

Department of Public Works
Water Production Division

Lime Residual Underground
Injection Control Project



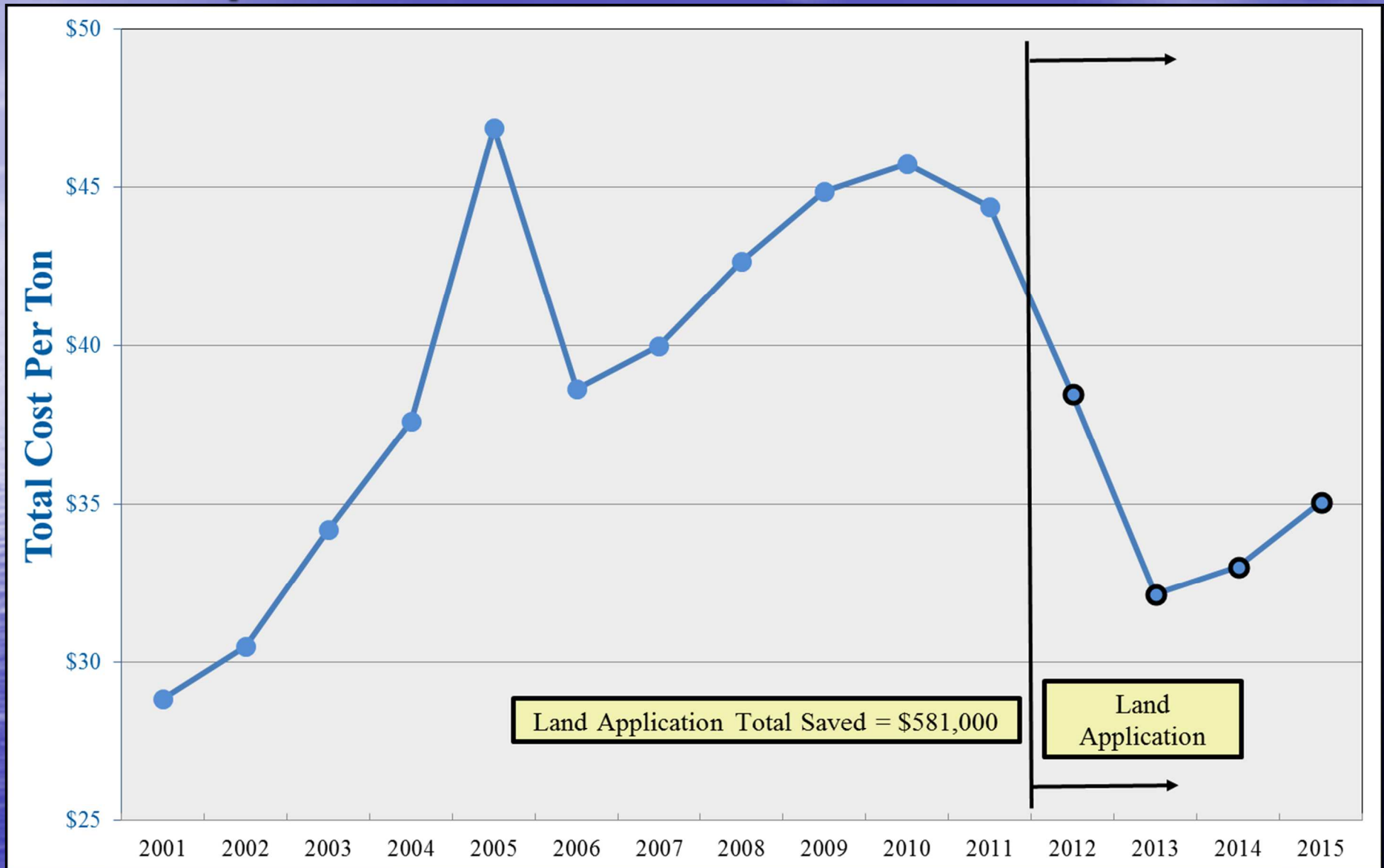
Joint BGI/Finance
Committee Meeting
February 23, 2016

Water Treatment Plant

Brief History – Lime Residual

- 1992 WTP online; Lime-softening process
- 1998 Additional lime residual lagoons constructed
- 2002 WTP capacity increased by 50%
- 2003 Additional lime residual lagoons constructed
- 2005 Drought; Difficult time managing residual
- 2006 Alternate disposal method investigation
- 2012 First use of land application for disposal

Disposal Costs – Lime Residual

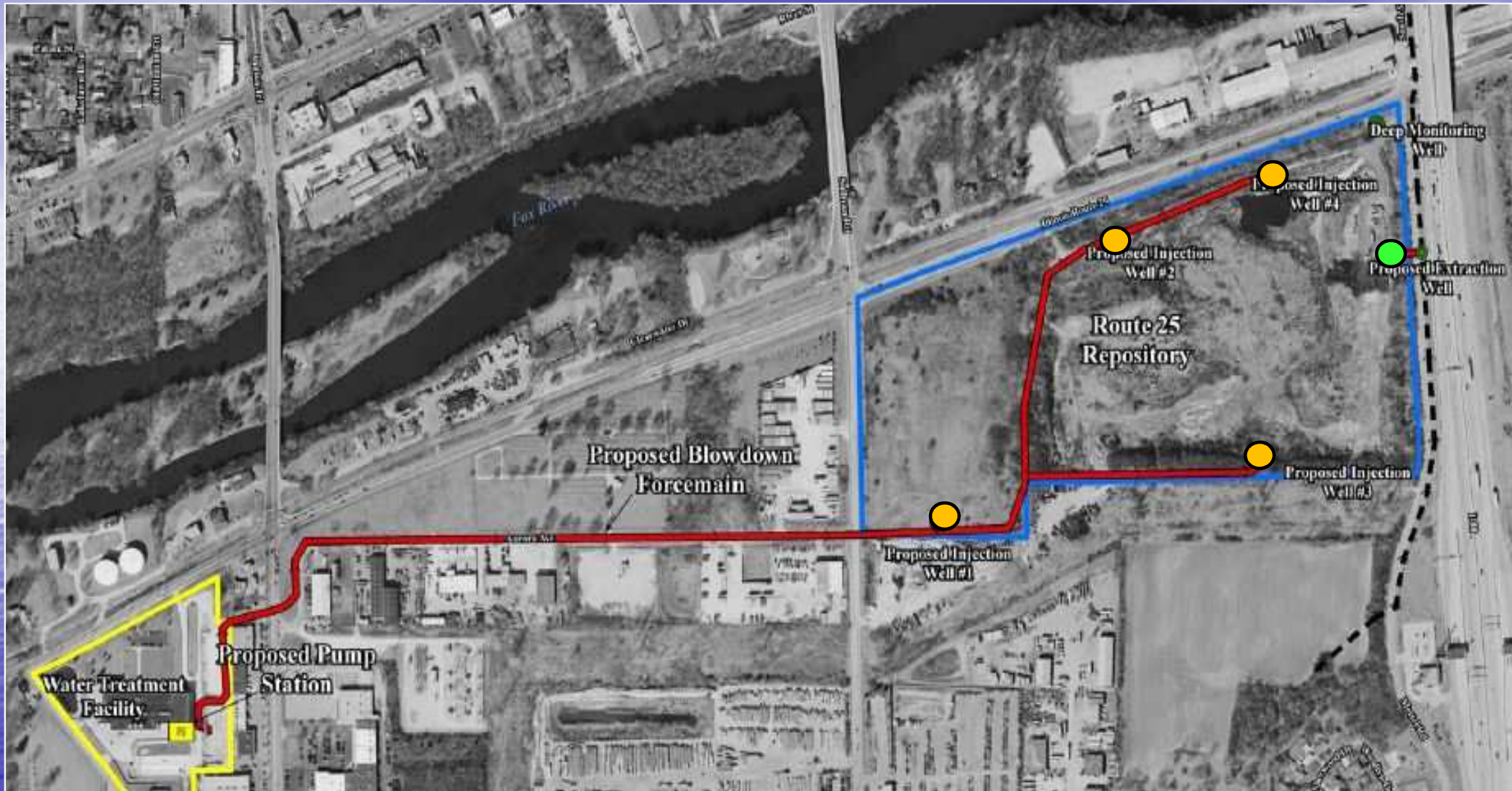


- Average annual total tons disposed = 38,400 tons
- Average annual costs for past 3 years = \$1.28M

Lime Residual UIC Program

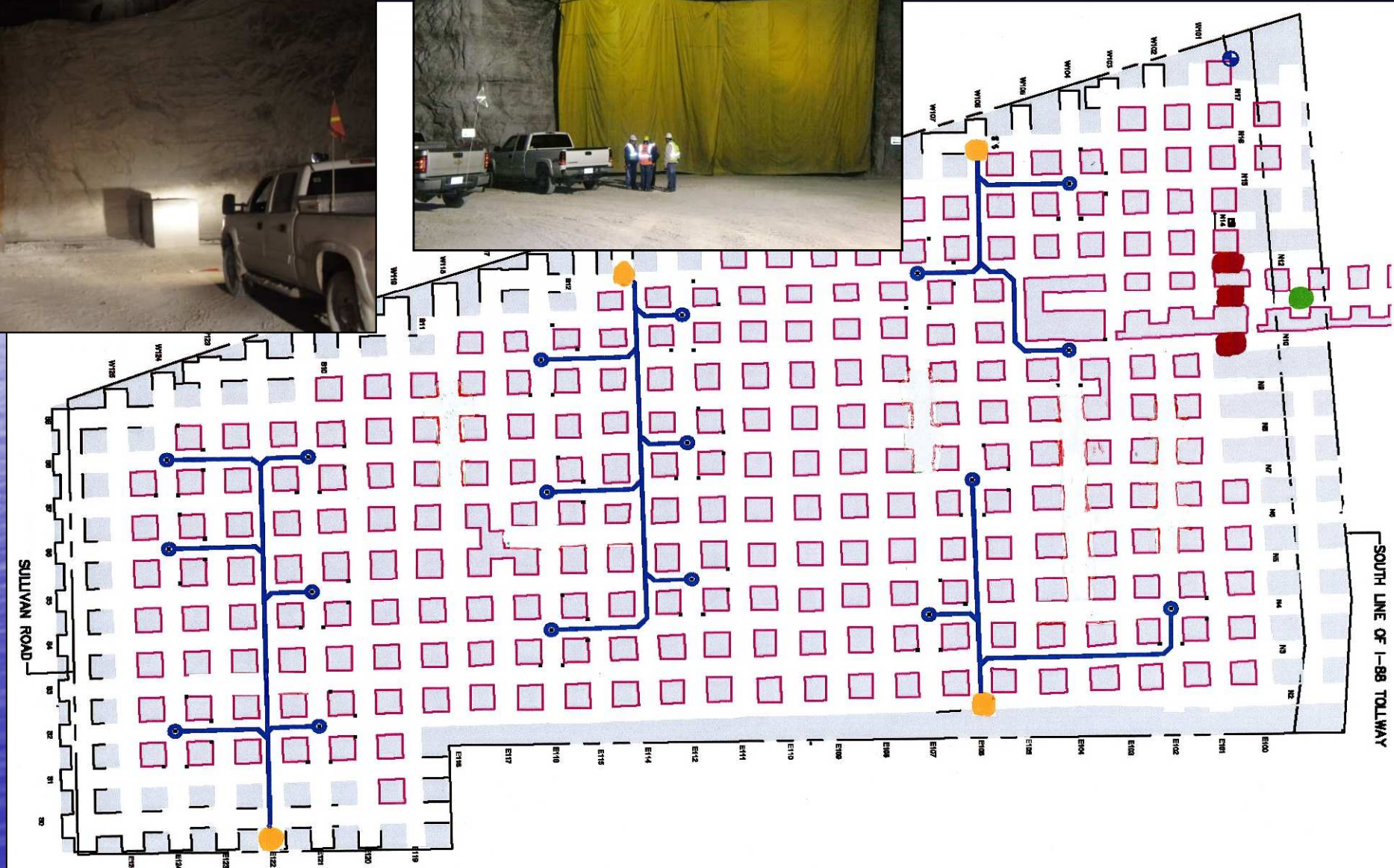
- 2006 Alternate disposal method investigation
- Injection of residual into spent portion of mine
 - LaFarge-Conco limestone mine near IL Rte 25 and I-88
- UIC program administered by IEPA
 - UIC = Underground Injection Control program
- Permit application submitted in February 2013
 - Contained numerous studies & preliminary project design
- Receipt of IEPA Lime Residual UIC Class V permit
 - Required public notification and comment period
 - Final permit effective date August 24, 2015
- Project funded under CIP# I044 in 2016 budget

Lime Residual UIC project



- Project Components: Pump Station, Forcemain & Injection Wells, Extraction Well and Pumps

Lime Residual UIC project



- In-Mine: Injection Wells, Distribution Piping, Bulkheads, Extraction Well

Lime Residual UIC project

Cost Analysis:

- Current annual operating costs \$1.28M
- Estimated UIC annual operating costs \$175,000
- Estimated annual operating **savings** **\$1.1M**

- Estimated total project costs \$9.5M
- Estimated breakeven point 9 years

- Estimated life of mine space 30-40 years
- **Total Estimated Savings – project life \$25-35M**

Lime Residual UIC project

Consulting Services

Current Request:

- Design and construction observation services
 - Deuchler Environmental, Inc., Aurora, IL
 - \$1,060,000 - 14% of estimated construction costs
- In-mine, third-party review services
 - CNA Consulting Engineers, Minneapolis, MN
 - \$190,000 - 18% of estimated design / constr. services
- Estimated construction schedule:
 - Start of construction: Early 2017
 - System start-up / commissioning: Late 2017

Lime Residual UIC project

Questions?

