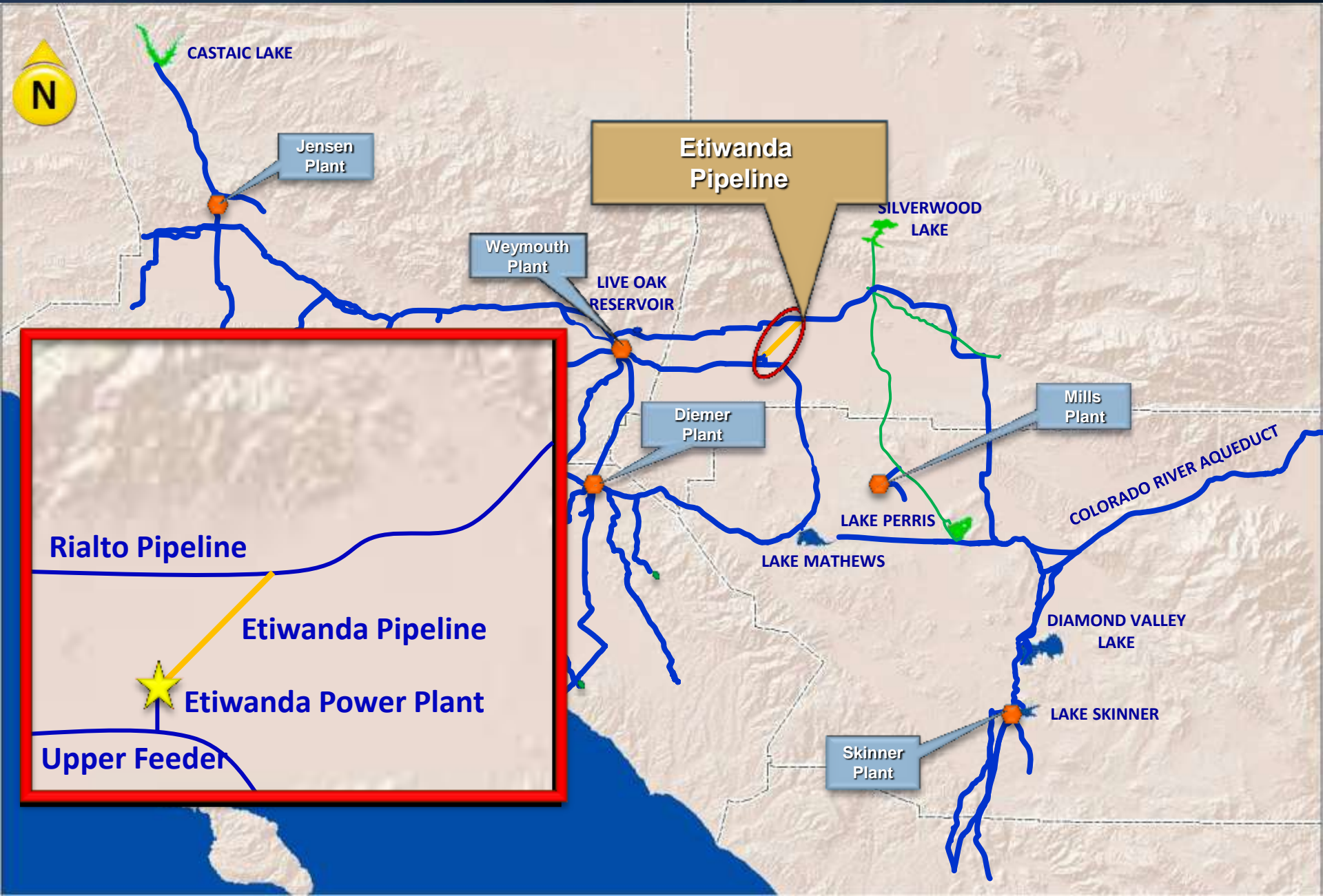




Update on Etiwanda Pipeline Lining Repairs

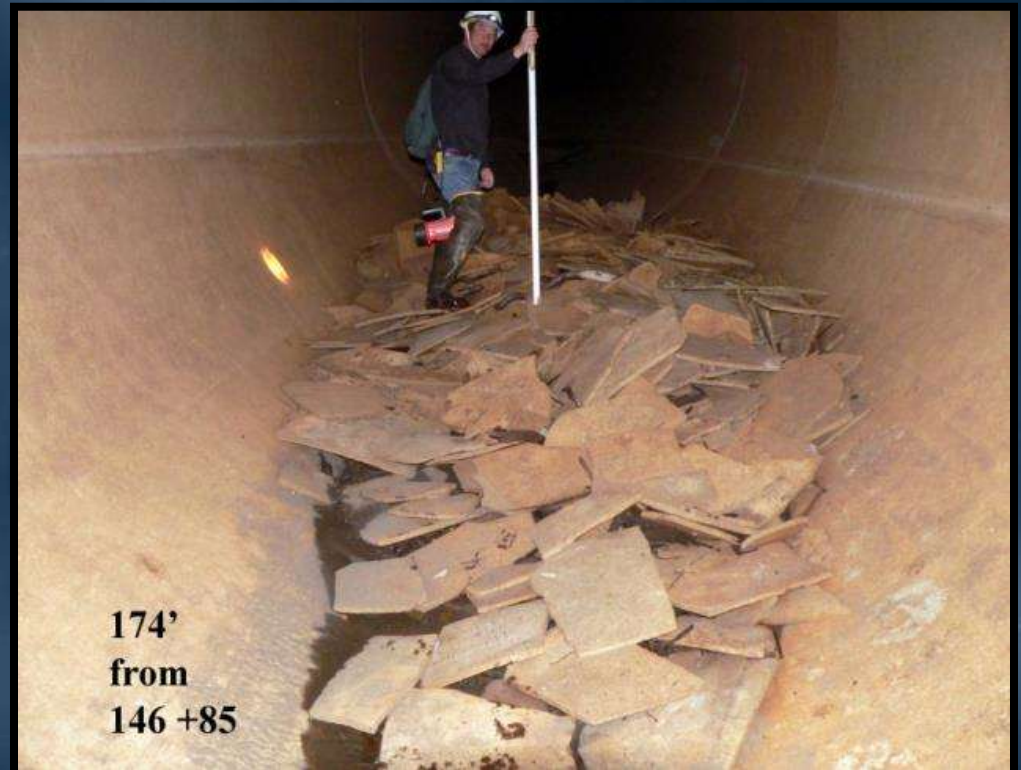
Engineering and Operations Committee
Item 6C
October 13, 2014

Distribution System



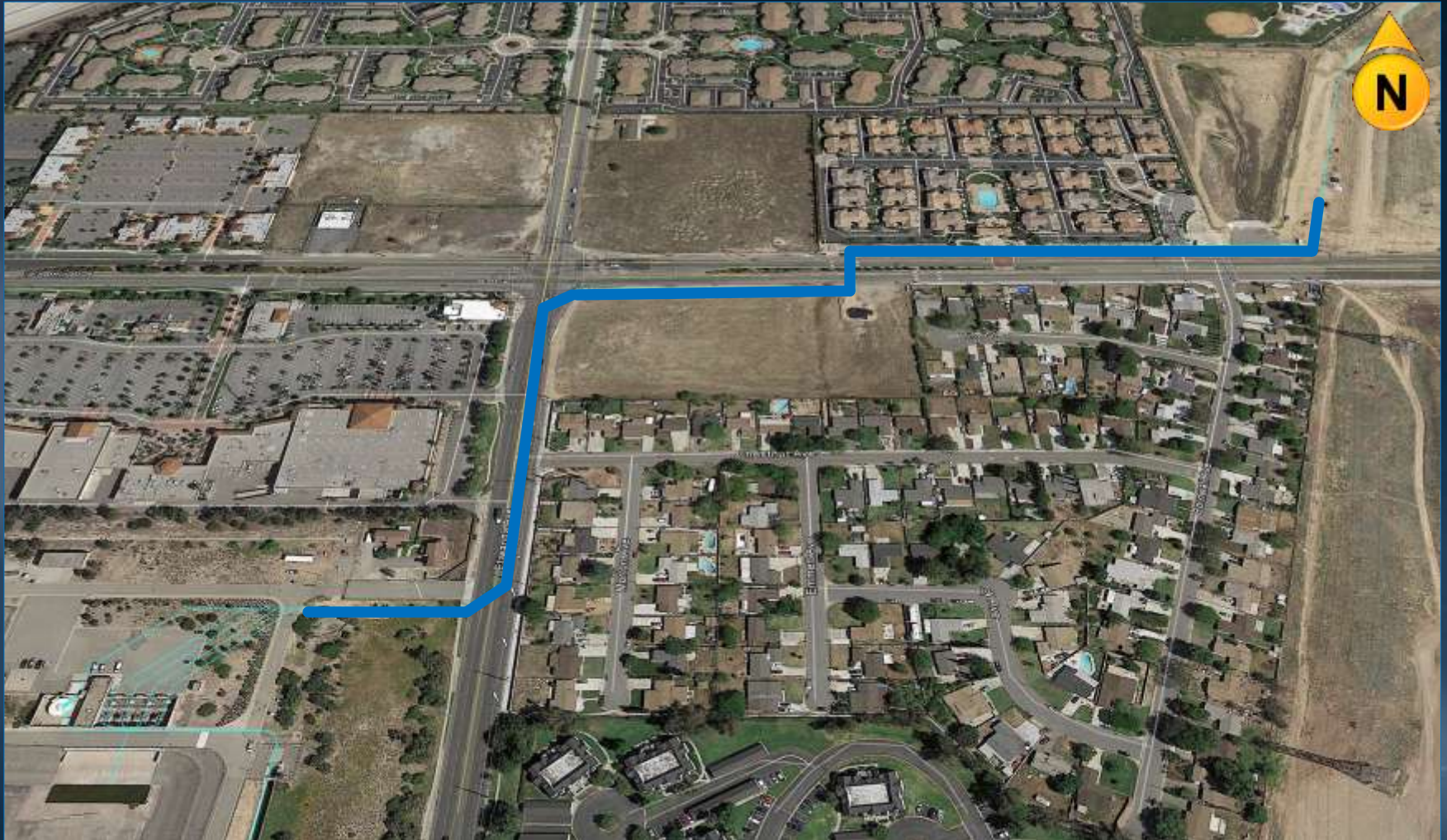
Background

- 6.4 mile 12-foot diam. welded steel pipe
- 37% delaminated mortar lining
- Still structurally sound
- Vulnerable to corrosion
- Multi-phase relining project initiated



Etiwanda Pipeline Relining

Phase I - Dec. 2013 Board Action



Etiwanda Pipeline

Removal of Mortar Lining



Etiwanda Pipeline

Before Blasting



Etiwanda Pipeline After Blasting



Etiwanda Pipeline

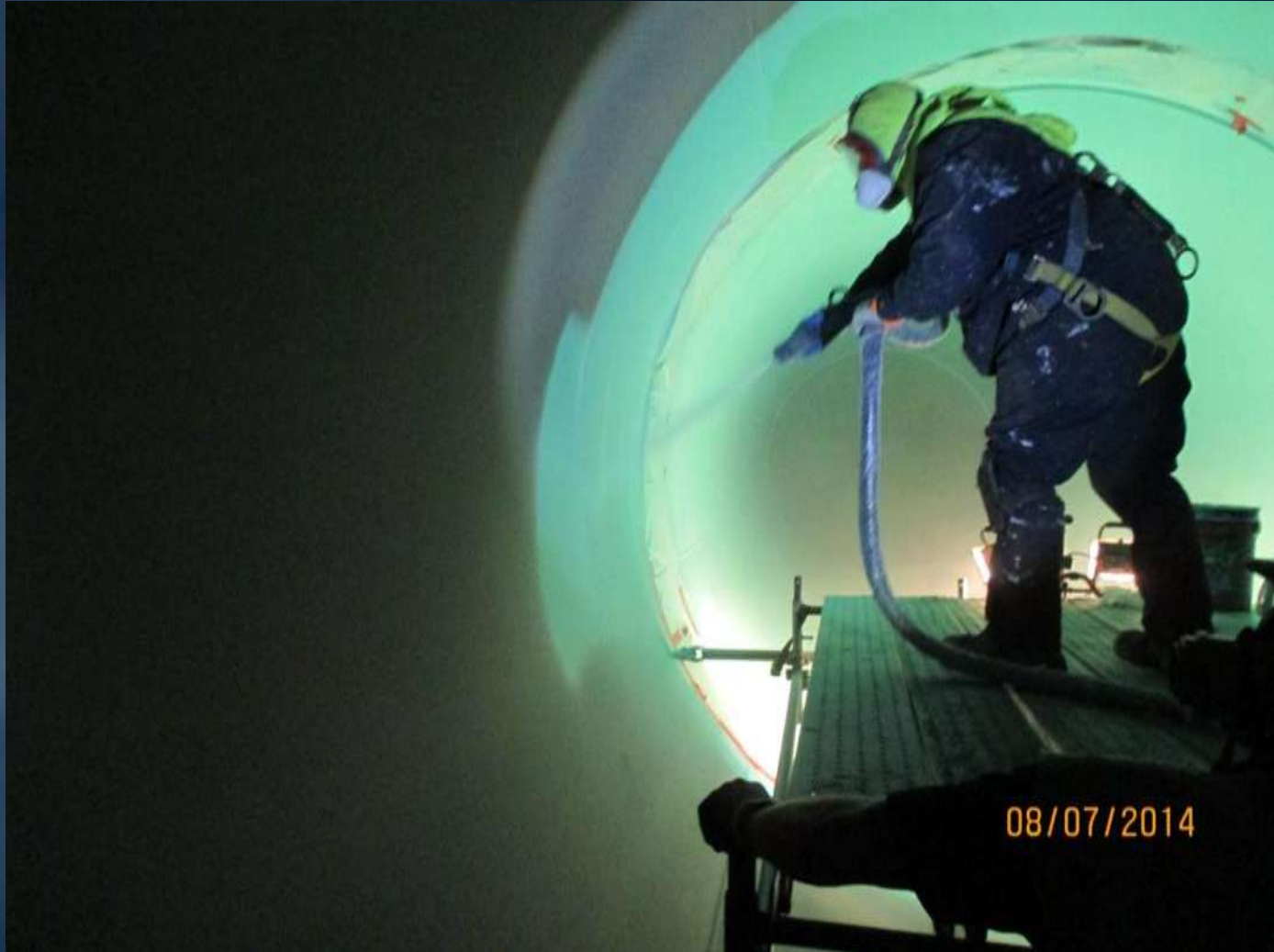
After Blasting



Before Blasting



Etiwanda Pipeline Polyurethane Application



Etiwanda Pipeline After Coating



Phase I Findings

- Corrosion pitting was more extensive and severe than anticipated
- Contractor adapted well to challenging conditions
- Contract work was minimally intrusive to community
- Polyurethane coating can be effectively applied in the field

Status of Contract

- Contract award date: December 10, 2013
- Bid amount: \$3,725,000
- Change order authority: \$250,000
- Working days in contract: 200
- Original pipeline return to service: Sept. 22nd
- Estimated actual working days: 236
- Anticipated pipeline return to service: Oct 17th

Next Steps

- Contractor to complete remaining work
- Staff will negotiate changes with contractor after work is complete
- Staff will return to Board for increased change order authority after negotiations

