Colorado River Aqueduct Main Pump Reliability Program

Engineering & Operations Committee
Item 7-6
October 8, 2012

Current Action

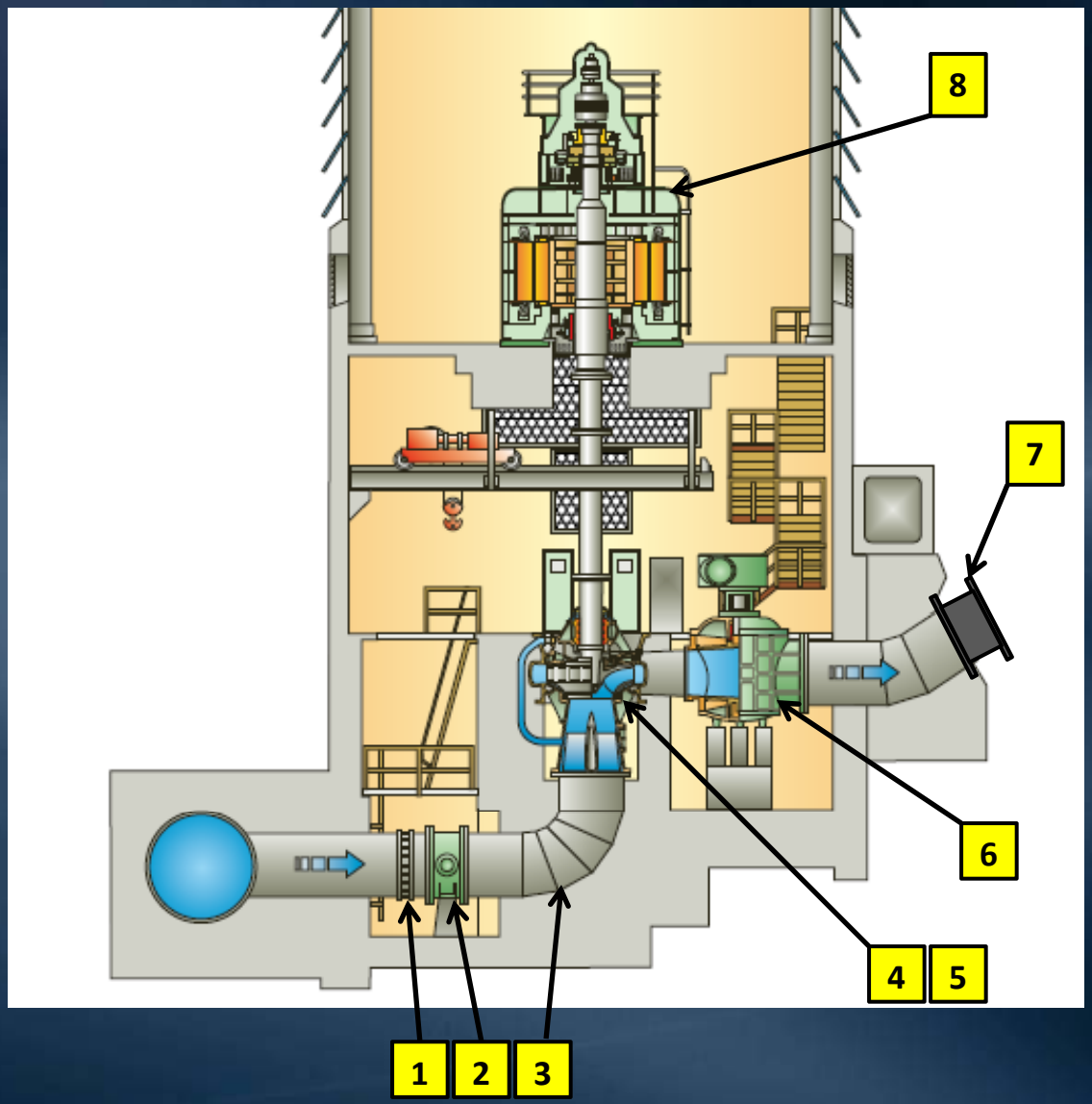
- Appropriate $950,000
- Authorize
  - CRA main pump investigations
  - Refurbishment of pump suction joint at Iron Mtn. pumping plant

Location Map

CRA Pumping Plants

- 5 pumping plants
- 9 pumps per plant
  - Installed from 1941 – 1959
  - 8 on duty & one spare
  - 1,617 ft total lift
  - 1,800 cfs capacity
- Rehabilitated in 1980s
- Performance deteriorating

1. CRA Main Pump Reliability Investigations



1. Suction Joint
2. Suction Valve
3. Suction Piping
4. Pump Case
5. Pump Impeller
6. Discharge Valve
7. Disch. Line Isolation
8. Pump Motor

1. CRA Main Pump Reliability Investigations

Inside Pump Casing

Directional Vane

- Planned activities
  - Disassemble & assemble eqpmt. for inspections
  - Review of operations and maintenance history
  - Testing of materials & performance
  - Identify needed repairs
  - Develop cost estimates
- Propose projects for inclusion into CIP

2. Erection Joint Pilot Project

Erection Joint

- Background
  - Located at 4 plants
  - Used to disassemble discharge pipe for valve maintenance & inspections
- Project Issue
  - Joint leaking & corroded
- Final design completed
  - Construction by Metropolitan forces recommended

2. Erection Joint Pilot Project

Suction Valve

- Construction Scope
  - Dewatering pipeline
  - Blasting & coating interior suction piping & valve disc
  - Welding internal butt strap
  - Blasting & coating exterior joint, valve and exposed piping
- Incorporation of lessons learned for contract repairs

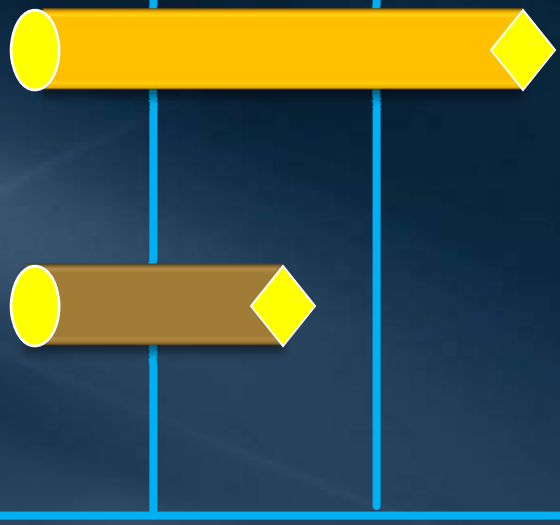
Requested Funds

	CRA Main Pump Reliability Investigation	Suction Valve Joint Repair
Labor		
Proj Mgmt, Env. Docs	$ 59,000	$ 34,000
Study & Investigations	246,000	-
Construction	-	274,000
Technical Support	-	42,000
Materials, Supplies, Eqpt. Use	-	140,000
Remaining Budget	75,000	80,000
Total:	$ 380,000	$ 570,000

Total Requested : $ 950,000

Project Schedule

Activity	2012	2013
CRA Main Pump Investigations		
Pipe Joint Refurbishment at Iron Mtn. Pumping Plant		



Board Action

Construction

Completion

Studies/Investigations

Board Options

- Option #1
  - Adopt CEQA determination
  - Appropriate $950,000
  - Authorize CRA main pump investigations
  - Authorize refurbishment of one suction joint at Iron Mtn. Pumping Plant
- Option #2
  - Do not proceed at this time

Staff Recommendation

- Option #1