Water Systems Facing Groundwater Decline

Mid-Columbia Resiliency Coordination Project

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We strengthen communities

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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
Columbia Basin Project

Source: Spokesman-Review 2018
GW Decline in the Odessa Subarea

Groundwater Decline

In feet, early ’80s to 2007

- 5-25
- 26-50
- 51-75
- 76-100
- 101-125
- 125+

150-199
200+

Dots represent readings from specific wells

Source: Spokesman Review 2018

Sources: Department of the Interior; National Park Service; Washington Department of Ecology
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
Although this well has a statistically increasing water level trend (solid line) this is interpreted to result from the large offset late in the record. The trend in water level on either side of the offset is a declining one (dashed line) and this more accurately represents water levels in the Wanapum in the vicinity of this well.
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
State Well Number 6837203 is 64.60 feet below land surface on 2019-10-01

Well Information

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 quality data, search the TWDB Groundwater Database (GWDB).
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 Odessa 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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