SAN JOAQUIN RIVER
RESTORATION PROGRAM

Seepage and Conveyance Technical Feedback Group

November 10, 2011

11704 Henry Miller Avenue

Dos Palos, CA

Preliminary draft – subject to change

Agenda

- Introductions and Technical Feedback Group (TFG) Purpose
- Action Item Review and Update
- Interim Flows Update
- Plan Formulation
- Design Data Collection
- Design
- Information & Data Exchange
- Next Steps and Follow-through

Review and Context

TECHNICAL FEEDBACK GROUP OBJECTIVES

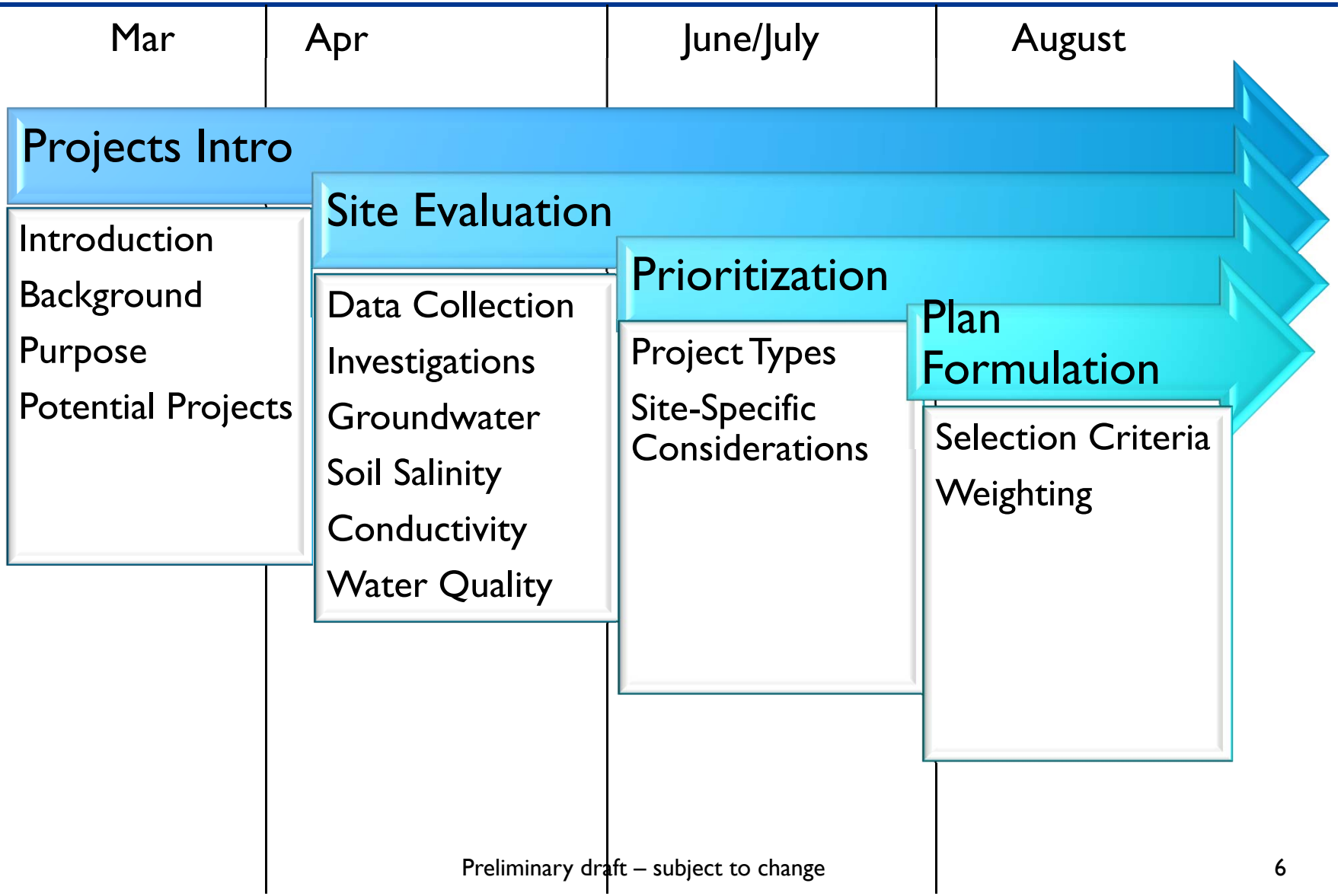
TFG Objectives

- 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
- Reclamation and its partner agencies retain decision authority for Program implementation

Discussion Topics



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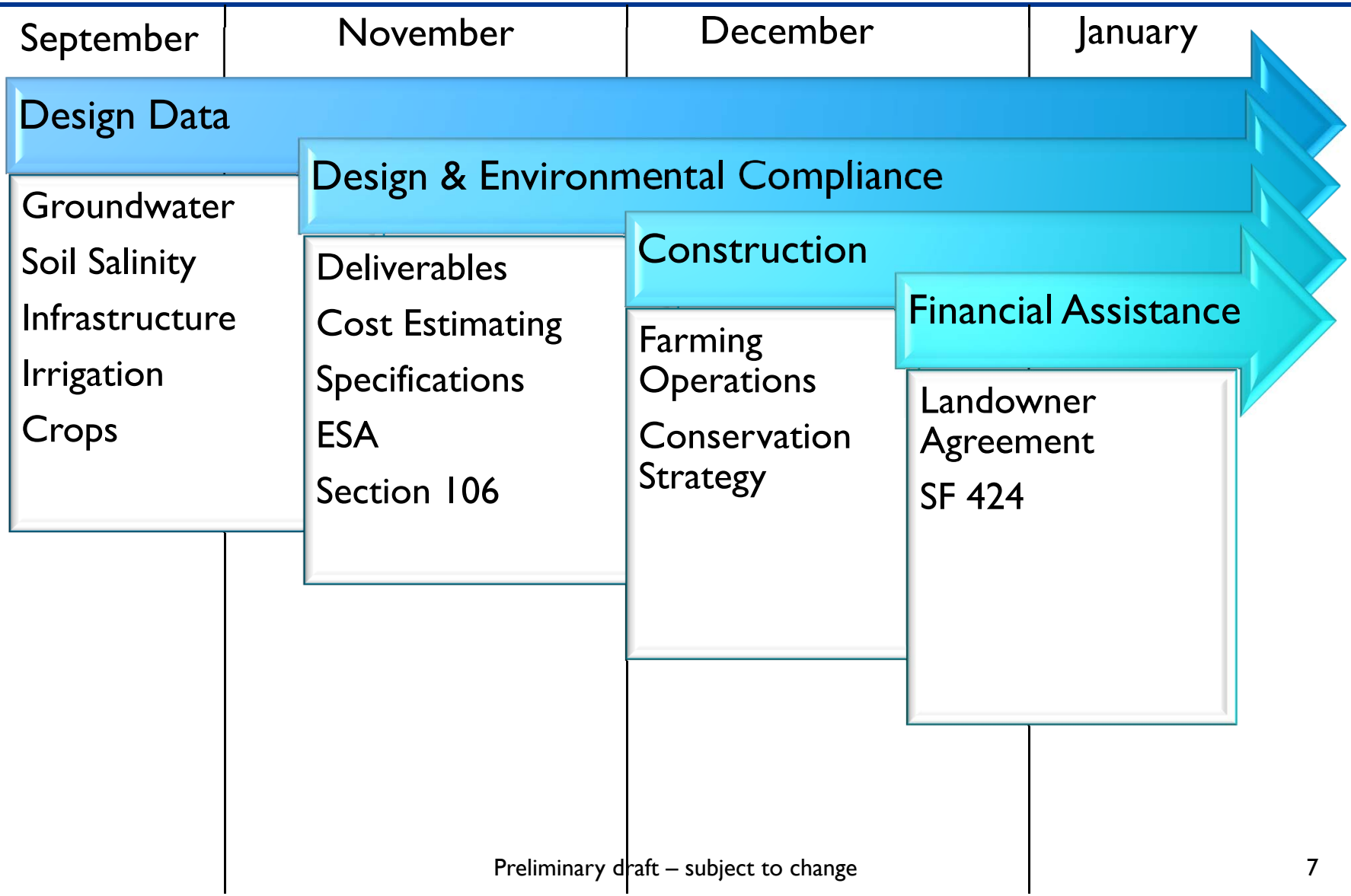
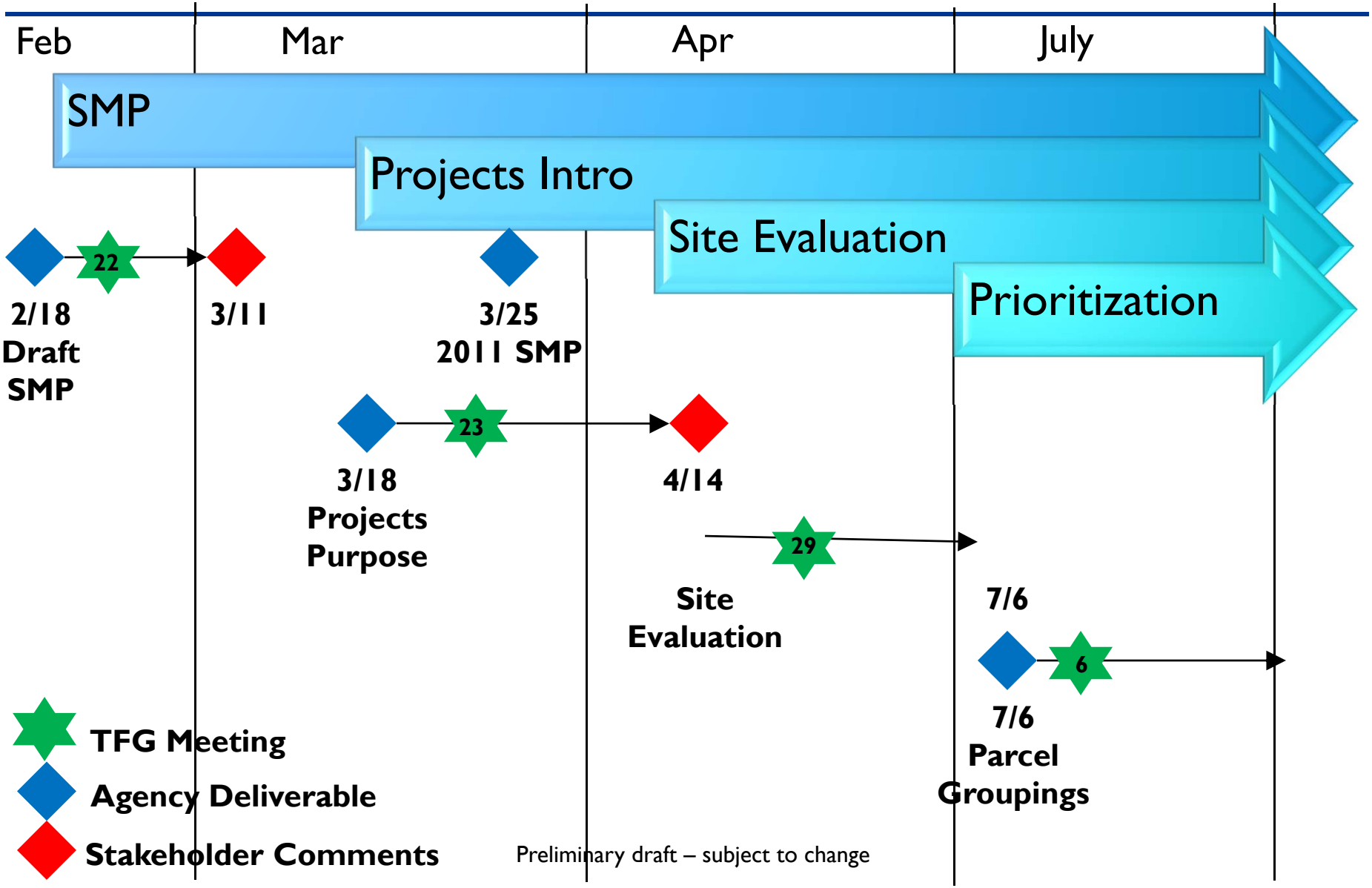


Milestones for Handbook Preparation



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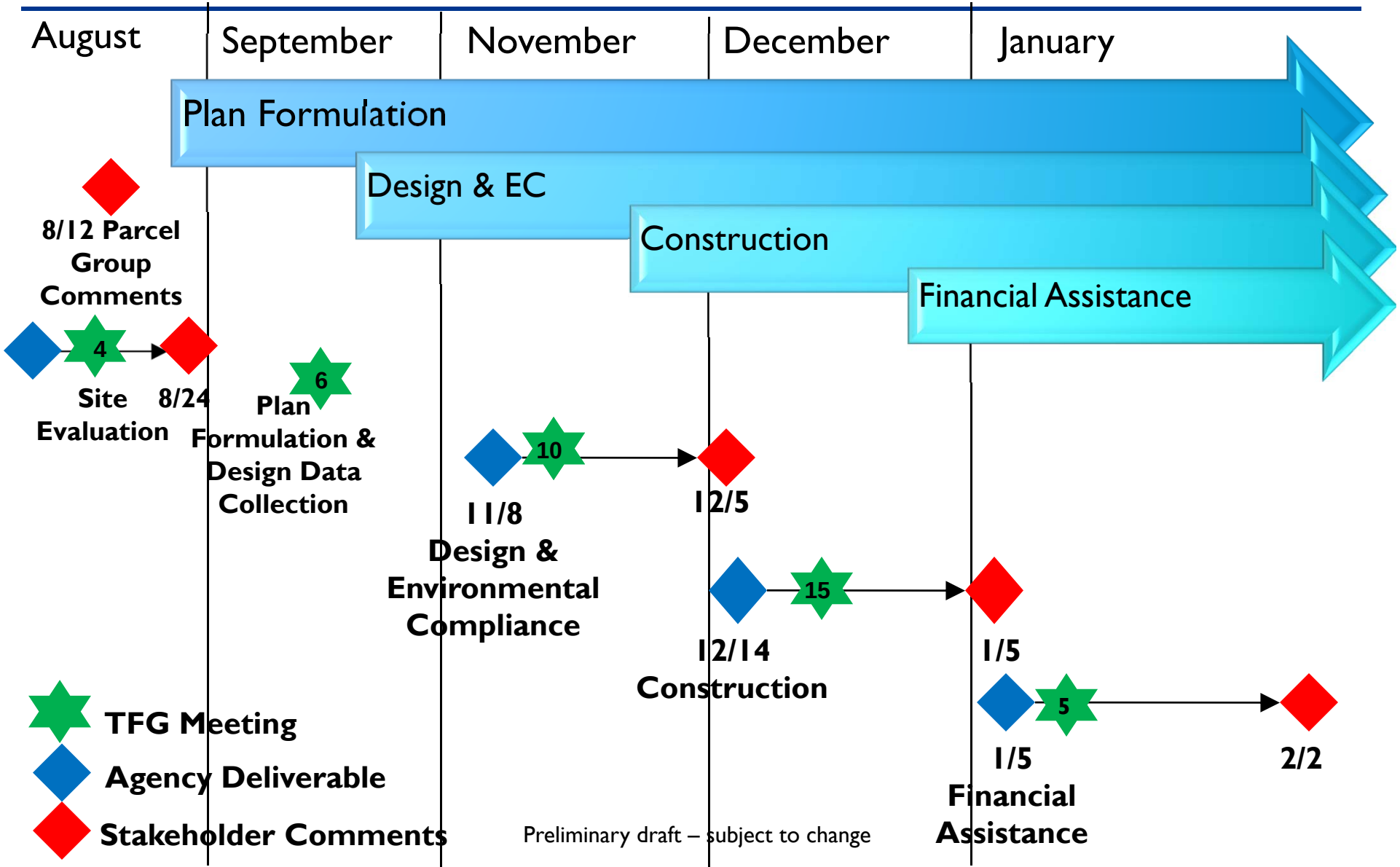

Review and Update

ACTION ITEMS

Action Items

Action Items	ID'ed	Due	Assigned to:	Status
1. Brainstorm on seepage project scenarios at future meeting	8/4/11	9/6/11	Team	Complete
2. Coordination with NULE- report on opportunities for cross evaluation work and exchange information on drilling permit	8/4/11	9/6/11	Scott Rice, DWR	?

Elements of the Seepage Project Handbook

- Introduction
- Site Evaluation
- Environmental Compliance
- Design ← Today
- Plan Formulation
- Design Data Collection
- Construction
- Financial Assistance

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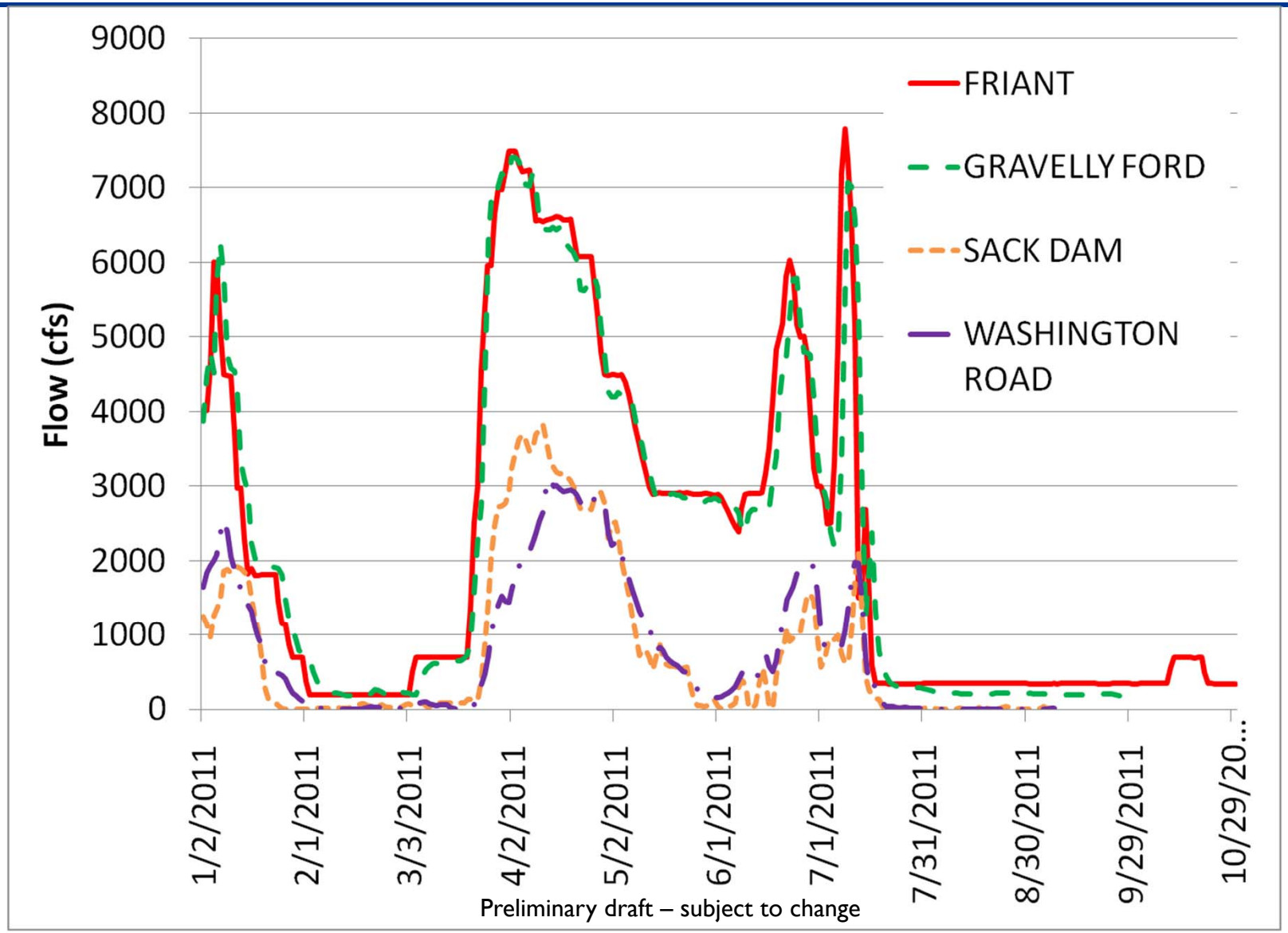
INTERIM FLOWS UPDATE

Interim Flows Update



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DESIGN PROCESS

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

Design Process Details

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

Design Process Details

Design - DRAFT SPEC Stage (90%)

- Lab testing reports completed
- TMs 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

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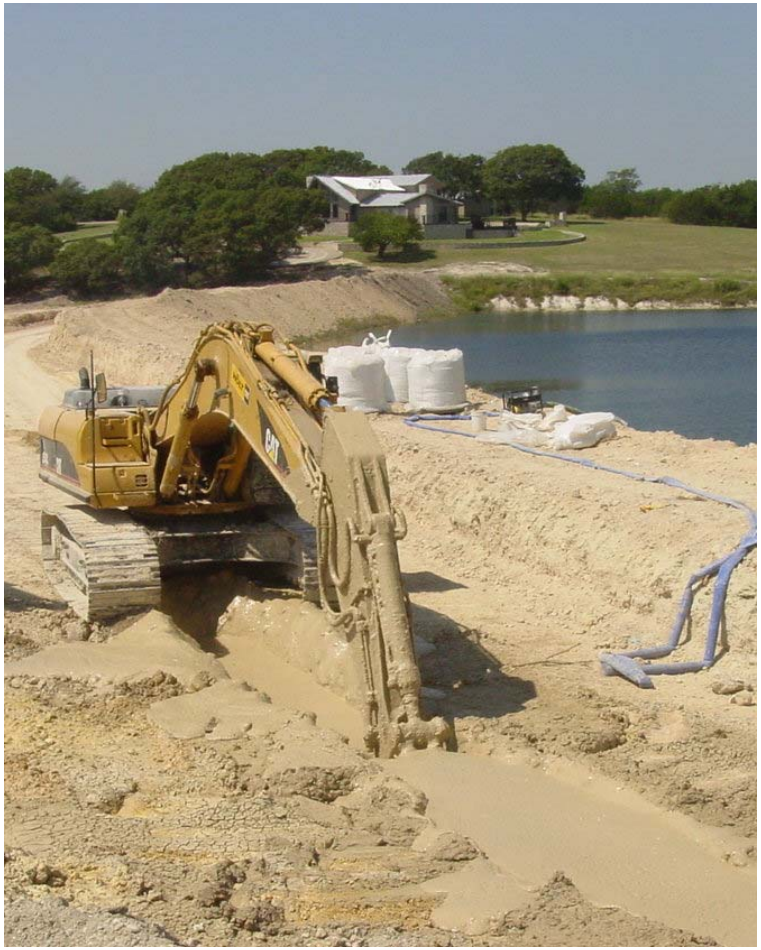
PLAN FORMULATION

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

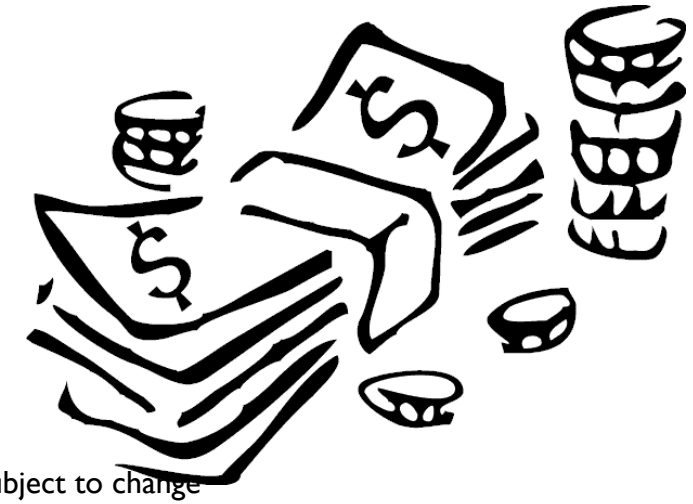


High Priority Criteria

- 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

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

Process Comments

- Projects sited at most constraining 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

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DESIGN DATA COLLECTION

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

Next Steps

- Comments on Design, Plan Formulation, Design Data Collection Seepage Project Handbook sections by 12/5
- Next Meeting –
  - Wrap up design, plan formulation and design data collection
  - Discuss construction
  - Introduce financial assistance

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INFORMATION & DATA EXCHANGE

Construction

- Ideas or suggestions on the Construction section of the Seepage Project Handbook

Challenges

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

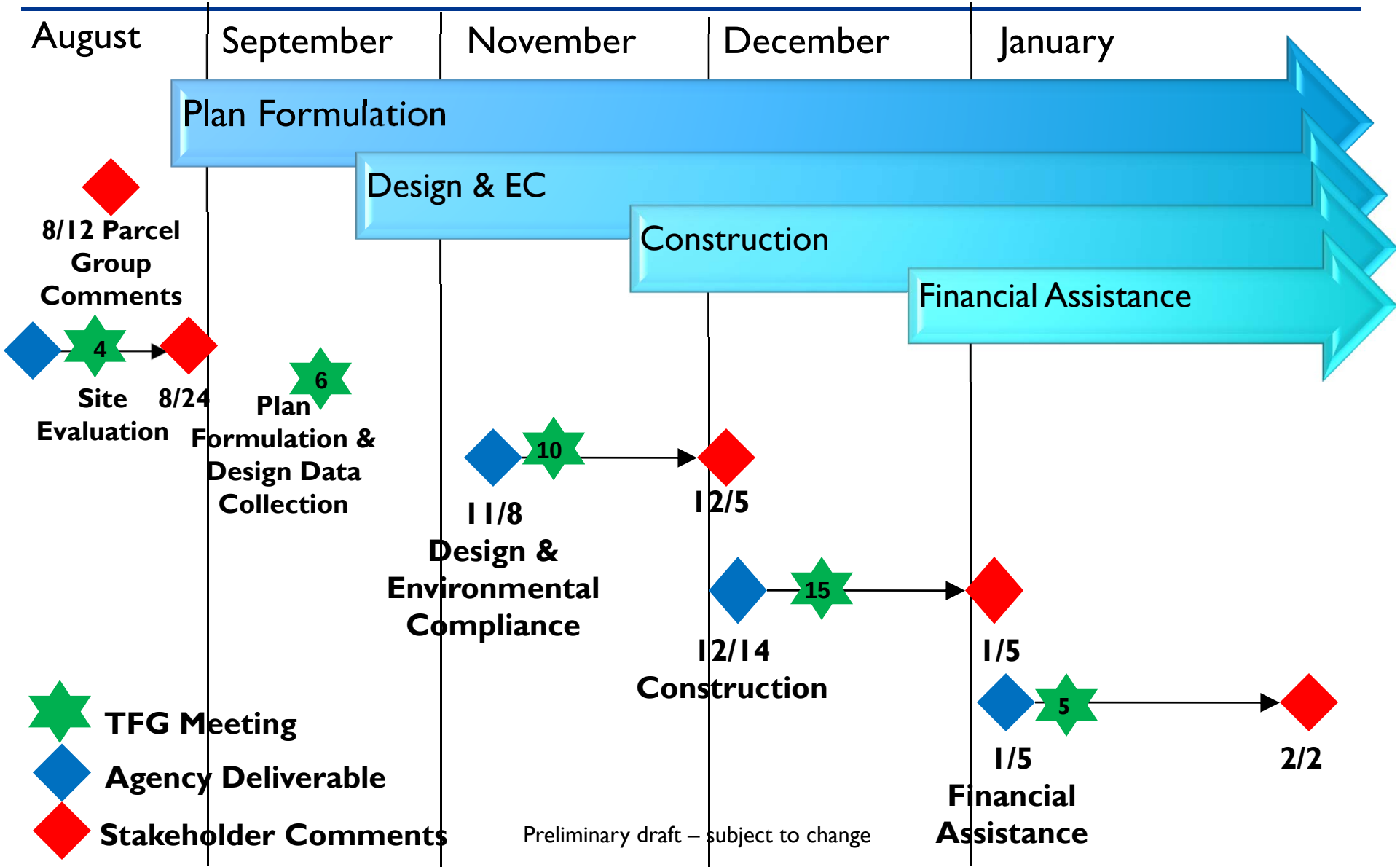
Shay Humphrey

NEXT STEPS AND FOLLOW-THROUGH

Next Steps

- Design Data Collection, Plan Formulation sections of SPH posted
- Feedback from Landowners on Design Data Collection, Plan Formulation sections of SPH
  - Due December 5
- Construction section of SPH posted
  - December 14
- Next Meeting Date:
  - December 15

Milestones for Handbook Preparation



Action Items and Review

- Update Action Items
  - Revised Actions
  - New Actions

Parking Lot Topics

- Impacts to Firebaugh
- State Lands Commission findings
- Full range of alternatives including:
  - All tile/interceptor scenario
  - All easement scenario

Contact

- Technical Feedback Group – David Mooney
  - 916-978-5458
  - dmmooney@usbr.gov
- Seepage Concerns – Seepage Hotline
  - 916-978-4398
  - interimflows@restoresjr.net