

Inland Empire Brine Line
Reach V Rehabilitation and
Improvement Project – Phase 1

January 3, 2017

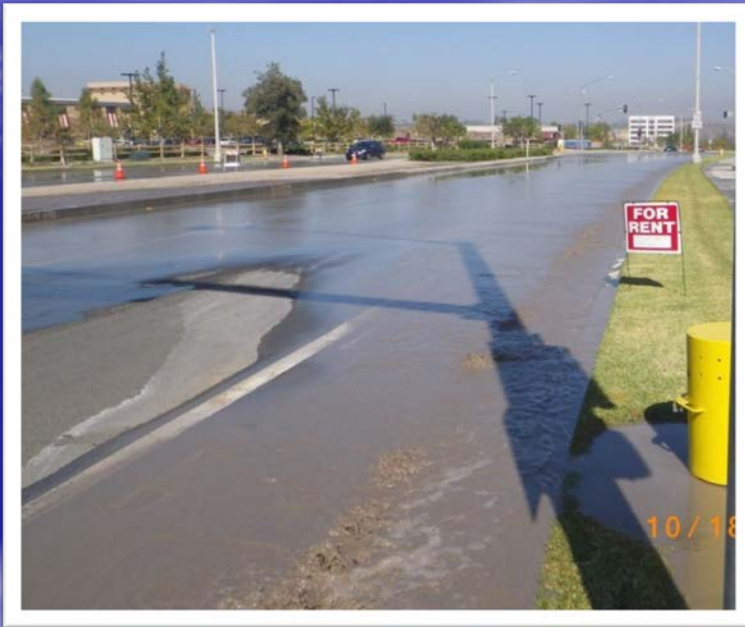
Inland Empire Brine Line

- Constructed in 2001
- 26,000 ft of 24" PVC
- Gravity and Low Pressure
- Major flow contributors from EMWD:
 - Power plant
 - Two desalters
 - Industrial manufacturer



SSO

October 18, 2011 SSO at Temescal Canyon Road and Cabot Road



- Cause of Failure Unknown
- Pipe was oval in shape
- Initiate investigation (collect data)

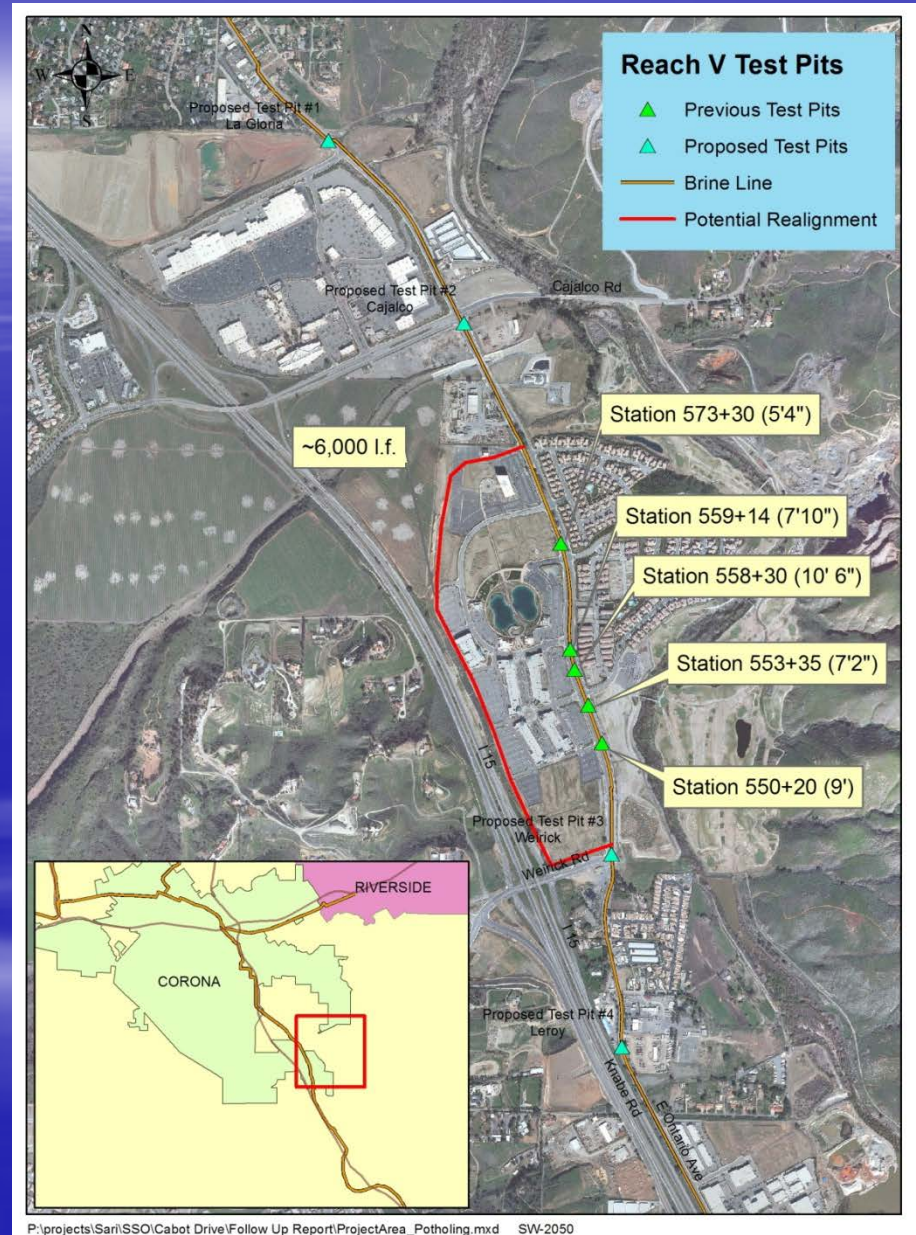
Investigative Work



- Added 3 access points for CCTV
- Pothole to determine location of pipe
- Construct test pits
 - Determine soil composition and compaction
 - Measure pipe ovality

Expert Panel Review

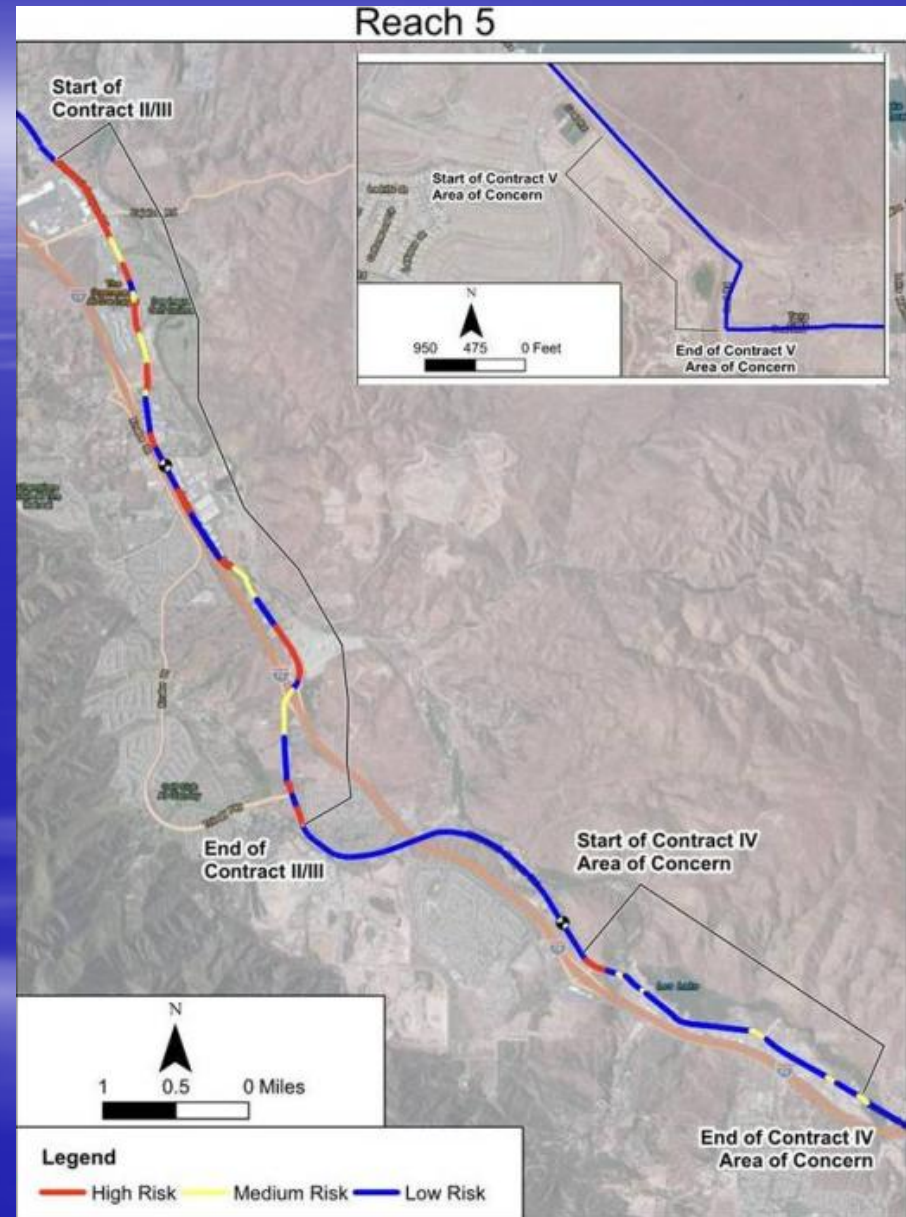
- Determined likely cause of pipe failure
 - Poor installation /compaction
 - Lack of specified bedding material
 - Poor sidewall support
 - Rocks in pipe zone
 - Added roadway fill
- Evaluated repair/replacement
- Developed list of recommended actions



Condition Study

Risk Assessment Findings

- High Risk Areas
 - 12,800 LF (32%)
- Medium Risk Areas
 - 8,200 LF (20%)
- Low Risk Areas
 - 19,800 LF (48%)



Condition Study

Recommended Rehabilitation Approach

- ~~Pressure Grouting~~
- ~~Tight Fit Lining~~
- ~~Pipe Bursting~~
- ~~Open Cut Replacement~~
- Pressure Cured-In-Place Lining (CIPP)
 - Cost \$11.5 \$16.3 Million

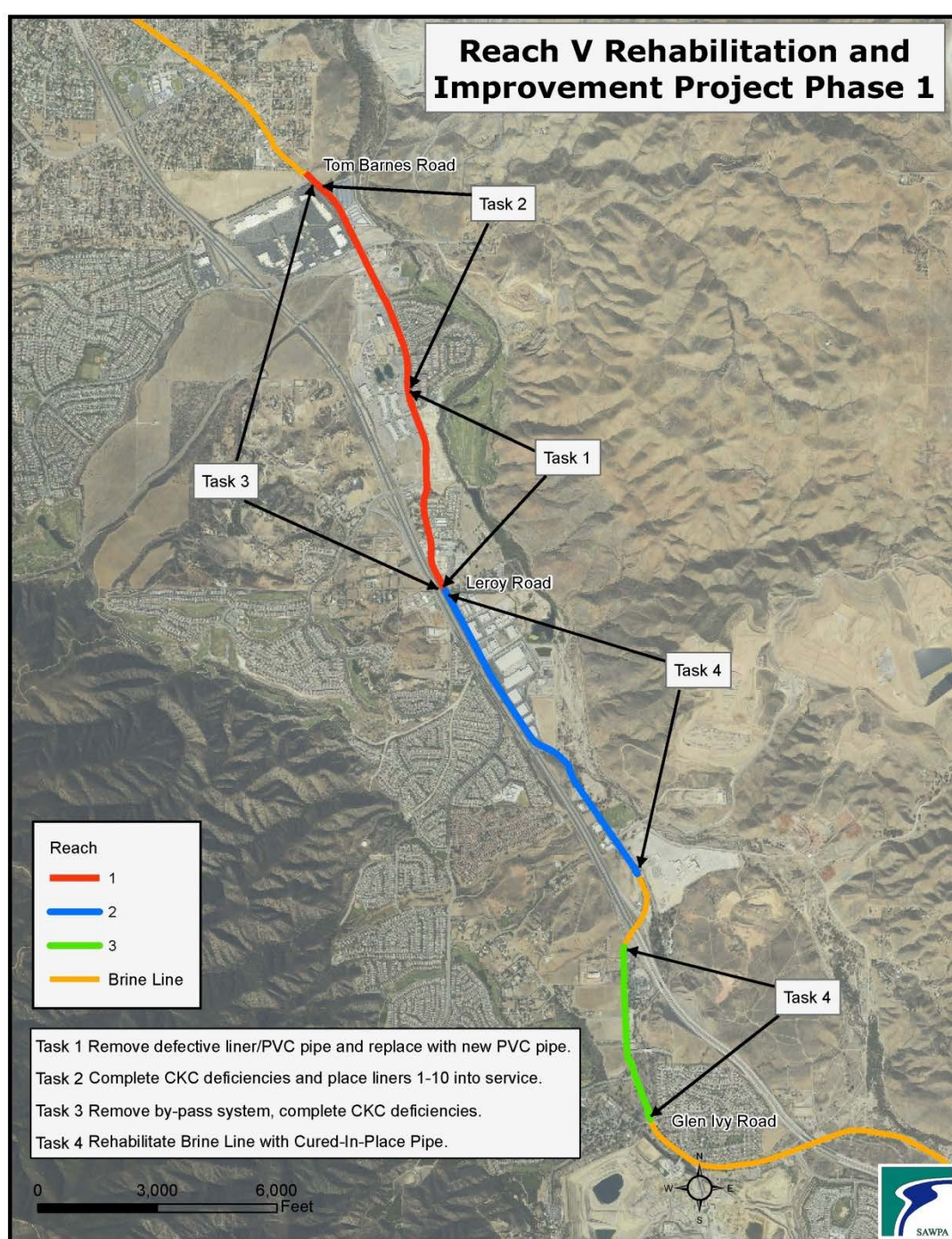


Design

- Hired Dudek to implement Design
 - Pressure CIPP Lining
 - Preliminary Design Report
 - Plans and Specifications
- SRF Loan
 - Design, Construction, CM, Admin - \$19 Million
- Advertise for Bids

Charles King Co / Spiniello	\$12,561,316
Weka, Inc. / Insituform	\$13,814,099
Spiniello / Norditube	\$14,890,120

Reach V Rehabilitation and Improvement Project Phase 1



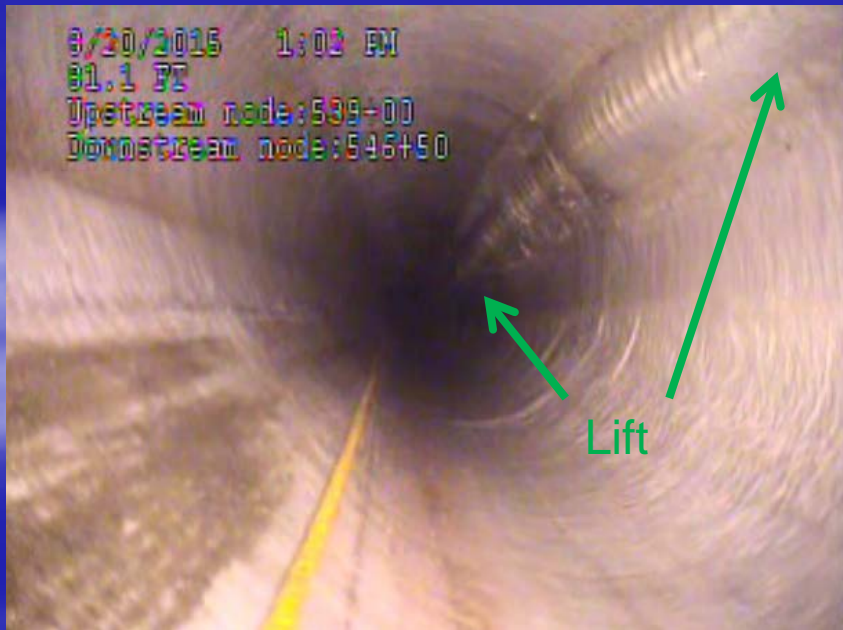
Notice to Proceed Jan 5, 2015
- Contract Time 400 days
- Liquidated Damages \$5,000/day
Contract Period End Mar 11, 2016



Liners (Norditube) 1 – 10
Installer Spiniello

Liners (Applied Felts) – 11 -16
Installer Spiniello

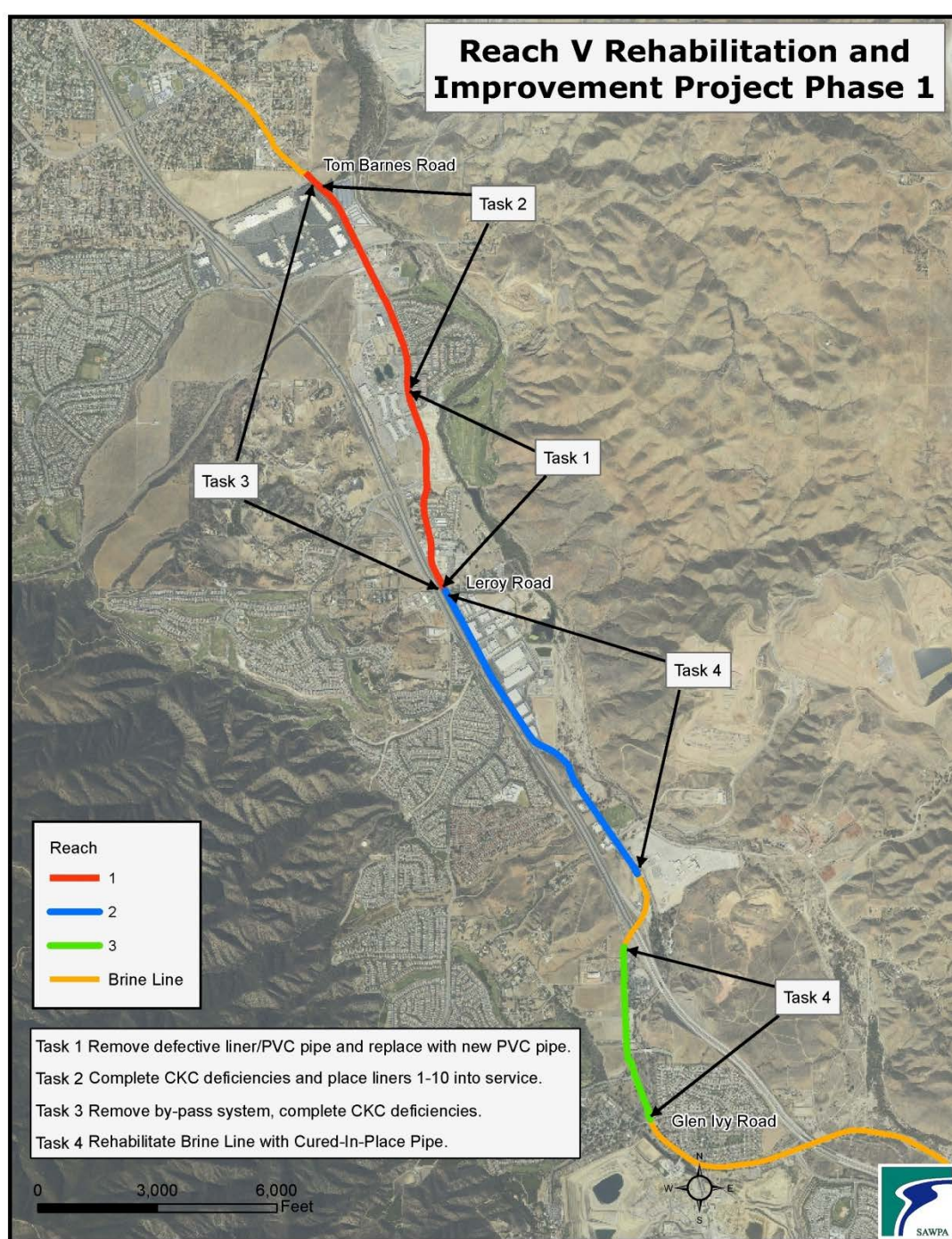




Construction

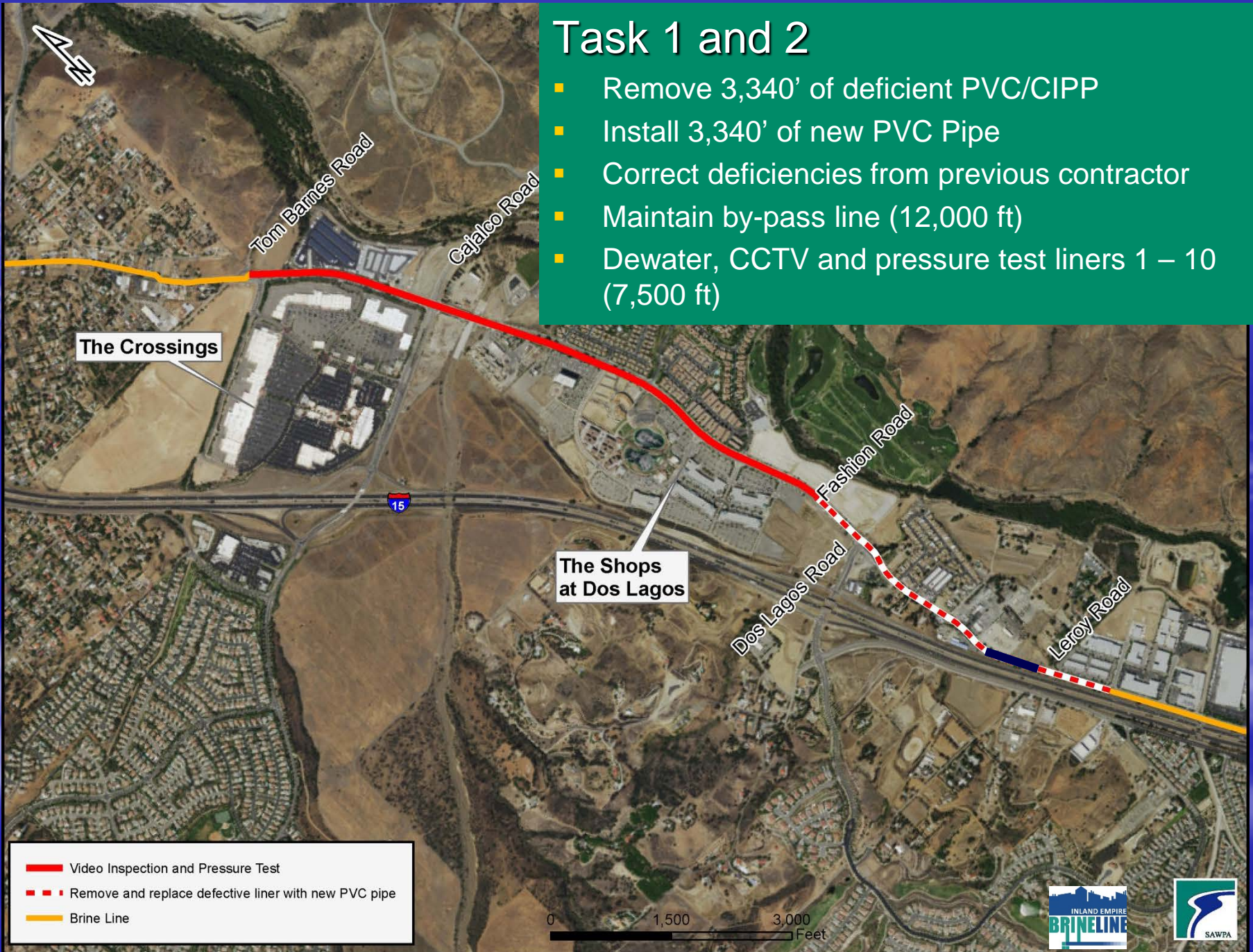
- Notice of Default Jun 2016
- Demand on Surety July 2016
- Termination of Contractor Aug 2, 2016
- Commission finding that the unfinished condition of the Project after termination for cause is an emergency that requires immediate action

Reach V Rehabilitation and Improvement Project Phase 1



Task 1 and 2

- Remove 3,340' of deficient PVC/CIPP
- Install 3,340' of new PVC Pipe
- Correct deficiencies from previous contractor
- Maintain by-pass line (12,000 ft)
- Dewater, CCTV and pressure test liners 1 – 10 (7,500 ft)



The Crossings

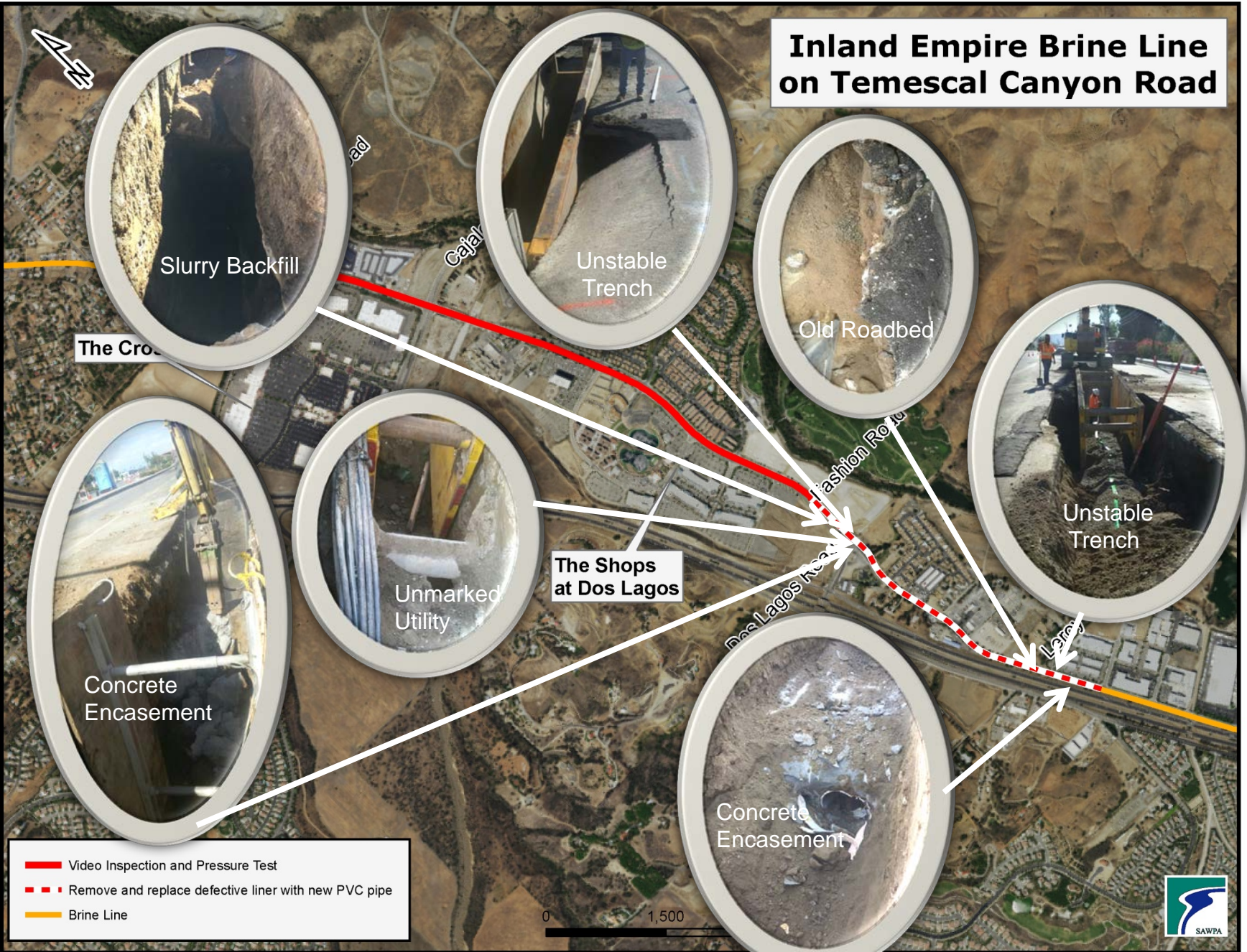
The Shops at Dos Lagos

- Video Inspection and Pressure Test
- - - Remove and replace defective liner with new PVC pipe
- Brine Line

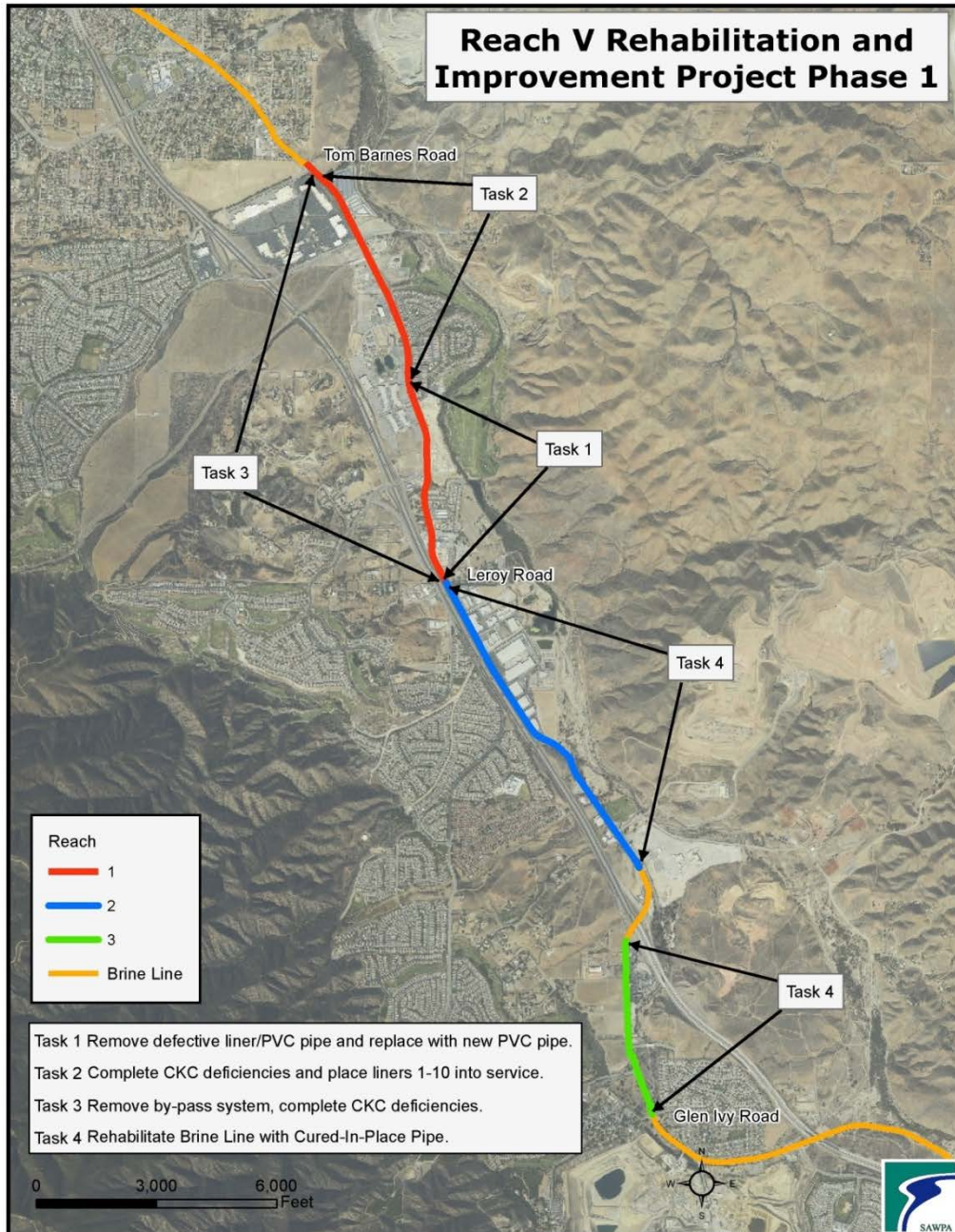
0 1,500 3,000 Feet



Inland Empire Brine Line on Temescal Canyon Road



Reach V Rehabilitation and Improvement Project Phase 1



Task 4

■ Project Description

- Clean, CCTV, Laser Profile – 12,800 ft
- Repair upto 12, 800 ft of PVC pipe
- 9 New MAS structures
- 9 New Avs, and 9 New Blow-offs

■ Contract Flexibility

- CIPP Installation only on approval of the Owner

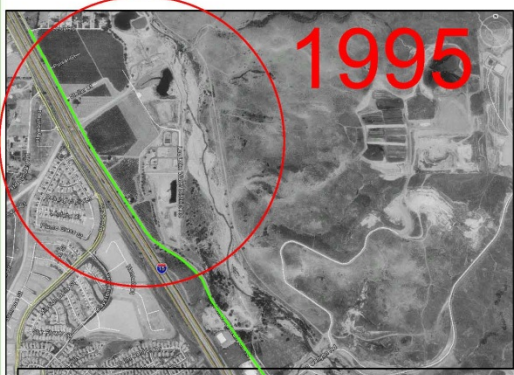
■ Cost Controls

- 48% of Lining is Additive Item
- Only pay for work that needs to be done
- Review work plan submitted by contractor
- Pre-negotiated price from contractor to remove existing PVC and Replace with new PVC.

Recommendation

1. Award a contract on the Inland Empire Brine Line Reach V Rehabilitation and Improvement Project – Phase 1 to Weka Inc. for an amount not to exceed \$12,950,113;
2. Execute Task Order No. VALI326-04 in an amount not to exceed \$1,252,400 with Vali Cooper & Associates, Inc. to provide Construction Management Services for the Inland Empire Brine Line Reach V Rehabilitation and Improvement Project – Phase 1; and,
3. Execute Task Order No. DUDK326-06 in an amount not to exceed \$134,900 with Dudek to provide Engineering Services during Construction for the Inland Empire Brine Line Reach V Rehabilitation and Improvement Project – Phase 1.

Questions?



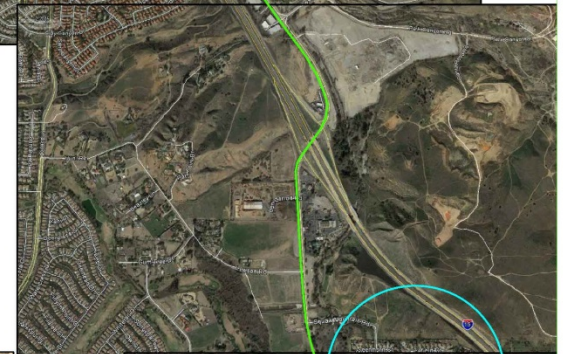
1995



2002



2016



Public Outreach

- Project Update Brochures
- Construction Hotline
 - 1 Call
- Construction E-mail address
 - 2 E-Mail
- Posting to We R Temescal Valley Facebook Page
- Project Website



SAWPA **INLAND EMPIRE BRINELINE**

PIPELINE PROJECT UPDATE

► **WHAT'S NEW AND WHY**

The contractor upgrading the Brine Line, WEKA Inc. of Highland, CA, is operating work crews at full staffing, maximizing production and efficiency on the project. In addition, repaving a segment of Temescal Canyon Road in Corona is scheduled to start on Friday, 11/4, and continue into early next week.

► **WHAT IT MEANS TO YOU**

WEKA will replace the temporary asphalt on Temescal Canyon Road near Fashion Drive – restoring a smooth driving surface on a portion of the roadway disturbed by work on the Brine Line. Final resurfacing will follow later. Generally, construction may slow traffic between Tom Barnes Street and Leroy Drive, 9 AM to 5 PM.

► **PROCESS AND TIMELINE**

The project remains fast tracked, reducing inconvenience while ensuring high-caliber work on the pipeline. The upgrades in Corona may be finished as soon as the end of November, with other areas in Phase 1 completed in early 2017. Write to us at construction@sawpa.org.

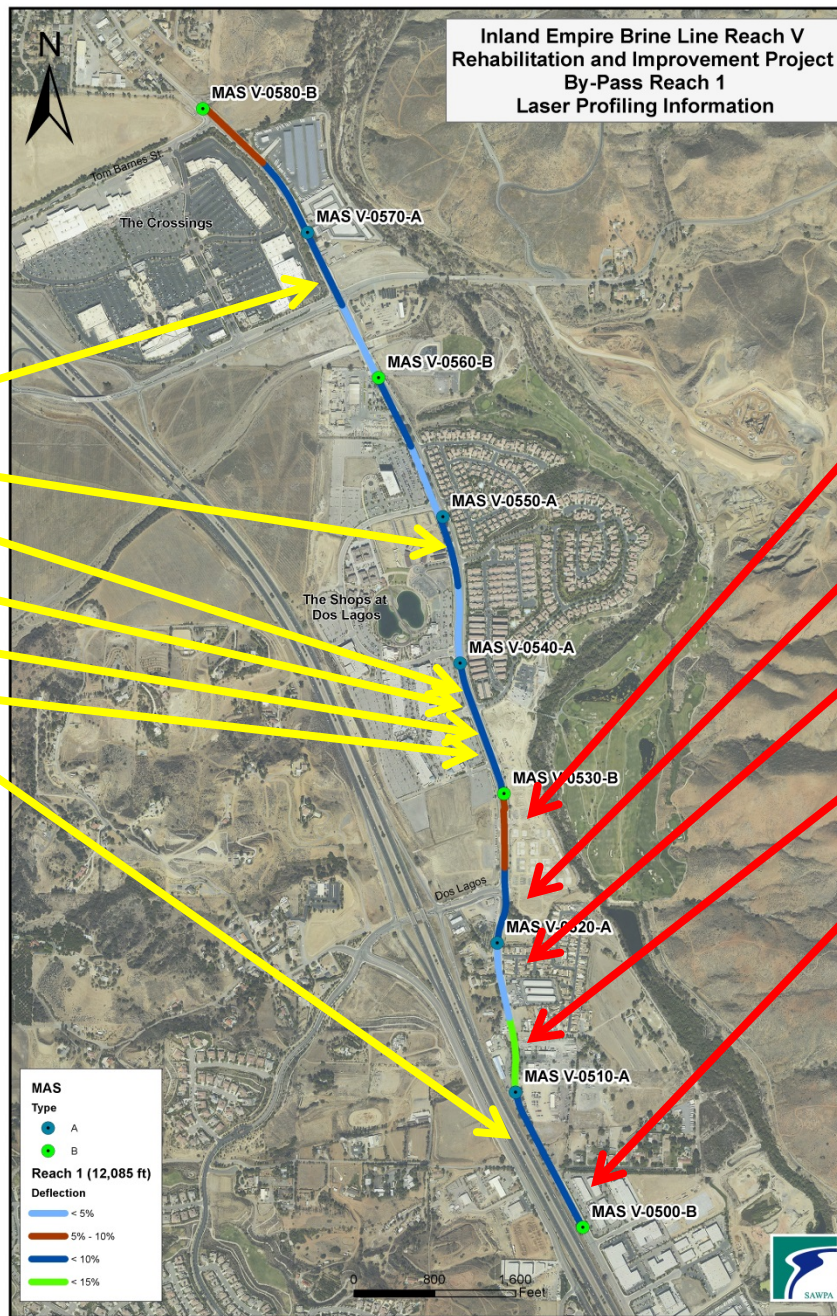
Project Overview

SAWPA is working to test, fortify and/or replace 5 miles of the Brine Line, an underground pipeline that conveys salty water from the Inland Empire to the Pacific Ocean. The brackish water comes from key sectors of the Inland economy, including power plants, manufacturers, and groundwater desalaters that produce large volumes of drinking water.

The project calls for placing new pipes within older pipes which have lost their shape over time. With loss of shape comes increased risk of spills, and the upgrades follow a 2011 Brine Line leak that was remediated. Water from the Brine Line poses no health risk but, if left untreated, could damage the local environment.

Santa Ana Watershed Project Authority
Inland Empire Brine Line
11615 Sterling Avenue
Riverside, CA 92503

Tell us what you think.
Hotline: 951.354.4250
Email: construction@sawpa.org
For updates: www.sawpa.org/brineline



Inland Empire Brine Line Reach V
Rehabilitation and Improvement Project
By-Pass Reach 1
Laser Profiling Information

Pipe Sampling (During Replacement Contractor Removal of Deficient Pipe)

Test Pit A (Pre-Design Data)

#	Station	Ovality
{Reach 1}		
7	(600 + 10)	3.7%
1	(573 + 30)	4.7%
2	(559 + 14)	5.4%
3	(558 + 30)	7.1%
4	(553 + 35)	5.6%
5	(550 + 20)	2.7%
6	(512 + 37)	6.6%
{Reach 2}		
9	(419 + 25)	6.6%
{Reach 3}		
8	(371 + 60)	3.7%

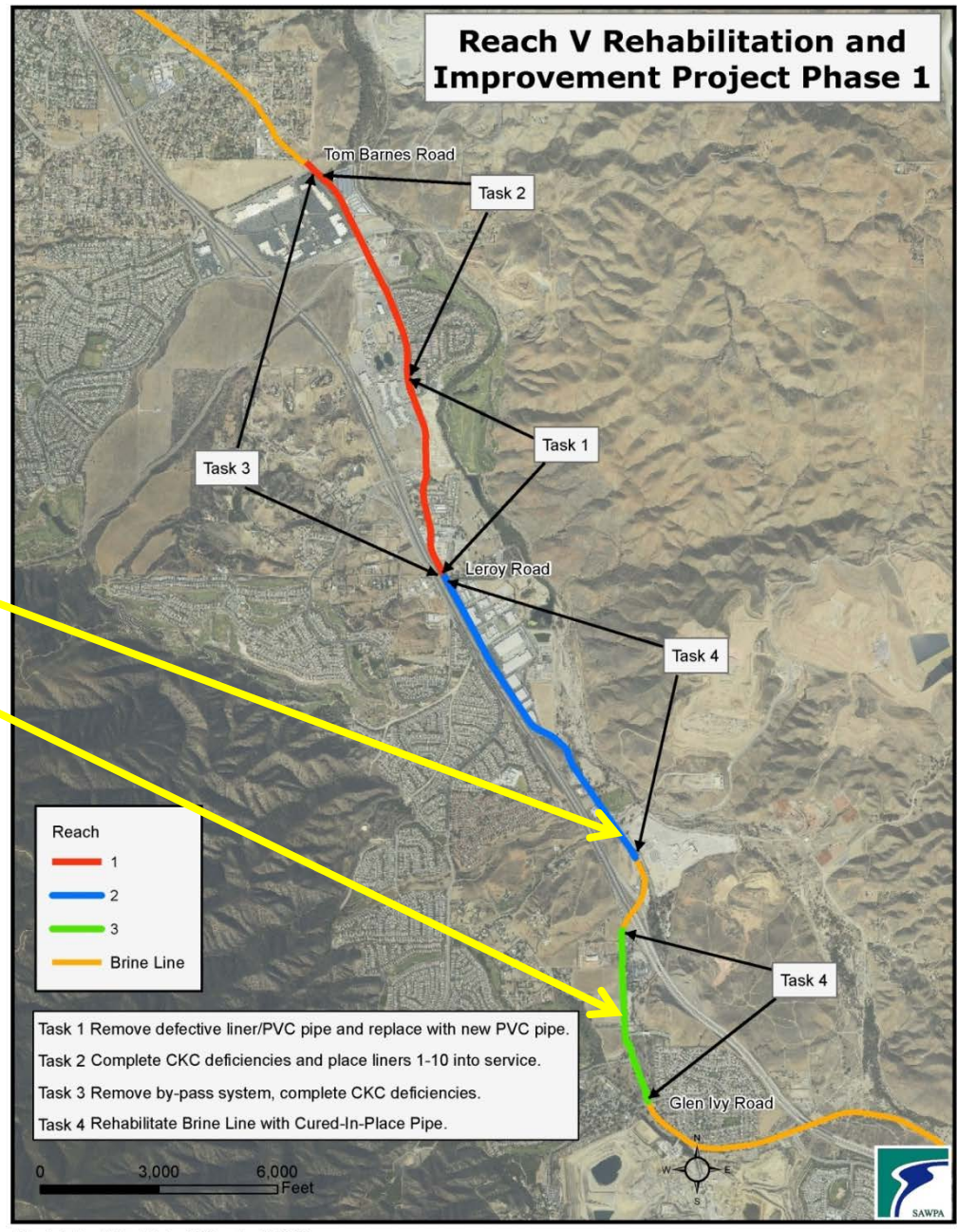
Ovality 0.0 ft – 10 ft

11-1	4% - 8%
11-2	N/A - 7%
12-1	3% - 7%
12-2	4% - 4%
13-1	6% - 9%
13-2	4% - 5%
14-1	7% - 11%
14-2	5% - 6%
16-1	2% - 8%
16-2	2% - 6%

A. Test Pit 10 (Sta. 622) canceled, unable to locate pipe. Test Pit 11 (Sta. 536) canceled, hit unmarked utility.



Reach V Rehabilitation and Improvement Project Phase 1



Test Pit

(Pre-Design Data)

Station Ovality

{Reach 2}

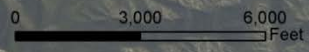
9 (419 + 25) 6.6%

{Reach 3}

8 (371 + 60) 3.7%

Reach	
1	Red
2	Blue
3	Green
Brine Line	Orange

- Task 1 Remove defective liner/PVC pipe and replace with new PVC pipe.
- Task 2 Complete CKC deficiencies and place liners 1-10 into service.
- Task 3 Remove by-pass system, complete CKC deficiencies.
- Task 4 Rehabilitate Brine Line with Cured-In-Place Pipe.



■ 14-1

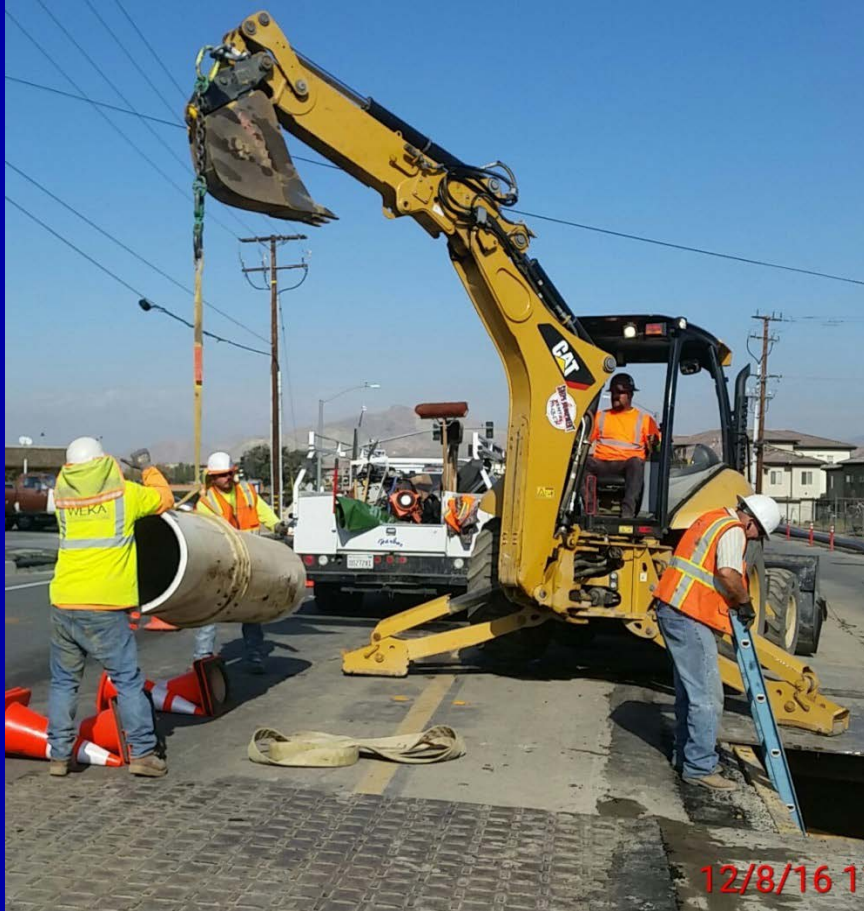
North End 10.8%



South End 7.4%

■ 16-2

South End 6.1%



North End 1.7%