistance

- **January**
  - 1/12 Financial Assistance

**Action Items and Review**

- Update Action Items
  - Revised Actions
  - New Actions

**Contact**

- Technical Feedback Group – David Mooney
  - 916-978-5458
  - dmmooney@usbr.gov

- Seepage Concerns – Seepage Hotline
  - 916-978-4398
  - interimflows@restoresjr.net