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Mosier Basin Groundwater Update

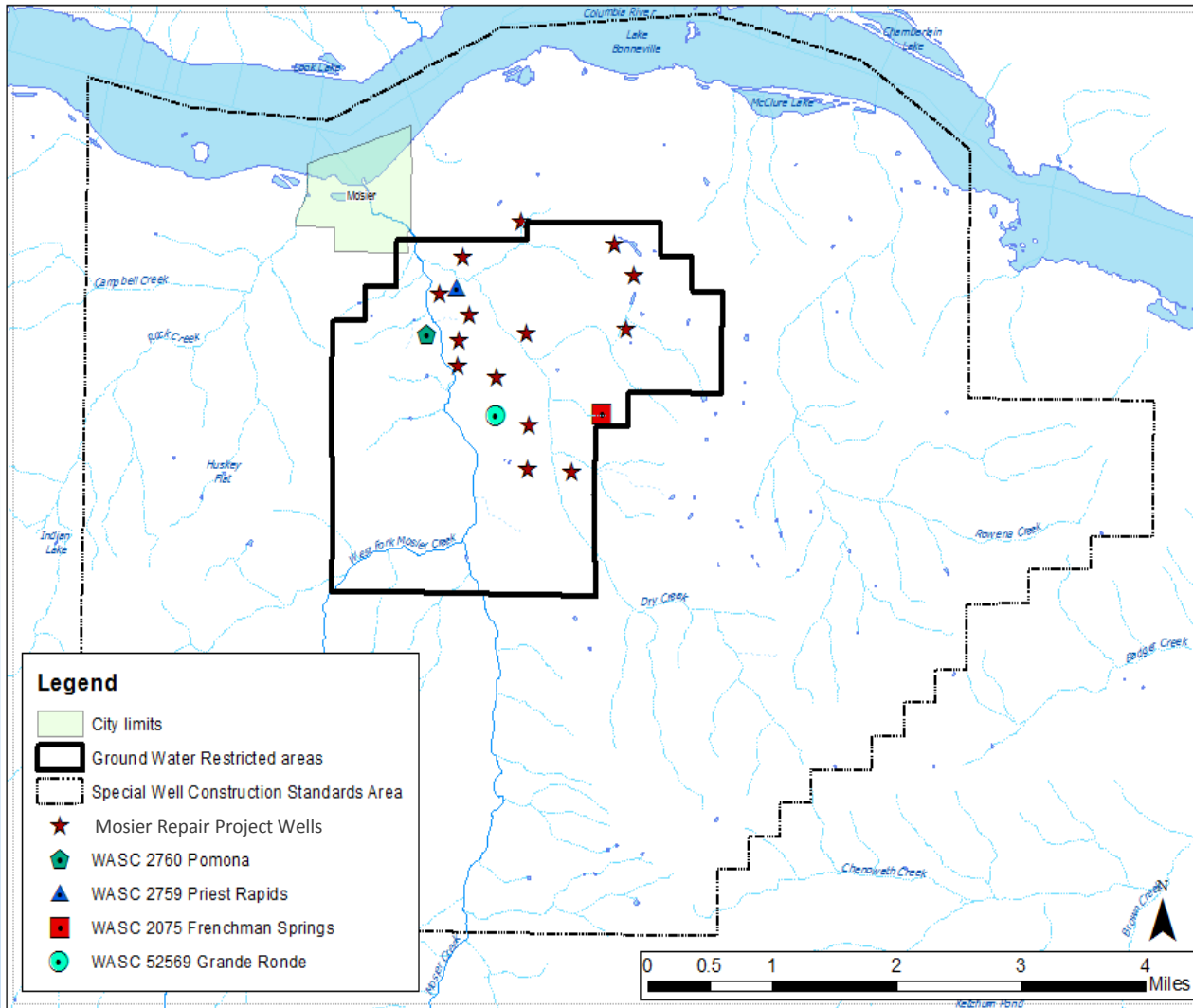
Erik Thomasser, North Central Region Well Inspector

Aurora Bouchier, Hydrogeologist

Justin Iverson, Groundwater Section Manager



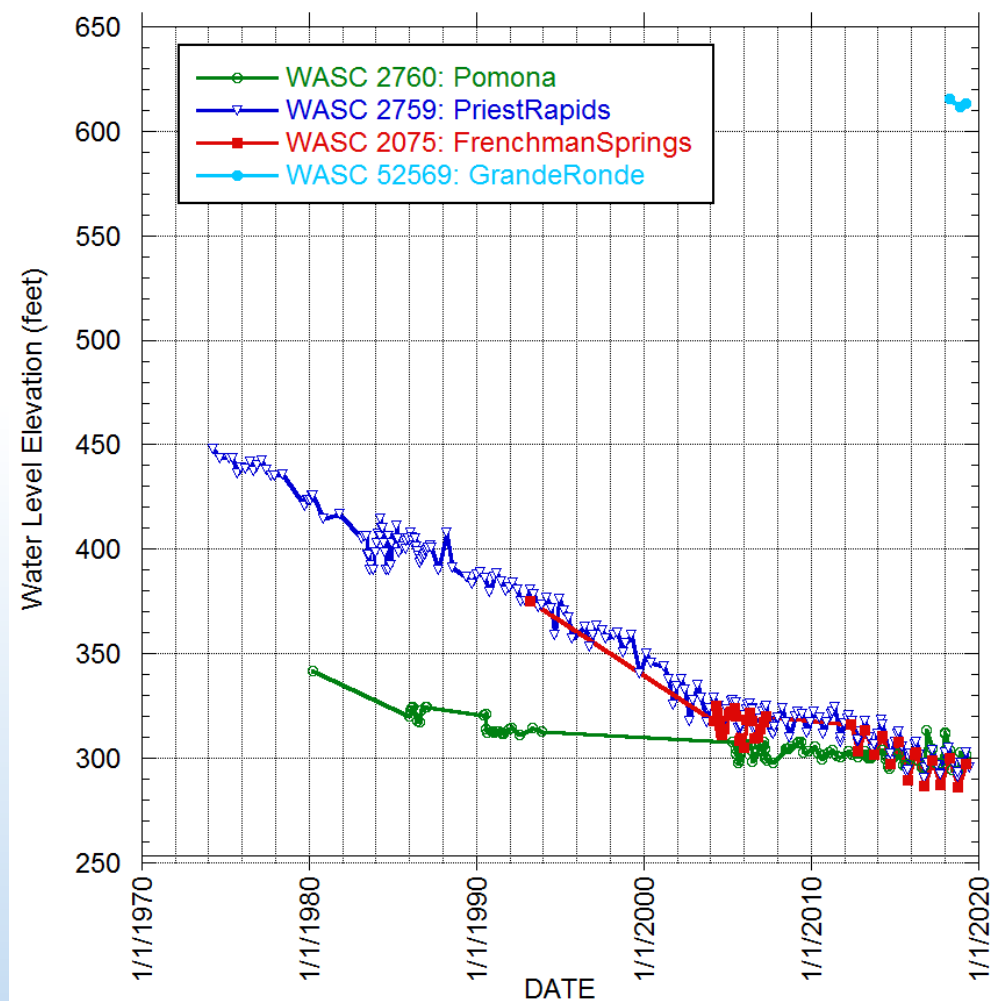
Mosier Area Overview



Mosier GW Problem Statement

Water level declines since 1960s, known in 1980s, leading to withdrawn area

Declines due to over-appropriation and well construction issues (commingling)



Actions to Address Problem

Withdrawal of
Mosier area in
1988

Continuing study
and education
regarding
commingling well
issues

Several recent
projects



Recent Programs

Special Well
Construction
Standards

Well repair/replace
program

Deep wells project



Acknowledgments

Thanks to Ken Lite who:

- developed the foundations of understanding
- studied, and continues to study, the area
- built relationships that have lead to public understanding and action
- mentored staff that continue this work



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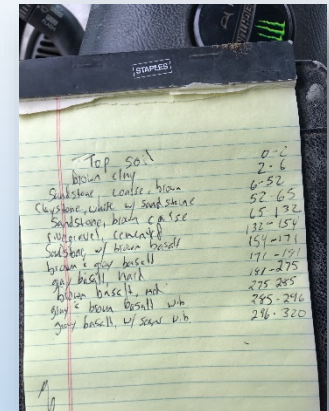
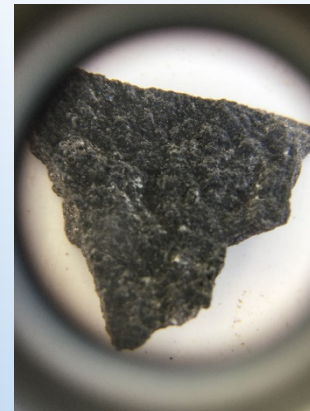
Mosier Special Area Standards for Well Construction

Erik Thomasser, North Central Region Well Inspector

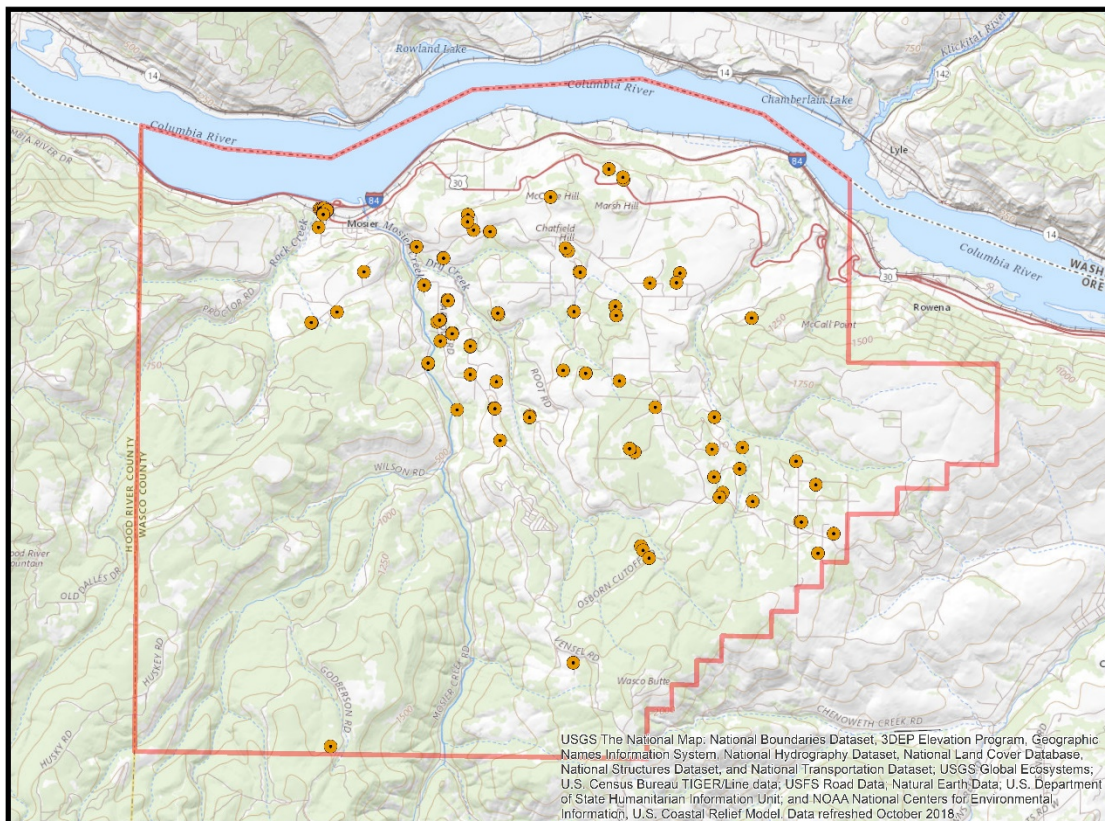
Mosier Special Area Standards



- Introduced in June 2015
- Increases oversight and Department involvement
- Process and science-driven
- Improves data collection
- Improves compliance and resource health



June 2015 - August 2019 Mosier Special Area Standards Activity



- 101 start cards submitted
- 23 Monitoring Wells
- 7 Irrigation Wells
- 16 Abandonments
- 55 Domestic Wells

Results, Impacts, and Feedback

- Observed 100% compliance
- Improved communication and rapport with drillers
- Driller response is positive



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Mosier Well Replacement Project Completion Summary

Erik Thomasser, North Central Region Well Inspector

Mosier Well Replacement Project



- 2015 Legislative response to a natural resource protection and rehabilitation need
- \$1M to repair or decommission and replace commingling wells



Replacement Project Timeline

- 2015 – Fall 2017: site assessments and prioritization
- Spring 2018 – Fall 2019: 13 priority project sites repaired/replaced
- Beyond Fall 2019: data collection, compilation, and analysis



Project Site Prioritization

Site Assessments:

- “Desktop” assessment
- Field assessment
- Access agreements

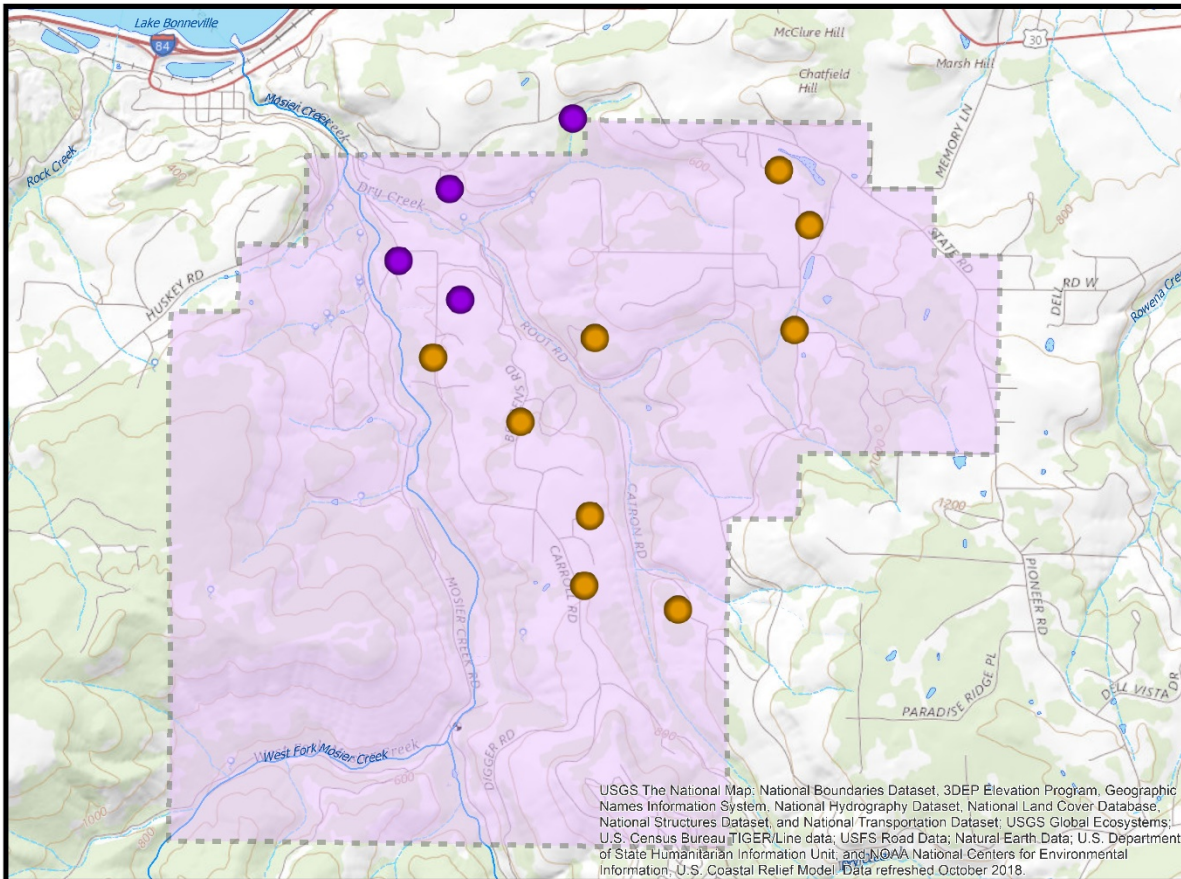


Criteria for Scoring Matrix:

- Proximity to system boundary
- Source aquifer
- Estimated rate of commingling

Priority Site Locations

Mosier Well Replacement Project Site Locations



- 4 Irrigation replacements
- 9 Domestic replacements

Project Partners

- Wasco County Soil and Water Conservation District
- Mosier Watershed Council
- Mosier Landowners and Irrigators
- GSI Water Solutions
- M&M Well Drilling
- OWRD
- Oregon Legislature



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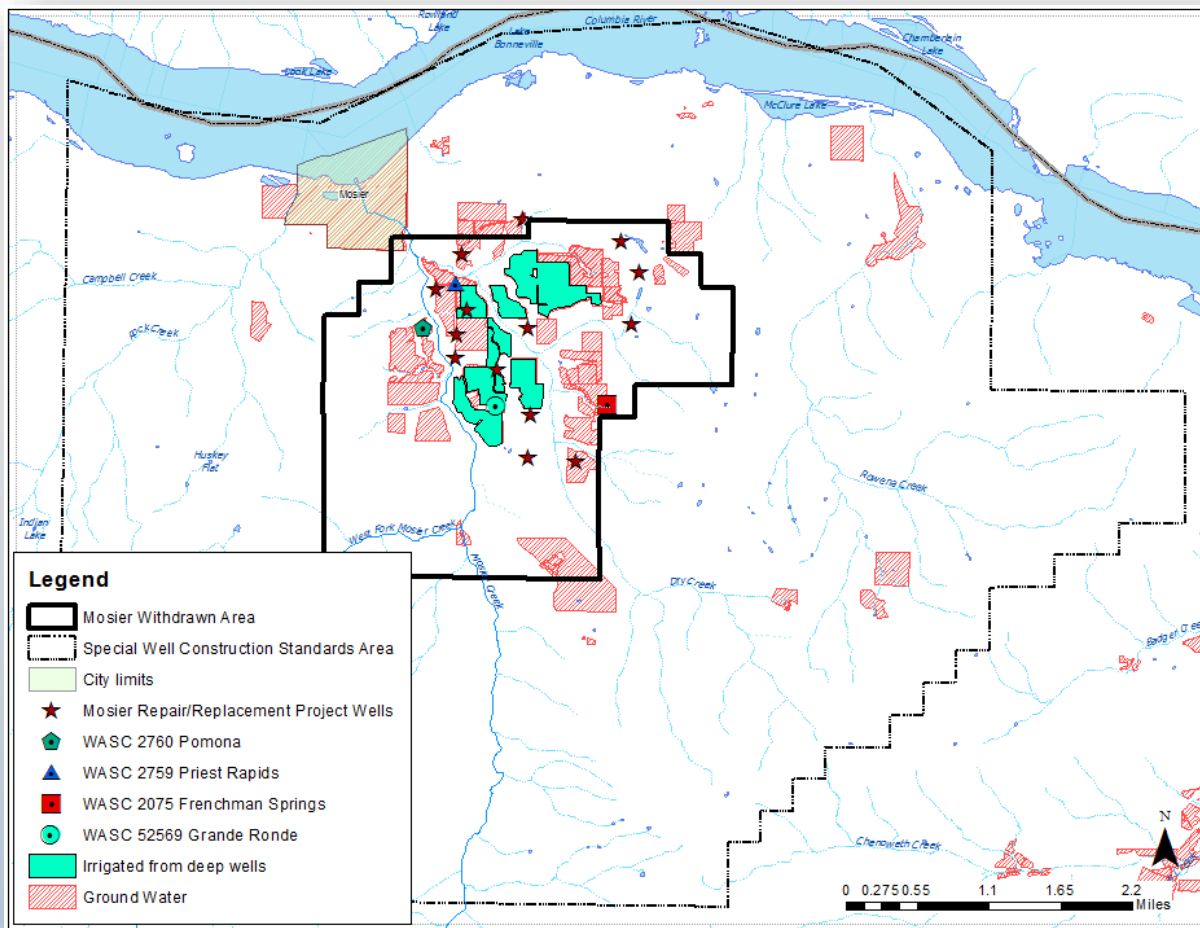


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Mosier Deep Wells Summary

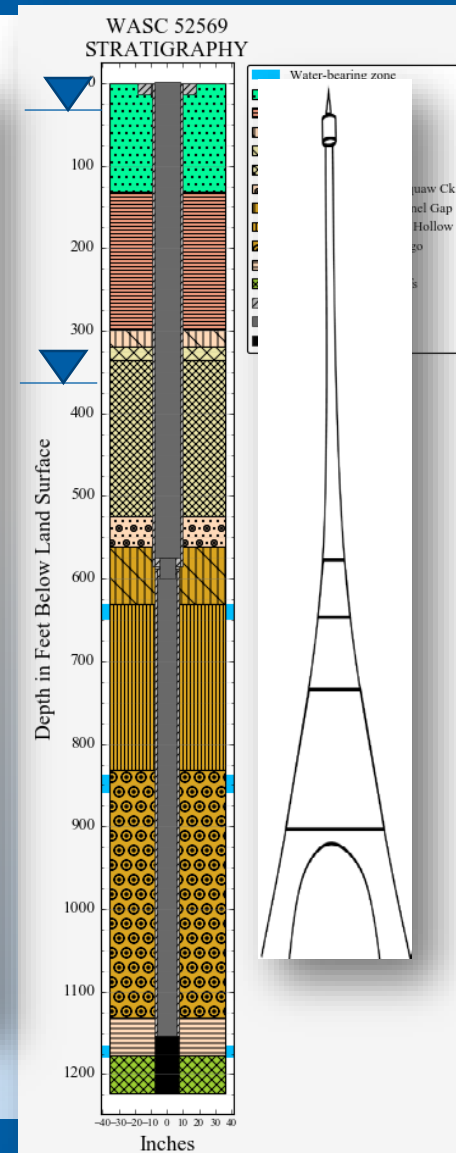
Aurora Bouchier, Hydrogeologist

Mosier Deep Wells



- Stress Relief
- Who Benefits
- Opportunity

Mosier Deep Wells



Mosier Deep Wells



1st Deep Well (WASC 52569) completed in mid-2018, permitted for supplemental irrigation of 171.7 acres.

Pumped 163 AF in 2018;
185 AF (to date) in 2019



Mosier Deep Wells

Presentation Reports

Logout

Projects | All systems | All alarms

Logged In: Josh Thompson
Account: Hydroview

Presentation » Projects » Mosier » Mosier Deep Well - Bryce Molesworth » Data

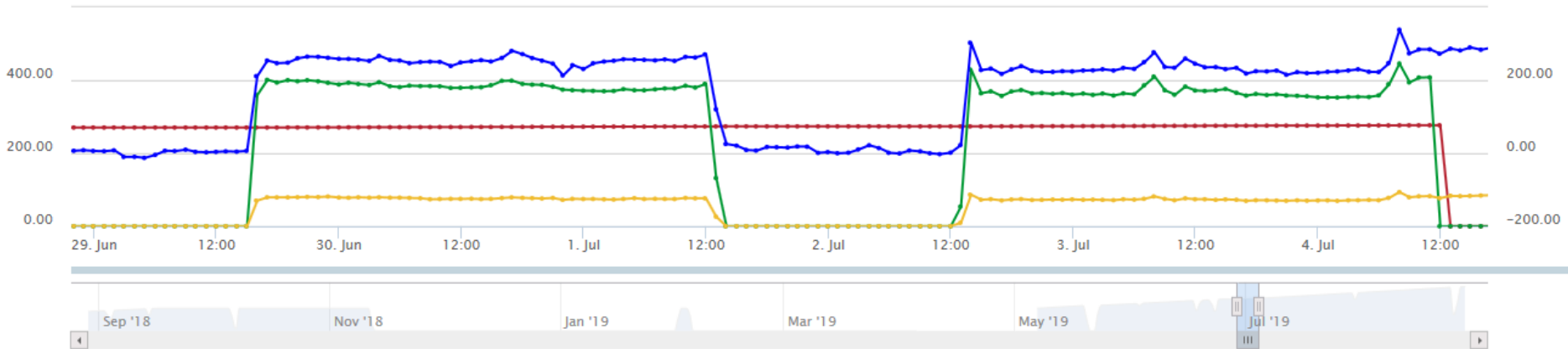
Mosier Deep Well | Overview | Alarm | **Historical data** | Map | Notes | Information

Time zone US/Pacific

Aggregated hour data

Zoom 1d 1w 1m 3m 6m YTD 1y All

From 2019-06-28 21:45 To 2019-07-04 16:41



Available Parameters:

Drag the parameter here to remove it from the chart

Motor Power
iQpump1000 kW

Motor Speed
iQpump1000 rpm

System Pressure
iQpump1000 PSI

Left Axis:

0003-Total Volume
Tiger Mag Flow Meter

Flow Rate
Tiger Mag Flow Meter GPM

Motor Current
iQpump1000 A

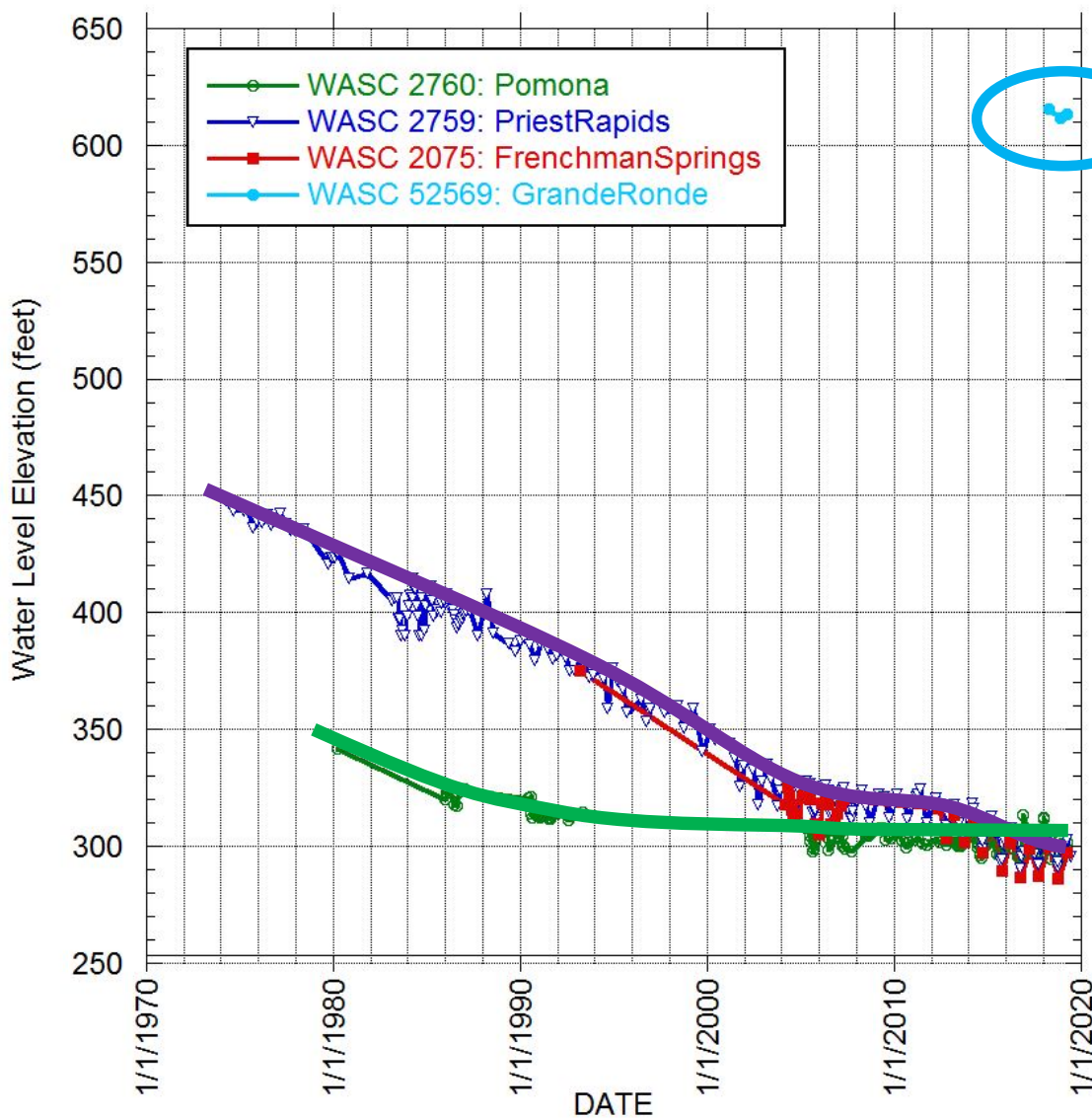
Drag the parameter(s) here

Right Axis:

Water Level
iQpump1000 ft

Drag the parameter(s) here

Mosier Water Levels



Questions or comments?

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