

# Reach IV-B Condition Assessment Status Update

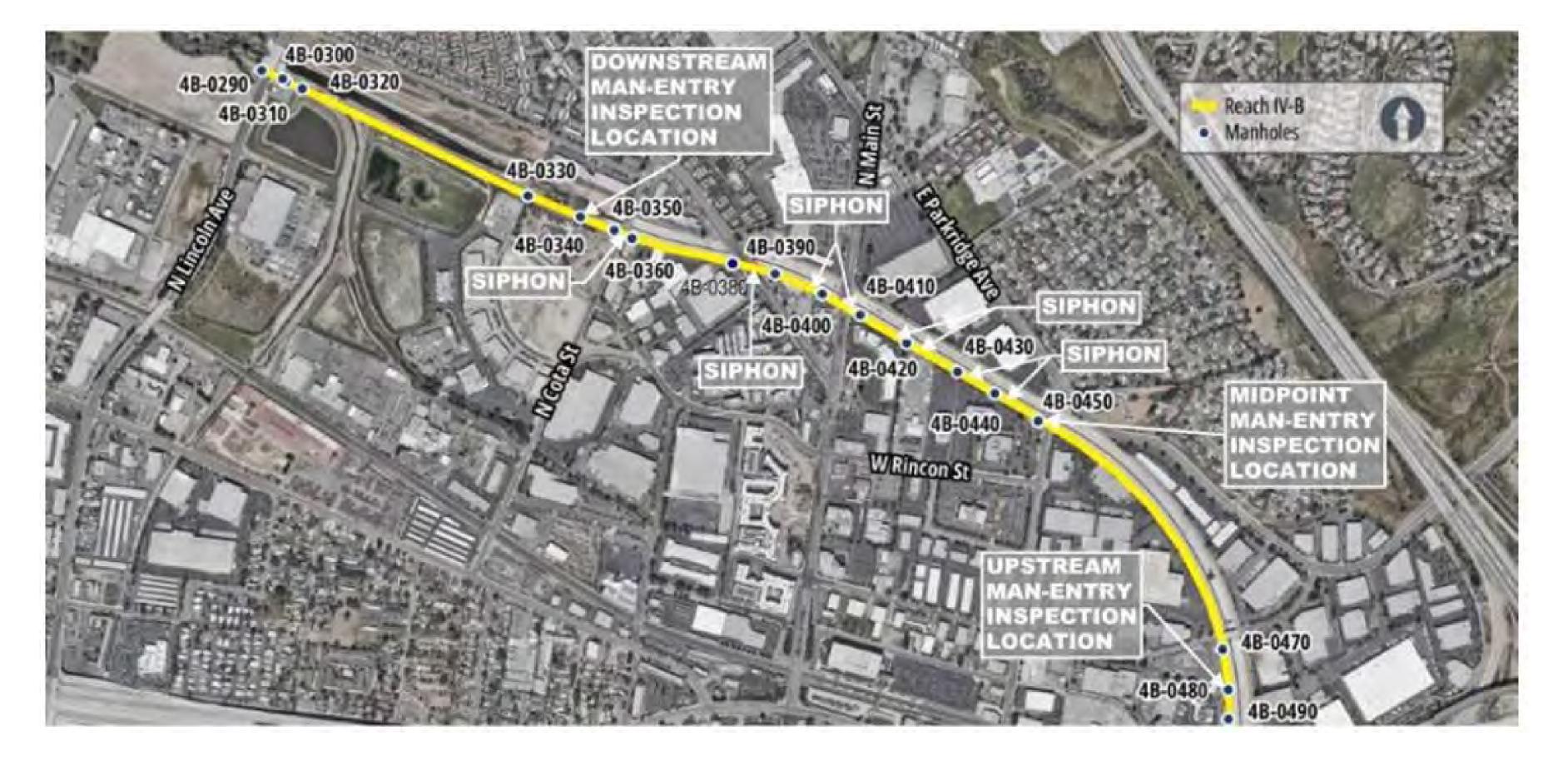
PA 24 Committee
Agenda Item No. 6.A
Daniel Vasquez
Manager of Operations
September 3, 2024

### Recommendation

Receive and file.

# Background

- In February of 2024, SAWPA Staff presented the Condition Assessment Draft Report to the PA 24 Committee for Reach IV-B.
- Draft report was provided to Member Agency staff for review
- The Near, Mid, and Long Term Recommendations have been refined.



Reach IV-B Pipeline and Man-Entry Inspection Locations

ondition lating	Description	Representative Photograph			
Level 1	Wall thickness loss, generalnone     Wall thickness loss, pittingnone to minimal     Extent (area) of corrosionmay be widespread but superficial				
Level 2	Minor corrosion  Wall thickness loss, generalup to 20%  Wall thickness loss, pittingup to 20%  Extent (area) of corrosionlocalized				
Level 3	Moderate corrosion  Wall thickness loss, general20% to 40%  Wall thickness loss, pitting20% to 60%  Extent (area) of corrosionup to half of surface				
Level 4	Severe corrosion  Wall thickness loss, general40% to 60%  Wall thickness loss, pitting60% to 100% (pinholes)  Extent (area) of corrosionmost of surface				
Level 5	Wall thickness loss, generalgreater than 60%     Wall thickness loss, pitting100% (holes)     Extent (area) of corrosionmost or all of surface				

### **Metal Condition Index Rating System**

# **Testing Methods Used**

- Visual Assessments
- Ultrasonic Thickness Testing
- Dry Film Thickness Testing
- Broadband Electromagnetic Testing
- CCTV Inspections



Missing Lining



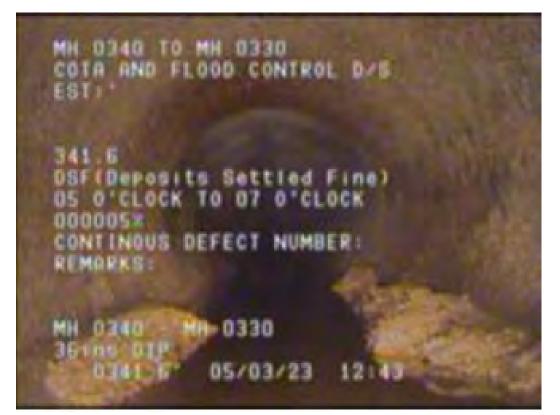
**Deposits and Missing Liner** 



Corrosion Discoloration at Crown and Joint



Missing Liner and Damaged Metallic Pipe Wall



Deposits



Coating Failure at Joint

### **Example Corrosion and Joint Lining Failures Found**

### **Condition Assessment Conclusions**

- Overall condition levels at level 2 and 3 throughout the piping and at the manned-entry locations with some isolated areas of moderate degradation.
- Minor to moderate corrosion in pipe throughout inspected areas.
- Minor corrosion at most joints inspected.
- Moderate failure of coated lining in pipe throughout a majority of inspected pipeline.
- Minor loss of coated lining at manned-entry inspection locations.

# **Summary of Recommendations**

Period	Summary of Recommendations	Cost
Near-Term (3-5 Years)	<ol> <li>Bypass as necessary to complete the work.</li> <li>Perform joint repairs at MAS 4B-0480.</li> <li>Perform man-entry visual inspections and physical testing at MAS 4B-0320.</li> <li>Install two new MAS.</li> </ol>	\$1,750,000
Mid-Term (7-10 Years)	<ol> <li>Bypass as necessary to complete the work.</li> <li>Heavy cleaning of the entire Reach IV-B.</li> <li>CCTV and sonar inspection of the entire Reach IV-B.</li> <li>Repeat man-entry visual inspections and physical testing at four locations.</li> <li>Evaluate spot repairs versus long-term lining alternatives.</li> <li>If spot repairs are selected as the preferred direction, complete joint repairs and lining spot repairs.</li> </ol>	\$3,200,000
Long-Term (10+ Years)	1. Rehabilitate the entire Reach IV-B pipeline (estimate assumes CIPP).	\$8,790,000

# **Next Steps**

 Update the Brine Line CIP with the near, mid, and long term recommendations.

## Questions?

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# Inland Empire Brine Line 10 – Year Capital Improvement Plan

David Ruhl, Executive Manager of Engineering and Operations

September 3, 2024

Agenda Item No. 6.B

### Capital Improvement Plan

- Assure the long-term future viability and sustainability of the Brine Line
- \$78 million over 10 years (year 2035)
- Includes recommended improvement projects from the draft Master Plan
- Organized into a 40 year plan that corresponds to build-out of the Brine Line system (year 2065)
- Prioritized based on criticality and need

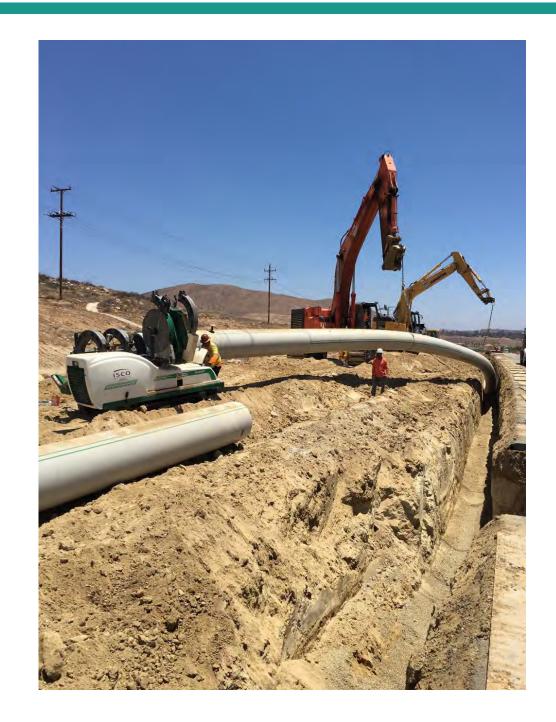


Reach IV-A and IV-B Rehabilitation Project

### Capital Improvement Plan

#### CIP addresses

- Known system improvements
  - Reach V New MAS
  - Reach IV-B New MAS
  - Reach IV-E mainline valve
- Known O&M challenges
  - Reach V Relocation of Air Vacs
  - Prado Access Road Improvements
  - o Protection from stormwater/erosion
- On-going investigations to monitor system improvement and future needs
  - o Reach IV-B DIP Corrosion
  - o Reach IV-D Corrosion
  - Condition assessments (inspection, design, repair/rehabilitation)
- System improvements identified in the Master Plan
  - MAS smart cover installation
  - o SCADA system
  - o Investigate off-line storage system



Reach V – Relocation and Improvement

### Inland Empire Brine Line 10 - Year Capital Improvement Plan (CIP)

Year	1	2	3	4	5	6	7	8	9	10	11-40
ID# Project	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FV 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035 - 65
1 Reach IV - B DIP Section New MAS Structures	\$334,750										
2 Reach IV-E Siphon Mainline Valve			\$420,700	\$433,321						13 14 14	
3 Reach IV Condition Assessment/Rehabilitation										\$1,142,329	\$8,250,000
4 Reach IV - B DIP Rehabilitation					\$4,266,129					A COLUMN AND A STATE OF	\$8,790,000
5 Reach IV-D Corrosion Rehabilitation	\$96,820								\$1,172,991	\$18,371,538	\$27,807,650
6 Reach V MAS Condition Assessment						\$686,580			\$2,609,546	\$2,687,833	\$2,000,000
7 Reach IV-B Condition Assessment / Repairs		\$450,883	\$464,409					\$1,076,755		A 40 C 10 C	\$33,970,000
8 Reach IV - E Condition Assessment / Repairs			\$491,727					10.00			\$750,000
9 Reach V - Temescal Canyon Rd Widening	\$103,000										04.50
10 Prado Access Road Improvements.	\$103,000	\$106,090		\$2,813,772							
11 Alcoa Dike Protection (Raise 2 MAS)	\$77,250										
12 Prado (below 566' Elevation) MAS Protection	\$206,000	\$212,180									
13 Reach V Air Vac Modifications	77					\$537,324					
14 Reach IV - D Condition Assessment / Repairs						\$746,283		\$791,731		\$839,948	
15 Reach V Indian Truck Trail Protection								\$728,393			
16 Reach V Baker St Protection								17.72.6.33		\$53,757	\$1,000,000
17 Reach IV-A Upper Pine Ave Siphon	\$154,500									1,200-1	
18 Capacity Management						\$388,067					\$27,000,000
19 Reach IV-D Mission Tunnel		\$185,658									
20 Hydraulic "Choke Points" Analysis						\$119,405				_	\$100,000
21 OC San Future CIP	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000	\$12,400,000
22 Smart MAS Cover Installation	14019/003	74.531.55	2010000	7111111		\$102,688	\$105,769	76.23.003	193211021		
23 Future Study on Green Hydrogen		\$210,058					A				
24 Future Studies on Brine Minimization		781 271212				\$104,679	\$107,819	\$111,054			
25 SCADA System	\$585,349	\$602,909	\$44,583	\$305,163	\$314,317	\$275,030	\$283,281	\$291,779	\$300,532		
26 Off-line Storage System	A-12/200	- A. D. E. E. B. D. C. B.	100000000	\$225,102	A-12-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	W-1-10-7	\$13,415,218	Warner Co. C. C.	\$14,232,205		\$87,262,400
27 IV-A Lower (Prado) Relocation				W. C.			14-14-1-1-1				\$55,114,000
28 Reach IV-D Parellel Line D1											\$4,825,000
29 Reach IV-D Parellel Line D2											\$19,520,000
Fiscal Year Total	\$2,060,669	\$2,167,778	\$1,821,419	\$4,177,357	\$4,980,446	\$3,360,056	\$14,312,087	\$3,399,712	\$18,715,275	\$23,495,405	\$288,789,050
Cumulative Total	\$2,060,669	\$4,228,447	\$6,049,866	\$10,227,223	\$15,207,669	\$18,567,725	\$32,879,812	\$36,279,524	\$54,994,798	\$78,490,203	\$367,279,253

Note: CIP projects adjusted for inflation at 3% per year.

The shaded projects are improvement projects identified in the Draft Master Plan for consideration

### **Next Steps**

- Member Agency staff review (September workshop)
- Fiscal Year 2026 and 2027 budget process
  - Review Reserve contributions
  - Evaluate and refine projects planned for next budget cycle



Reach IV-A CCTV Inspection

### Recommendation

• Receive and file

# Questions?