SMID
SELAH-MOXEE IRRIG. DIST.
Yakima, Wa.
PO Box 166, Moxee, WA 98936

ADDRESSEE

How do I get involved?

We need your feedback on demand for water in the Black Rock area and preferred options for surface water supplies to users relying on declining groundwater.

- Provide feedback at public meeting to be held on Thursday, October 17th, from 6-8:00 pm at the Yakima Area Arboretum located at 1401 Arboretum Drive, Yakima WA, 98901
- Fill out survey that will be sent out following the meeting to area water users
- Contact SMID office with comments and questions

If local interest in further study is high, what are the next steps?

- Produce a report with recommendations on water supply options and land owner interest. Copies of the report will be made available to the public.
- Apply for additional grants to support further work
- Conduct feasibility study
- Expand water level monitoring in the Black Rock area
- Negotiate Water Service Contracts for surface water through SMID

Study Schedule:

- Public Meeting followed by survey in October 2019
- Responses and public comments by November 2019
- Develop report and recommendations by Summer 2020
- Questions? Contact SMID Office at (509)469-0449 or smidistrict@qwestoffice.net

DECLINING GROUNDWATER
BLACK ROCK / MOXEE

New Bureau of Reclamation Study

Reclamation is funding a study to evaluate options that address declining groundwater in the Black Rock area east of Moxee, led by Selah-Moxee Irrigation District (SMID). The Study will assess:

- Demand for surface water as an alternative source to declining groundwater
- Options for physical water supply delivery or replacement of groundwater by SMID
- Potential cost of delivery options and willingness-to-pay by existing groundwater users

The Study will conclude with development of preferred actions, recommendations and next steps

Why is Selah-Moxee Irrigation District (SMID) sponsoring the effort?

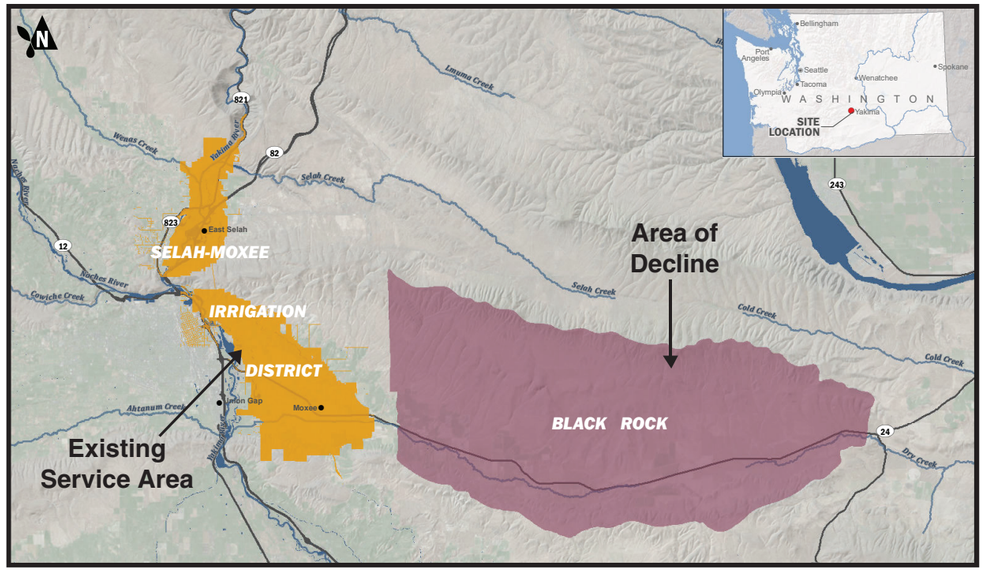
- SMID's mission is supporting agriculture, helping our neighbors, and being a good water steward. As part of our infrastructure upgrades it makes sense to consider options that solve local problems in the process.
- Through conservation upgrades, SMID has approximately 10,000 acre-feet of water available.
- SMID's water delivery infrastructure extends east toward the Black Rock area.
- The District is planning additional system upgrades including piping to improve water use efficiency.
- SMID needs to understand how extending service east to Black Rock affects the sizing of planned upgrades.

photo credit: USBR

Where are groundwater supplies declining?

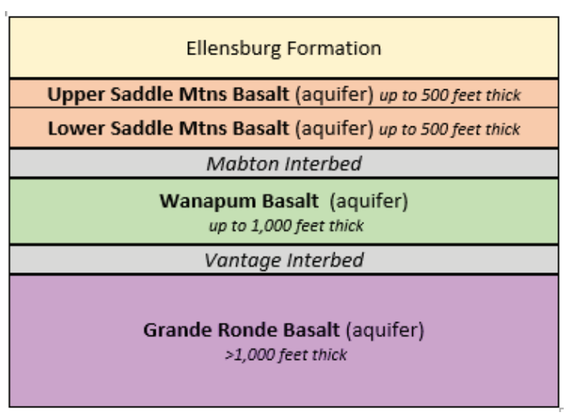
Groundwater levels have been declining steadily over the past several decades within the Black Rock area east of Moxee. The magnitude and location of decline varies and are controlled, in part, by geologic structures and pumping from wells. Generally, the largest declines are found in the central and eastern portion of the Black Rock area within the Columbia River Basalts.

The USGS and Department of Ecology have conducted studies and monitored wells in the area for several decades which are available from SMID on request. The figure below shows SMID's service area in orange near the Black Rock declining groundwater area in red.



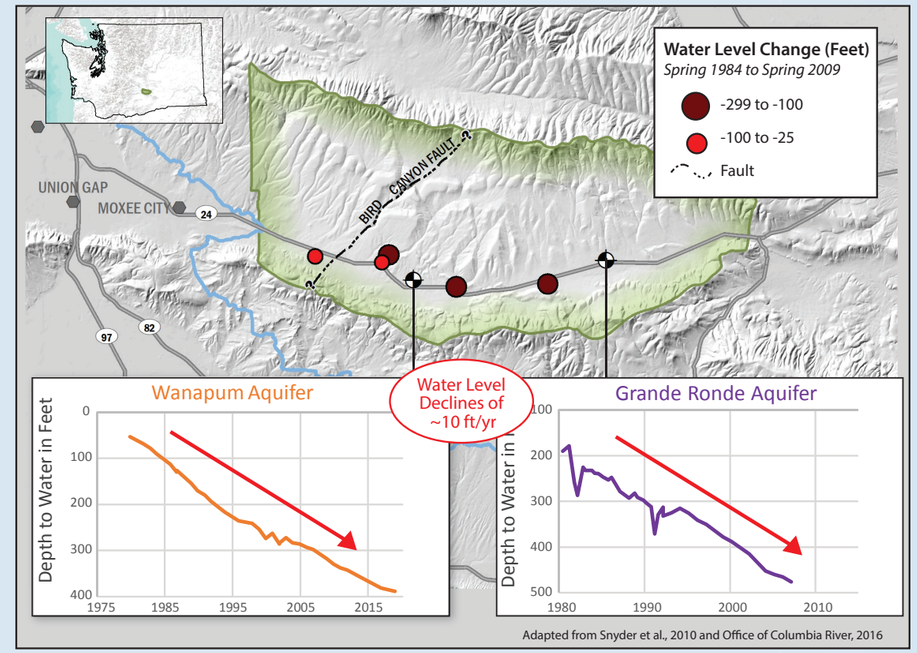
What aquifers are declining?

There are multiple basalt units that form the aquifers relied on for water supply in the area. Black Rock groundwater monitoring wells show declines in all of the major basalt aquifers. The figure to the right shows the basalt formations from deep to shallow: Grande Ronde Basalt, Wanapum Basalt, and Lower and Upper Saddle Mountains Basalts.



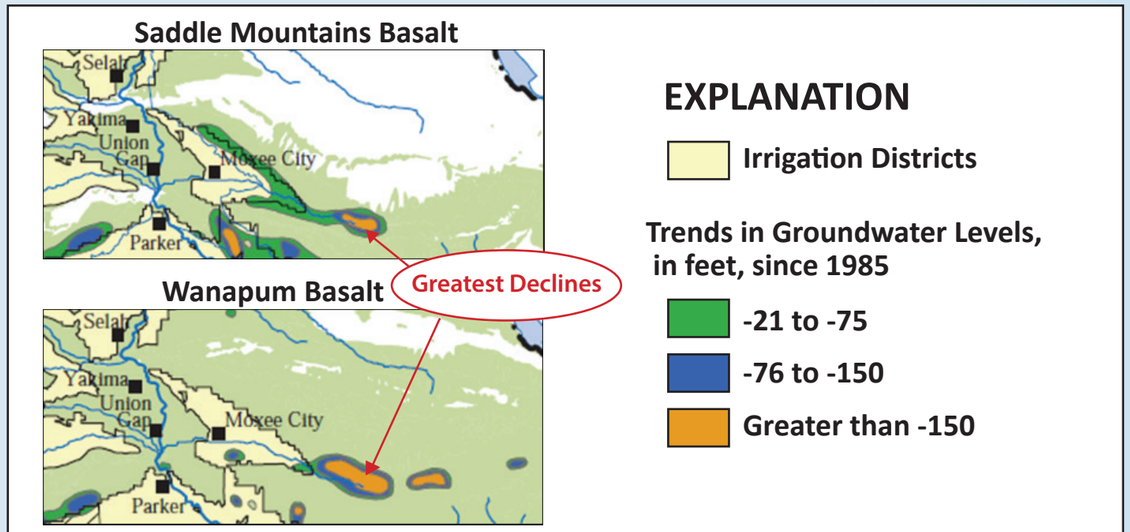
How bad are the declines?

Groundwater declines are approximately 5 feet per year in the Saddle Mountains Basalt, and greater than 10 feet per year in the Wanapum and Grande Ronde Basalt over the last 40 years. The figure below shows orange and red dots classifying the magnitude of the declines, along with time-history graphs of water levels from existing wells in specific basalt aquifers.



Greatest declines are in central Black Rock area

This figure shows the location of greatest declines in orange within specific basalt aquifers.



Source: Adapted from Vacarro et al., 2009; Clipped excerpt of Figures 30 and 31