

OVERALLOCATION/ GROUNDWATER LEVEL DECLINES (3)

1. There are declining groundwater levels in the Greater Harney Valley Groundwater Area of Concern (GHVGAC) due to cumulative groundwater discharge, including both human uses (predominantly irrigation) and natural discharge, exceeding recharge.
 - *Groundwater Study Preliminary Results; GHVGAC designation; OWRD 2015 presentation*
2. Many groundwater users are being affected by seasonal and long-term declines in available water, which has unknown impacts on groundwater dependent ecosystems.
 - *Sub-area discussions; consensus prep meeting*
3. Groundwater declines are not uniform across the basin or between shallow and deep groundwater, which can lead to management challenges.
 - *Groundwater Study Preliminary Results; Sub-area discussions*

ECOSYSTEM HEALTH AND PROTECTION (2)

1. There are limited legal protections for springs.
 - *GDE Step 2 and 3 Report*
2. Declining groundwater levels negatively affect springs, wetlands, cold water inputs to streams, riparian areas, other groundwater dependent ecosystems, and lakes as well as the native flora and fauna associated with these groundwater dependent ecosystems.
 - *GDE Step 2 and 3 Report*

GROUNDWATER GOVERNANCE AND ACCOUNTABILITY (5)

1. There is lack of accountability regarding the use of groundwater for irrigation. Groundwater used by irrigators is reported by only some of the permit holders but is not uniformly measured and reported.
 - *Agriculture Water Use Step 3 Report; Exempt Use Step 2 and 3 Report*
2. There are limited public participation opportunities and barriers to participation in the water permitting and permit transfer process, which can lead to decisions that do not fully consider potential impacts to the local environment, community, and economy and potentially produce outcomes that lead to disproportionate impacts on people who have not been engaged or represented.
 - *Domestic Well User (DWU) 6/24/21 presentation*
3. Failure to remove water rights for abandonment or non-use results in inaccurate accounting of valid water rights volume and inaccurate accounting of water availability if based on permitted volume.
 - Collaborative member addition 10/2021

4. Failure to remove water rights for abandonment or non-use allows those water rights to continue to be subject to transfer applications and/or to be reactivated instead of removing those acre feet from permitted volumes and reflecting that removal in stats of water availability.
 - Collaborative member addition 10/2021
5. Failure to remove water rights for abandonment or non-use allows those water rights to be reactivated which creates further draws on already depleted groundwater reservoirs.
 - Collaborative member addition 10/2021

WATER SECURITY FOR GROUNDWATER USERS (4)

1. The current and potential negative effects of declining groundwater levels on domestic and stock water wells - including lack of water and declining water quality - is having a negative impact on the quality of life and economic security of rural inhabitants of the Harney Basin.
 - *Exempt Use Step 2 and 3 Report*
2. There is limited legal protection for exempt groundwater uses.
 - *DWU Working Group*
3. The impact of declining groundwater levels on the water supply for the cities of Burns and Hines is unknown and are not currently monitored.
 - *DWU Working Group*
4. The community of Burns and Hines have the need to invest in infrastructure to provide water service to their citizens. Ongoing infrastructure updates and funding will likely be needed in the future.
 - *DWU Working Group*

DATA AND INFORMATION GAPS (16)

1. There is limited or no baseline information about the condition and location of groundwater-dependent ecosystems, and limited or no monitoring to determine the impacts of groundwater declines now and in the future.
 - *GDE Step 2 and 3 Report*
2. The total amount of groundwater pumped in the basin is unknown, which can lead to issues with accurate allocation regimes
 - *Collaborative conversation*
3. There is limited information about water use from domestic and stock water wells and historic well conditions.
 - *Exempt Use Step 2 and 3 Report*
4. Incomplete information on potential economic impacts of lowering groundwater levels in agricultural and domestic wells.
 - *Collaborative conversations; Agricultural Water Use Step 3 Report*

5. Incomplete information on potential economic impacts of voluntary curtailment and CREP payments
 - *CREP conversations*
6. Incomplete information on potential economic impacts of curtailment from the State
 - *Collaborative conversations; conversations from producers + ag organizations + others*
7. Incomplete information on potential economic impacts from ecological impacts of groundwater declines.
 - *Collaborative conversations*
8. Incomplete information on the impacts from continued development in the GHVGAC
 - *Consensus prep meeting*
9. Lack of information about occurrence, distribution, and potential impacts of both unpermitted and poorly constructed wells and impacts on groundwater quality/quantity.
 - *Collaborative conversations; OWRD well inspector comments*
10. There is a need for better understanding of the effects and amount of supplemental groundwater used.
 - *Sub-area discussions*
11. Previous groundwater data for the basin has been inconclusive. Site-specific groundwater data, such as designation of certain areas for targeted CREP outreach, groundwater markets, etc., might be useful for effective groundwater management as well as ongoing data gathering and collection by the Department.
 - *Collaborative conversations*
12. Incomplete information on the effects of climate change on groundwater resources in the Harney Basin.
 - *USGS Groundwater Budget Presentation*
13. Groundwater quality monitoring in the basin is not done on a regular basis, which causes difficulty in understanding changes overtime.
 - *DEQ Groundwater Quality Study*
14. Arsenic is a documented water quality issue in the basin. Arsenic exceeds human health standards in some wells across the basin that provide drinking water
 - *DEQ Groundwater Quality Study*
15. There is uncertainty about whether co-mingling between shallow and deep groundwater systems is occurring due to well construction issues in some parts of the basin.
 - DWU Working Group
16. There is an unknown number of undocumented wells in the basin that may not have been properly constructed and have not been inspected or maintained over time. For instance, there are many uncapped wells in the basin that could negatively impact groundwater quality.
 - DWU Working Group

CLIMATE CHANGE AND CYCLE + EFFECTS ON GROUNDWATER (2)

1. Future climate conditions in the Harney Basin are likely to be warmer and drier than current ones, which will likely impact groundwater resources.
 - *All CBWP Groundwater Step 3 Reports*
2. Lack of drought contingency plan.
 - *Collaborative conversations*

TOTAL ISSUES: 32