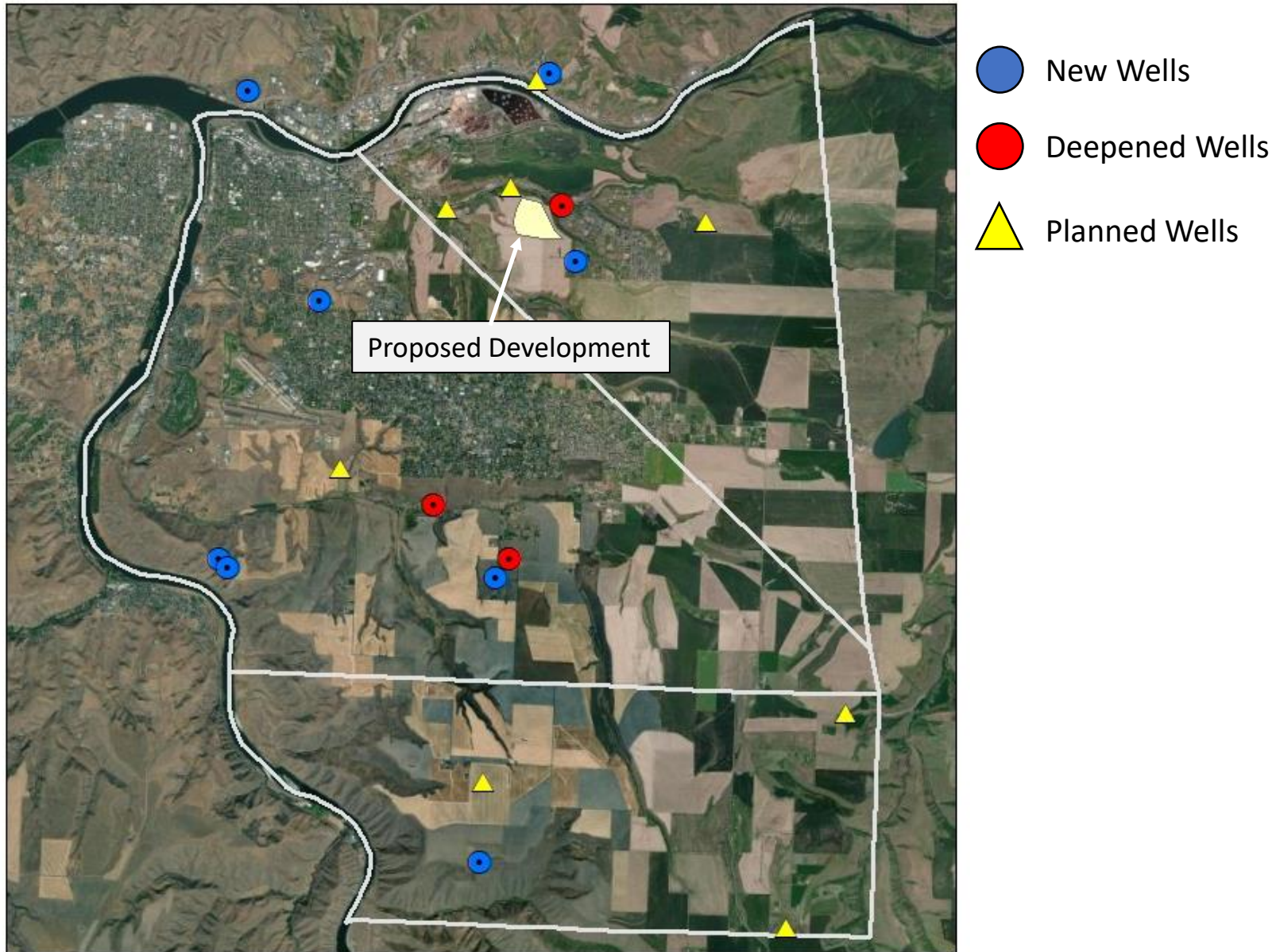
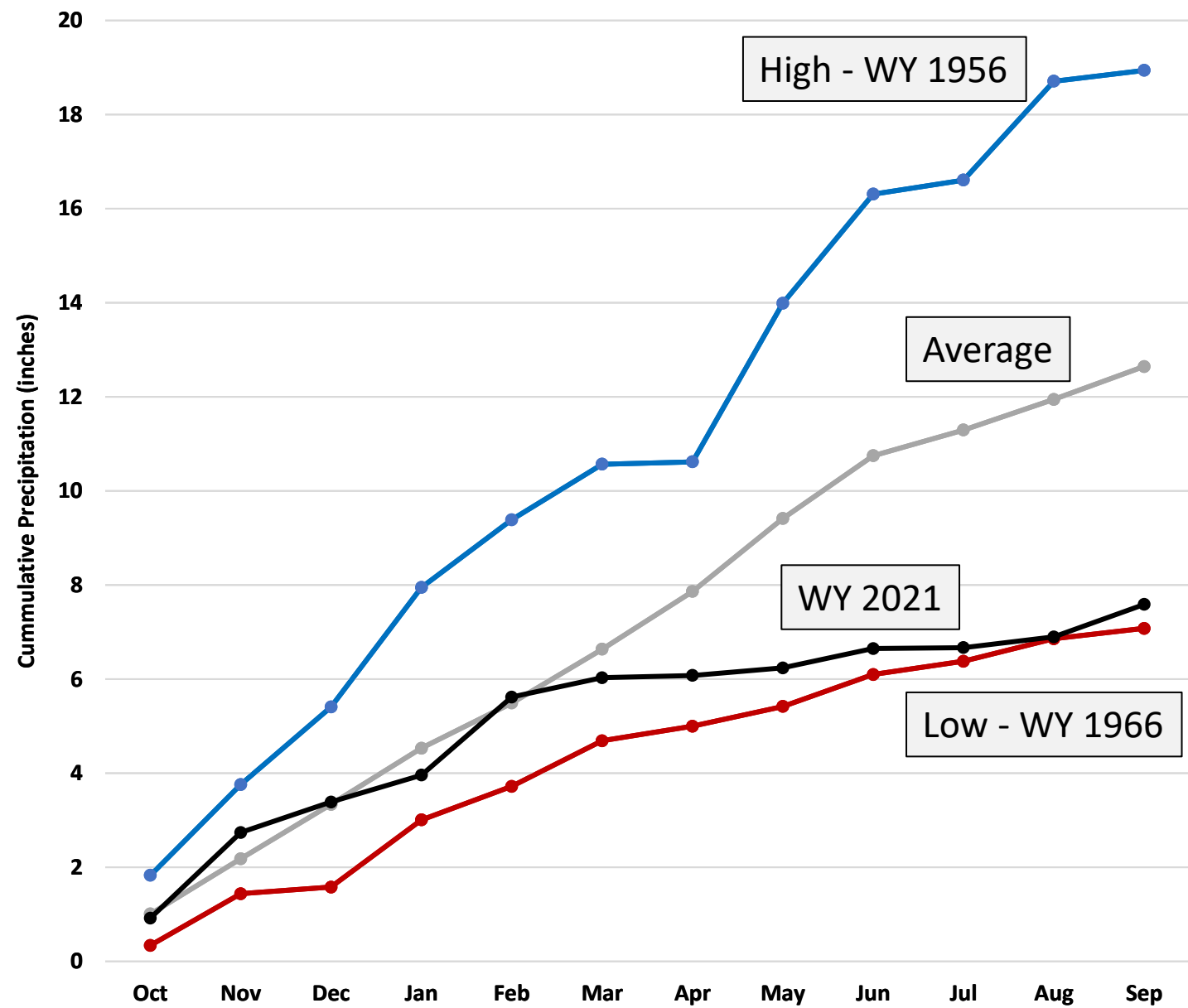


Recent and Planned Drilling Activities Since 2019



Water Year 2021 Precipitation



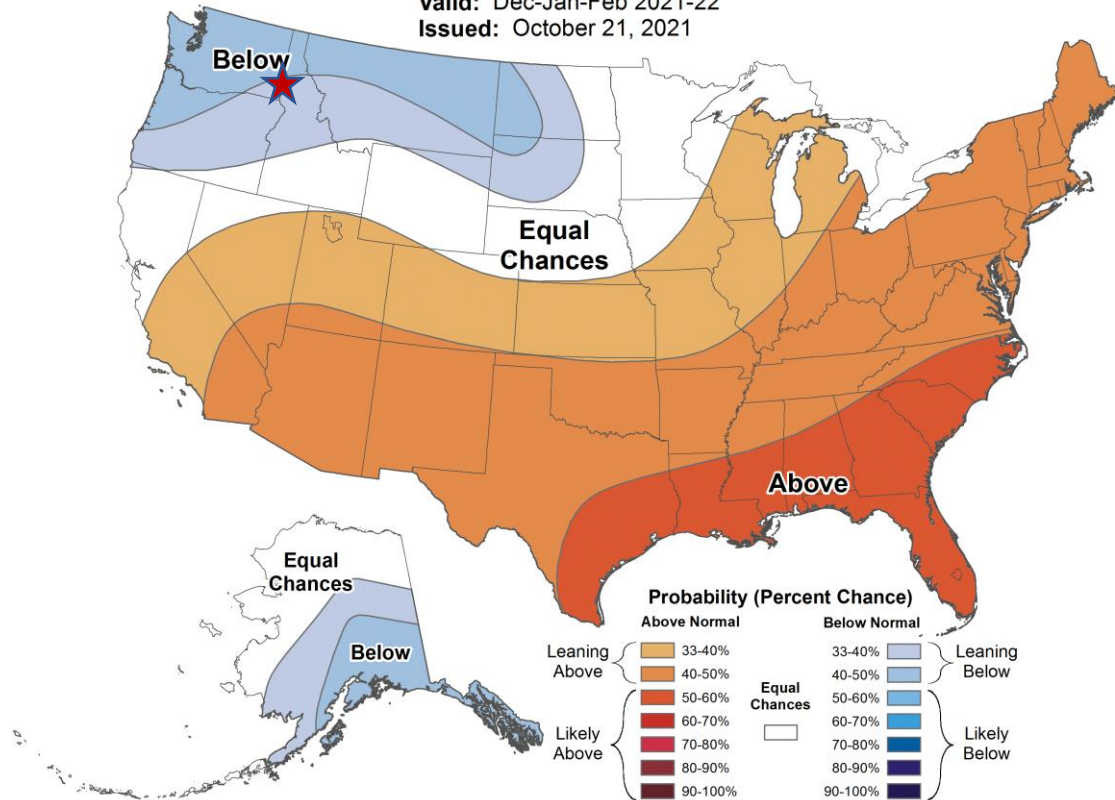
Winter 2022 Expectations



Seasonal Temperature Outlook



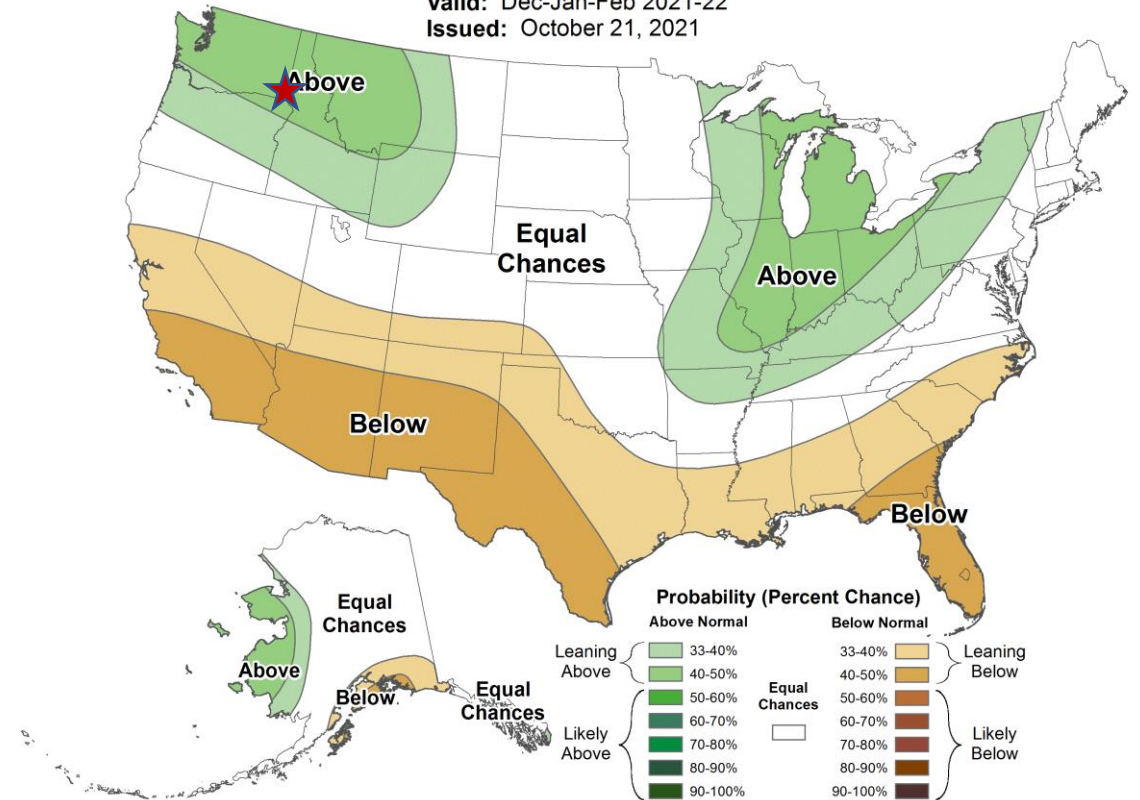
Valid: Dec-Jan-Feb 2021-22
Issued: October 21, 2021



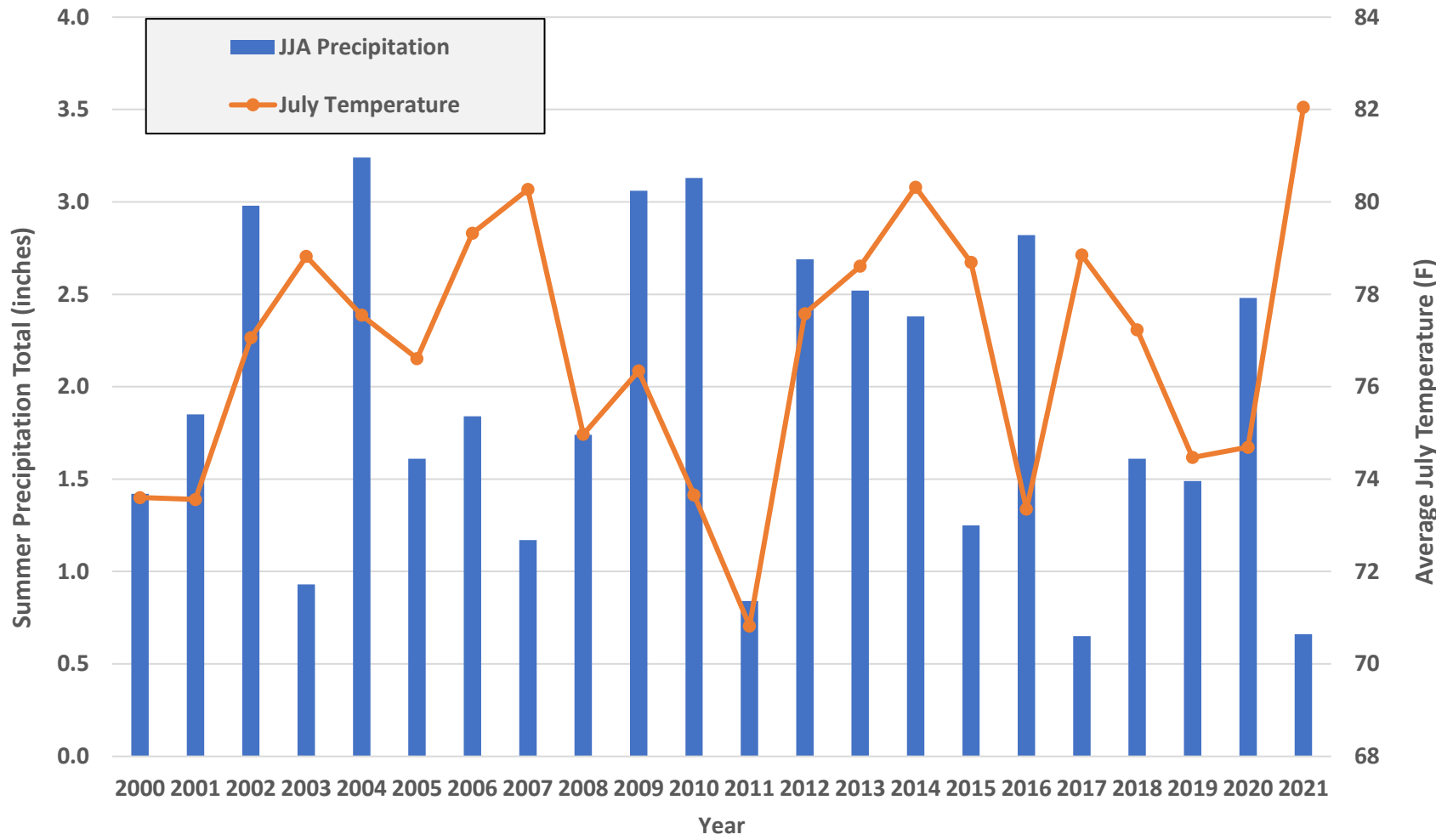
Seasonal Precipitation Outlook



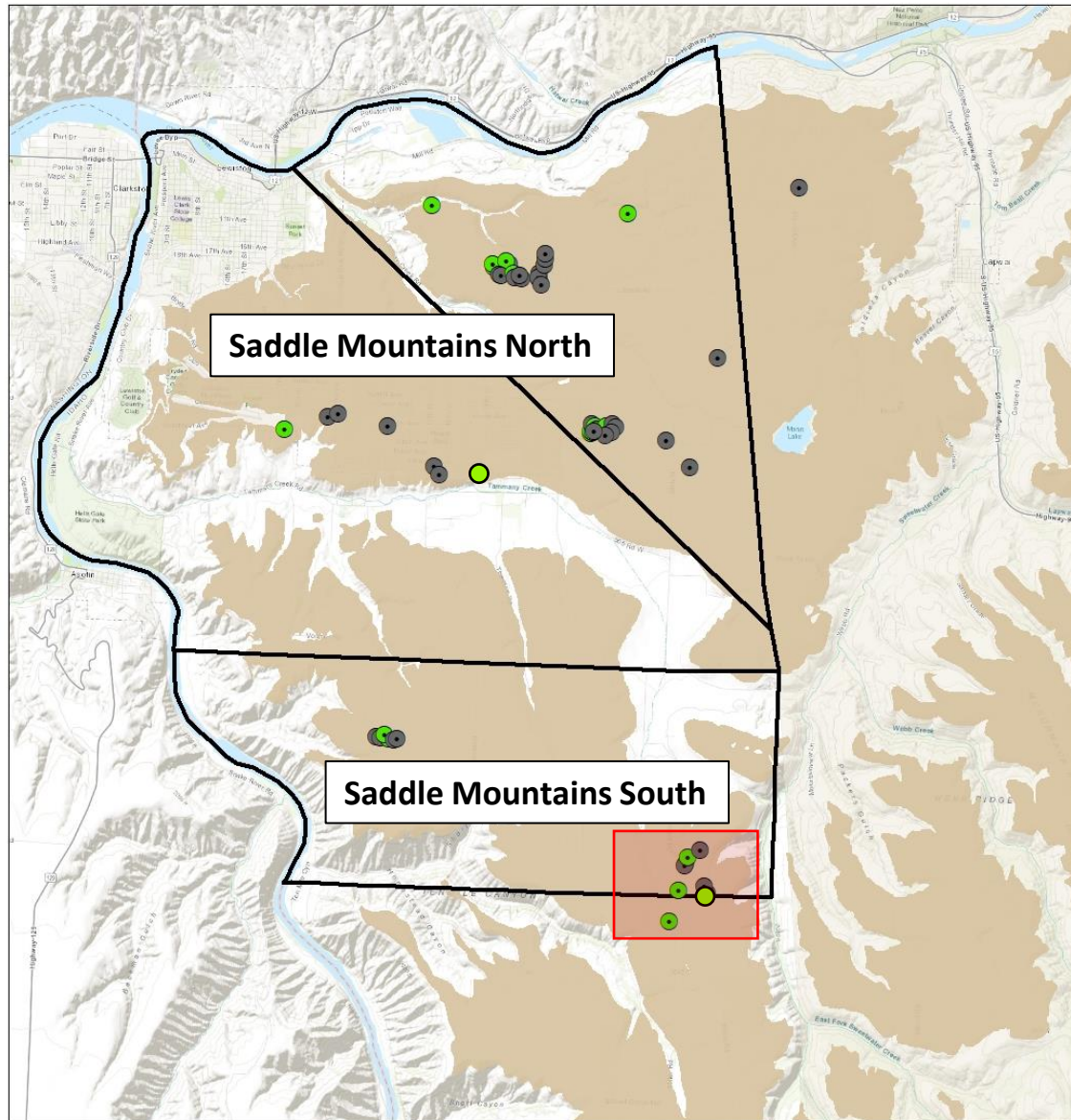
Valid: Dec-Jan-Feb 2021-22
Issued: October 21, 2021



Summer 2021 Climate Conditions



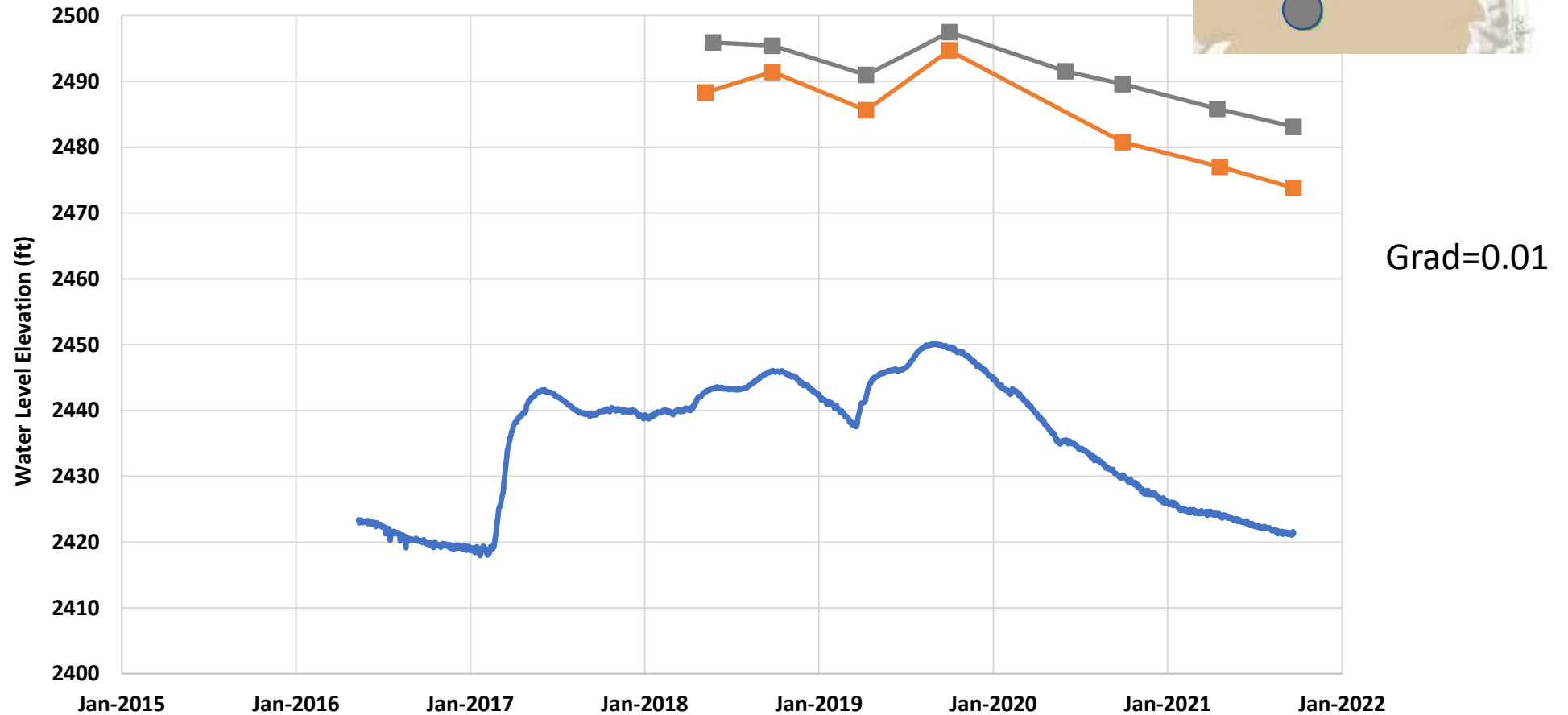
Saddle Mountains Basalt Aquifers



- Approximately 57 wells completed in the Saddle Mtns.
- Two different aquifers – North and South.
- In 2016, IDWR monitored 4 wells.
- IDWR now monitors 16 wells.

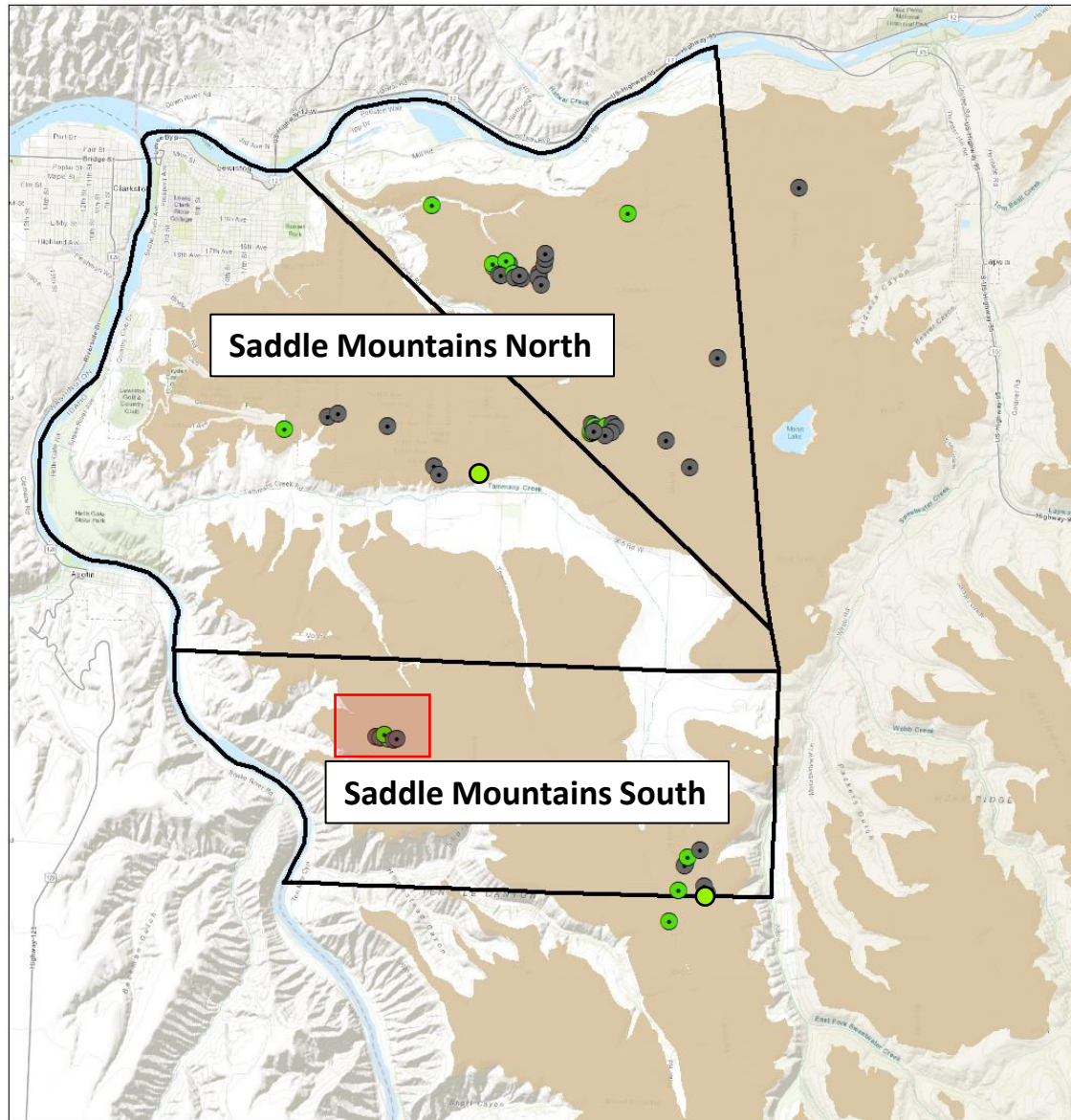
Saddle Mountains Water Levels

Tammany View Area



- 8 wells in the area. 5 are in use.
- Water levels down about 7 ft compared to fall 2020. Similar pattern seen in the Rathdrum Aquifer.

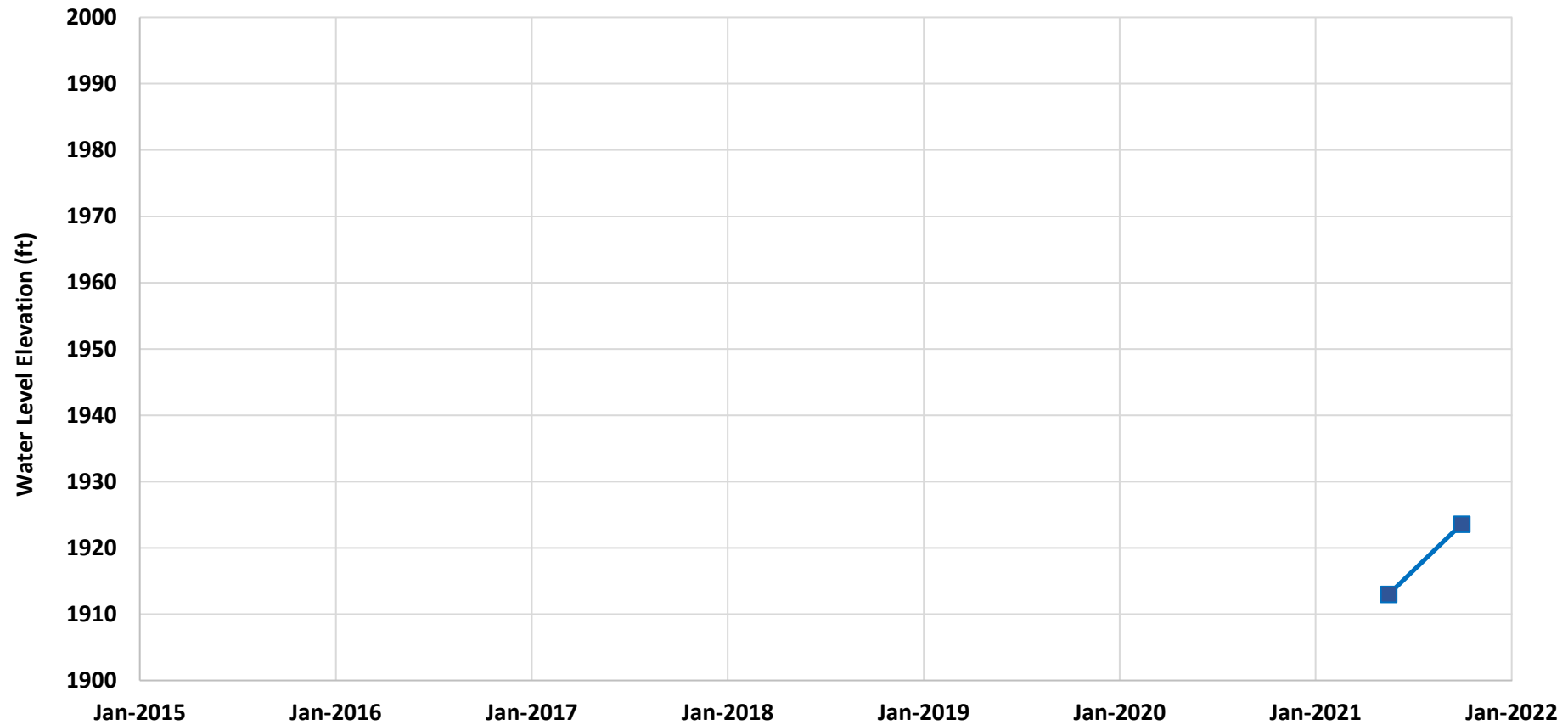
Saddle Mountains Basalt Aquifers



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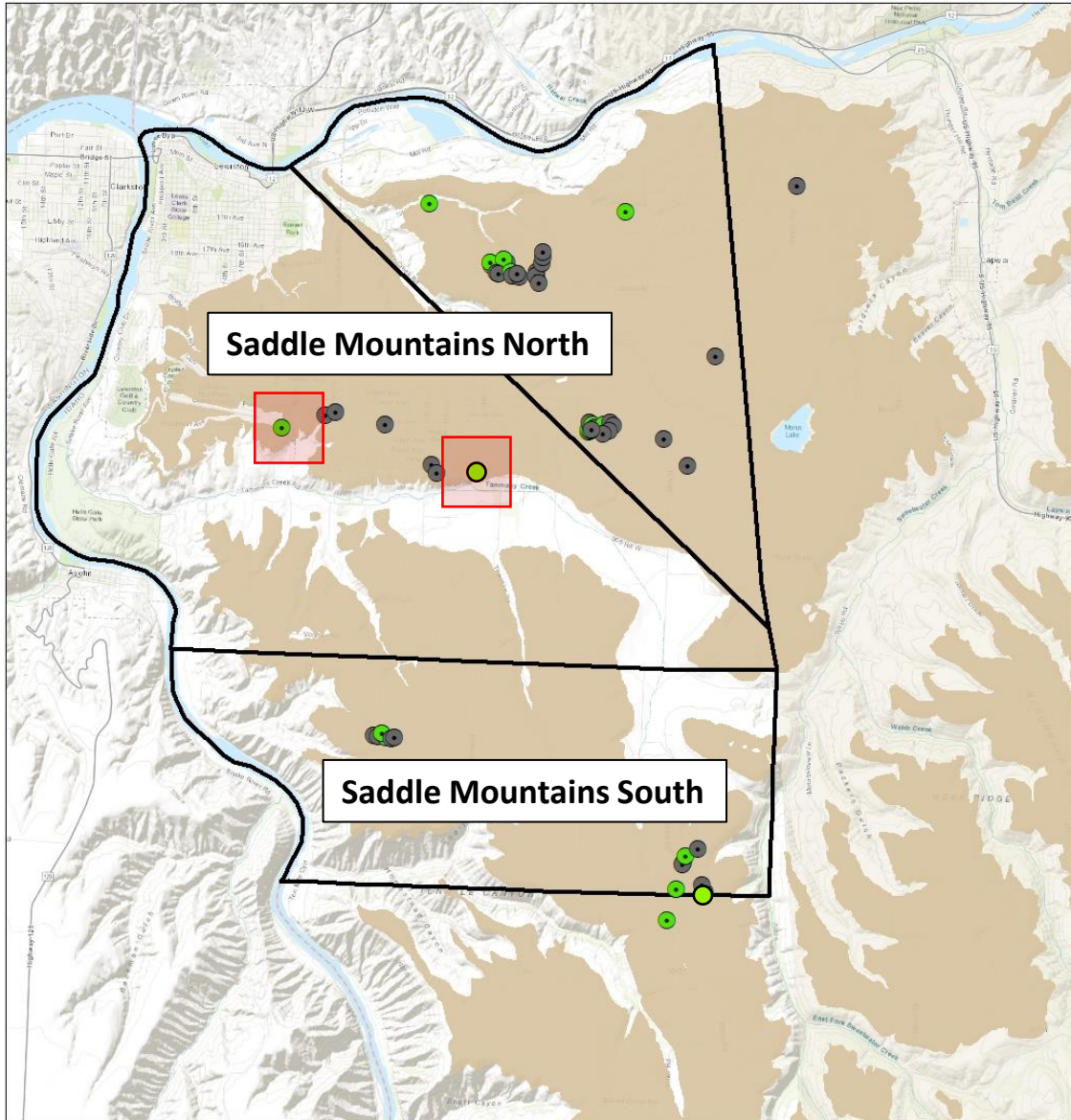
Saddle Mountains Water Levels

Volmer Road Area



- 6 wells in the area. 4 are in use. Very low yield wells.
- Water levels up 10 feet since spring.

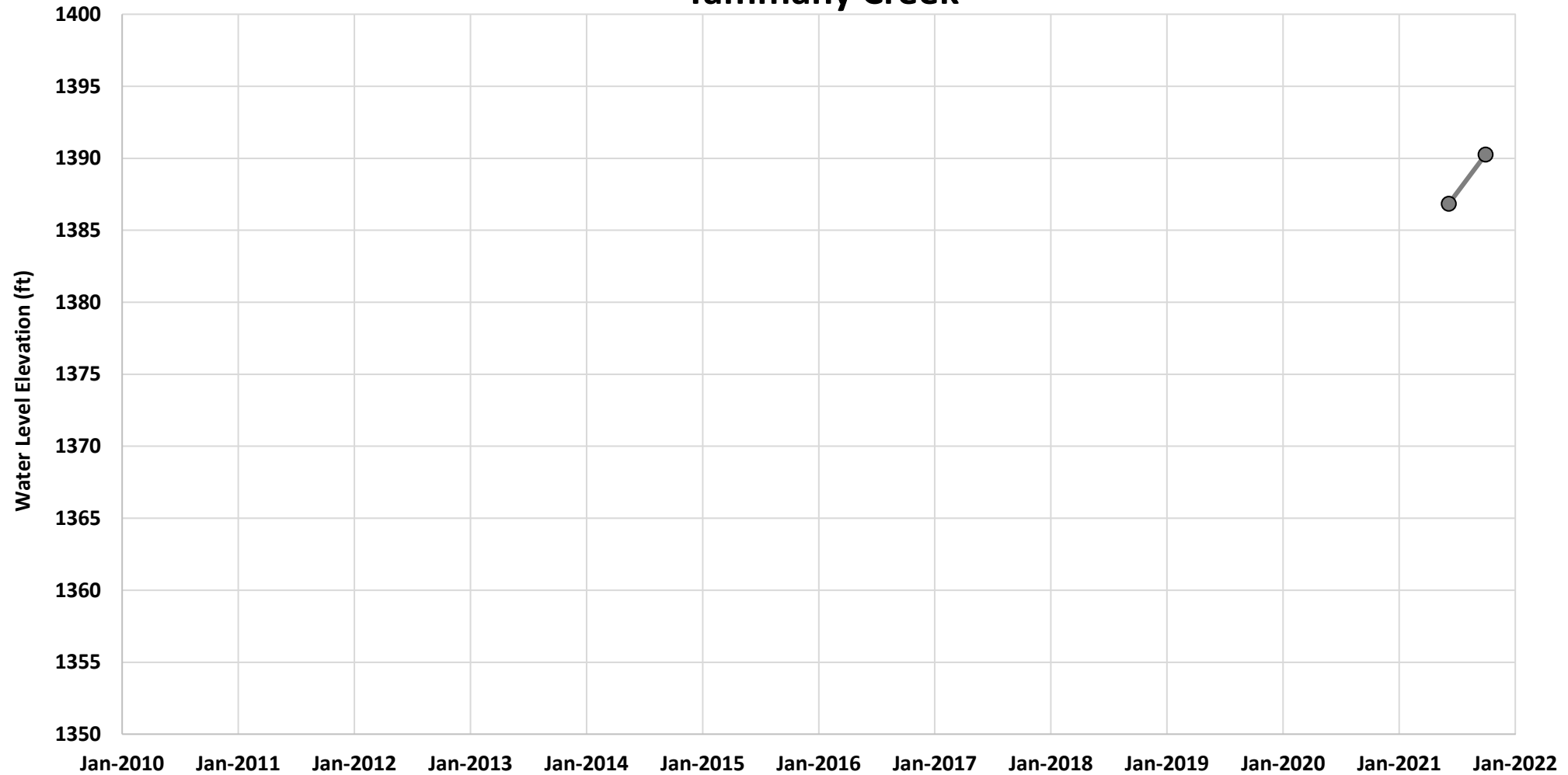
Saddle Mountains Basalt Aquifers



- Approximately 57 wells completed in the Saddle Mtns.
- In 2016, IDWR monitored 4 wells.
- IDWR now monitors 16 wells.

Saddle Mountains Water Levels

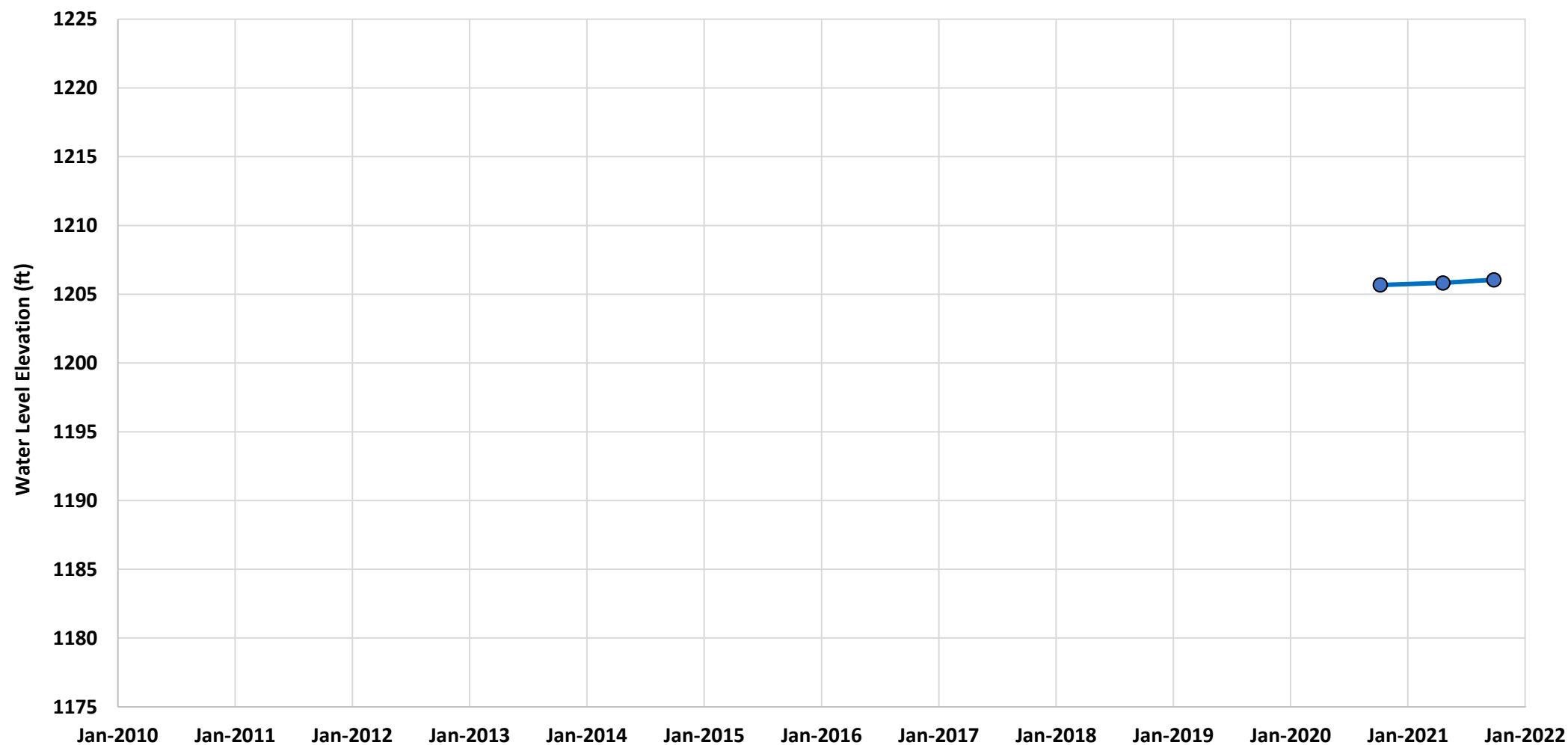
Tammany Creek



- Up about 3.5 feet

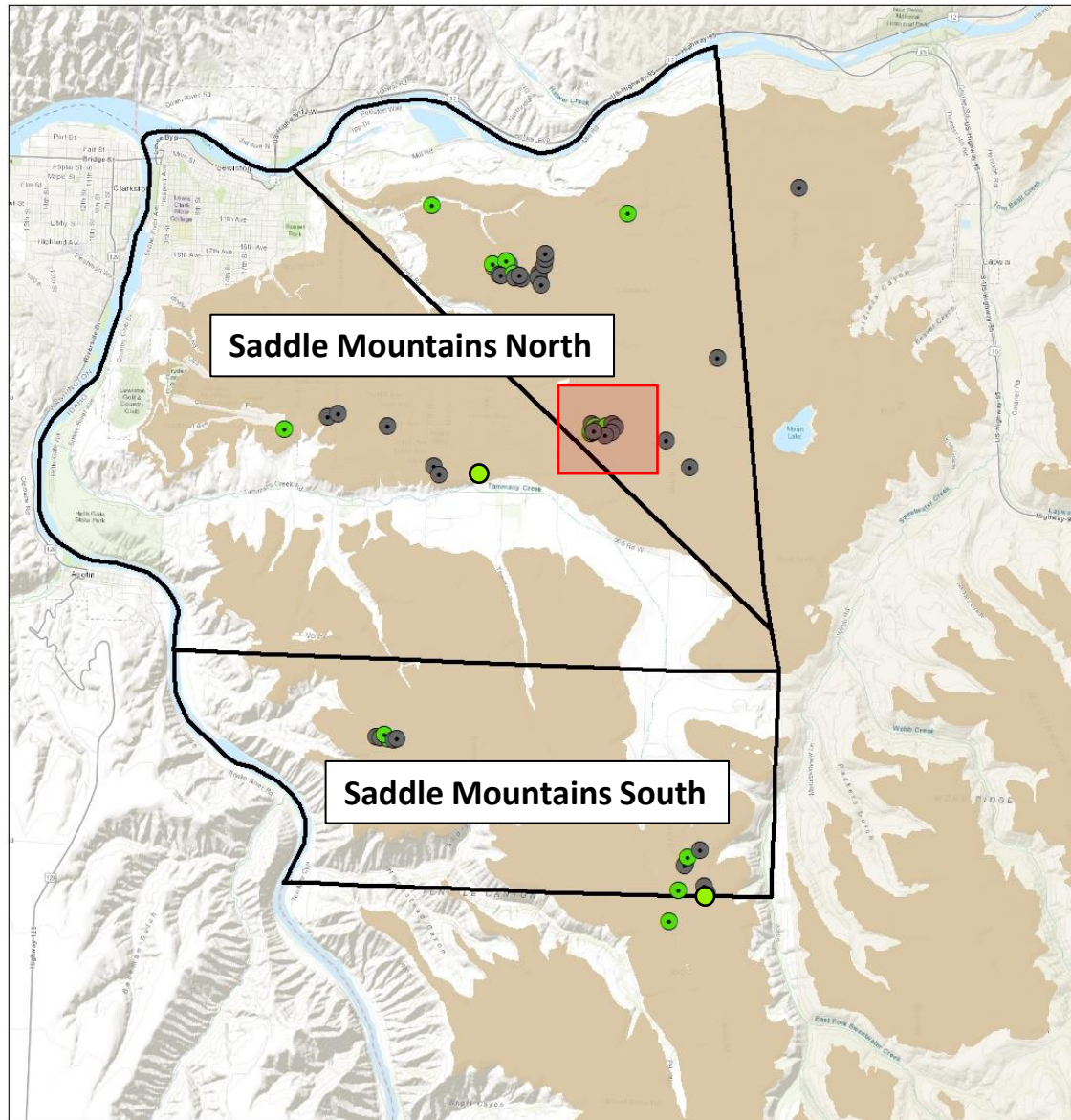
Saddle Mountains Water Levels

Lewiston Airport



• Up 0.2 feet

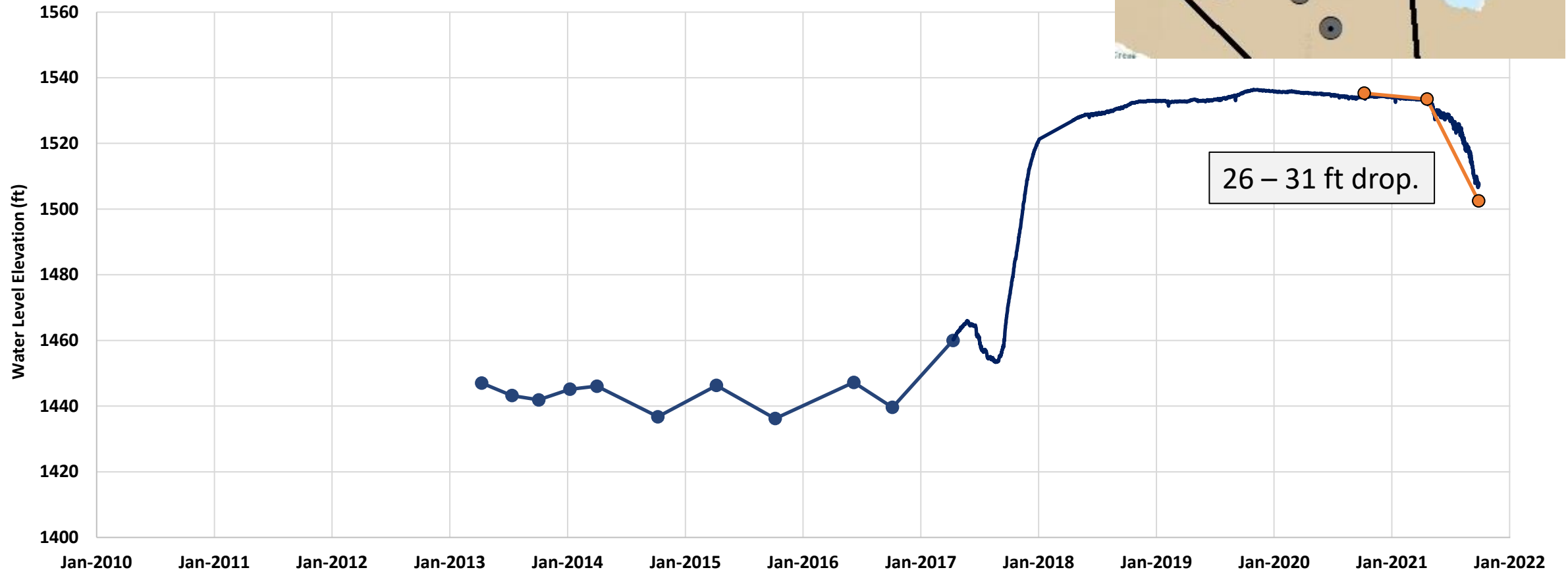
Saddle Mountains Basalt Aquifers



- Approximately 57 wells completed in the Saddle Mtns.
- In 2016, IDWR monitored 4 wells.
- IDWR now monitors 16 wells.

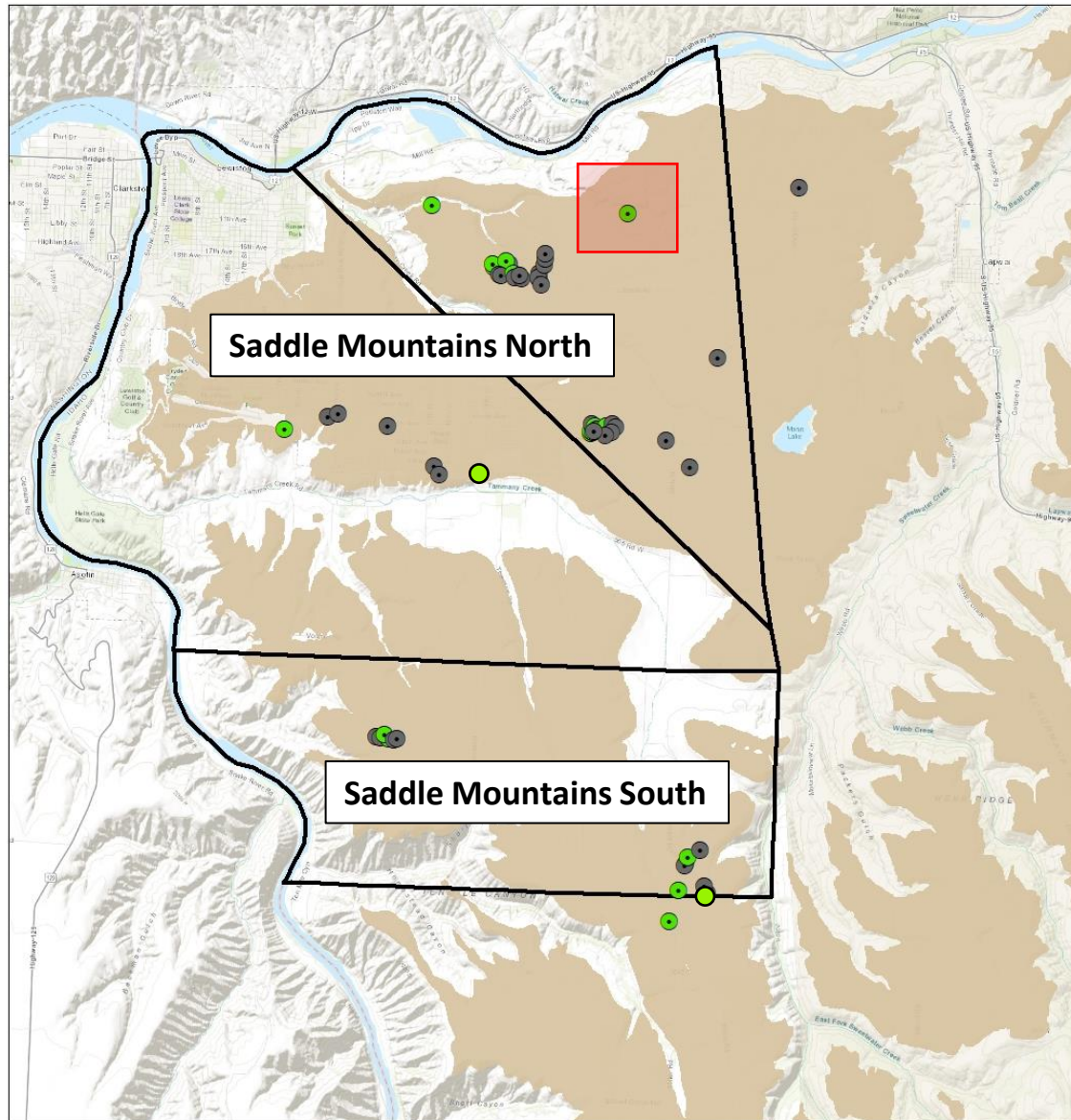
Saddle Mountains Water Levels

Powers/Grelle Area



- 16 wells in the area. About 12 are in use.

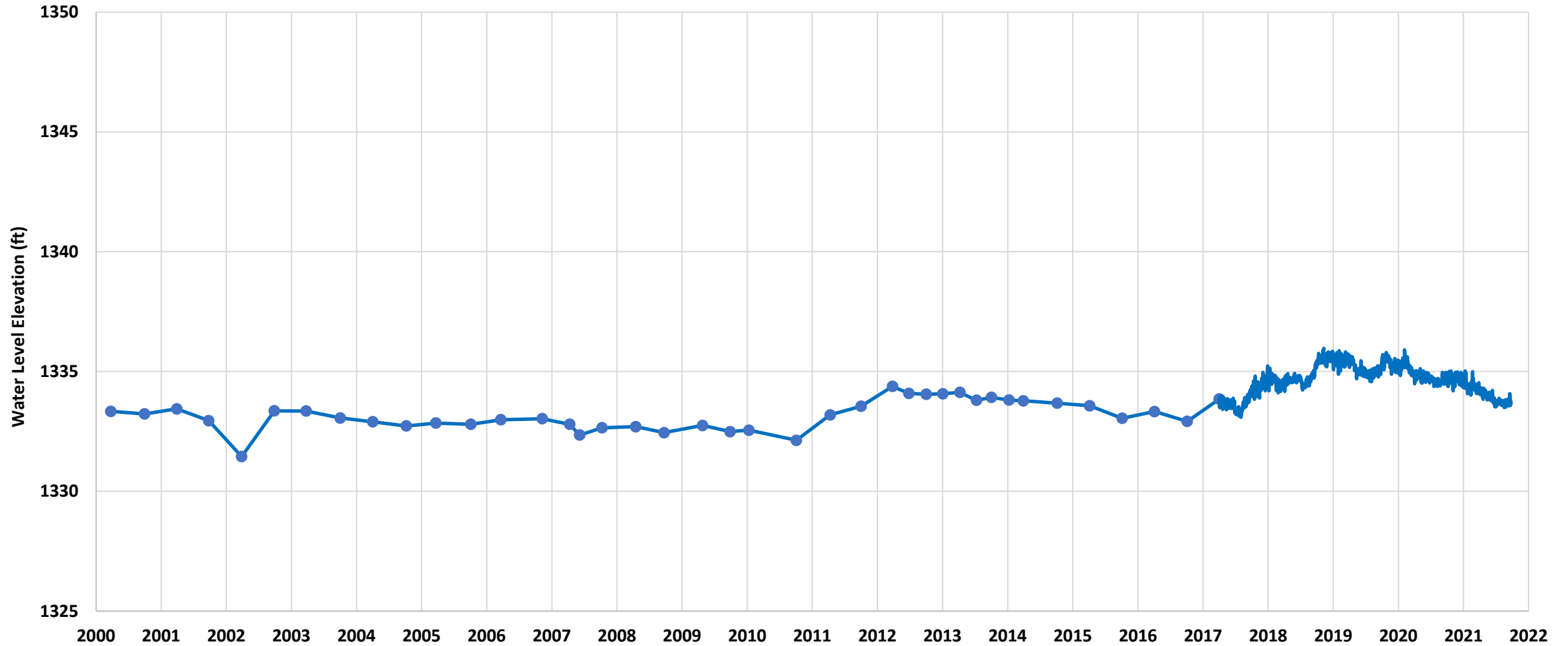
Saddle Mountains Basalt Aquifers



- Approximately 57 wells completed in the Saddle Mtns.
- In 2016, IDWR monitored 4 wells.
- IDWR now monitors 16 wells.

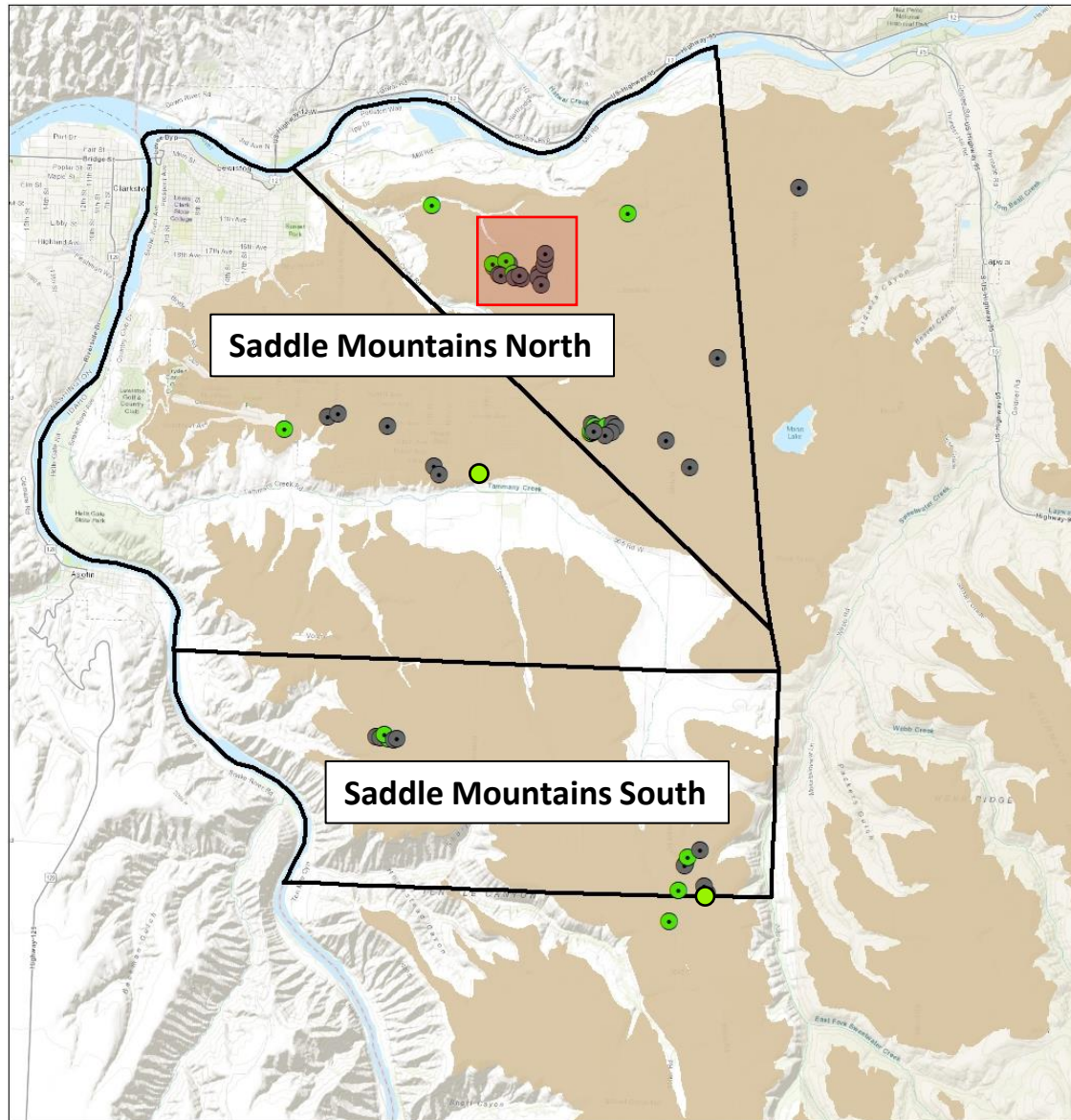
Saddle Mountains Water Levels

Lindsay Creek Area



• Down 0.8 feet

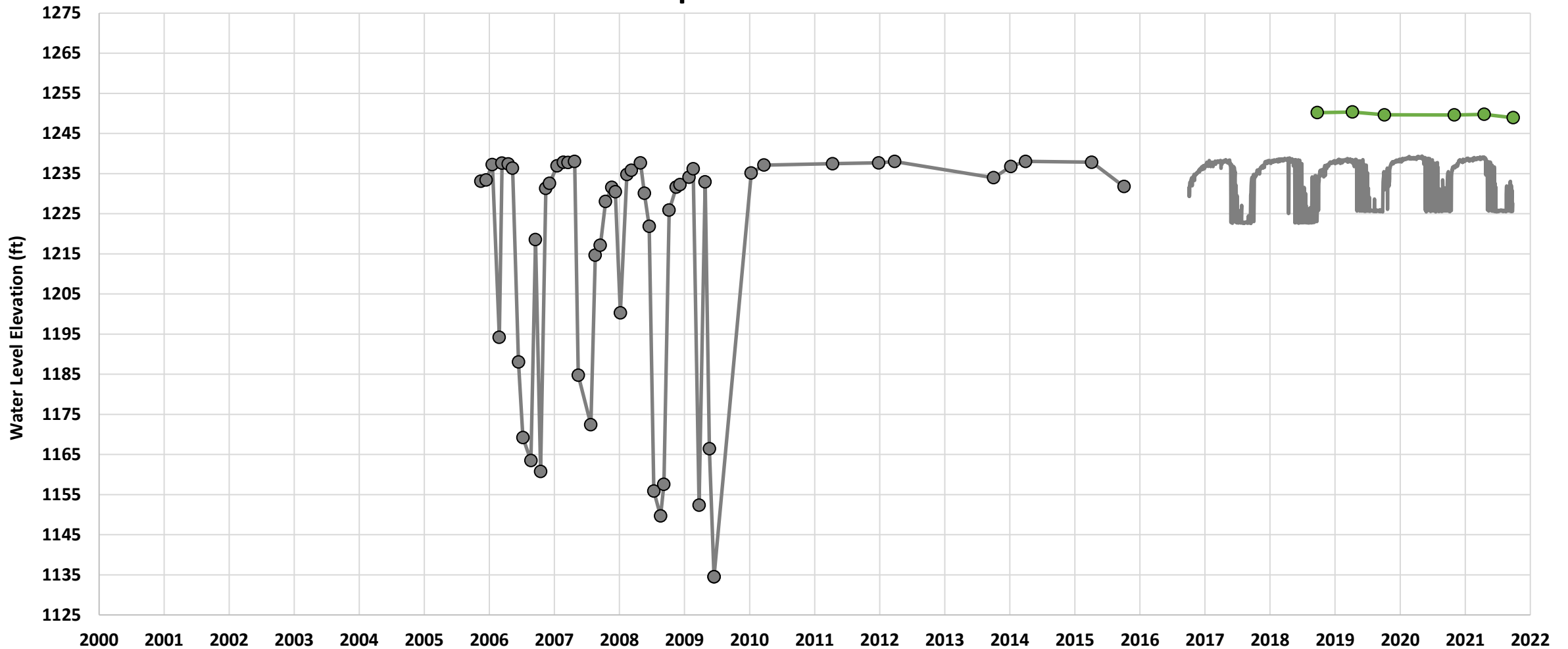
Saddle Mountains Basalt Aquifers



- Approximately 57 wells completed in the Saddle Mtns.
- In 2016, IDWR monitored 4 wells.
- IDWR now monitors 16 wells.

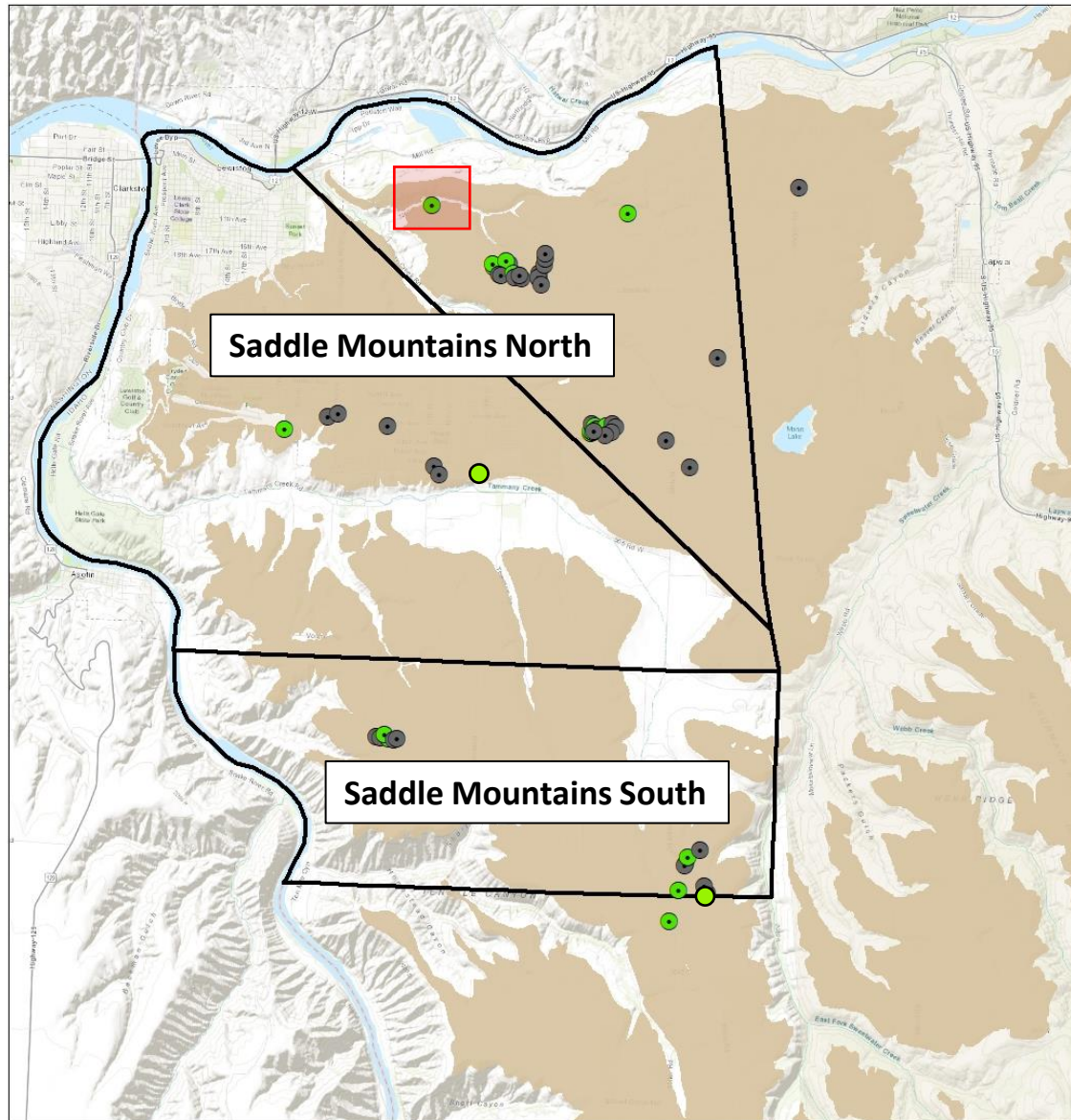
Saddle Mountains Water Levels

Hepton Lane Area



- 18 wells in the area.
- Down 1 to 7 feet.

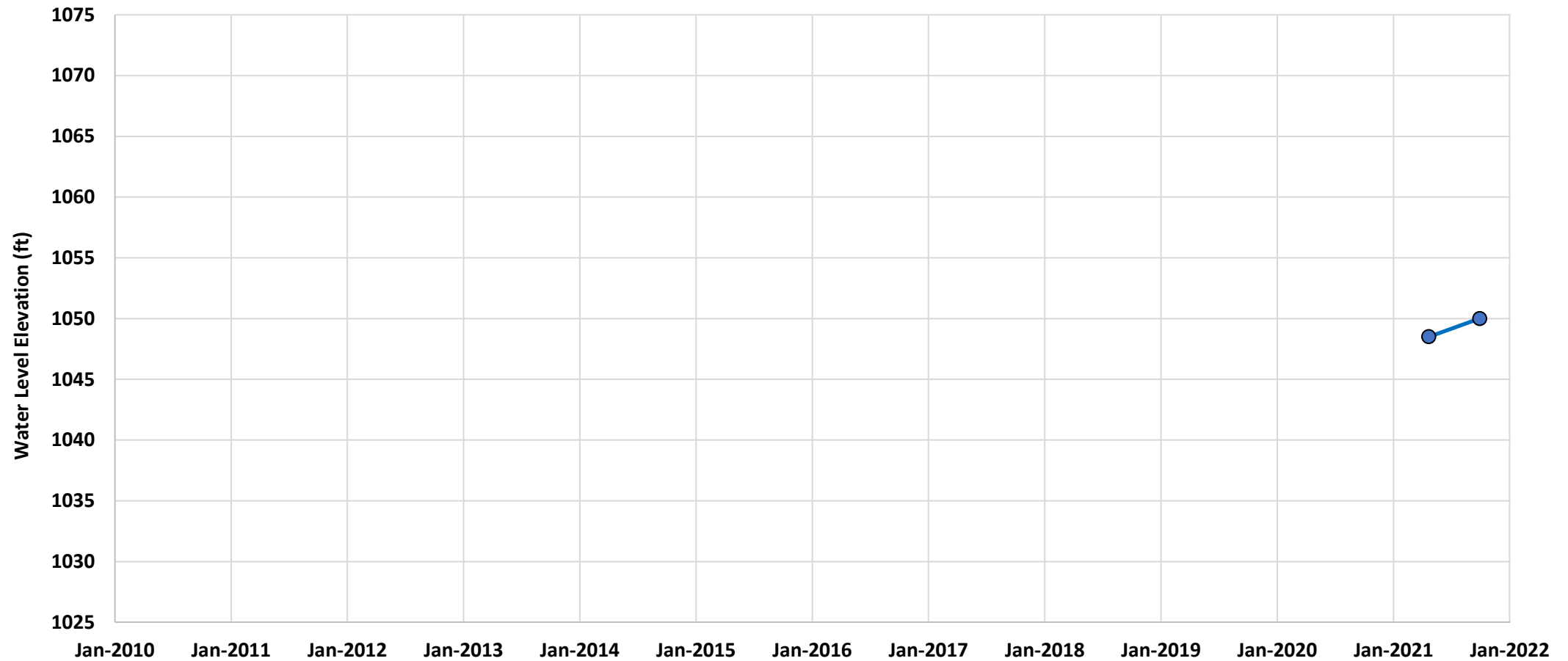
Saddle Mountains Basalt Aquifers



- Approximately 57 wells completed in the Saddle Mtns.
- In 2016, IDWR monitored 4 wells.
- IDWR now monitors 16 wells.

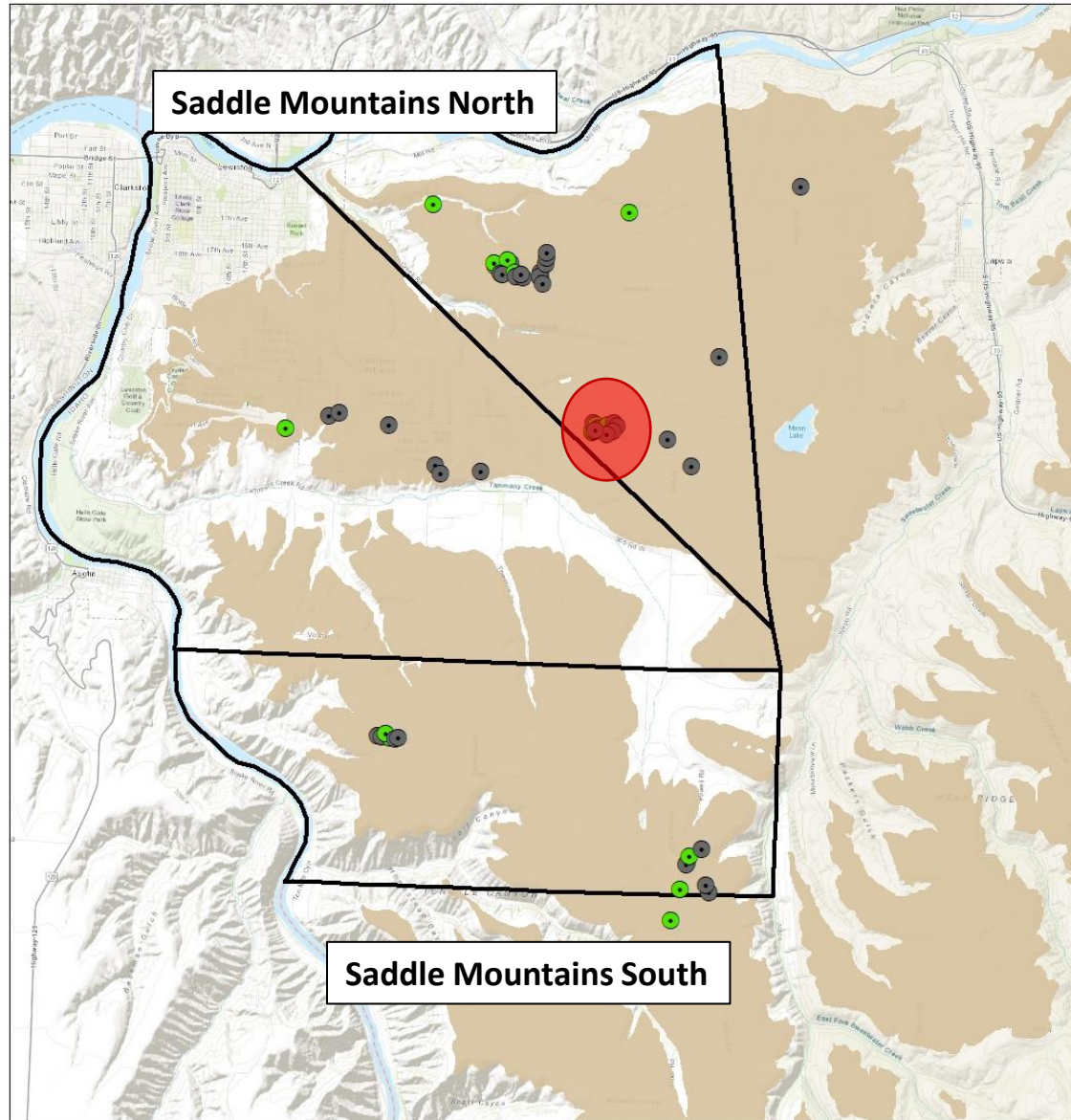
Saddle Mountains Water Levels

Lower Lindsay Creek Area



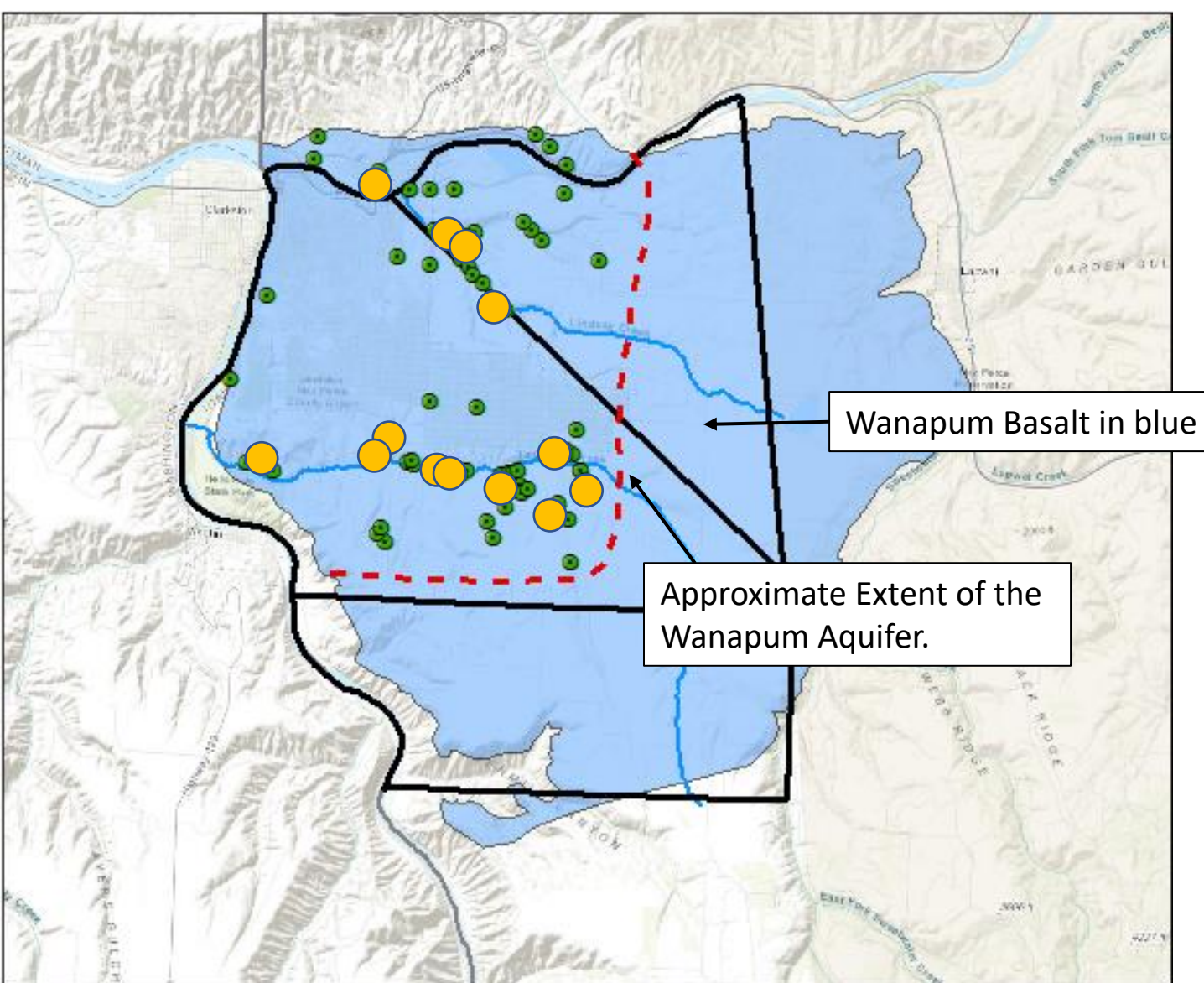
- Up 1.5 ft since spring.

Saddle Mountains Water Level Change



- Mix response this summer.
- Most areas are down about 3 feet or less from spring and down 9 feet or less from fall 2020.
- Powers/Grelle area is down 25 to 31 feet since the spring and 26 to 33 feet since fall 2020.
- Most likely caused by increased summer pumping and high number of wells in use.

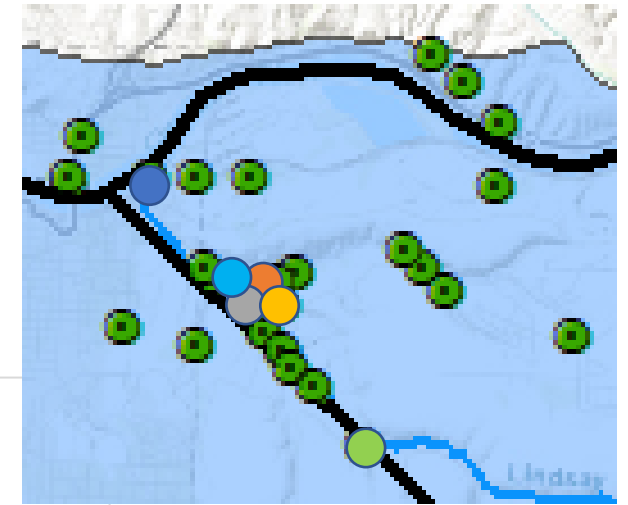
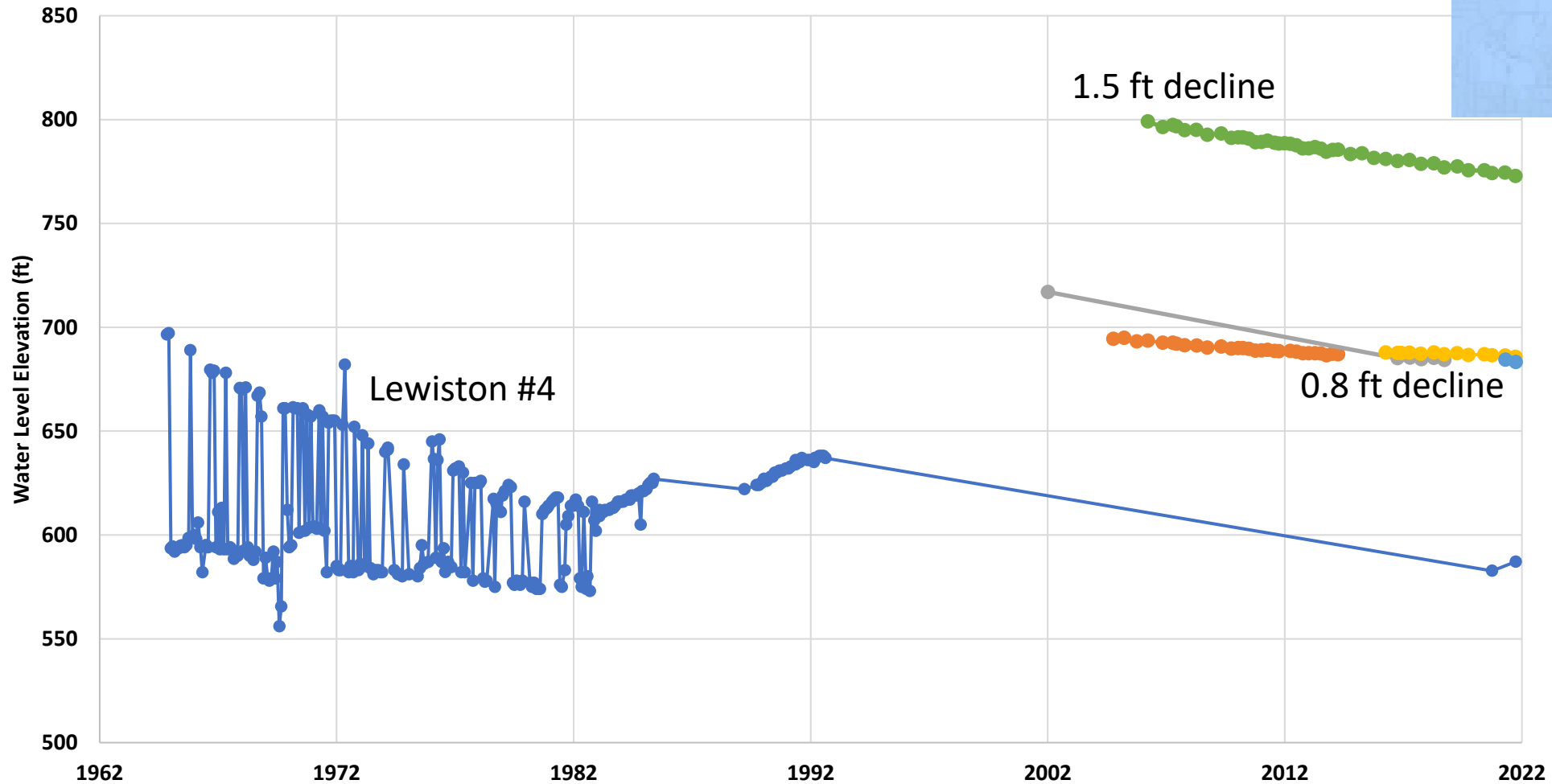
Wanapum Aquifer



- About 85 wells completed in the Wanapum Basalts.
- IDWR now monitors 14 wells in the Wanapum.
- In 2016, IDWR monitored 10 wells.
- Recharge is possibly from precipitation or seepage along Tammany Creek.
- Wanapum is connected to the Snake and Clearwater
- Possibly extends into Clarkston.

Wanapum Water Levels

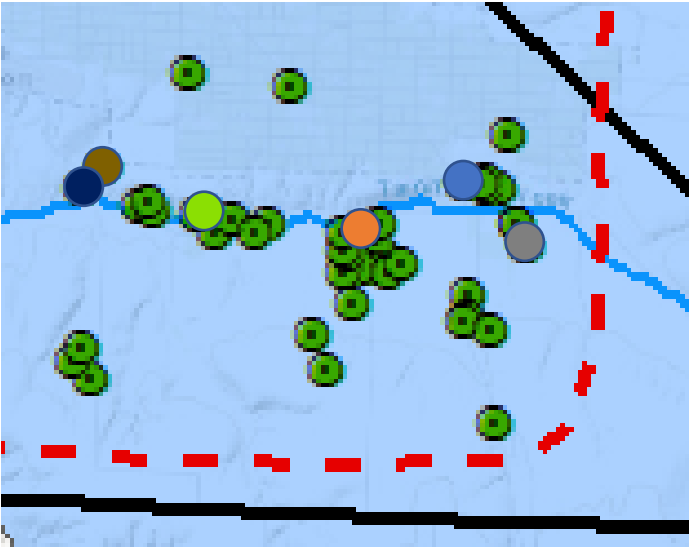
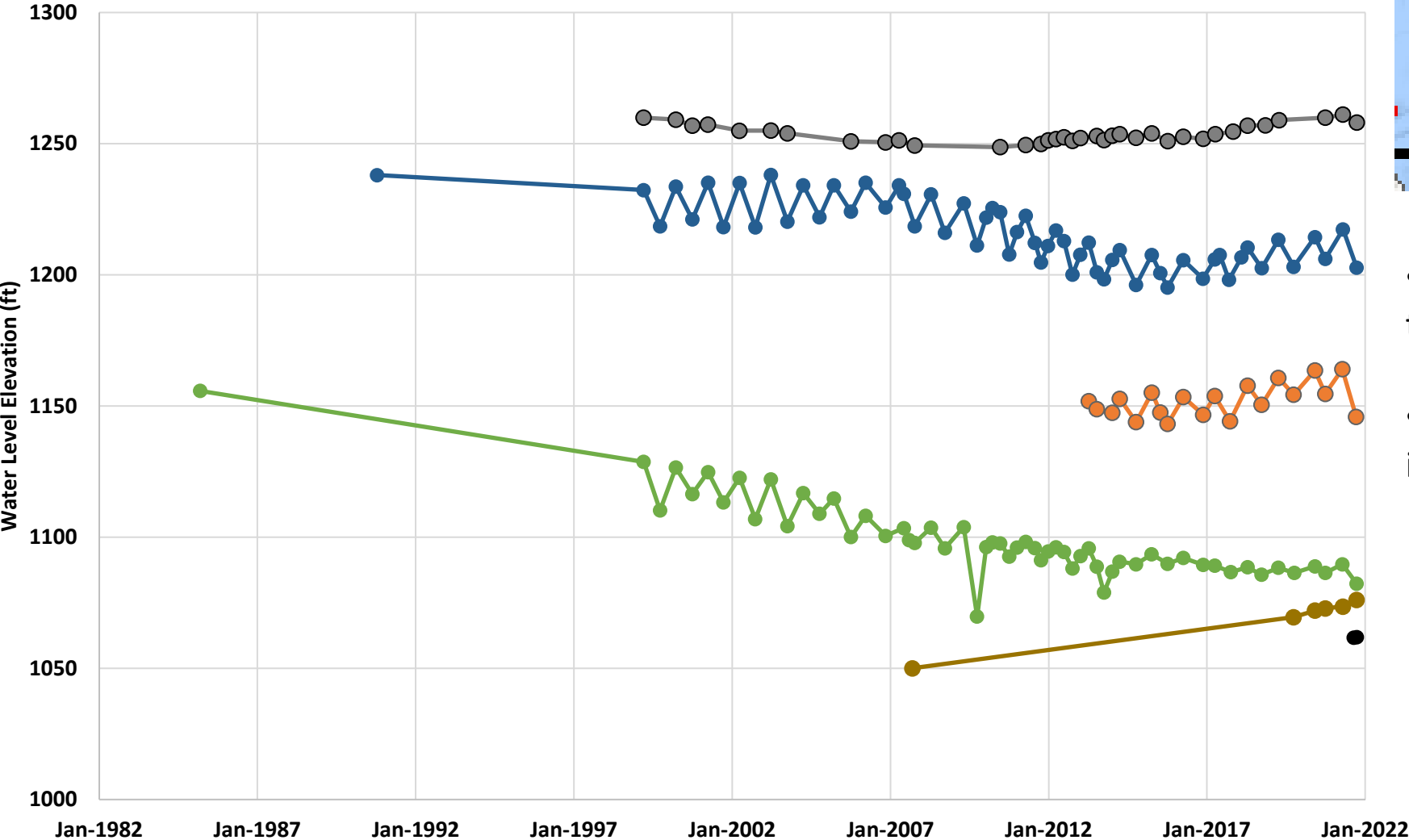
Lindsay Creek Area



- Numerous domestic wells in this area have been deepened.
- Continued decline.

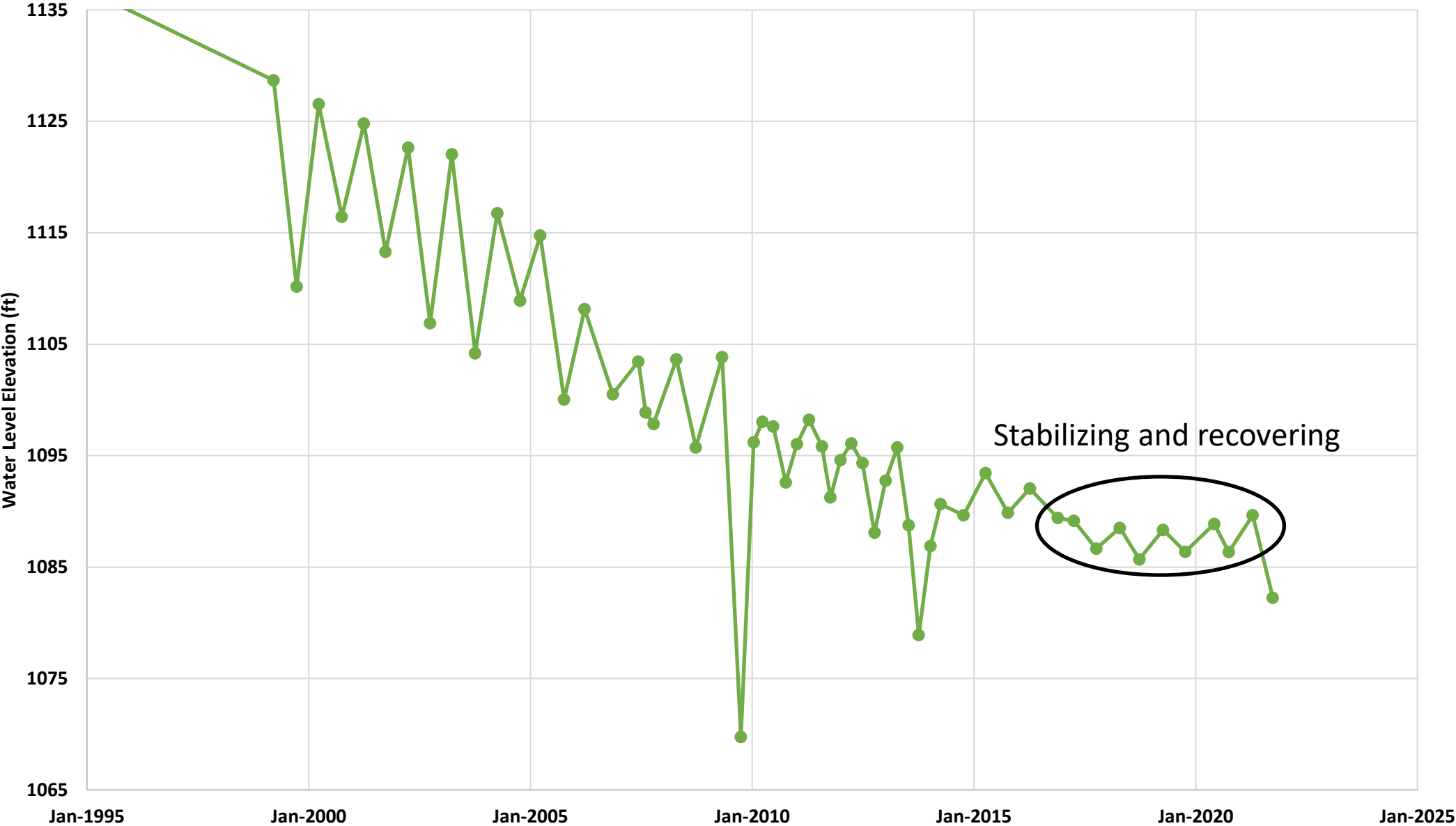
Wanapum Water Levels

Tammany Creek Area

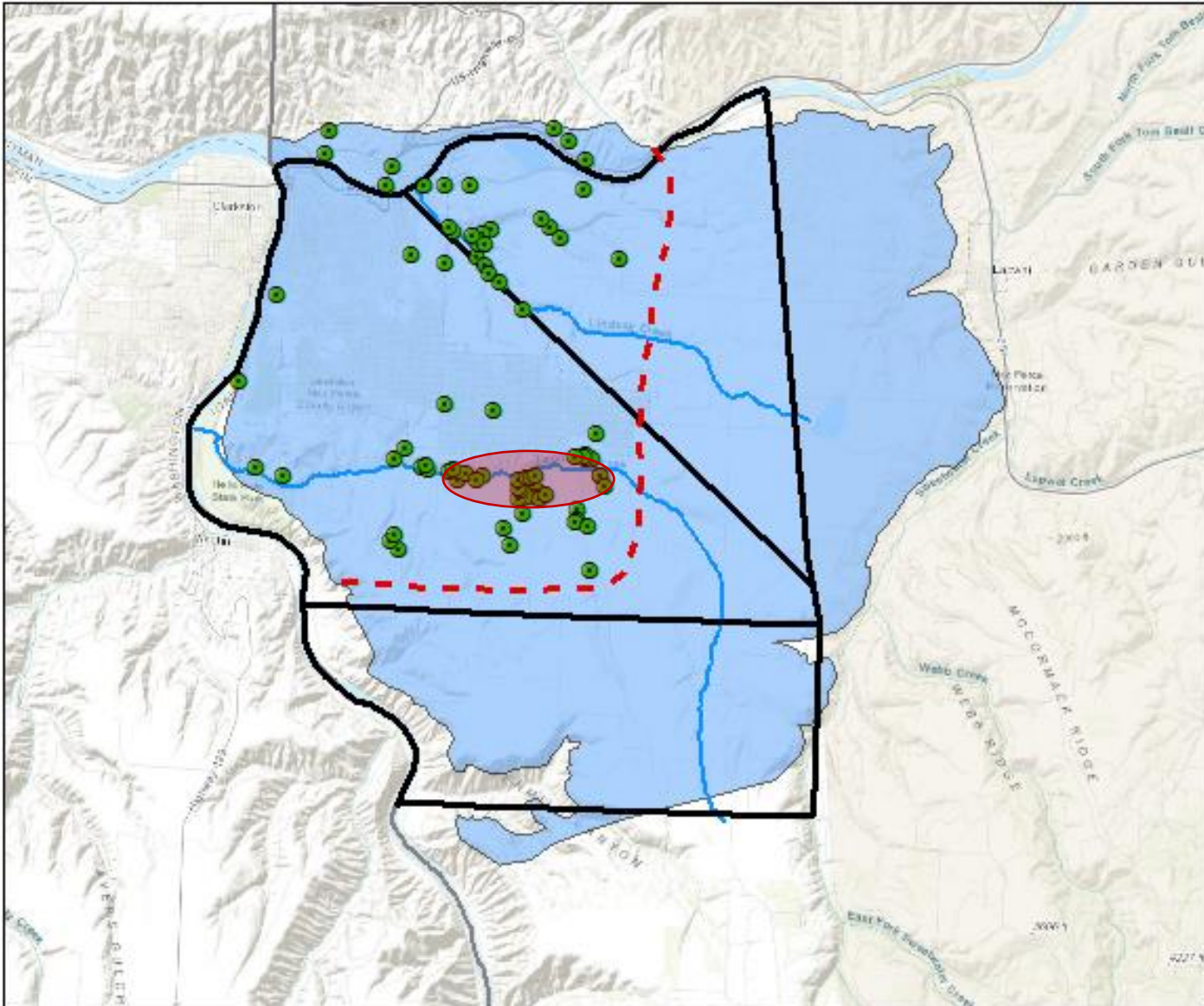


- 2 to 9 ft drop since compared to last fall.
- One well continues to show an increase in water level.

Wanapum Water Levels

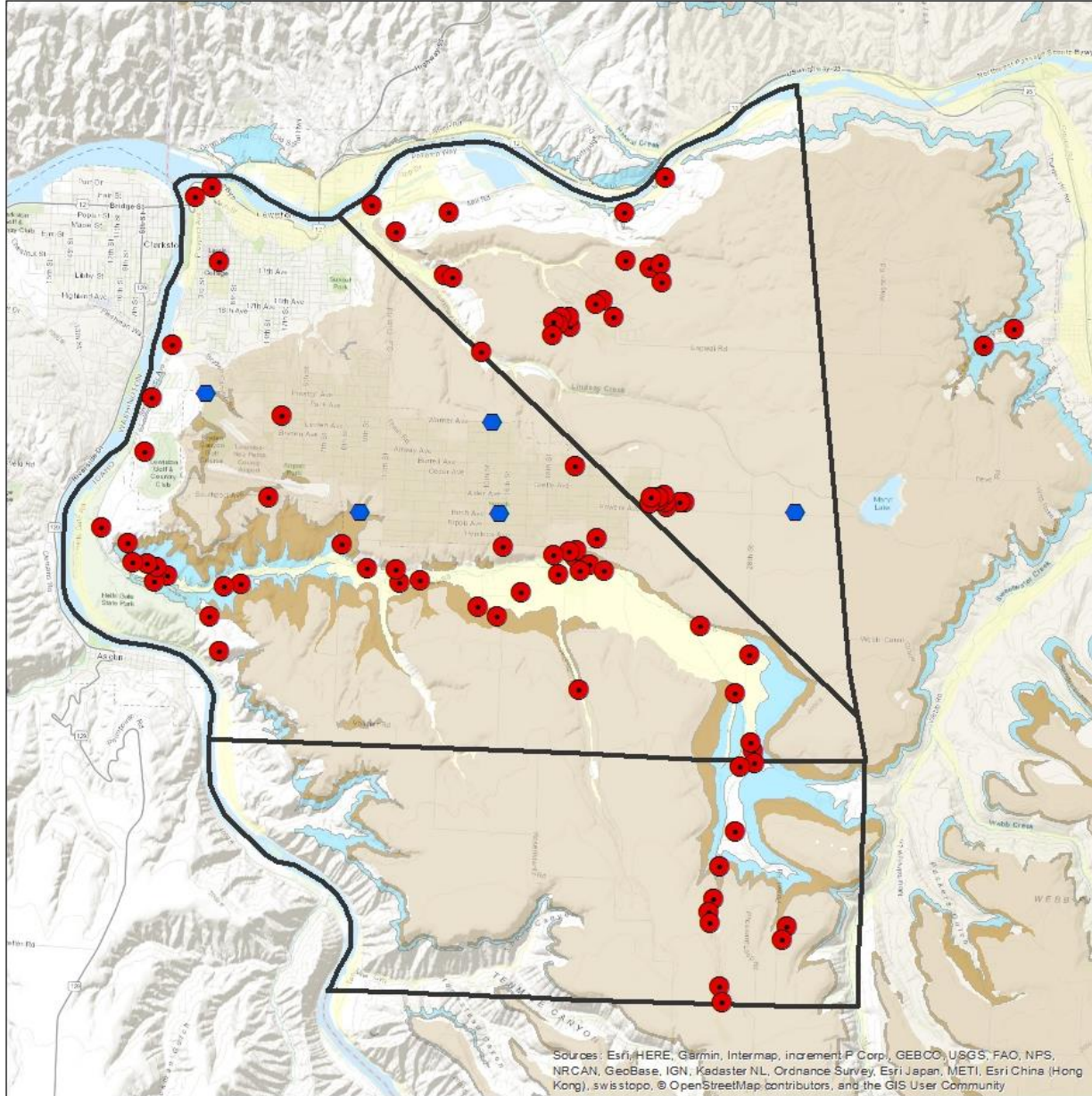


Wanapum Basalt Aquifer Change



- Most change is seen at Tammany Creek possibly caused by irrigation pumping.
- 3 to 9 ft decline compared to last fall.
- 7 to 18 ft decline compared to the spring.

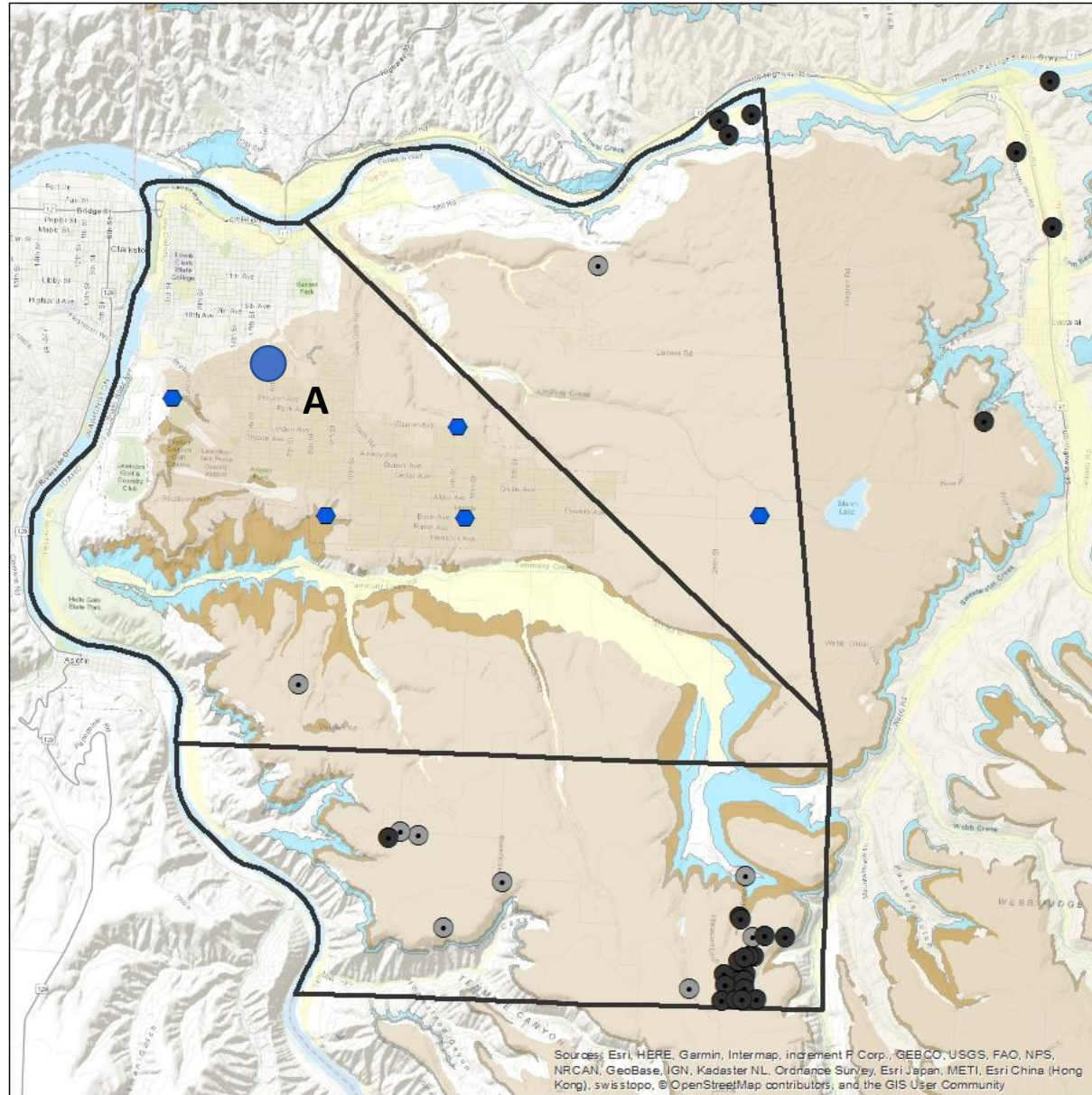
Wells Completed in the Grande Ronde R2 Basalt Aquifer



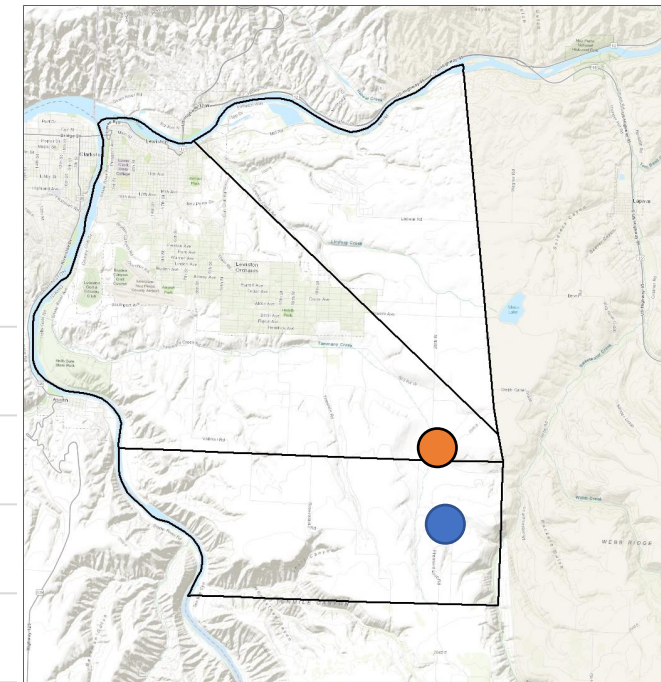
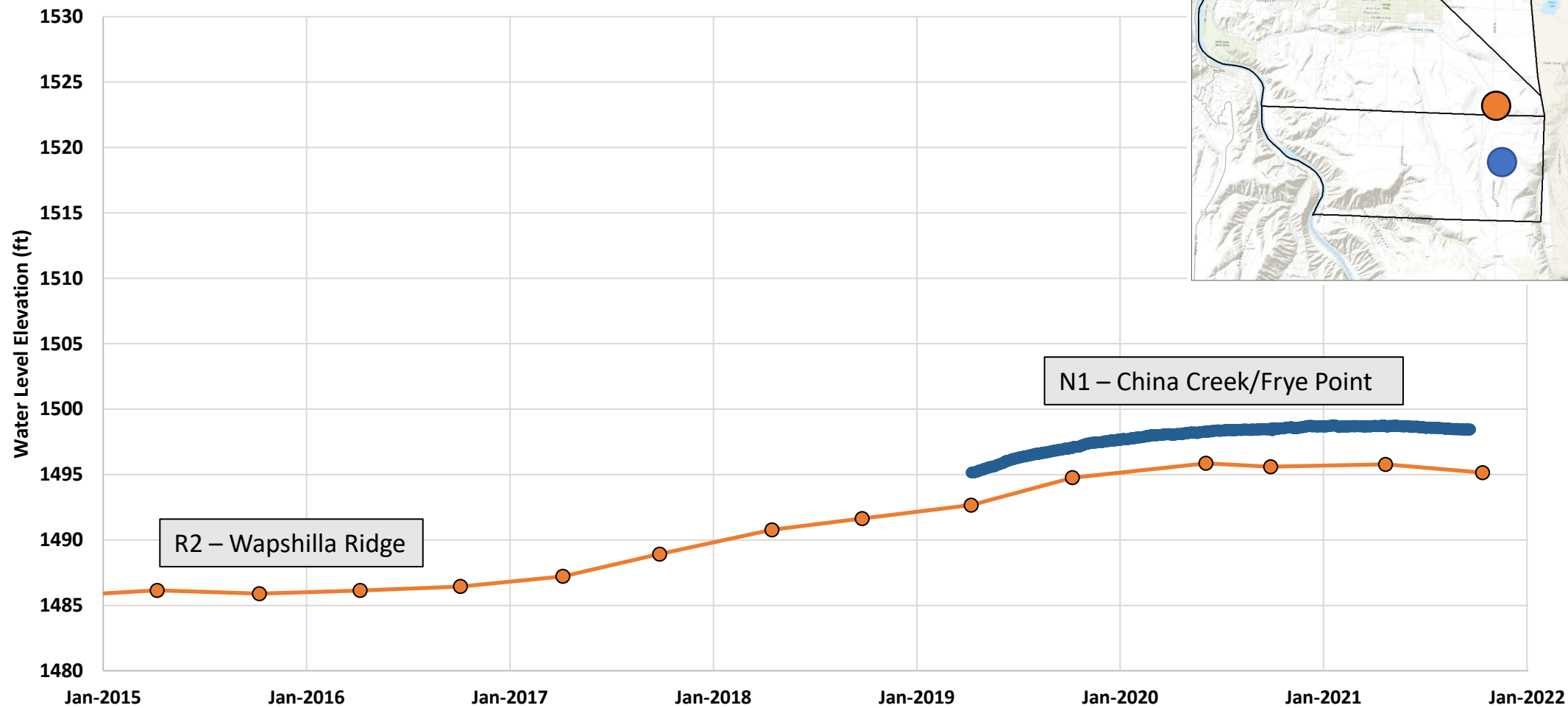
- The Grande Ronde is made up of a large number of different basalt flows with different characteristics.
- Grande Ronde is typically separated by paleo-magnetics (Reverse or normal). Rock chemistry allows us to identify Different members and develop the hydro-stratigraphy.
- About 90 wells completed in the R2 Basalts
- Five municipal wells produce from R2 and N1 basalts
- IDWR monitors 25 wells in the R2. 9 new wells since 2018.

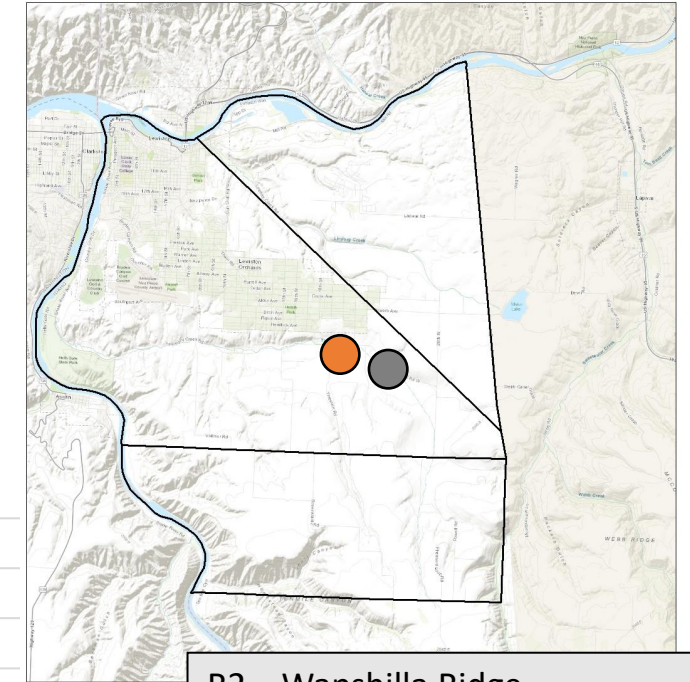
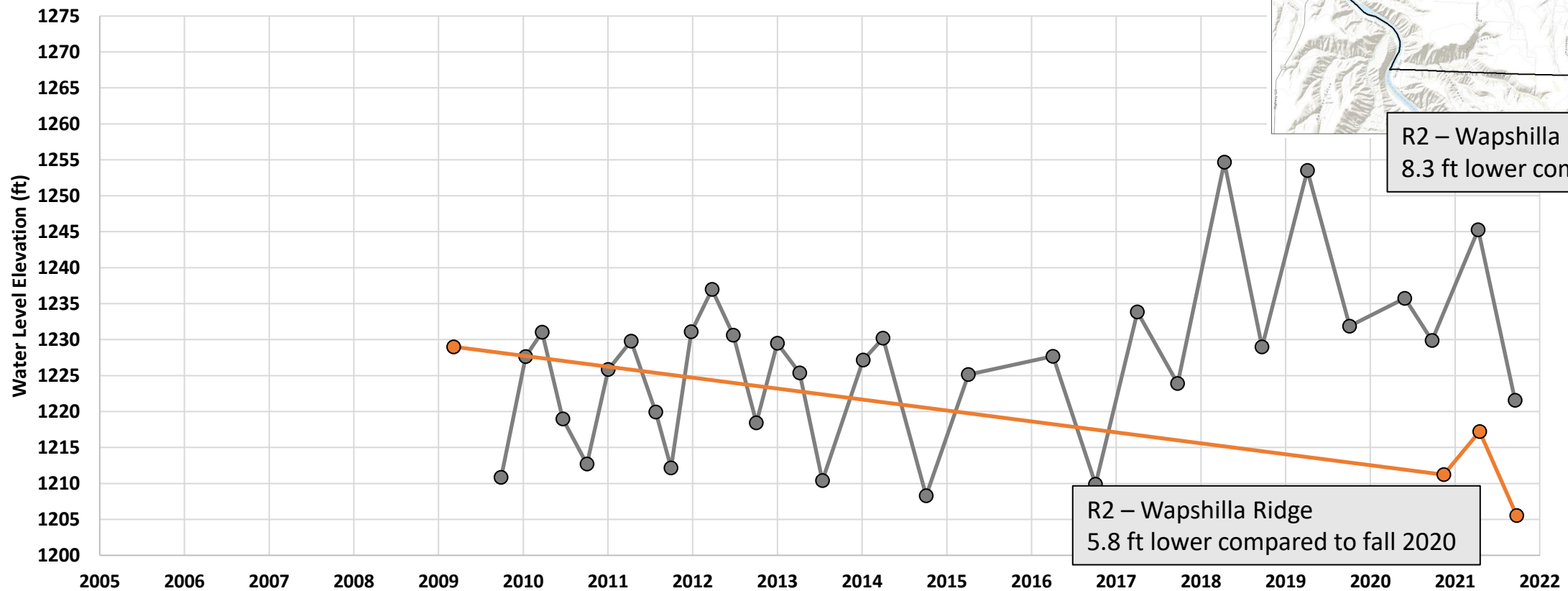
Wells Completed in the Grande Ronde N1 Basalt Aquifer

- About 32 wells completed in the N1.
- IDWR monitors 18 wells completed in the N1.

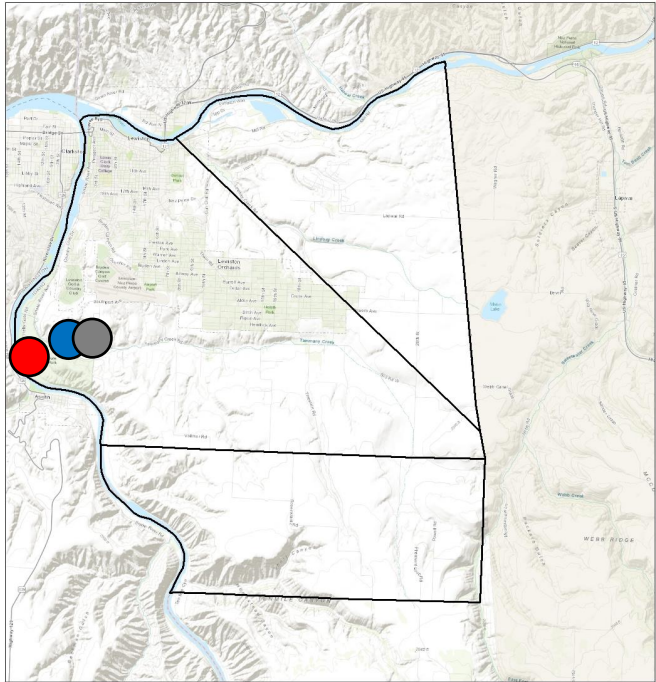
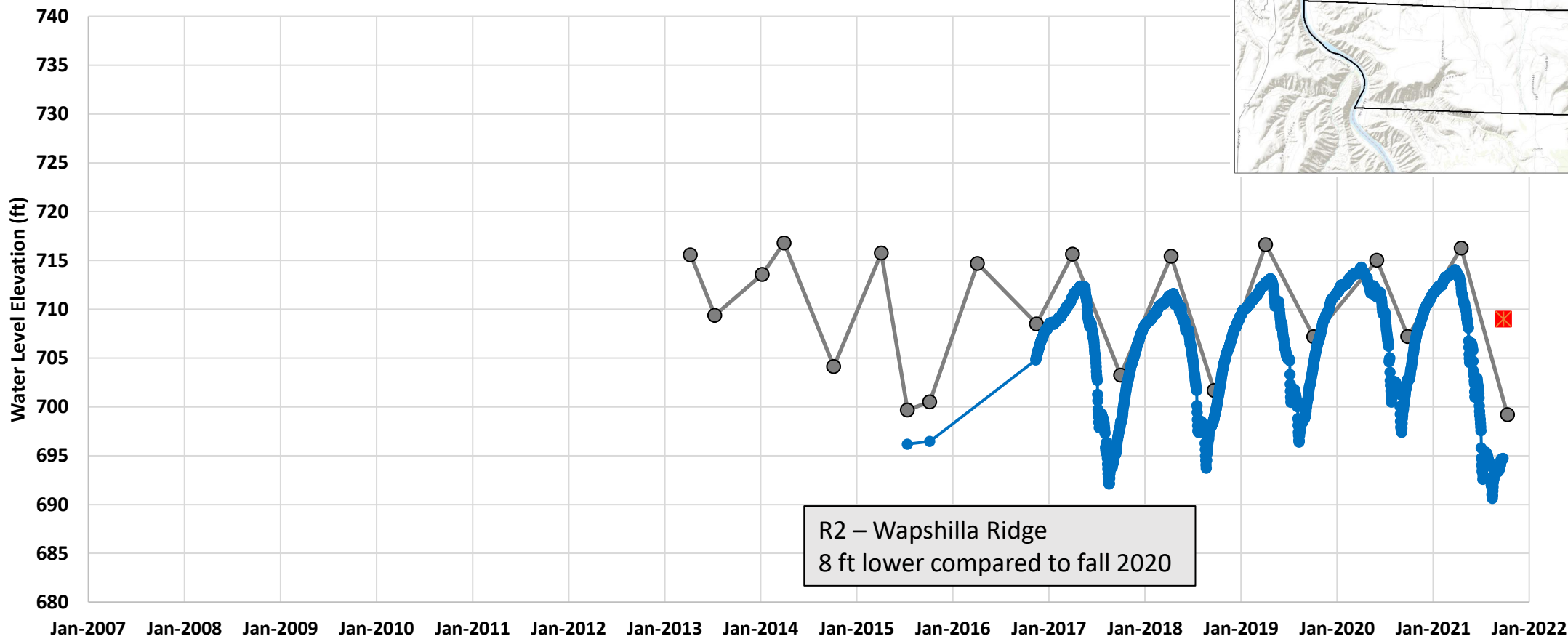


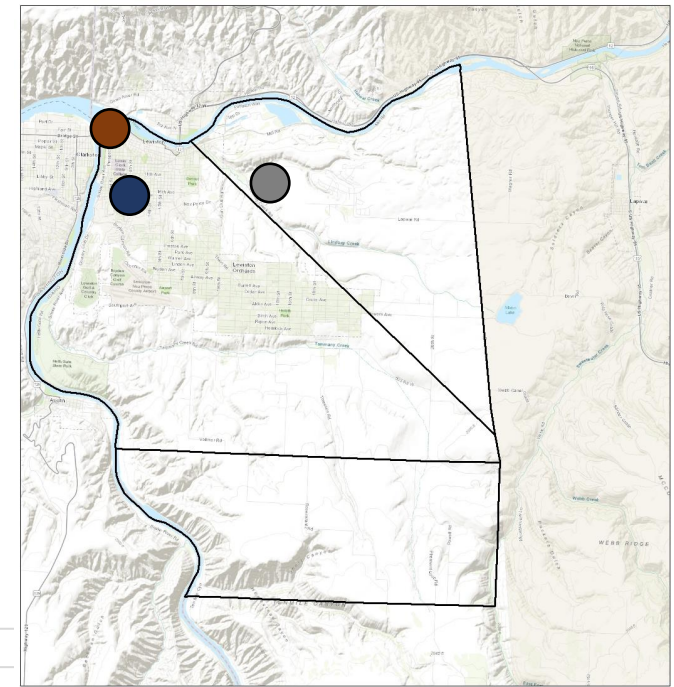
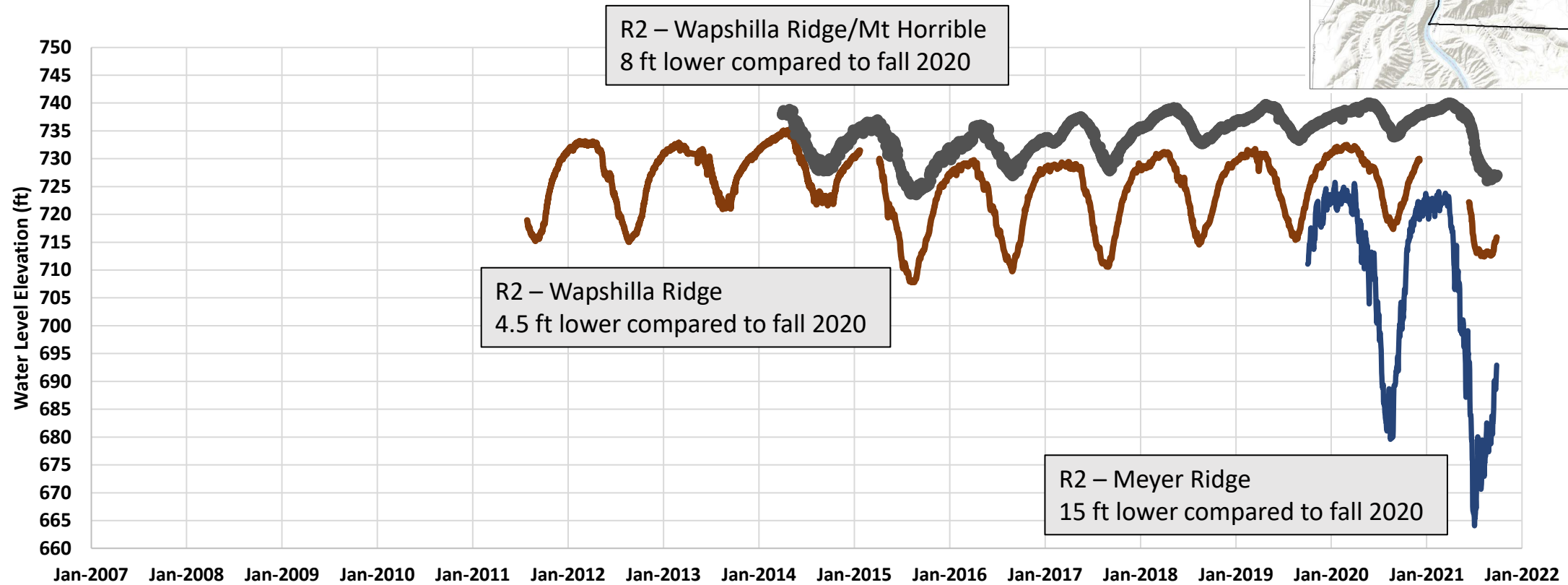
- N1-China Creek Well
- N1-Downey Gulch Well
- Municipal Well Intersecting R2 and N1



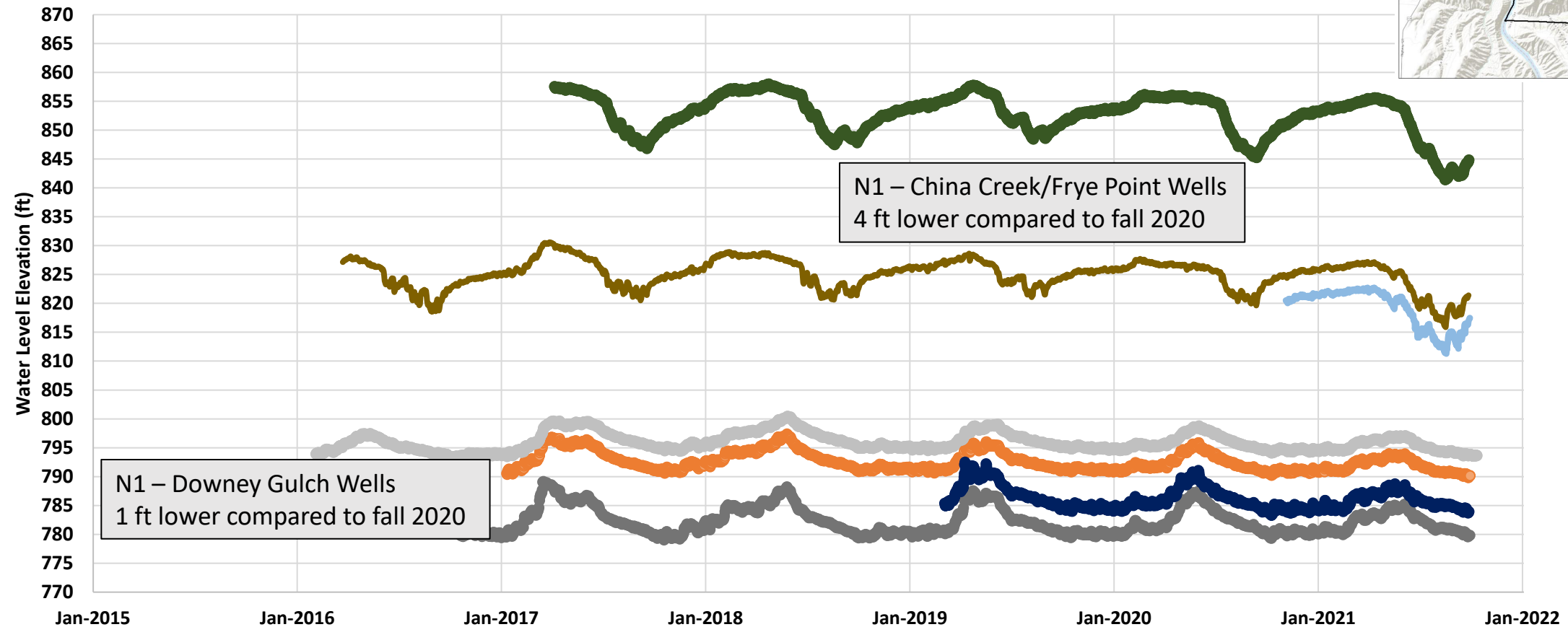
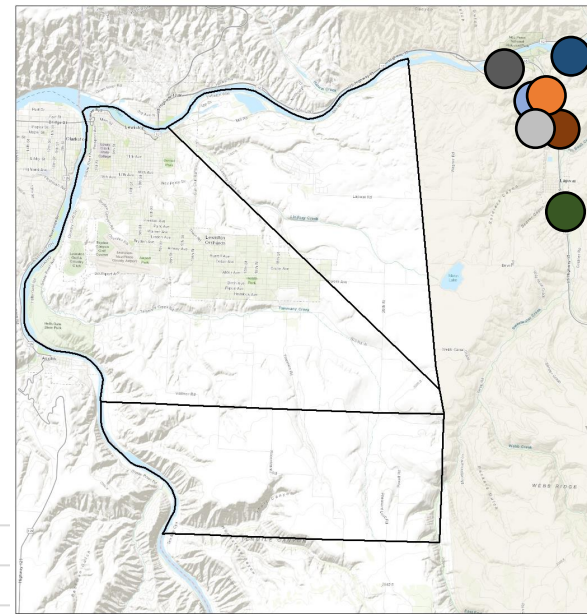


- Snake River elevation is about 740 feet.

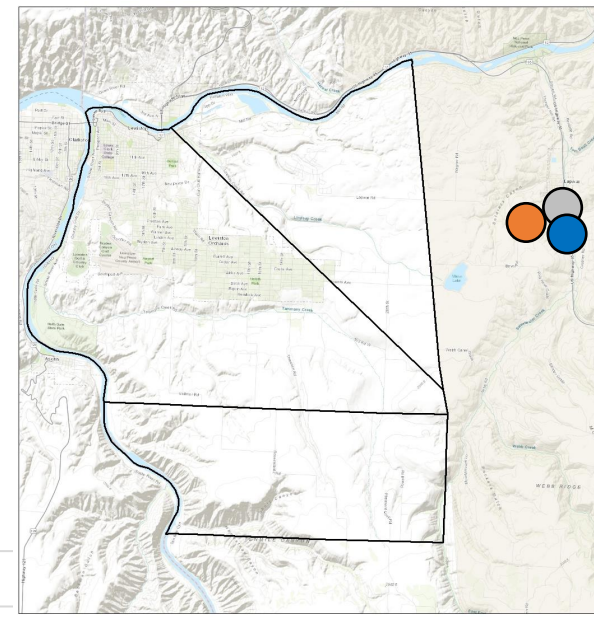
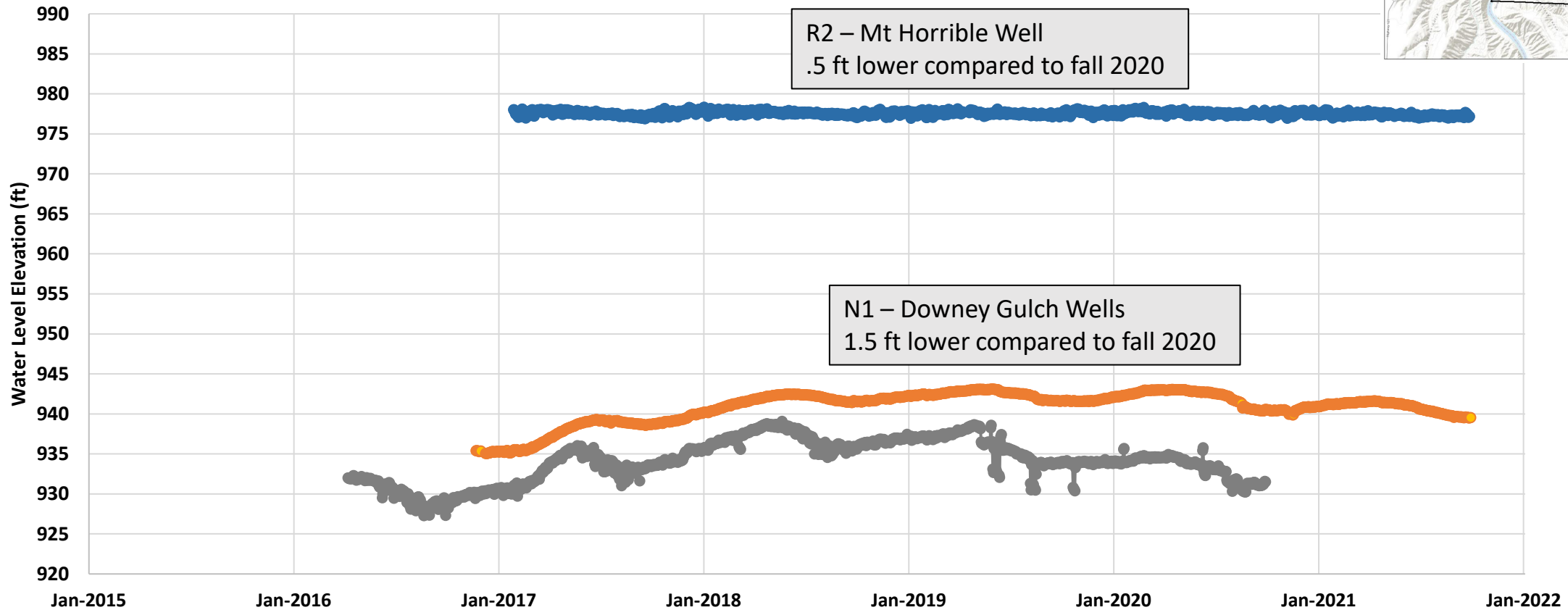




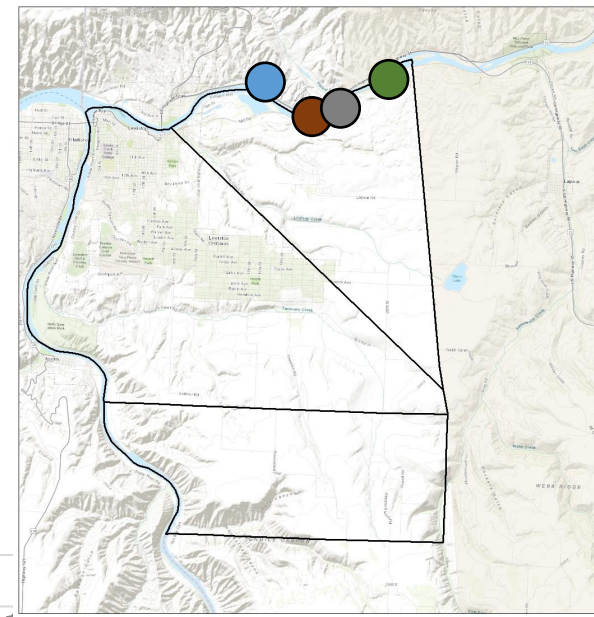
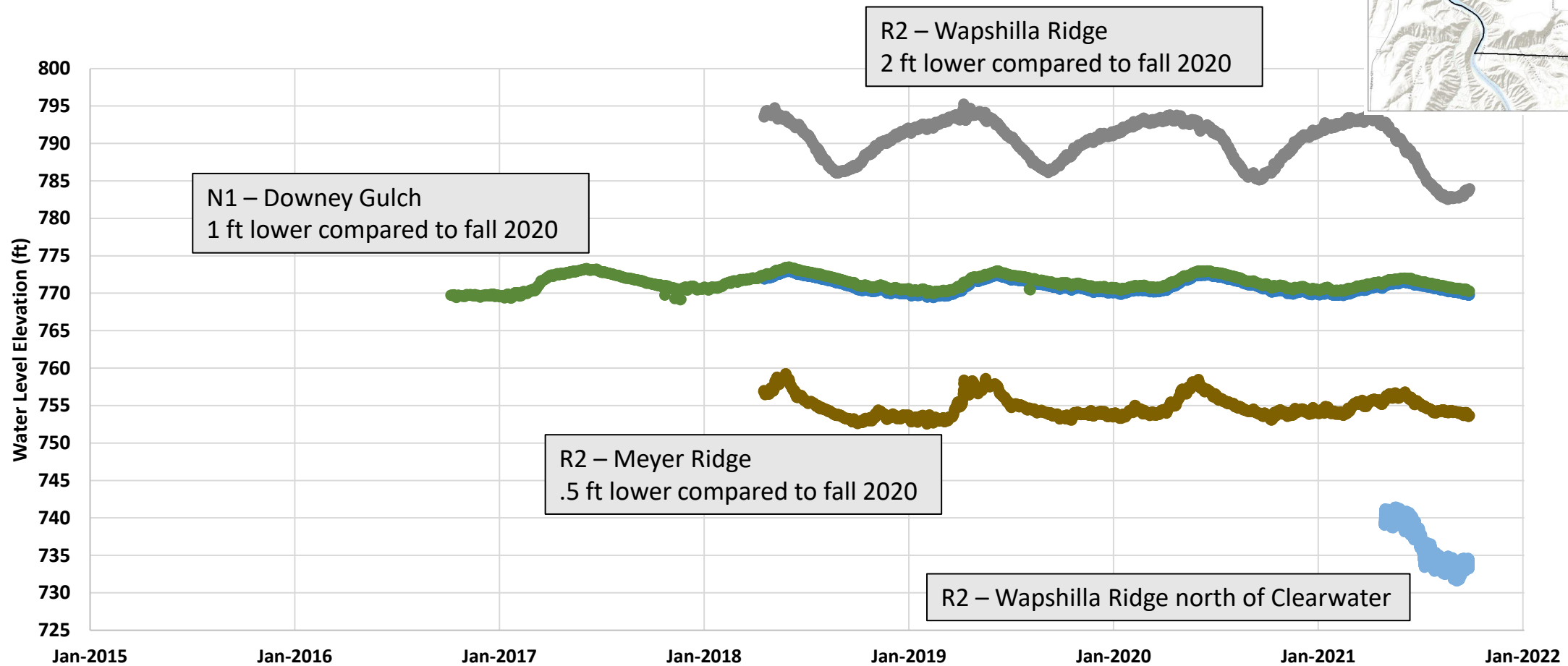
- Different water levels, different fluctuations, different geology. Different aquifers.

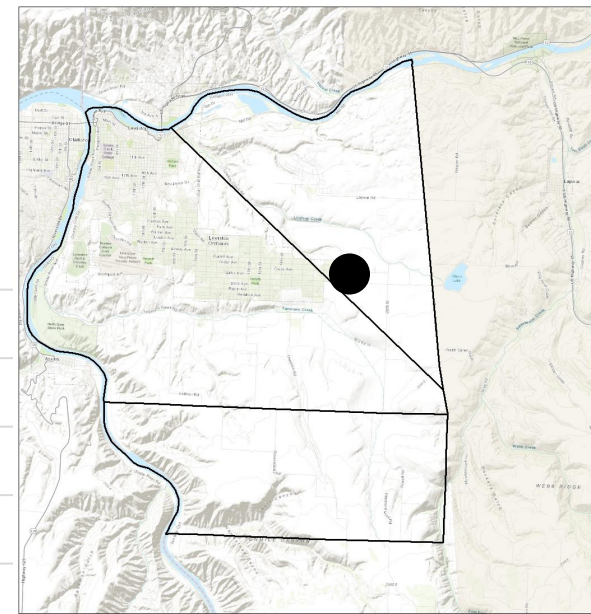
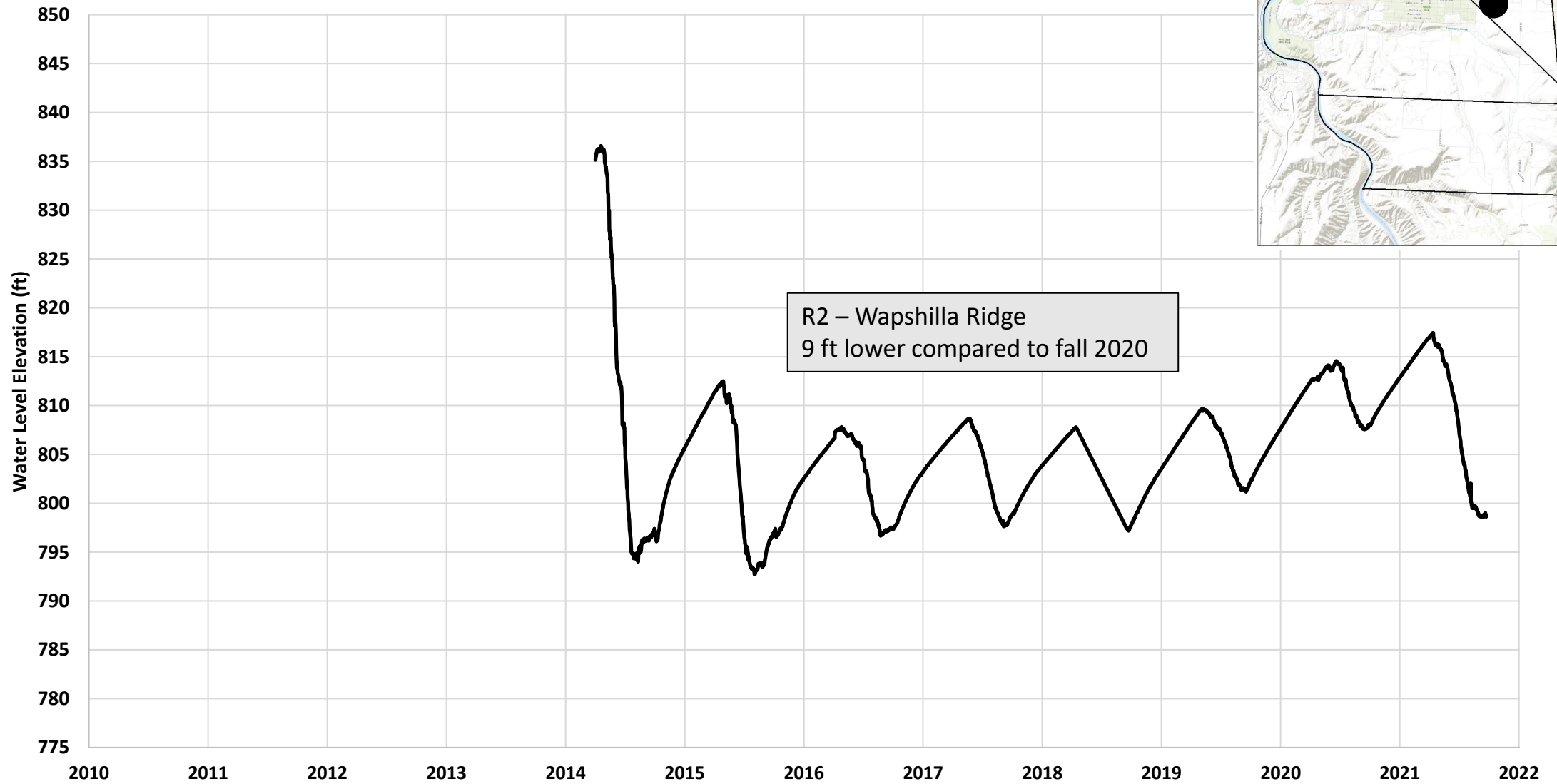


- Different water levels, different fluctuations, different geology. Different aquifers.

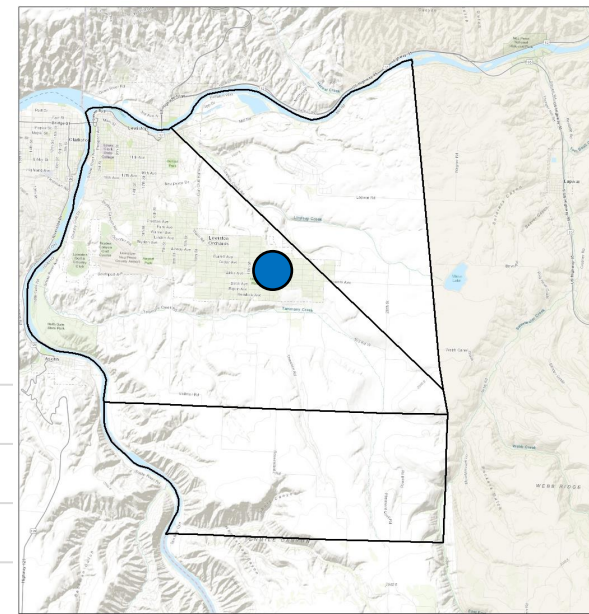
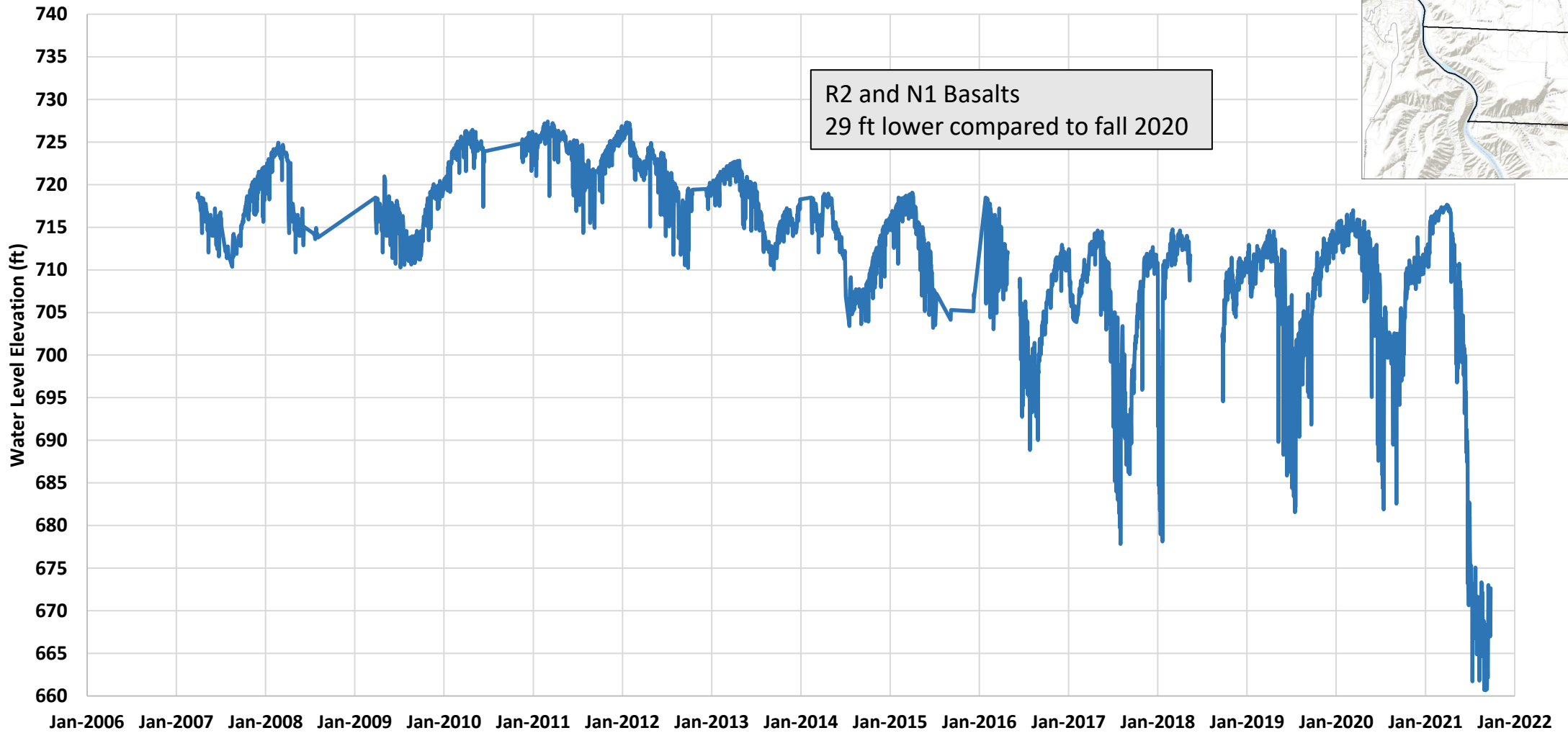


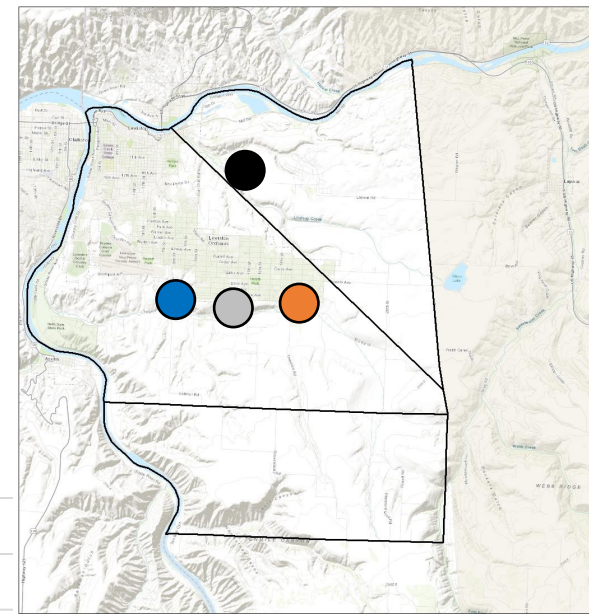
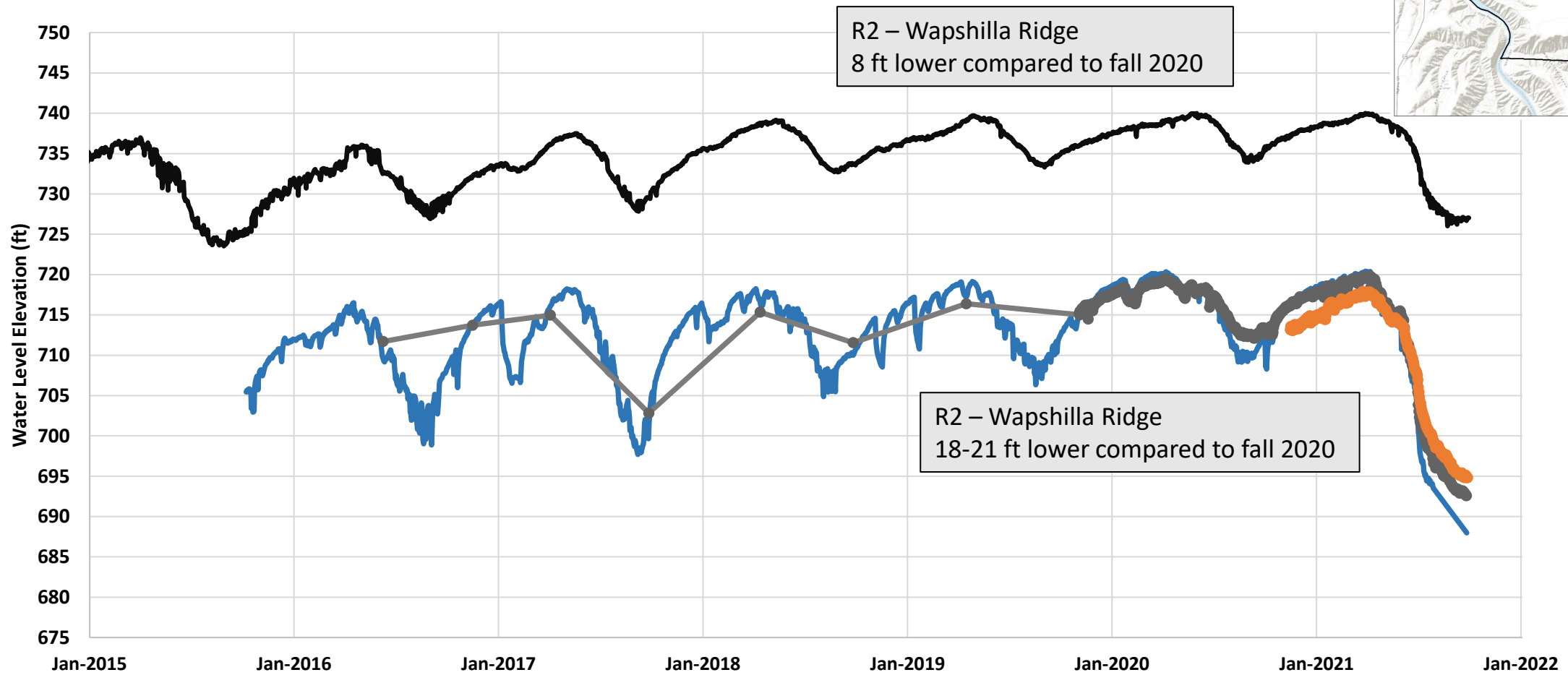
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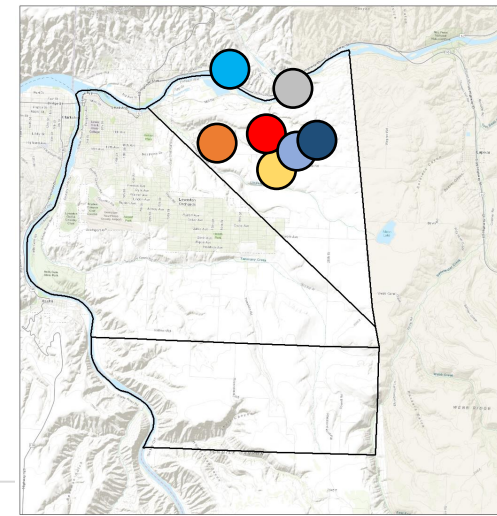
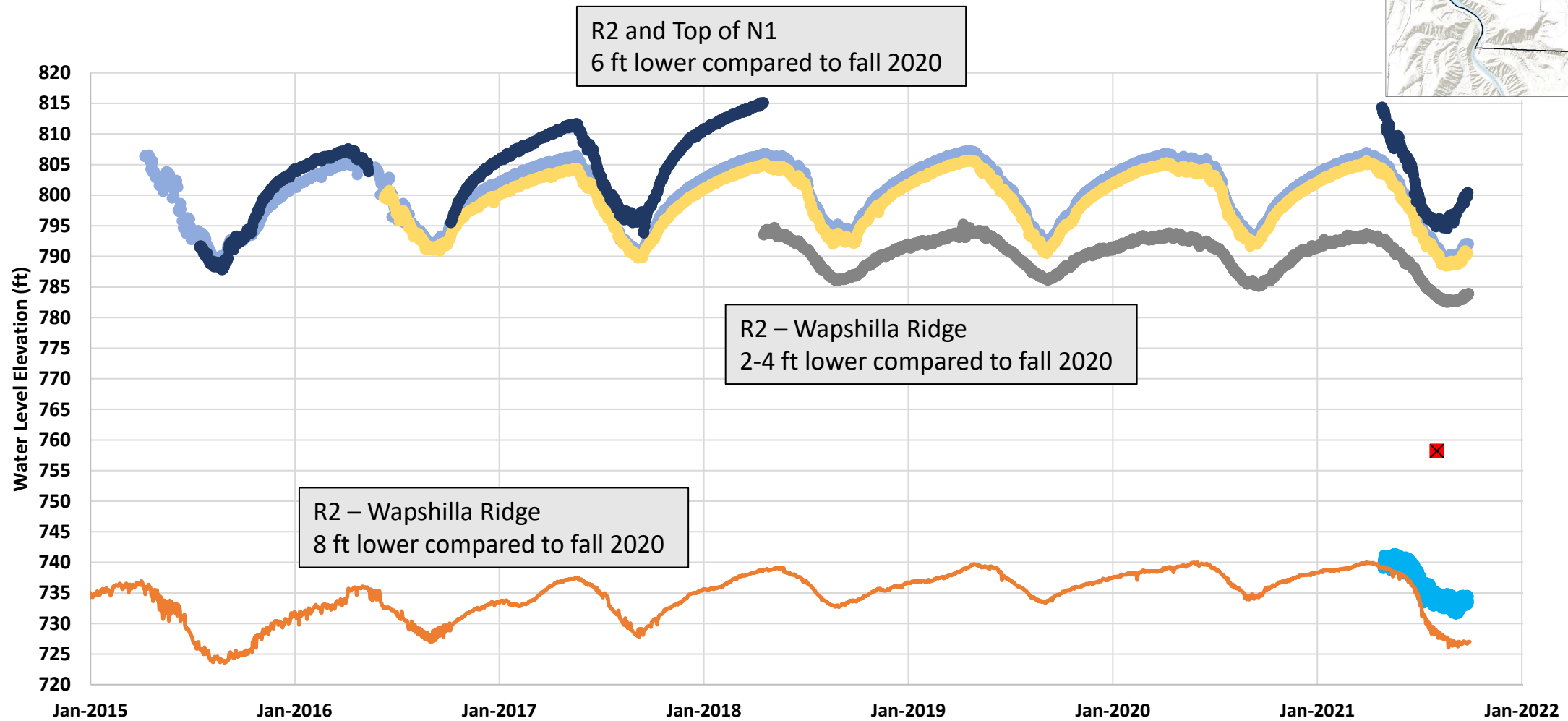




LOID #1







Grande Ronde Basalts Change

15 ft lower compared to fall 2020

- Lewiston #3 irrigation well
- Pumping from R2-Meyer Ridge

18-29 ft lower compared to fall 2020

- Most Wells IDWR monitors are Domestic with little to no irrigation.
- LOID wells are located in this area.

