

EAST SIDE WATER TREATMENT PLANT

EXPANSION TO 540 MGD AND WATER QUALITY IMPROVEMENTS OVERVIEW



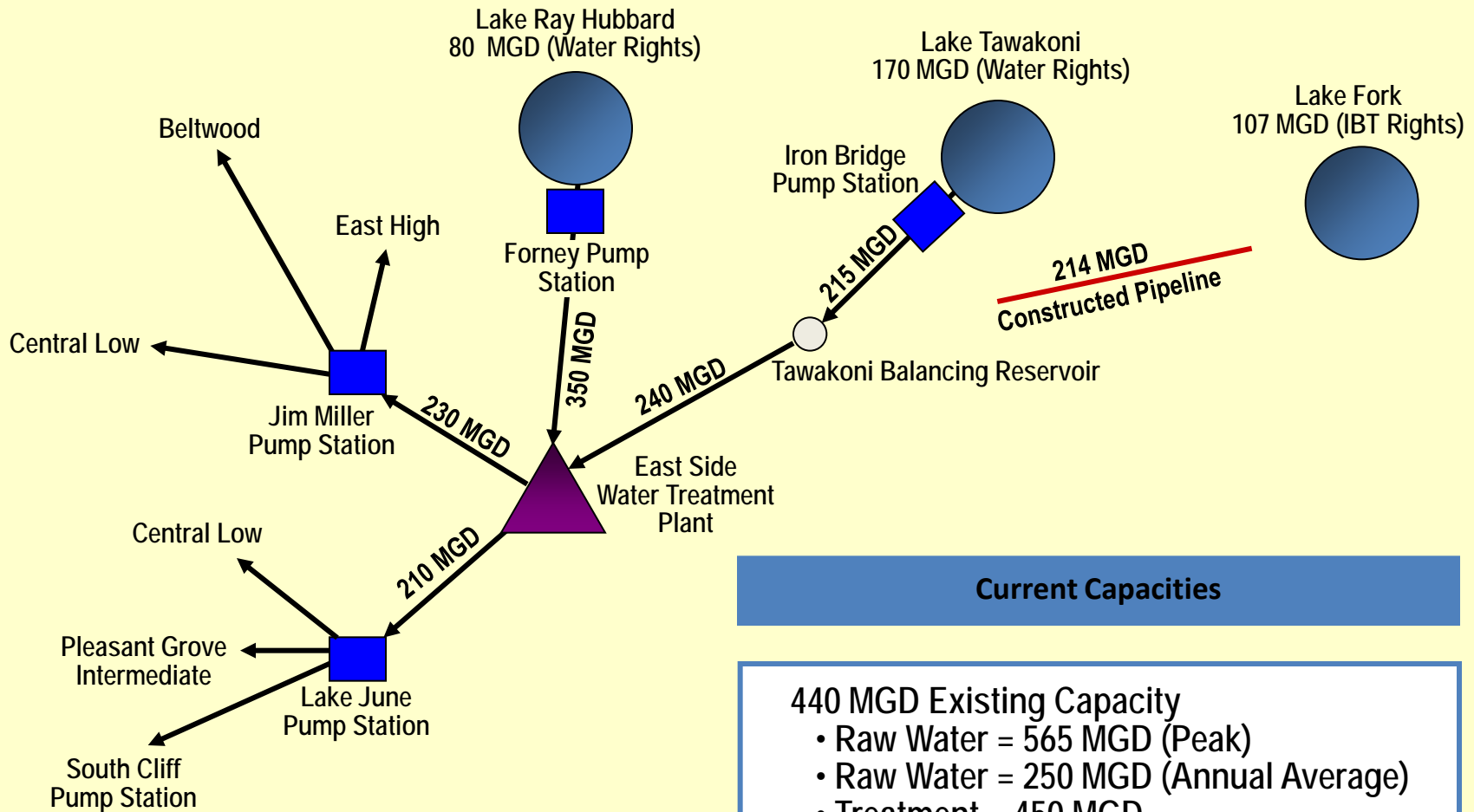


TOTAL SYSTEM TREATMENT CAPACITY OF 900 MGD

- **Serve 2.5 million people**
 - City of Dallas
 - 27 nearby communities
- **Bachman WTP – 150 mgd**
- **Elm Fork WTP – 320 mgd**
- **East Side WTP – 440 mgd**
 - Constructed in 1962
 - Three sources
 - Lake Ray Hubbard
 - Lake Tawakoni
 - Lake Fork

BRIEF HISTORY OF EAST SIDE WTP

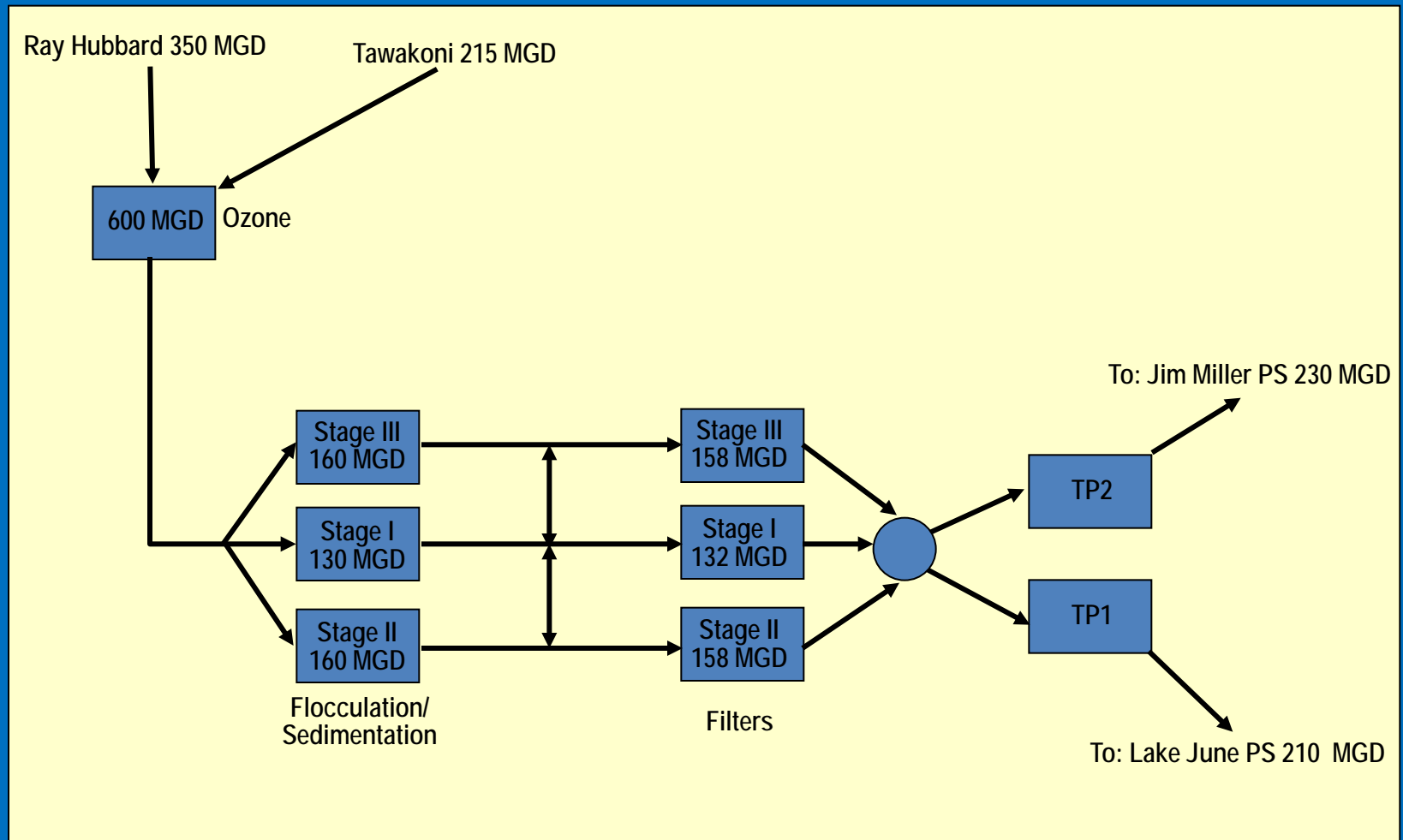
- East Side Water Treatment Plant originally constructed in 1962 as a 100 MGD plant
- Expansion in 1970s and 1980s and hydraulic improvements in 1990s increased capacity to 440 MGD
- Ozone added to treatment process in 2004
- 2000 Long-range water supply plan identified shortages of treated water in parts of the growing DWU system
- Expansion from 440 MGD to 540 MGD was recommended and contracts awarded in 2002 to increase treatment capacity and add storage and pumping capacity to ESWTP
- 2006 DWU began a source to tap Water Quality Study to look at causes of colored water in portions of the distribution system
- 2010 Water Quality Improvements contracts were awarded to implement recommendations at all three plants



Current Capacities

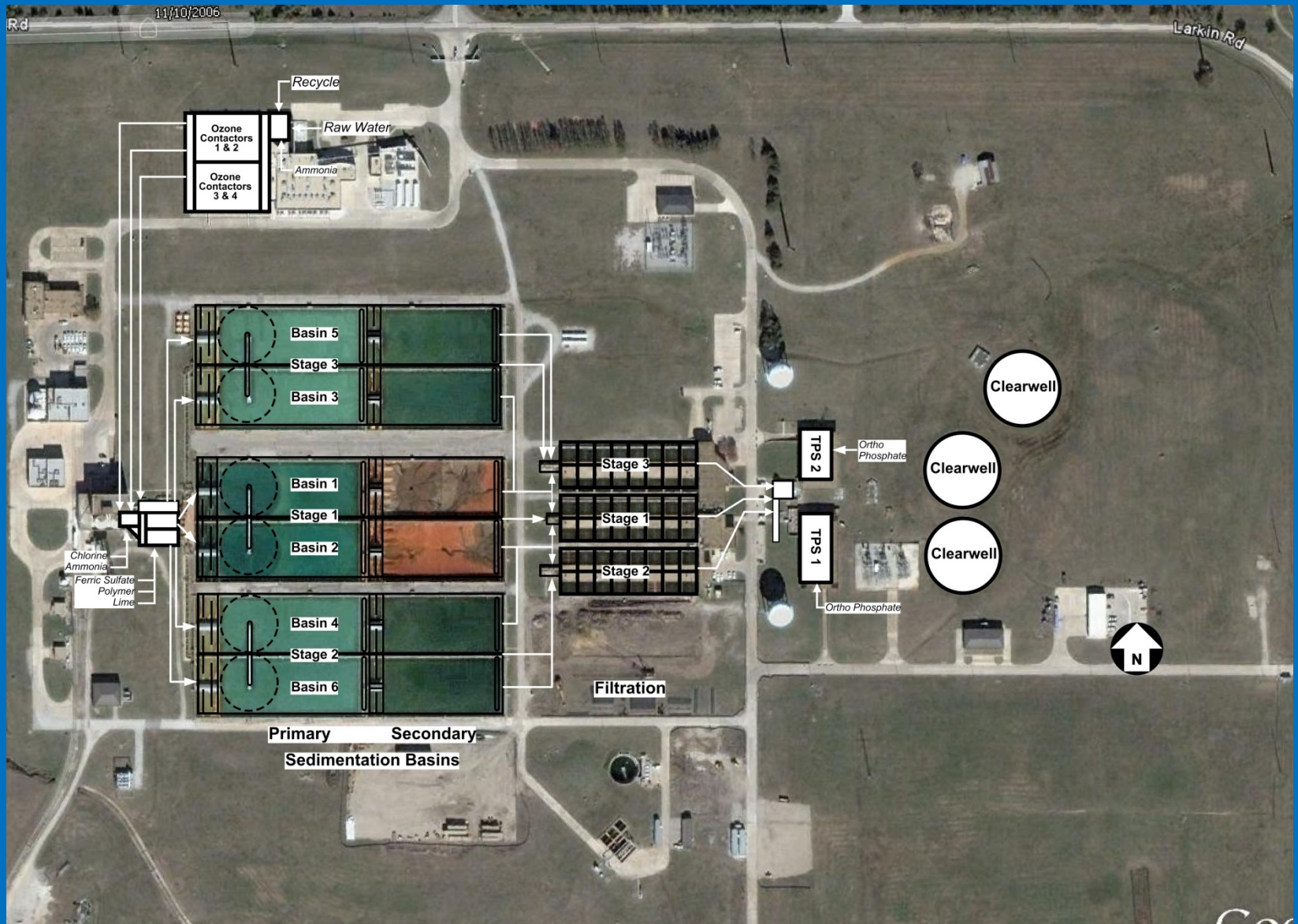
440 MGD Existing Capacity

- Raw Water = 565 MGD (Peak)
- Raw Water = 250 MGD (Annual Average)
- Treatment = 450 MGD
- High Service Pumps = 440 MGD
- High Service Pipelines = 440 MGD



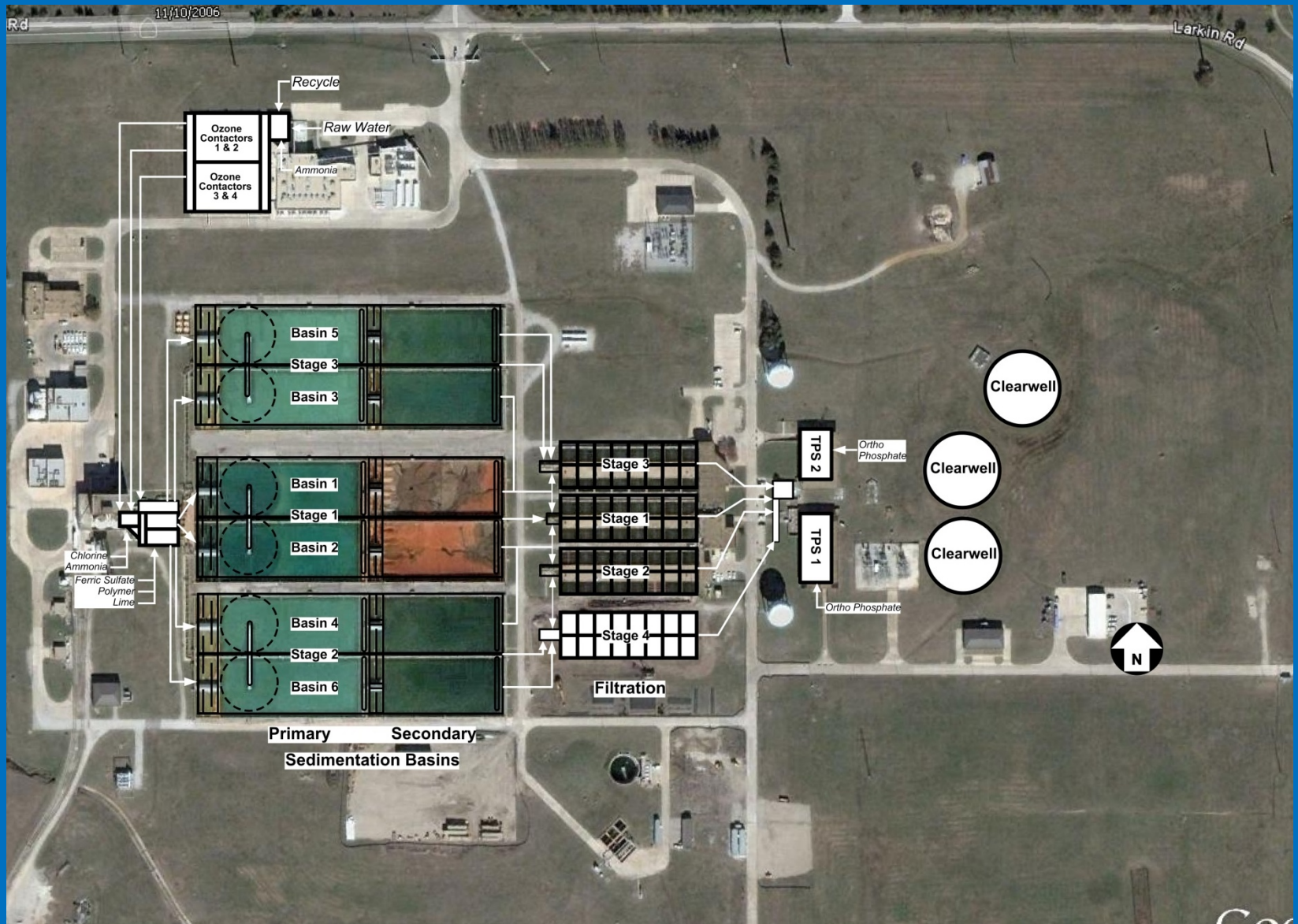
EAST SIDE IMPROVEMENT PROJECTS

- **Expansion to 540 MGD**
 - Filter Stages IV and V
 - New Sedimentation Basins
 - Changes to flow splitting and chemical mixing
 - Additional chemical storage and improvements to feed capability
 - 64 MG of clearwell storage
 - 150 MGD Pump Station #3, expandable to 300 MGD in the future
- **Water Quality Improvements**
 - Adding filter to waste to older filter stages
 - Settled water hydraulic improvements
 - Basin Improvements – added flocculation time, sludge collection and optimization changes in treatment
 - GAC media conversion
 - Non-chlorinated backwash pump station
 - Residuals Improvements



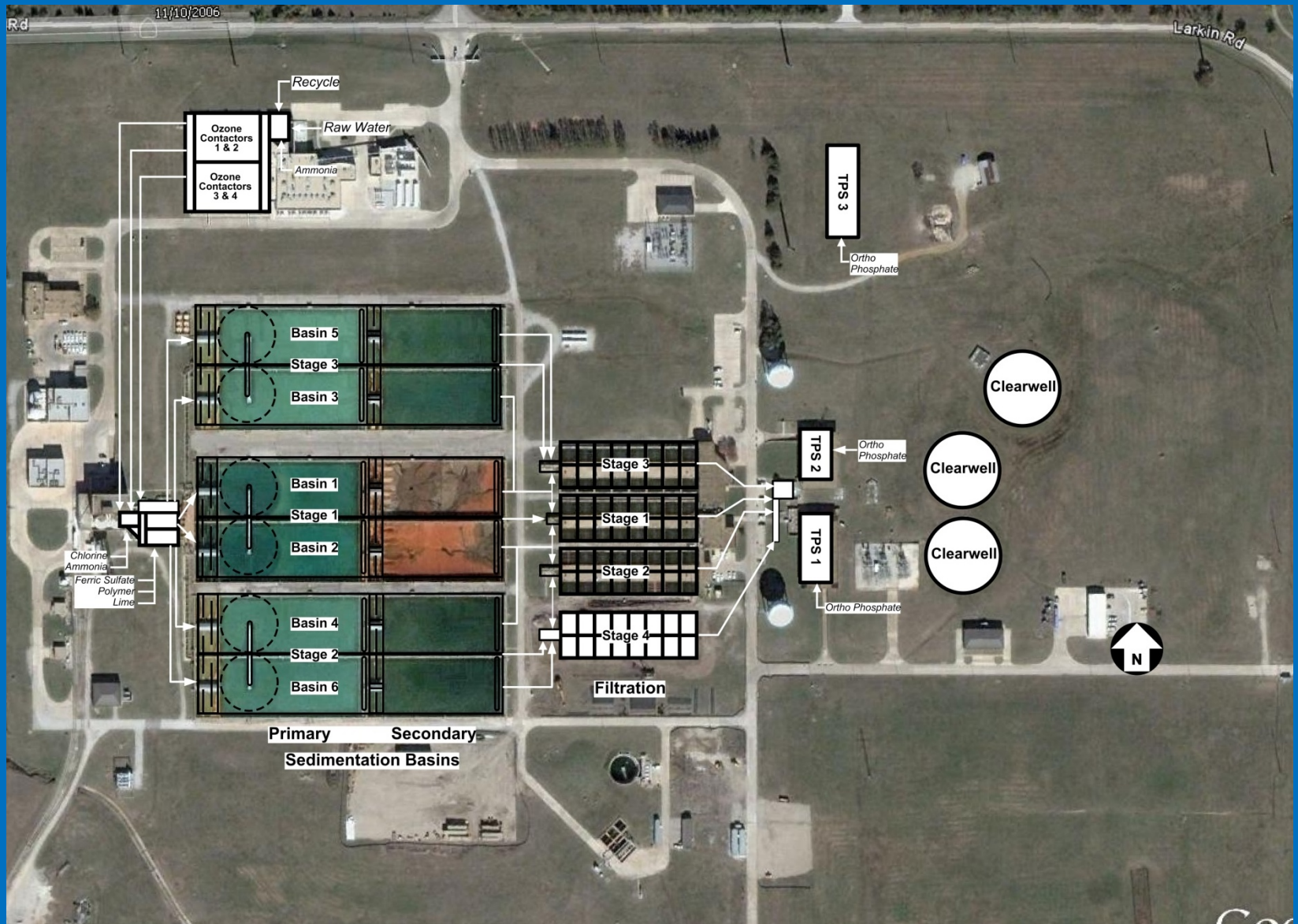
East Side WTP – 540 mgd Expansion

2005



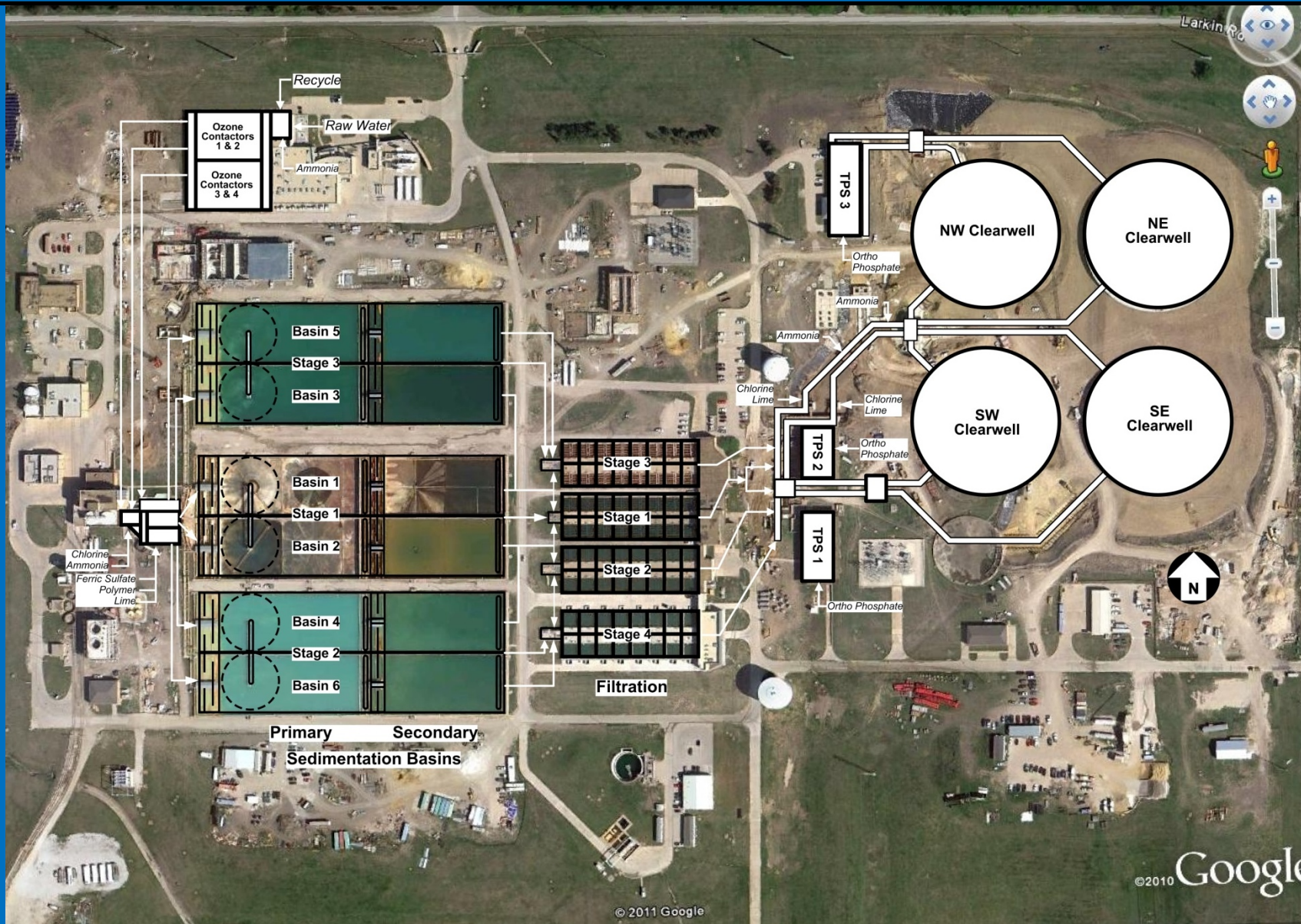
East Side WTP – 540 mgd Expansion

2006 - Stage IV Filters



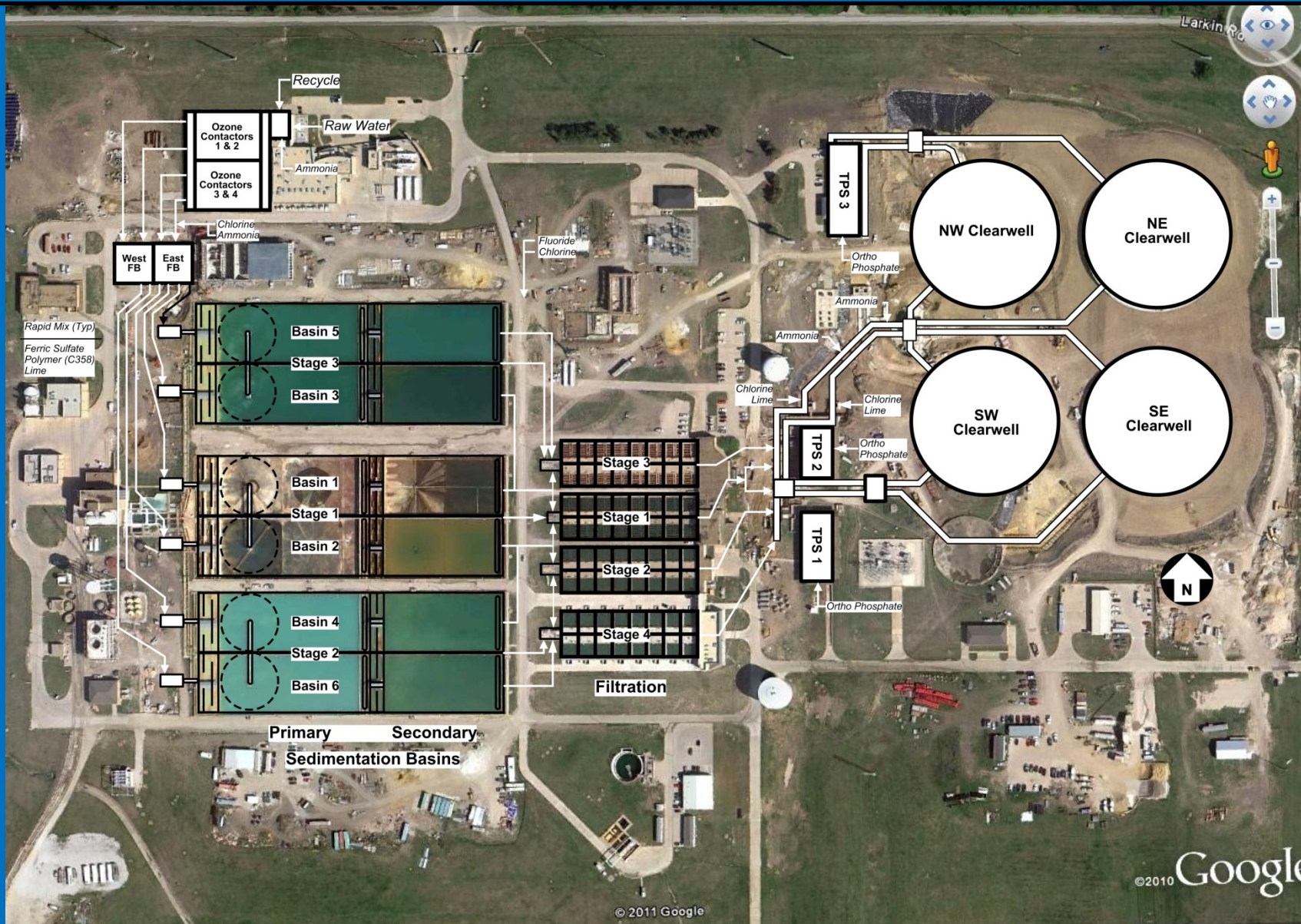
East Side WTP – 540 mgd Expansion

2007 - TPS3



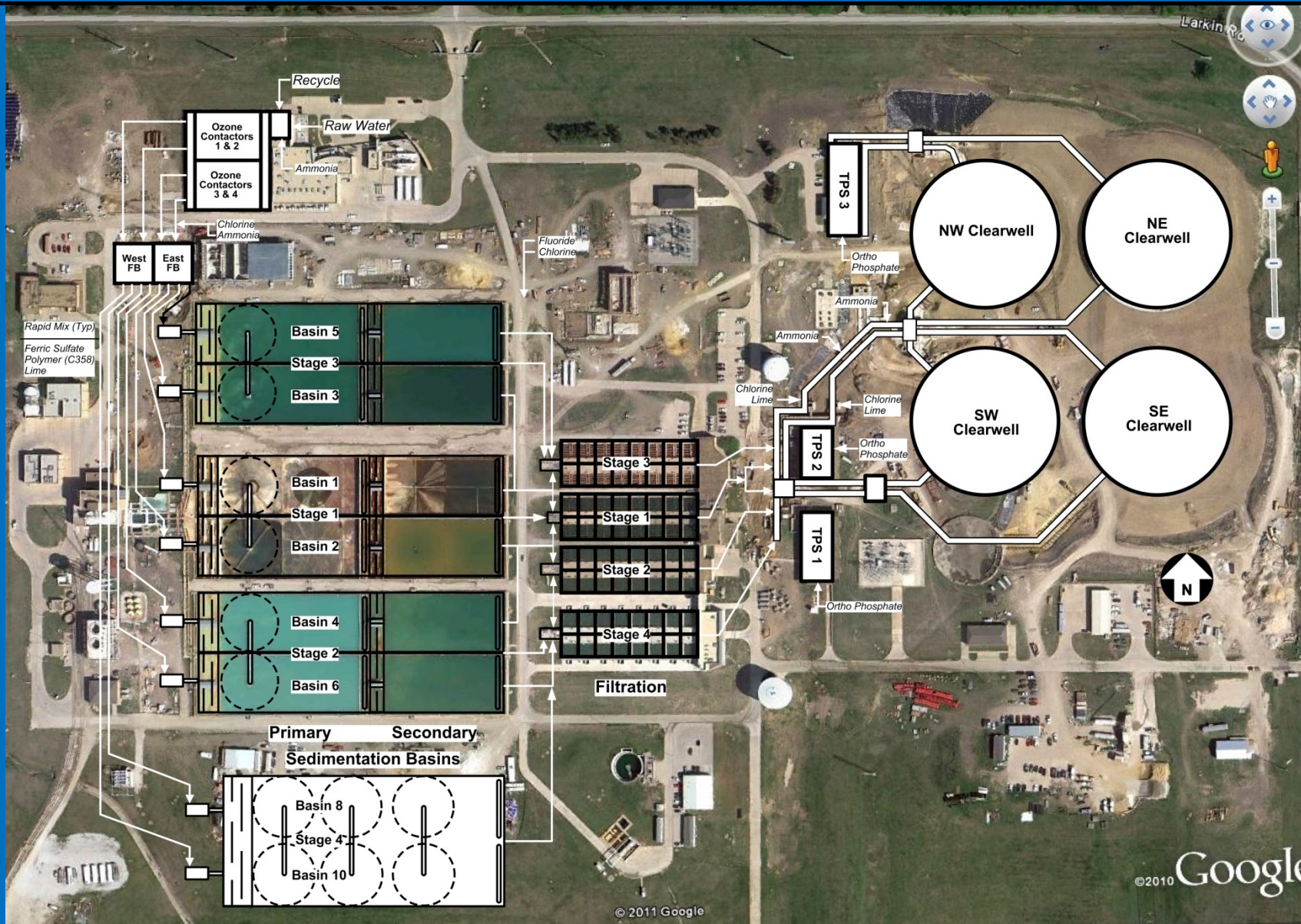
East Side WTP – 540 mgd Expansion

2008 - Clearwells



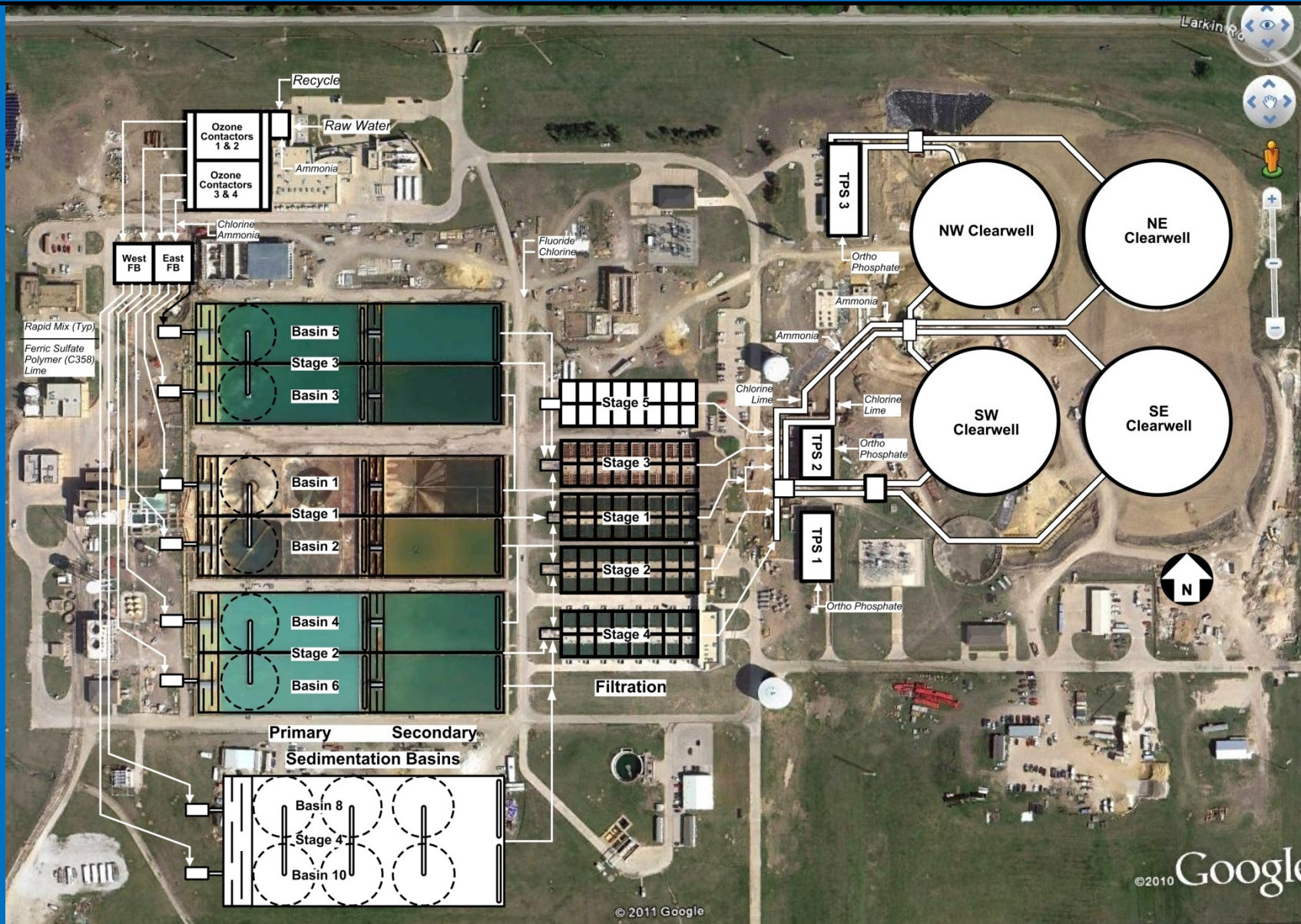
East Side WTP – 540 mgd Expansion

2009 - Headworks



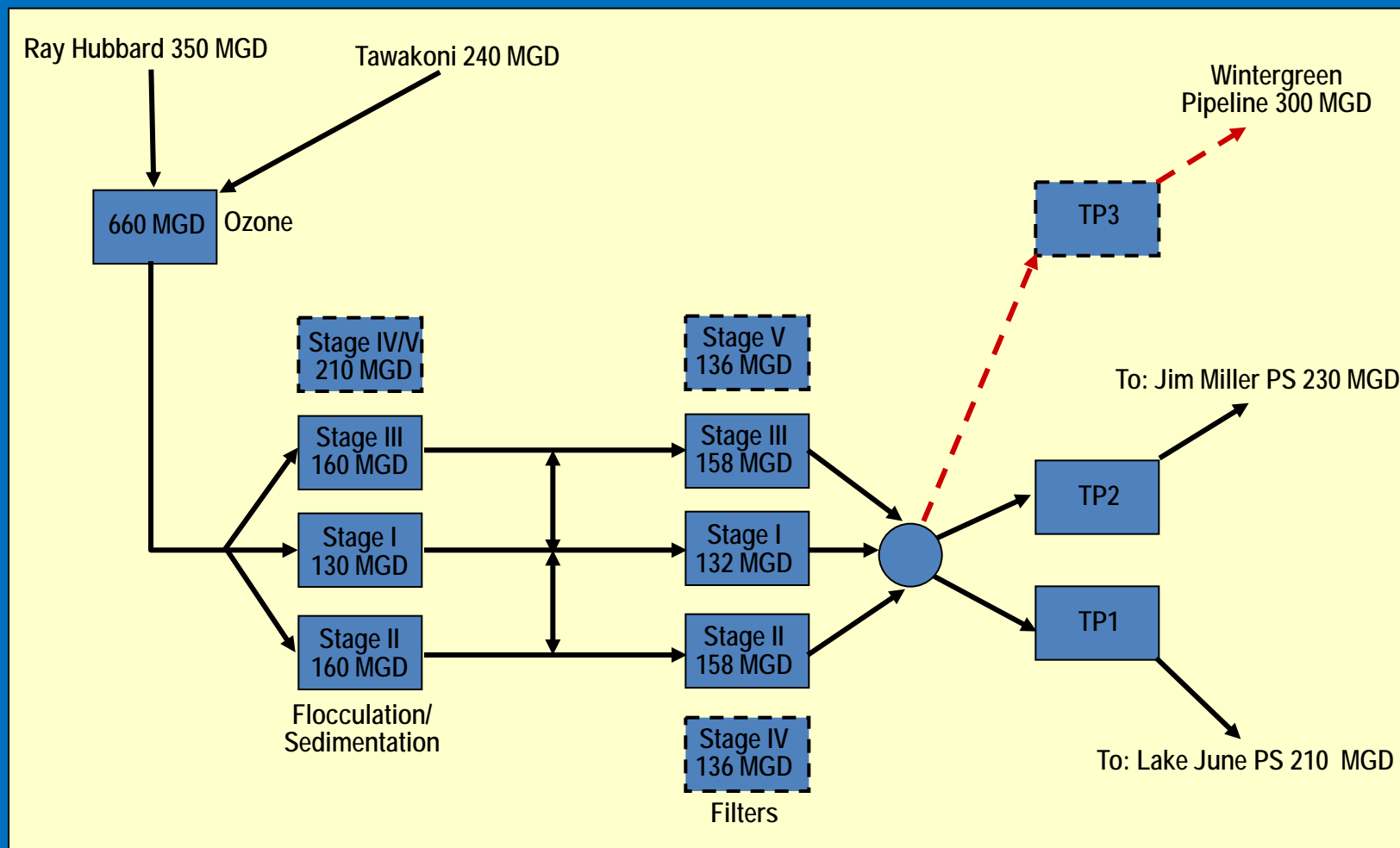
East Side WTP – 540 mgd Expansion

2011 - Stage IV Basins



East Side WTP – 540 mgd Expansion

Future - Stage V Filters





March 2008





March 2009



July 2009



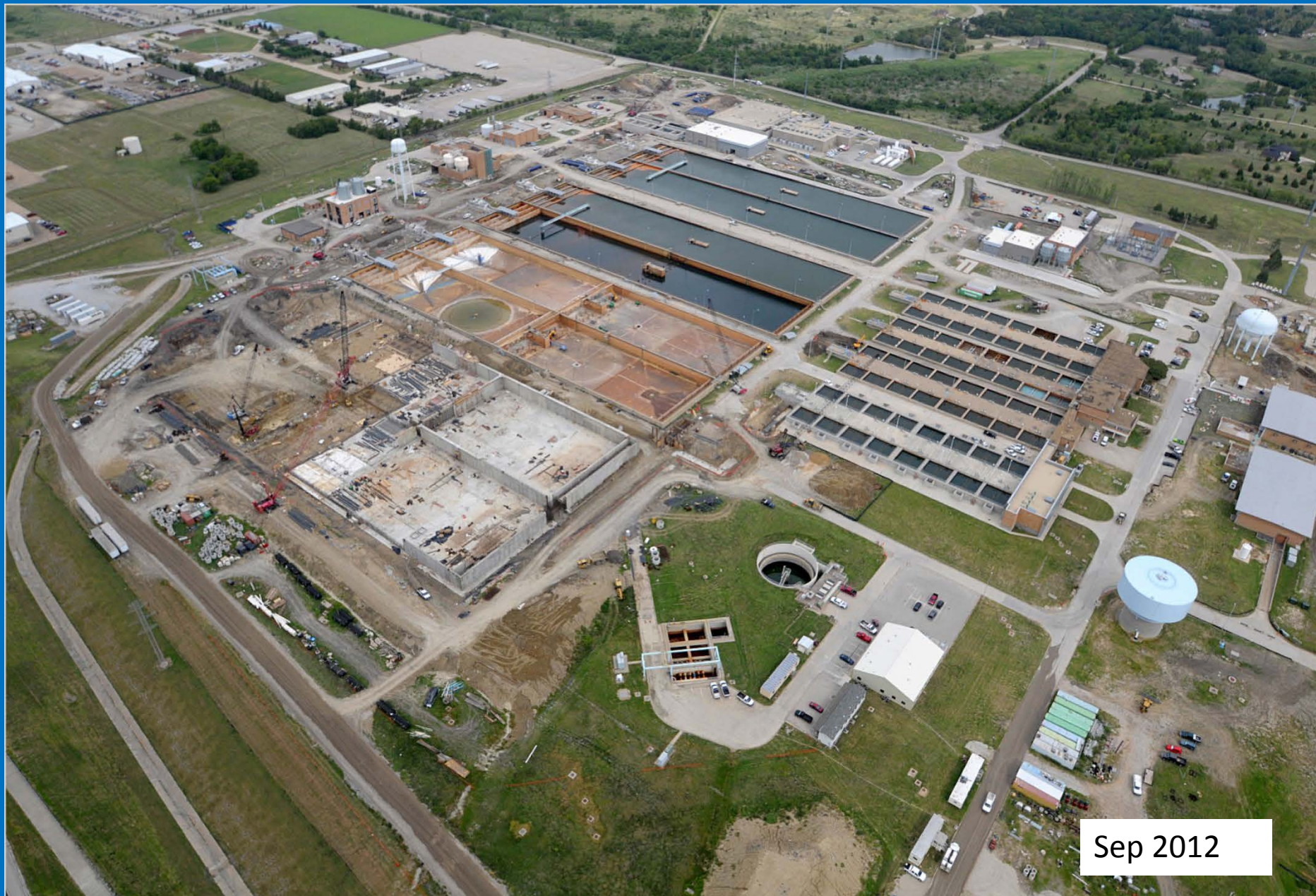
Sep 2010



Sep 2011



Sep 2011



Sep 2012





Sep 2014



Sep 2014

Thanks

- East Side and Pumping Operation Divisions
- Contractors
 - AUI Contractors
 - BAR Constructors
 - Cajun Constructors
 - Oscar Renda Contracting
- Design Engineers
 - AECOM
 - Black & Veatch
 - CPY, Inc.
- Construction Manager
 - Jacobs
- TWDB – For WIF funding for Clearwell Project

And everyone else at COD and DWU who supported the delivery of the projects and our friends at Town of Sunnyvale for their patience and cooperation with all the construction activity.

And SAME Dallas Post for the opportunity to present at the 2014 Infrastructure Forum

Questions