



Department of Commerce

Water Systems Facing Groundwater Decline

Mid-Columbia Resiliency Coordination Project

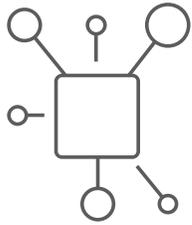
Benjamin A. Serr
SENIOR PLANNER

DECEMBER 12, 2019

We strengthen communities



**HOUSING
HOMELESSNESS**



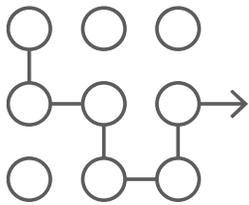
INFRASTRUCTURE



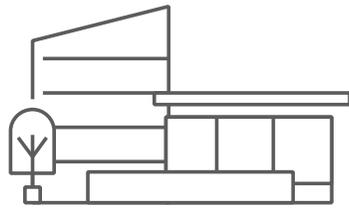
**BUSINESS
ASSISTANCE**



ENERGY



PLANNING



COMMUNITY FACILITIES



**CRIME VICTIMS
SAFETY**

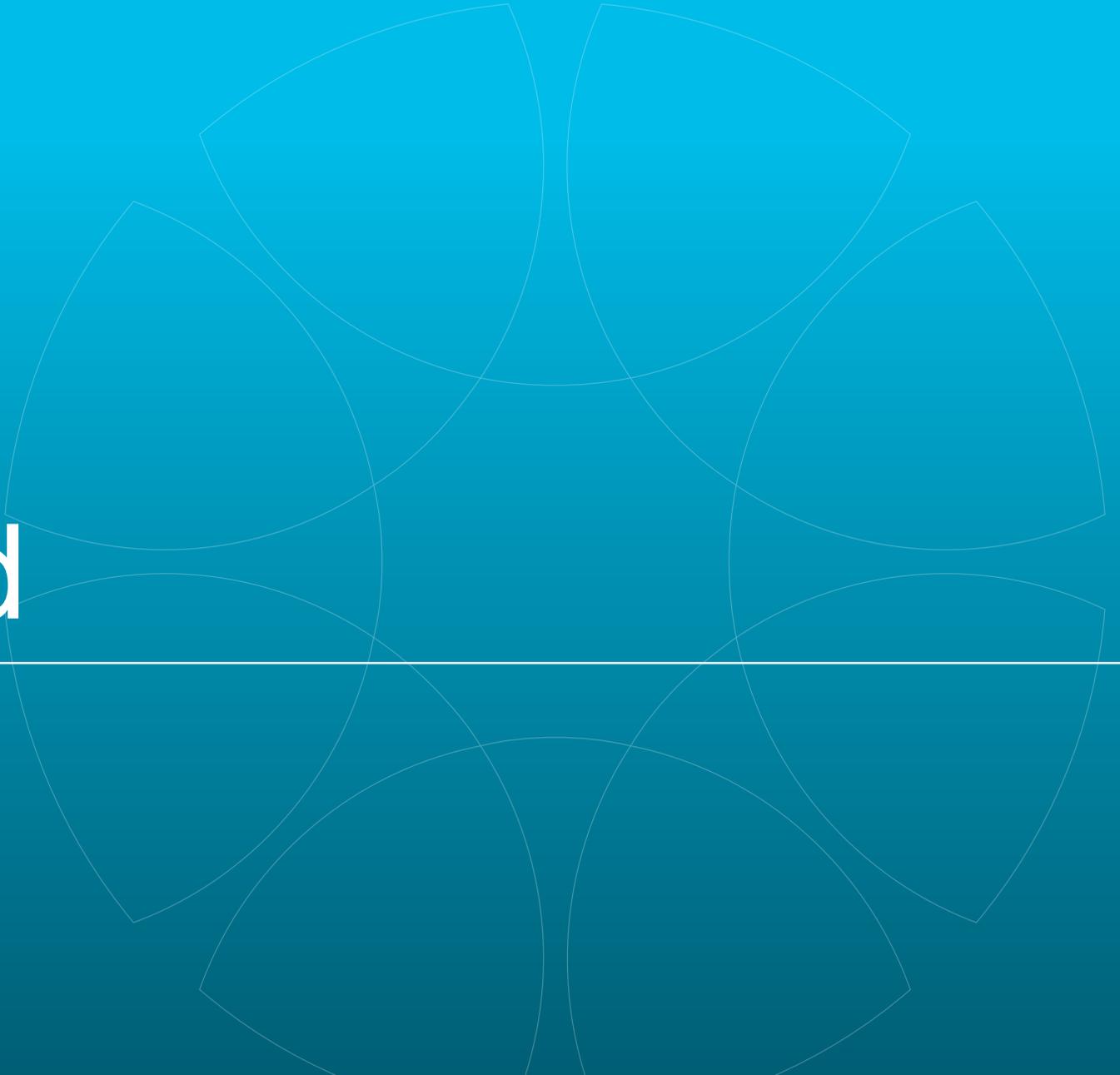


**COMMUNITY
SERVICE**

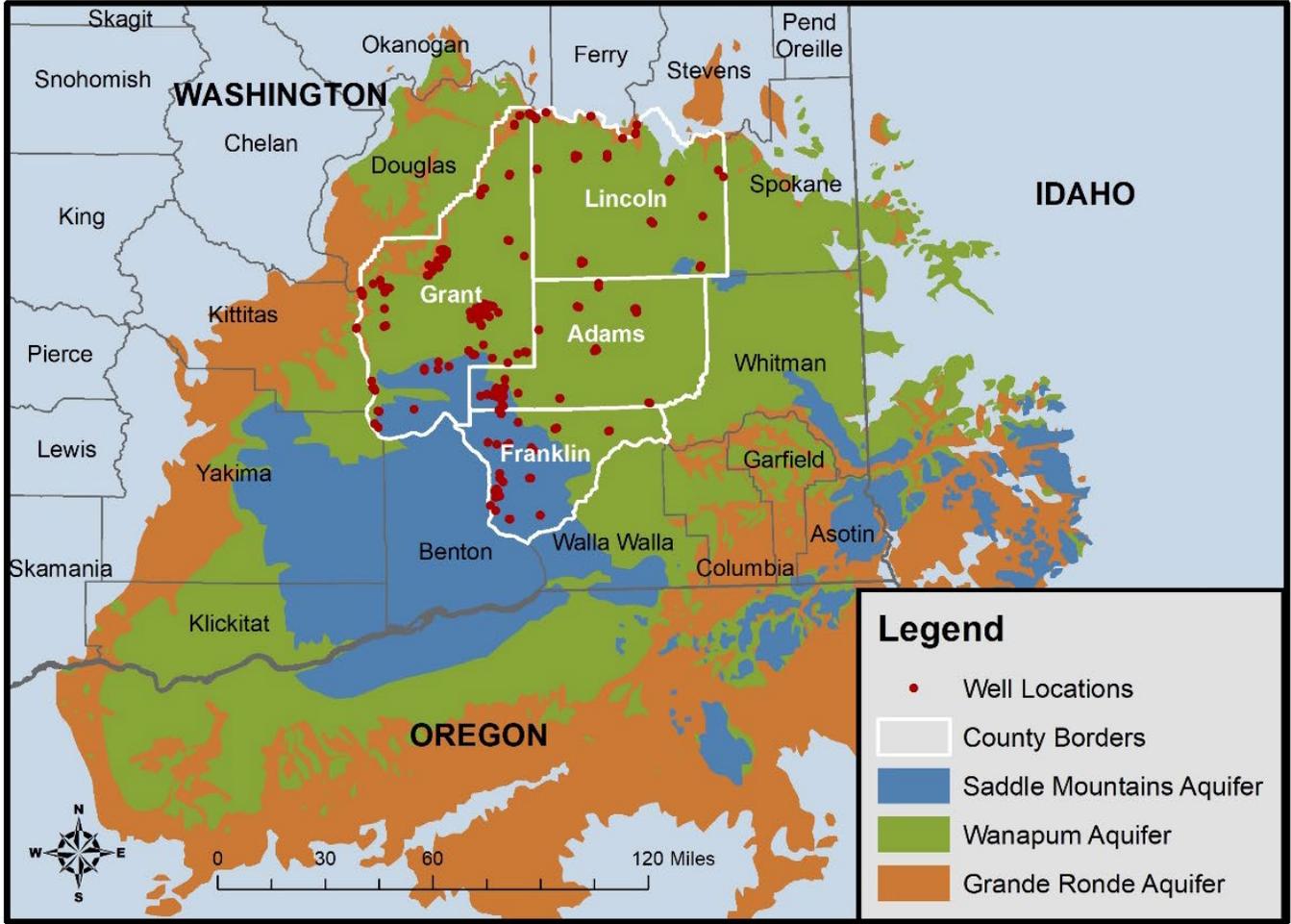
Agenda

- Background
- Mid-Columbia Resiliency Coordination Project
- Project Recommendations

Background



Aquifers of the Columbia Basin



Aquifer Layering– Cake Model



Aquifer Layering- USGS

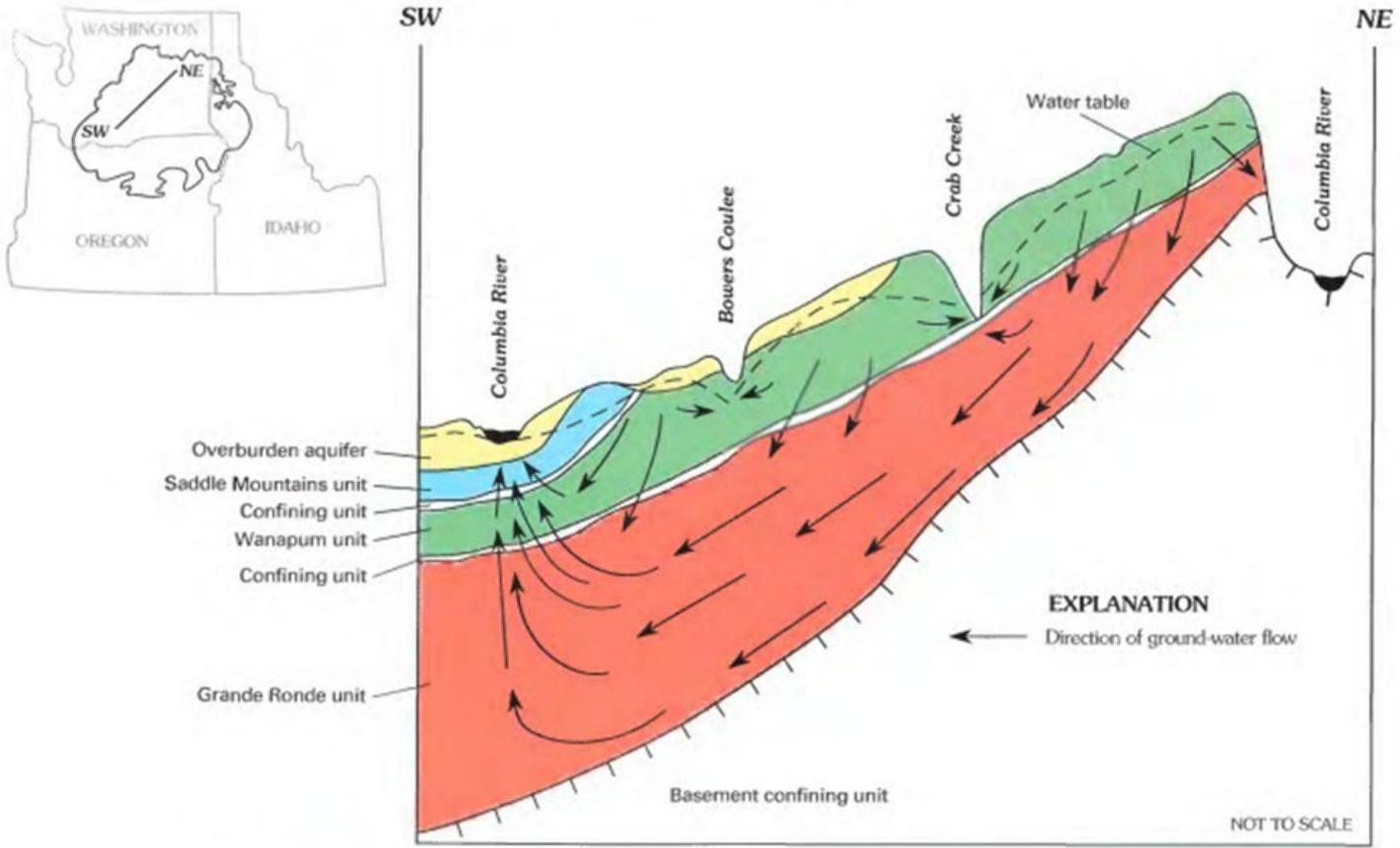
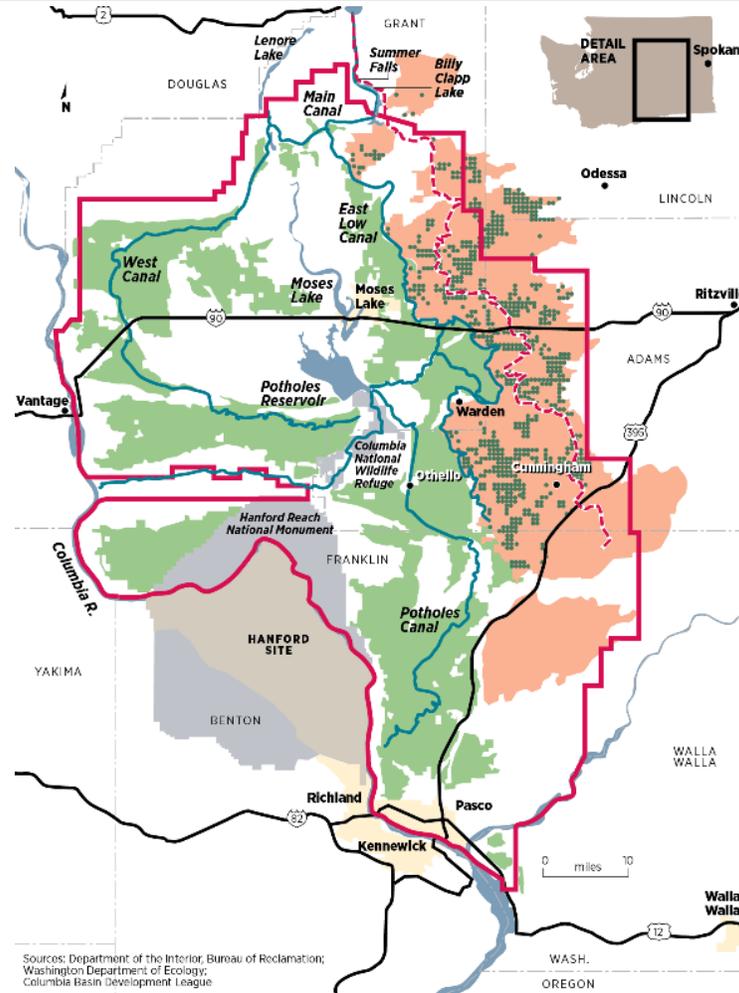


FIGURE 21.—Generalized ground-water-flow pattern in the Columbia Plateau aquifer system.

Columbia Basin Project

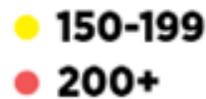


Source: Spokesman-Review 2018

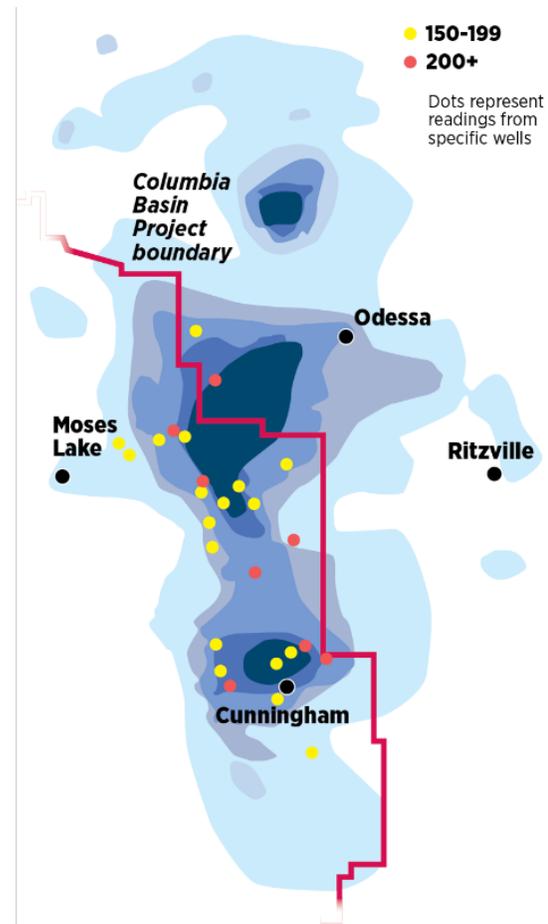
GW Decline in the Odessa Subarea

GROUNDWATER DECLINE

In feet, early '80s to 2007



Dots represent readings from specific wells

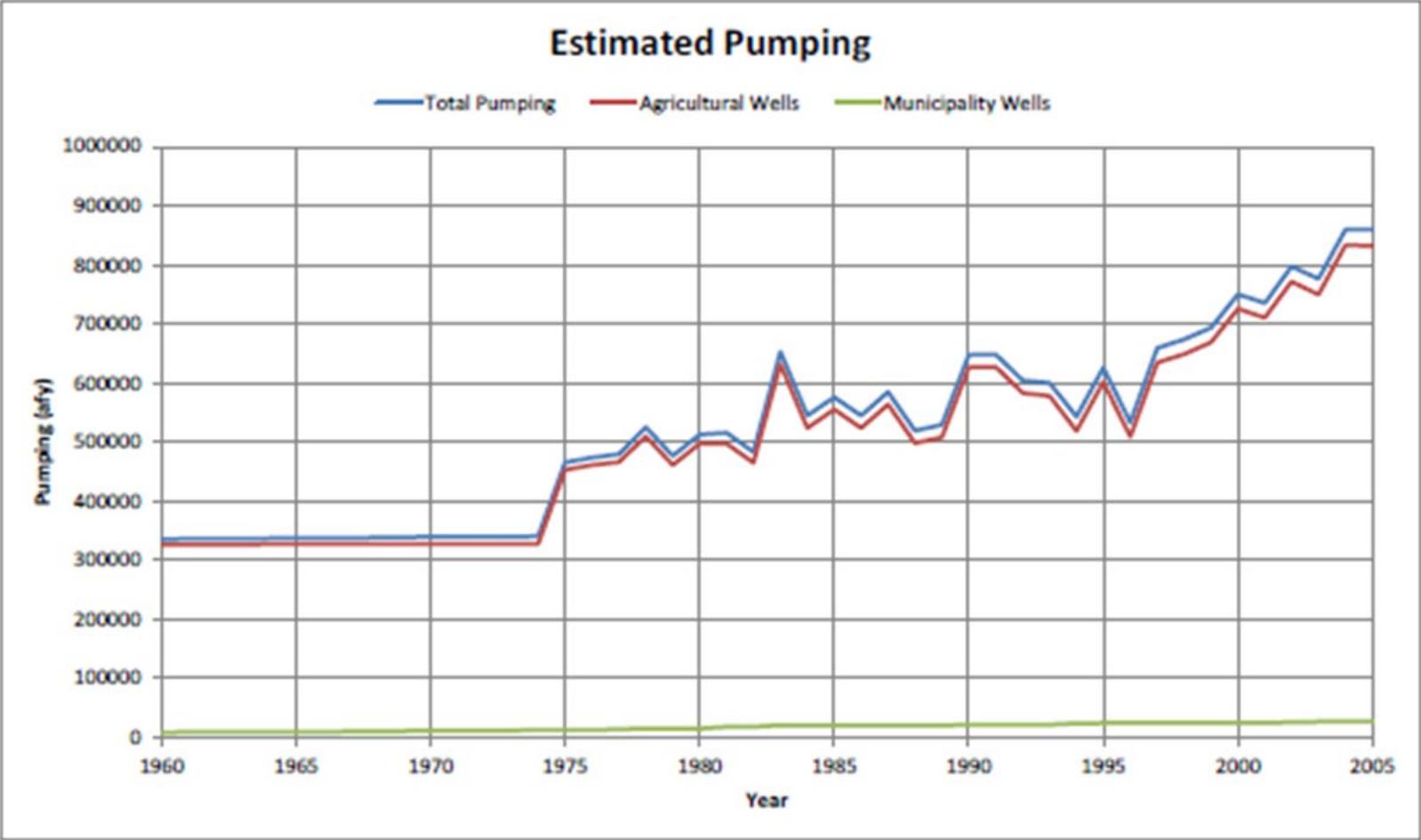


Sources: Department of the Interior; National Park Service; Washington Department of Ecology

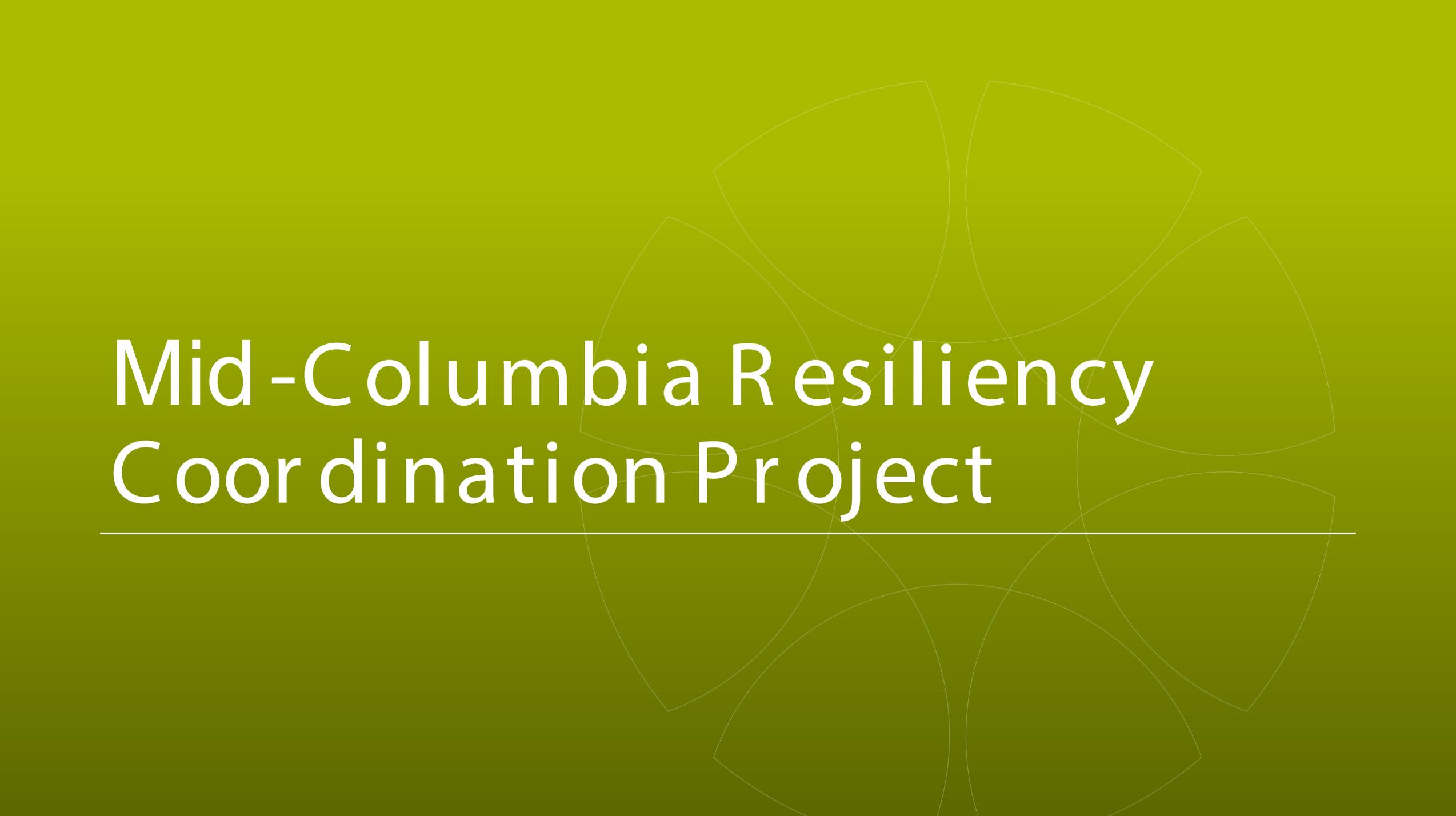
Source: Spokesman-Review 2018



Aquifer Demand



Source: Columbia Basin GWMA



Mid-Columbia Resiliency Coordination Project

Mid-Columbia Resiliency Coordination

- DOH Partnered with Commerce's Small Communities Initiative & Growth Management Services
- Project Duration from Nov. 2017 – Aug. 2019
- Built on Previous DOH and CB GWMA Efforts
- Perform Outreach to 137 Water Systems in Adams, Lincoln, Franklin, and Grant Counties
- Serving ~92,000 Residents

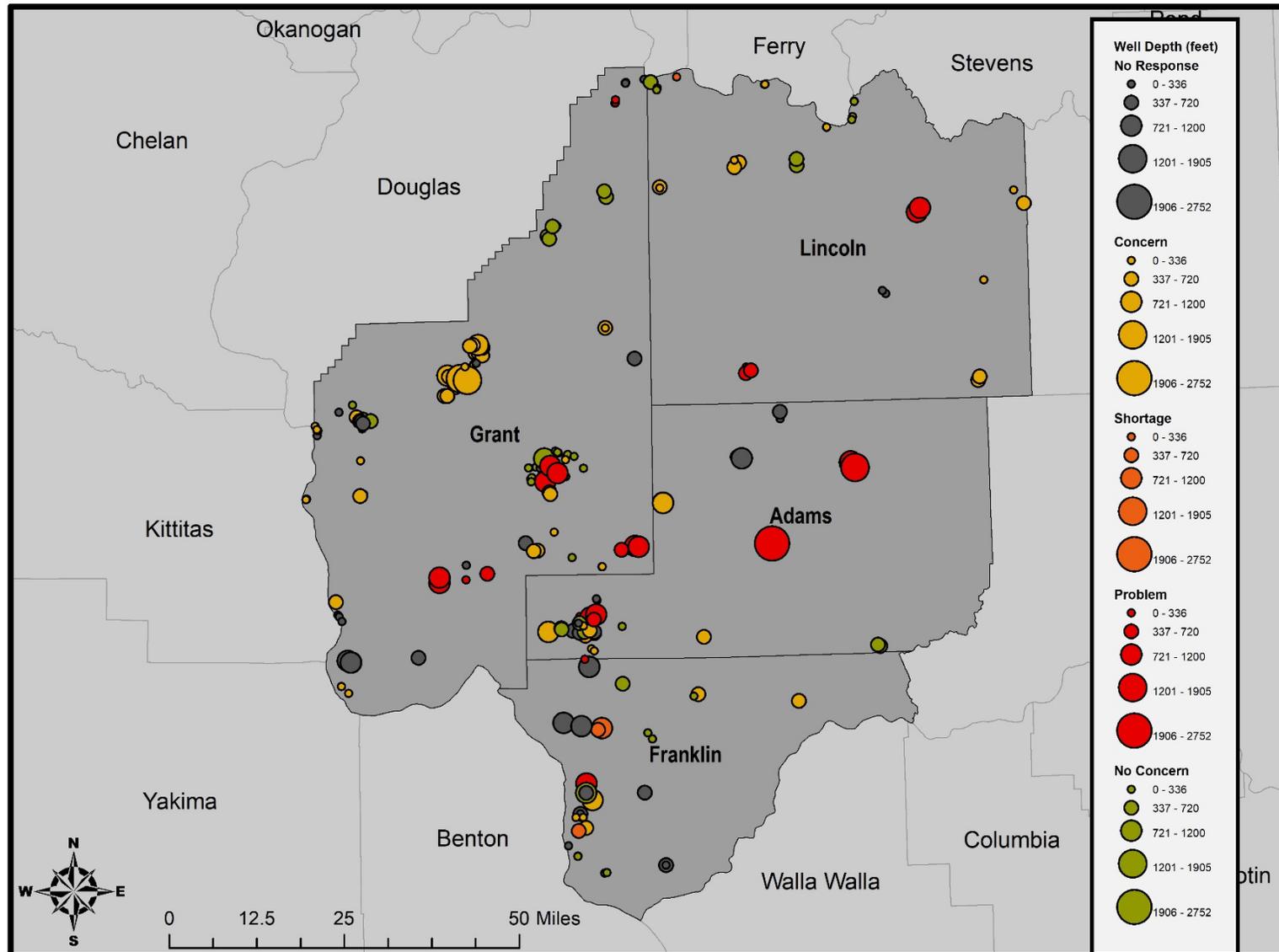
Project Activities

- A Survey of Water Systems
- Collection and Analysis of Existing Groundwater Data
- Education and Outreach to Water Systems and Other Stakeholders
- Agency Discussion on Expanding the Monitoring Network
- Coalition Building

Survey Highlights

- 57 Respondents Representing 93 Water Systems– 68% Response Rate
- 89% Are Aware of Groundwater Decline
- 18% Report a Well Problem Related to Groundwater Decline
- 11% Do Not Meet Year-Round Demands
- 33% Are Concerned About Meeting Demands in 5 – 15 Years
- 47% Do Not Measure Depth to Water in All Wells
- 32% Are Not Prepared to Deal with a Well Failure

Well Concern– Status and Depth



Existing Data

- **Best Sources are Dept. of Ecology and USGS**
 - Lacks Continuity
 - Data Integrity Issues
 - Spread Out
 - Not Water System Specific
 - Multiple Aquifers
- **No Repository of Water System Data**
 - Some GWMA

Well ERO263 Water Level Trend

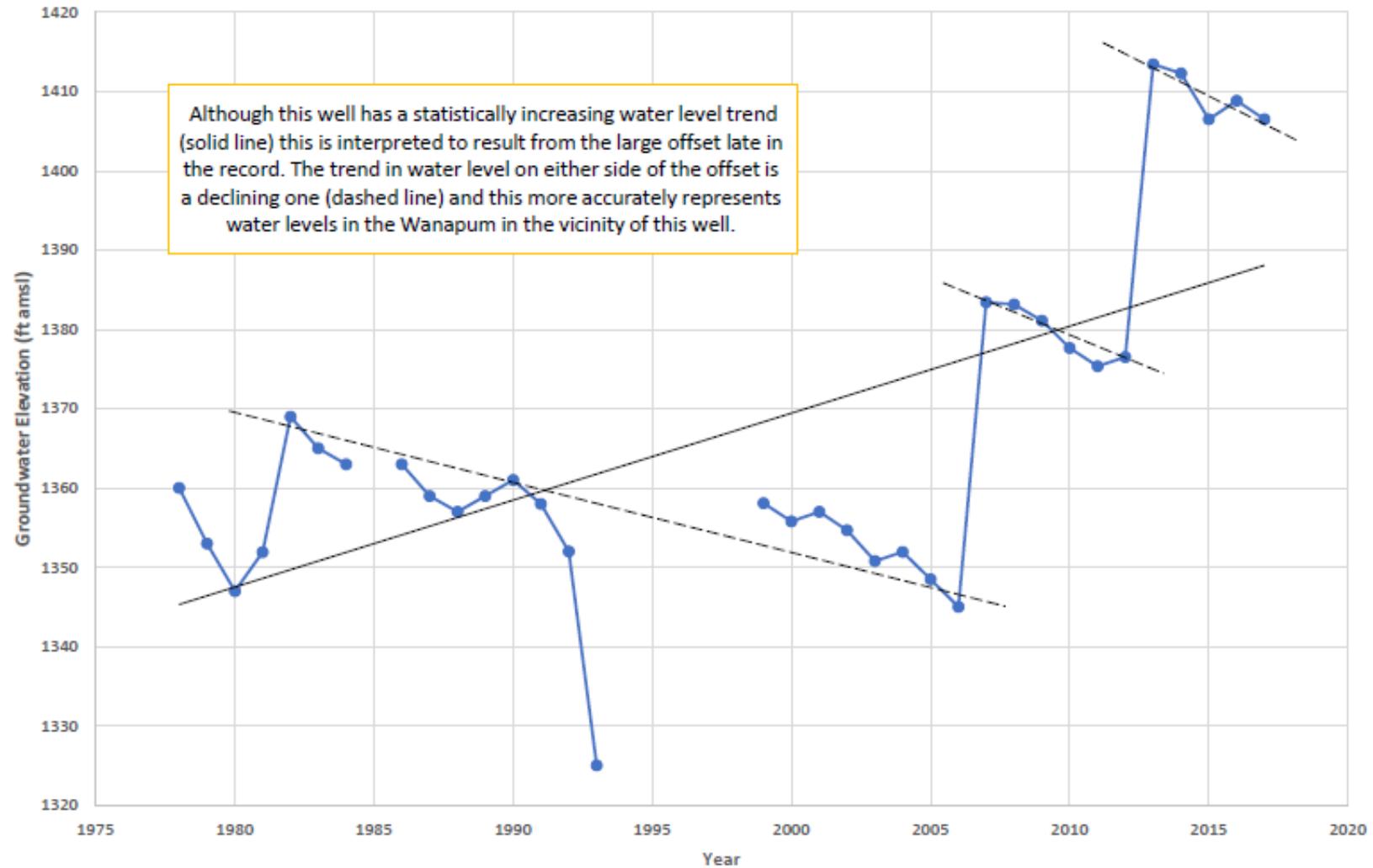
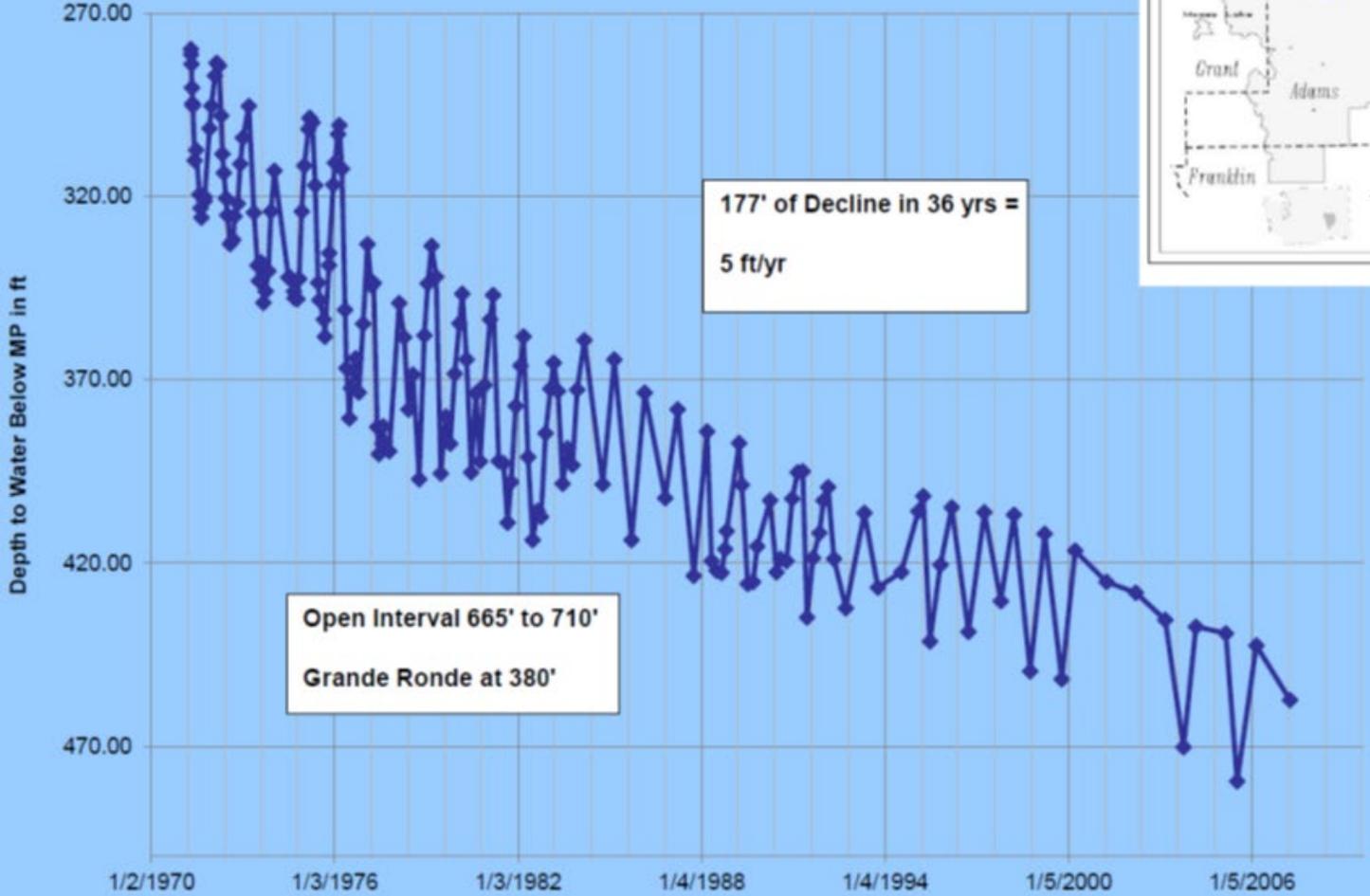


Figure 16a. Hydrograph for ERO263

Source: LCCD Sustainable Water Level Study 2018

Odessa Observation Well 20N/33E-16E06



Source: Dept. of Ecology Presentation: Long Term Water Level Trends in the Odessa Subarea, Eastern Washington (2015)



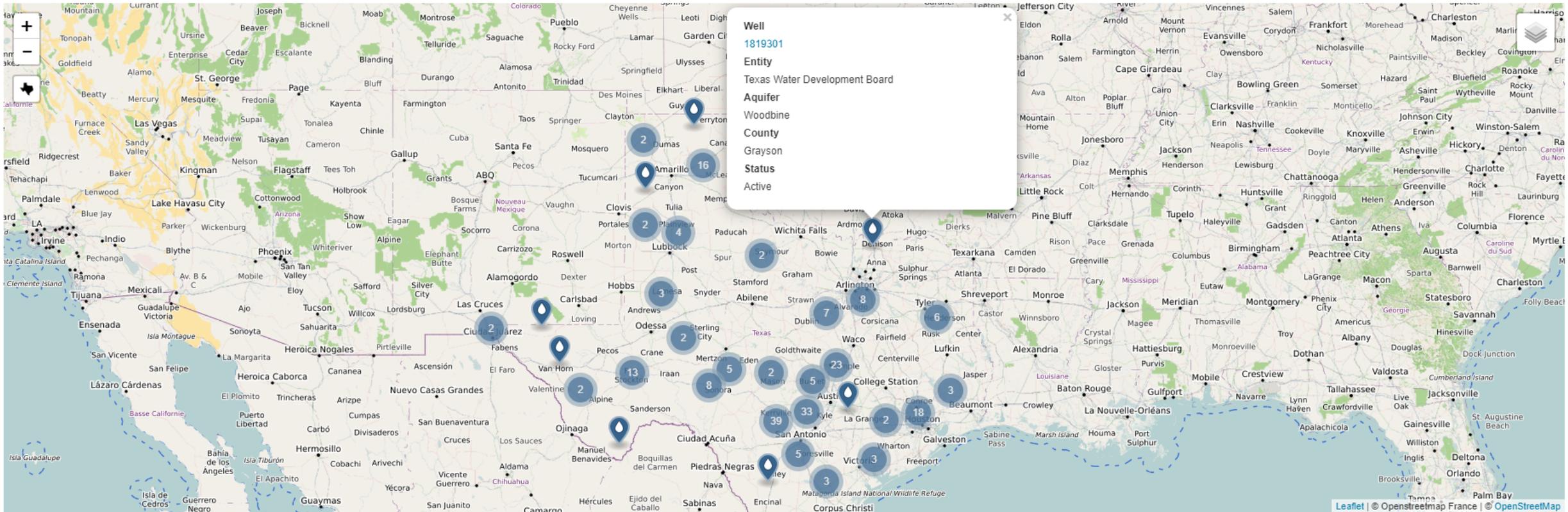
Water System Outreach Meetings

- Hosted Five Meeting in June and July 2018
- One Meeting in Each of the Four Counties
- 76 Attendees in Total
- Different Concerns from Each Meeting

Long-Term Monitoring Network

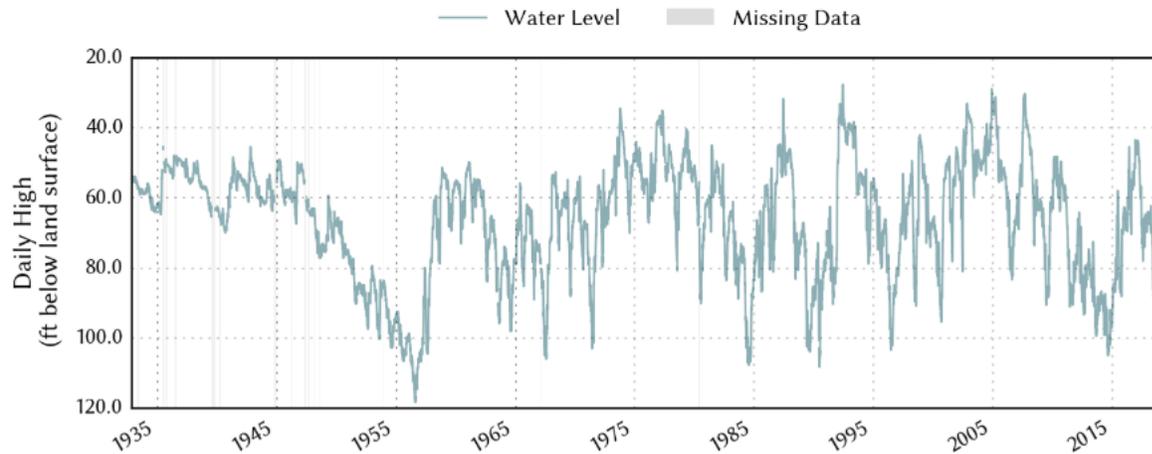
- Local, State, and Federal Agencies
- Explored Examples in Other States
- Identified Agency Resources
- Brainstorming Sessions
- Three Alternative Approaches to Expanding Monitoring

Automated Groundwater Level Wells



All data are provisional and subject to revision. The Texas Water Development Board (TWDB) specifically disclaims any and all liability for any claims or damages that may result from providing these data. For additional information, including water level and water

State Well Number 6837203 is 64.60 feet below land surface on 2019-10-01



Full-screen Snip

30 Days

1 Year

Period of Record

Well Information **

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Columbia Basin Sustainable Water Coalition

PROBLEM STATEMENT:

Groundwater levels in areas of the Columbia Basin have been declining for decades and now impact all water wells. It is critically important that water systems have a reliable water source . A broad stakeholder coalition was initiated to develop locally and regionally implementable activities to address the issue .

Columbia Basin Sustainable Water Coalition

VISION-Why we exist:

To protect and maintain a water supply for present and future generations of the Columbia Basin

Columbia Basin Sustainable Water Coalition

MISSION-What we do:

Address groundwater supply with active support and involvement of stakeholders creating locally -driven recommendations that influence water delivery methods and policy that will direct resources for long -term groundwater solutions.

CBSWC– Short-Term Priorities 1

- Build diverse and inclusive stakeholder group
- Identify/implement/support projects that can be done now that will have a positive effect
- Gather aquifer data for decision-making including past groundwater studies

CBSWC– Short-Term Priorities 2

- Develop budget and seek funding through grant applications and other funding sources
- Set monthly meetings
- Consensus to address groundwater decline based on localized conditions
- Create foundational documents including a comprehensive communication/outreach plan

CBSWC– Long-Term Priorities 1

- Support the development of a regional groundwater recharge plan including the consolidation, evaluation, and implementation of existing plans by stakeholders
- Water/wastewater viewed as commodity and water converted back into system
- General public understand gravity of water situation-- support Coalition efforts

CBSWC– Long-Term Priorities 2

- Promote recycling and re-use of water
- Preserve drinking water sources by supporting transition of deep-well irrigation to CBP water or other sustainable sources of water
- State and federal agencies actively work to build out Columbia Basin Project
- Completion of Odes sa Ground Water Replacement Program and east high canal

Project Recommendations

Recommendations

- Water System Water Level Data Reporting and Repository
- Long-term Monitoring
 - Data collection will inform decision makers about groundwater supply
 - Identify areas of investment
 - Improve public awareness about water use in the Columbia Basin.
- Support for the Columbia Basin Sustainable Groundwater Coalition
- Local, State, and Federal Agency Coordination
- Regionalization



Thank you!

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