

Eastern New Mexico Rural Water System Project



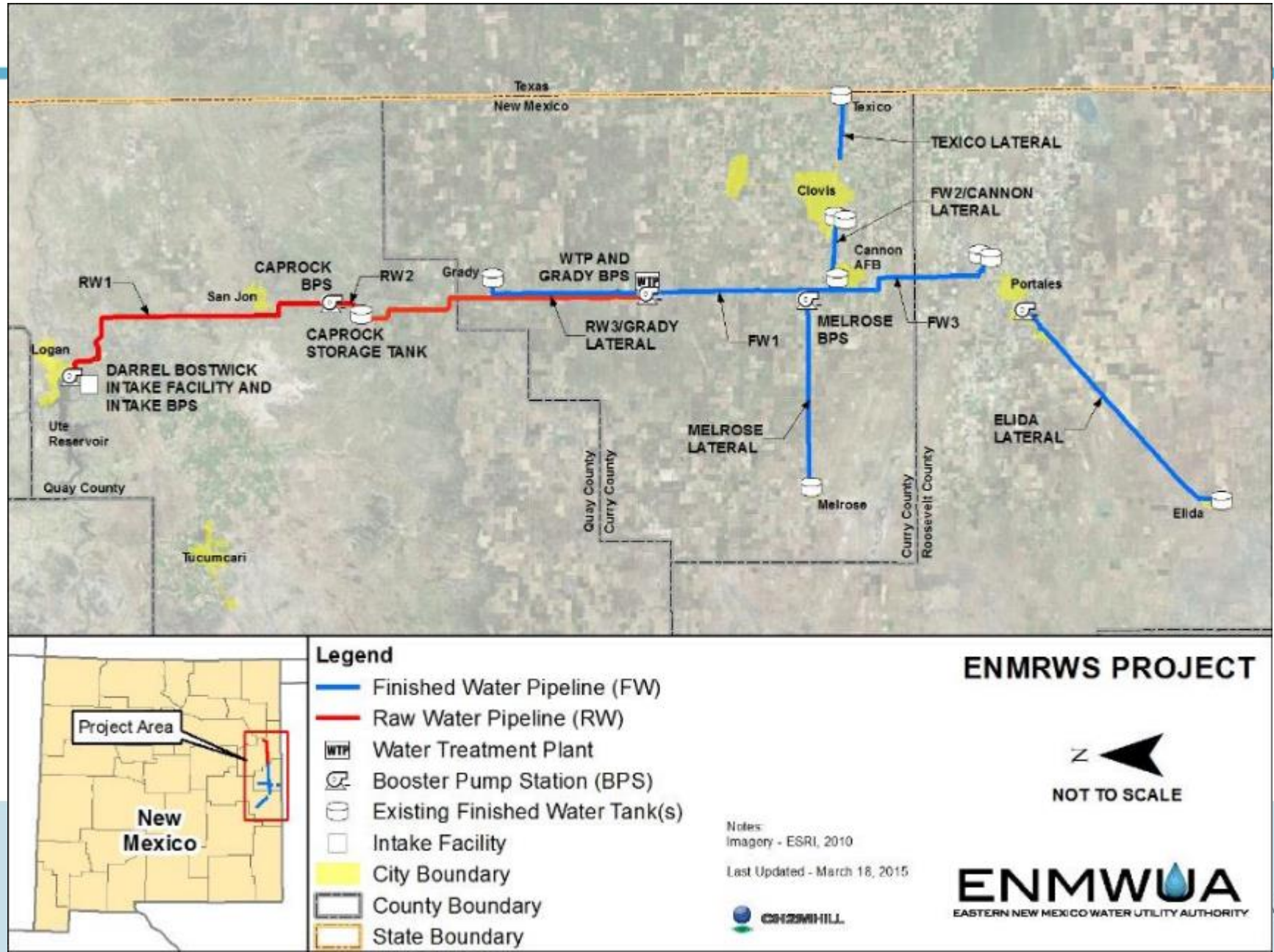
Justin Howalt, P.E., ENMWUA Executive Director



Agenda

- Project Overview
- Work Completed To Date
- Interim Groundwater Project
- Project Need

Project Overview



Project Overview

- 150 Miles of conveyance pipelines – Welded Steel Pipe, DIP, PVC, HDPE (4” to 48”)
- Intake Structure – Designed to handle 25,000 ac-ft (member allotment 16,450 ac-ft)
- 28 mgd Caprock raw water booster station
- 1 million gallon storage tank
- 28 mgd water treatment plant
- Finished Water booster stations (Grady, Elida, Melrose)
- Pressure Reducing Stations, Fiber Optic Cable, etc.

Work Completed to Date

- Preliminary (10%) Engineering Report – Dec 2005
 - 6 Alternatives Analyzed
- Schematic (30%) Design – Feb 2009
- Value Engineering – June 2009
- Environmental Assessment – Jan 2011
- Ute Reservoir Intake Facility – April 2016



Ute Reservoir Intake Facility - Phase I

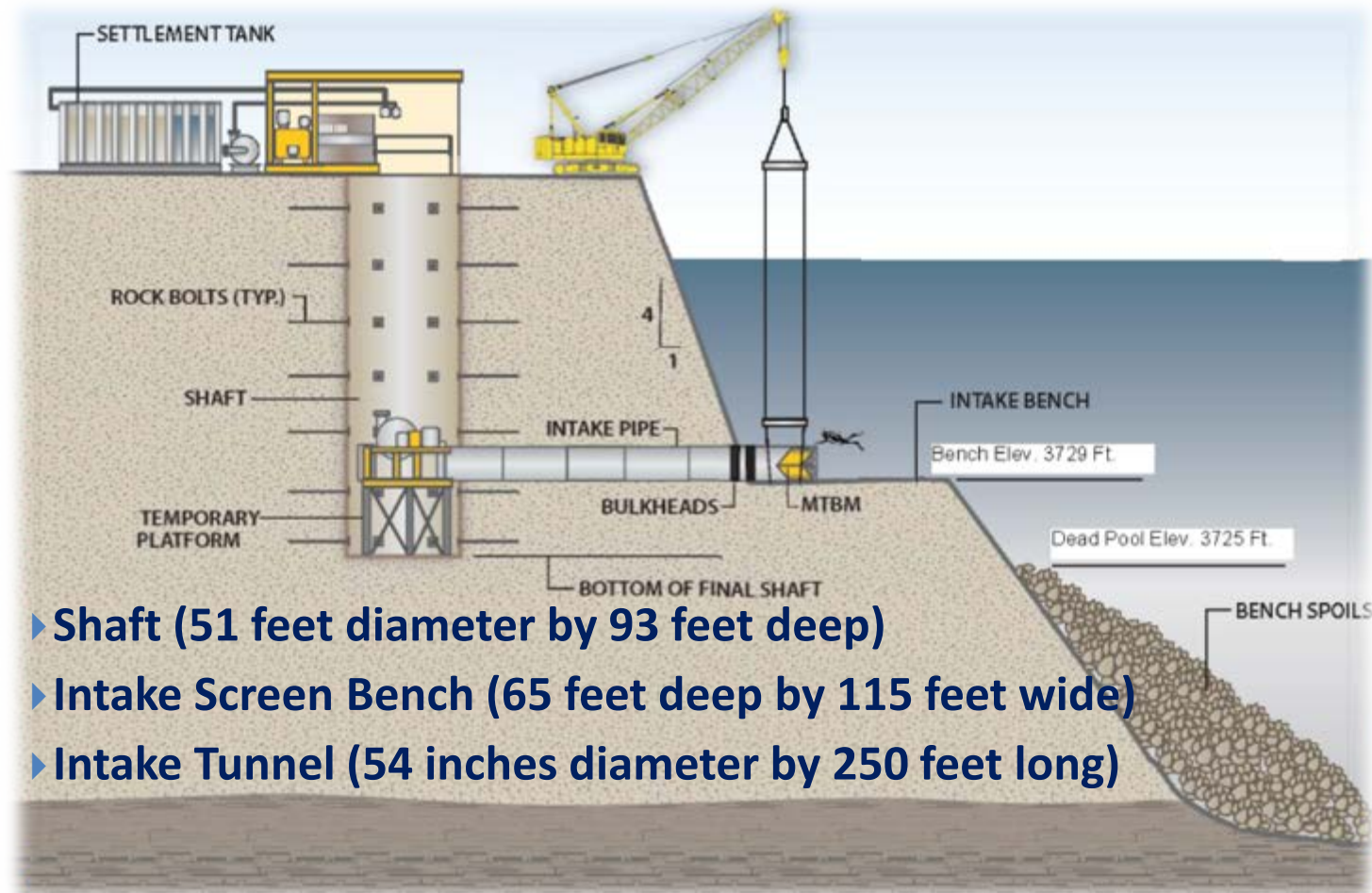
- Construction Started Feb 2013
- Construction April 2016
- \$14M Construction Cost



Shaft Excavation

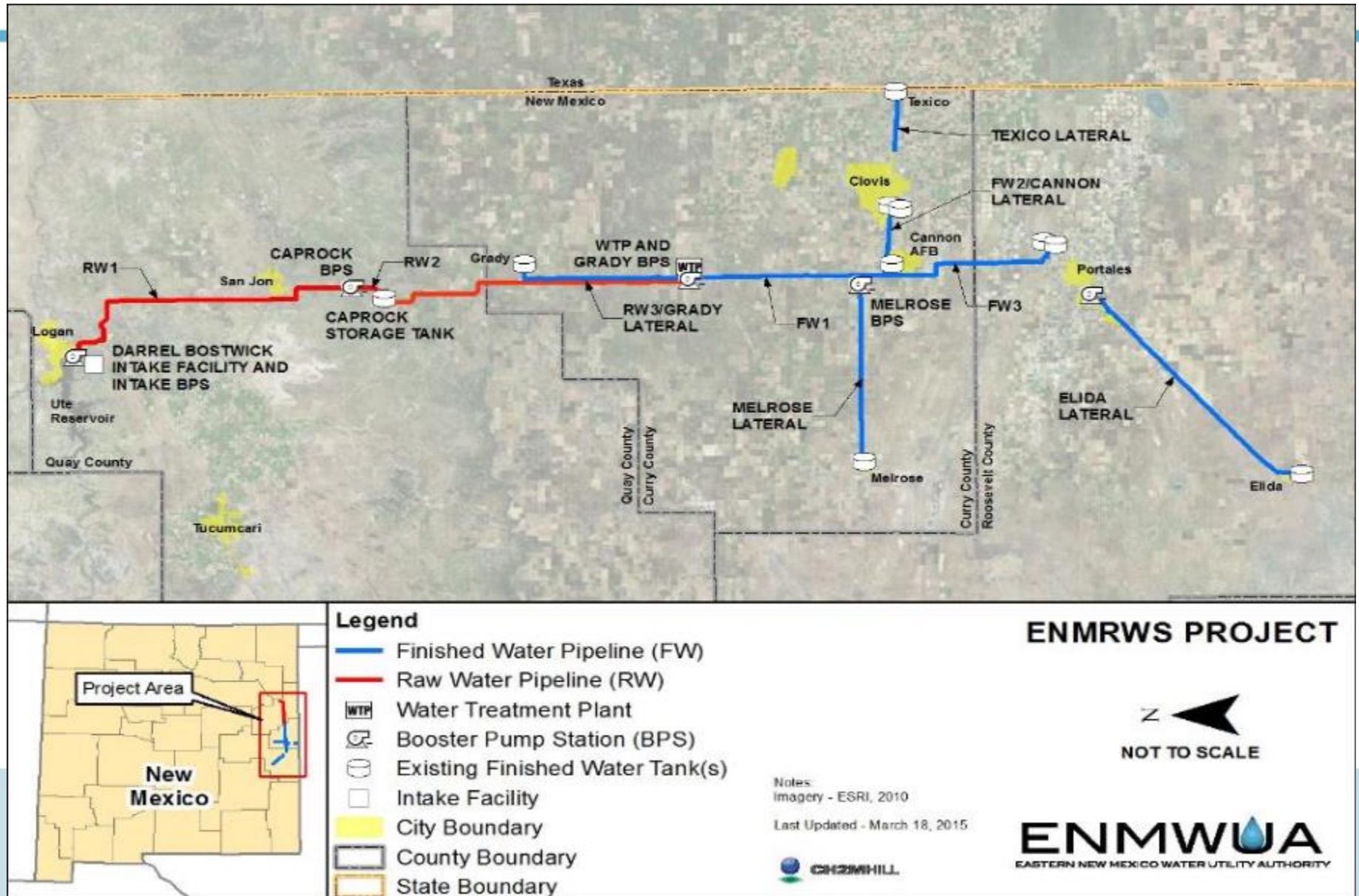
**Intake Platform
Rebar Placement**

Intake Facility Construction

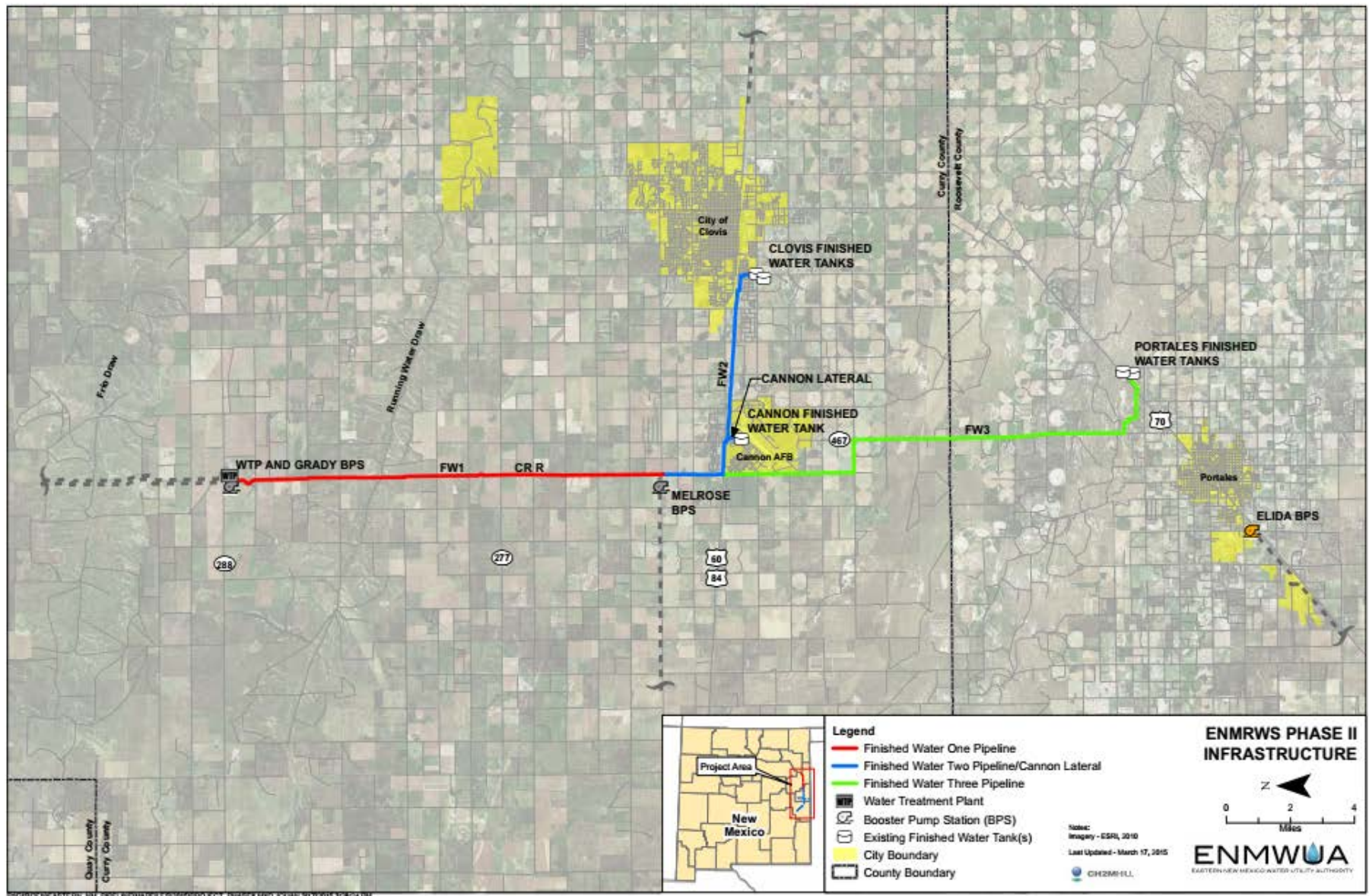


- ▶ Shaft (51 feet diameter by 93 feet deep)
- ▶ Intake Screen Bench (65 feet deep by 115 feet wide)
- ▶ Intake Tunnel (54 inches diameter by 250 feet long)

Phase 2 – Interim Groundwater Project



Phase 2 – Interim Groundwater Project



WTP to Cannon AFB – Finished Water 1

- Alignment: WTP to Melrose Turnout
- 14 miles of 39-inch Welded Steel Pipe
- Field Work – Completed
- 60% Design – Completed
- \$44.7M – Estimated Capital Cost



Cannon to Clovis AFB – Finished Water 2

- Alignment: Melrose Turnout to Cannon AFB/Clovis FW Tanks
- 9 miles of 33-inch Welded Steel Pipe/16-inch Ductile Iron
- Field Work, Design, & Legal Descriptions – Completed
- Easement Acquisition – In Progress (18 total, 12 secured)
- \$25M – Estimated Construction Cost



Cannon AFB to Portales – Finished Water 3

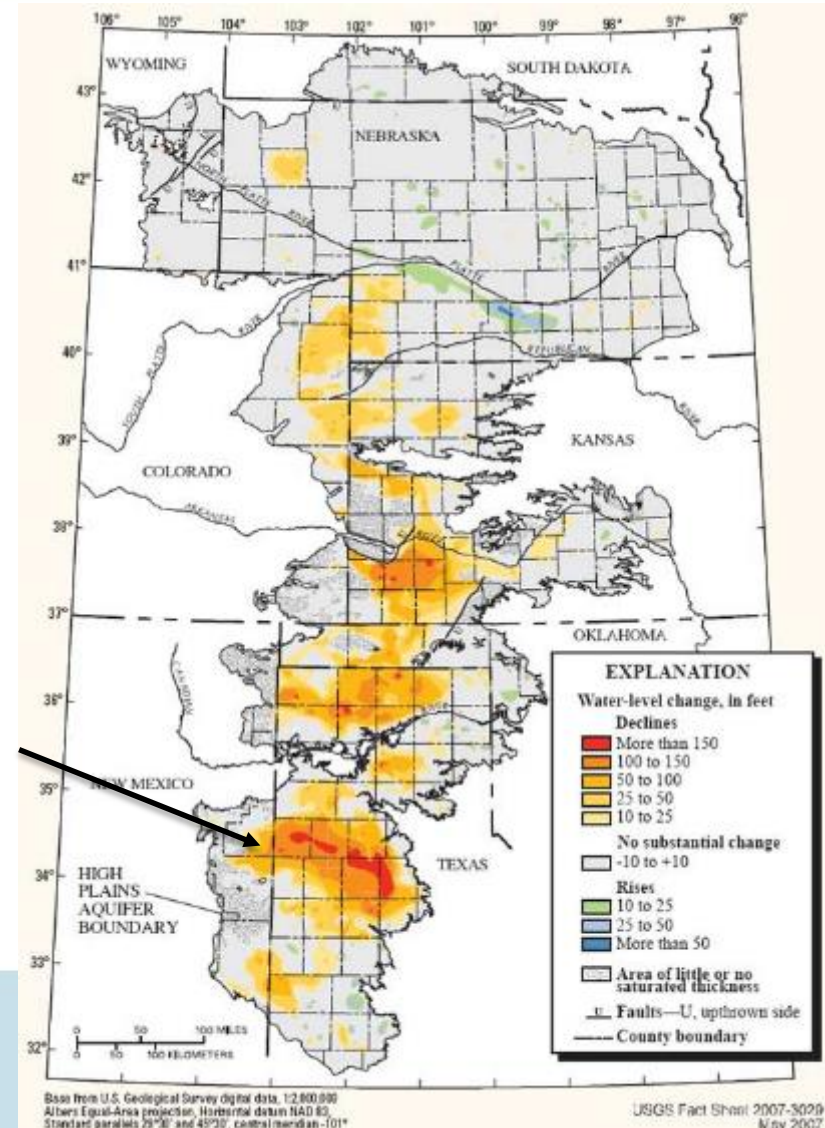
- Alignment: Cannon AFB to Portales FW Tanks
- 16 miles of 20-inch Ductile Iron and PVC Pipe
- Field Work, Design – Completed
- Easement Acquisition – In Progress (44 total, 13 secured, 23 offers out, 7 appraisals being completed)
- \$24M – Estimated Construction Cost



Project Need – Eastern New Mexico

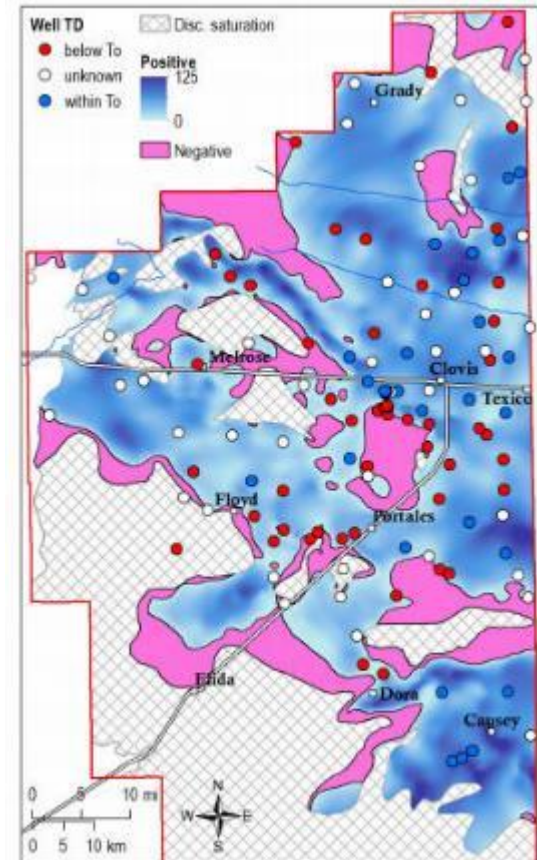
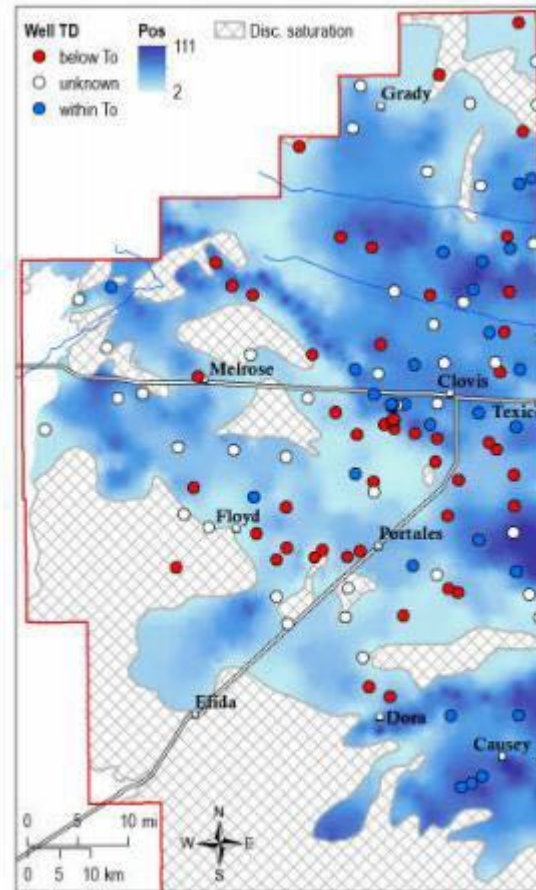
- Ogallala Aquifer is rapidly declining from 0.5 foot to 5.8 feet each year

ENMRWS

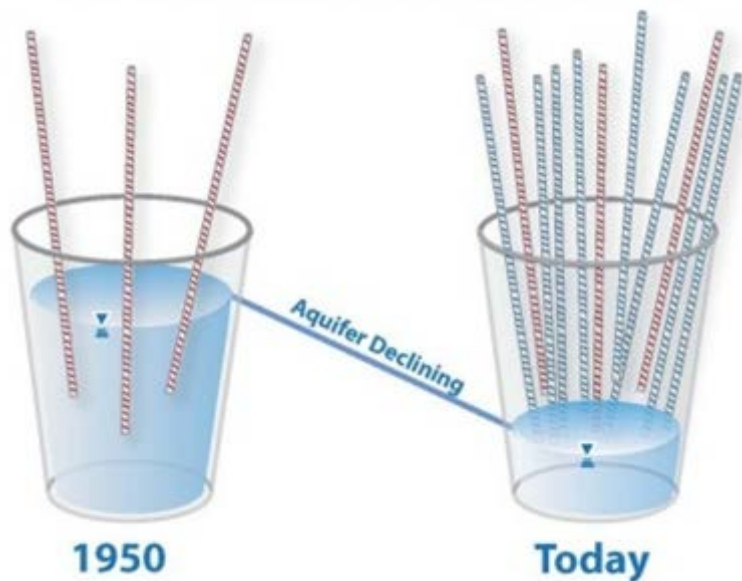


Project Need – Eastern New Mexico

- 121 Wells Sampled
- 2004 - 2007 & 2010 - 2015
- Change in Volume (Loss of 1,943,105 acre-feet)
- Loss Per Year 277,586 acre-feet
- Median Well Decline of 4.2 ft.
- Saturated Thickness
- “There is no evidence of significant recharge occurring via infiltration of precipitation through playas...” **FINITE SOURCE**



Project Need: Portales



- Average Depletion Rate in 2015 1.1 feet/year
- Average remaining aquifer saturated thickness in 2015 was 35 feet
- Average Useable Saturated Thickness in 2015 was 22 feet
- From 2011 to 2014, 17 new agricultural wells converted to municipal use.

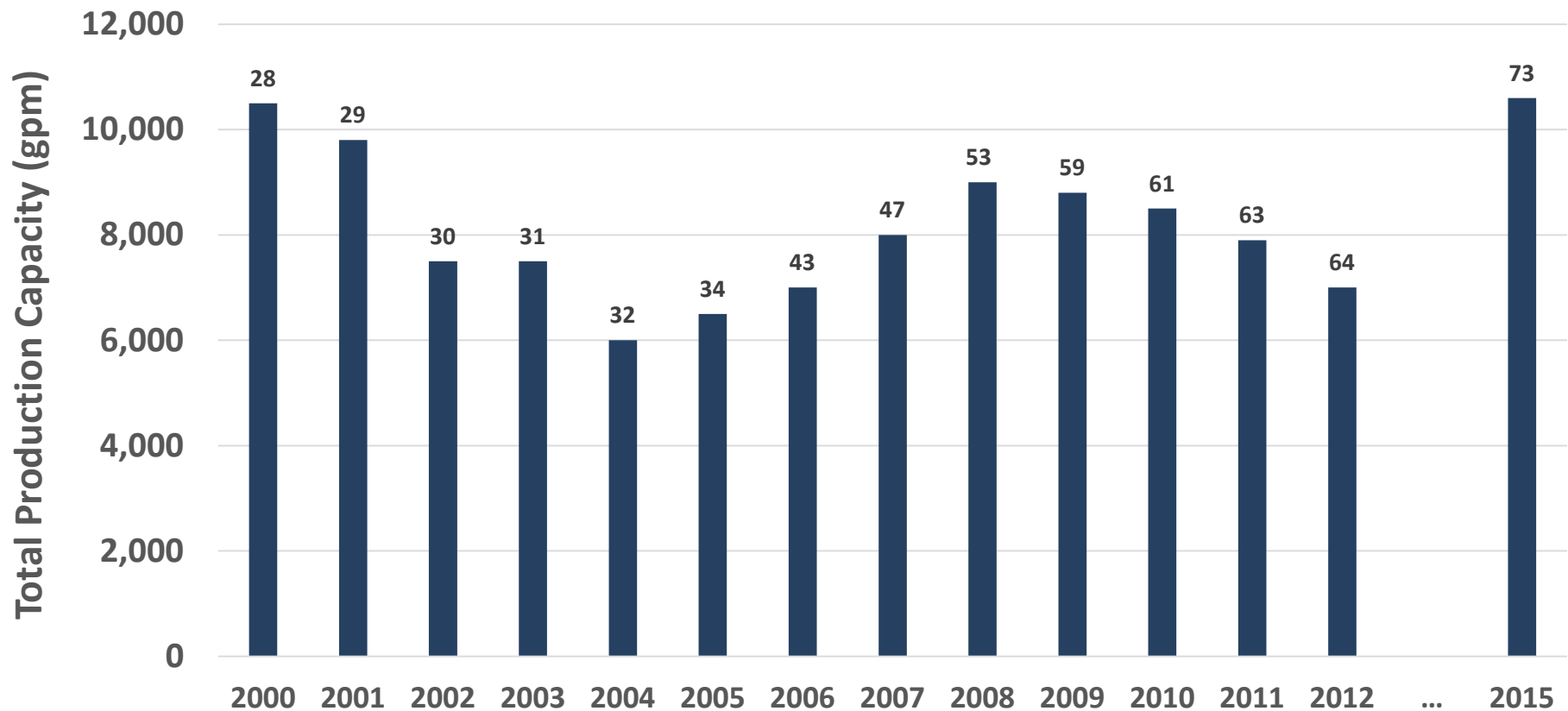
"The best alternative water supply for Portales continues to be a renewable surface water supply from Ute Reservoir..."

Charles R. Wilson, Consultant, LLC

City of Portales 2016 Water Conservation and Use Report,
September 2016

Project Need: Clovis

Number of Wells vs. Production Capacity



Courtesy: Epcor

Project Need: Texico

- Existing 3 wells pumping capacity has been declining
- Purchased 2 agricultural wells/water rights to meet demand



Project Need: Cannon Air Force Base

Cannon AFB supports the project because their own study "...reveals that the aquifer is declining at such rate that we will begin experience impacts by the end of this decade."

"...first priority is to remain strong advocates for the Eastern New Mexico Rural Water System Project (Ute Pipeline Project)."

"We are keenly aware that groundwater is not a renewable resource in the High Plains... The Ute Pipeline Project provides a viable solution to the depleting aquifer."

DEPARTMENT OF THE AIR FORCE
27TH SPECIAL OPERATIONS WING (AFSOC)
CANNON AIR FORCE BASE NEW MEXICO



DEPARTMENT OF THE AIR FORCE
27TH SPECIAL OPERATIONS WING (AFSOC)
CANNON AIR FORCE BASE NEW MEXICO

6 March 2014

Colonel Tony D. Bauernfeind
Commander
100 Air Commando Way Suite 100
Cannon AFB NM 88103-5214

Eastern New Mexico Water Utility Authority
Clovis City Hall
321 N Connelly St
Clovis NM 88103-7443

Dear Members

Cannon Air Force Base (AFB) is fully committed to exploring all options for alternative water sources and initiatives to reduce impacts to the Ogallala Aquifer and we are here to support you in your efforts to partner with the local communities on these endeavors.

Our first priority is to remain strong advocates for the Eastern New Mexico Rural Water System Project (Ute Pipeline Project). Additionally, we are continuing efforts to ensure future access to water throughout the base and the surrounding communities. We are also working to ensure water usage on the base and the surrounding communities is sustainable. We are also working to ensure water usage on the base and the surrounding communities is sustainable.

Should you have any questions, please contact Lt. Colonel...

TONY D. BAUFENFEIND, Colonel, USA

DEPARTMENT OF THE AIR FORCE
27TH SPECIAL OPERATIONS WING (AFSOC)
CANNON AIR FORCE BASE NEW MEXICO

8 MAY 2014

Colonel Robert A. Stern
Commander
100 Air Commando Way Suite 100
Cannon AFB NM 88103-5214

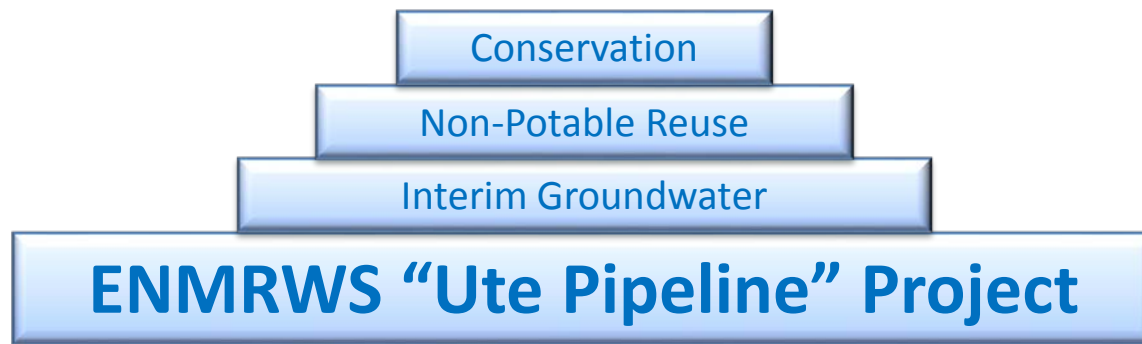
Dear Mr. Bauernfeind:

We are keenly aware that groundwater is not a renewable resource in the High Plains... The Ute Pipeline Project provides a viable solution to the depleting aquifer.

Ute Pipeline - Regional Solution

Regional Water Portfolio is Key to a Sustainable Future

- ENMRWS “Ute Pipeline” is the foundation of the Regional Water Portfolio



- Critical to our community – Focused public and business leaders collaborating and committing to completion of the project

Questions?

