

Discussing the Facts and Fiction of the “Use It or Lose It” Mentality in the Northern High Plains Designated Basin

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WHAT IS “USE IT OR LOSE IT”

To many water users in the Northern High Plains Des. Basin *USE IT OR LOSE IT* seems to mean:

If I don't pump all of my well's permitted appropriation, the State will take the remainder away, limiting my permit to what it has historically diverted.

The above perception of USE IT OR LOSE IT is not accurate. Education is needed to prevent wasteful irrigation and to ensure irrigators understand the situation in which a Final Permit's annual allocation can be reduced.

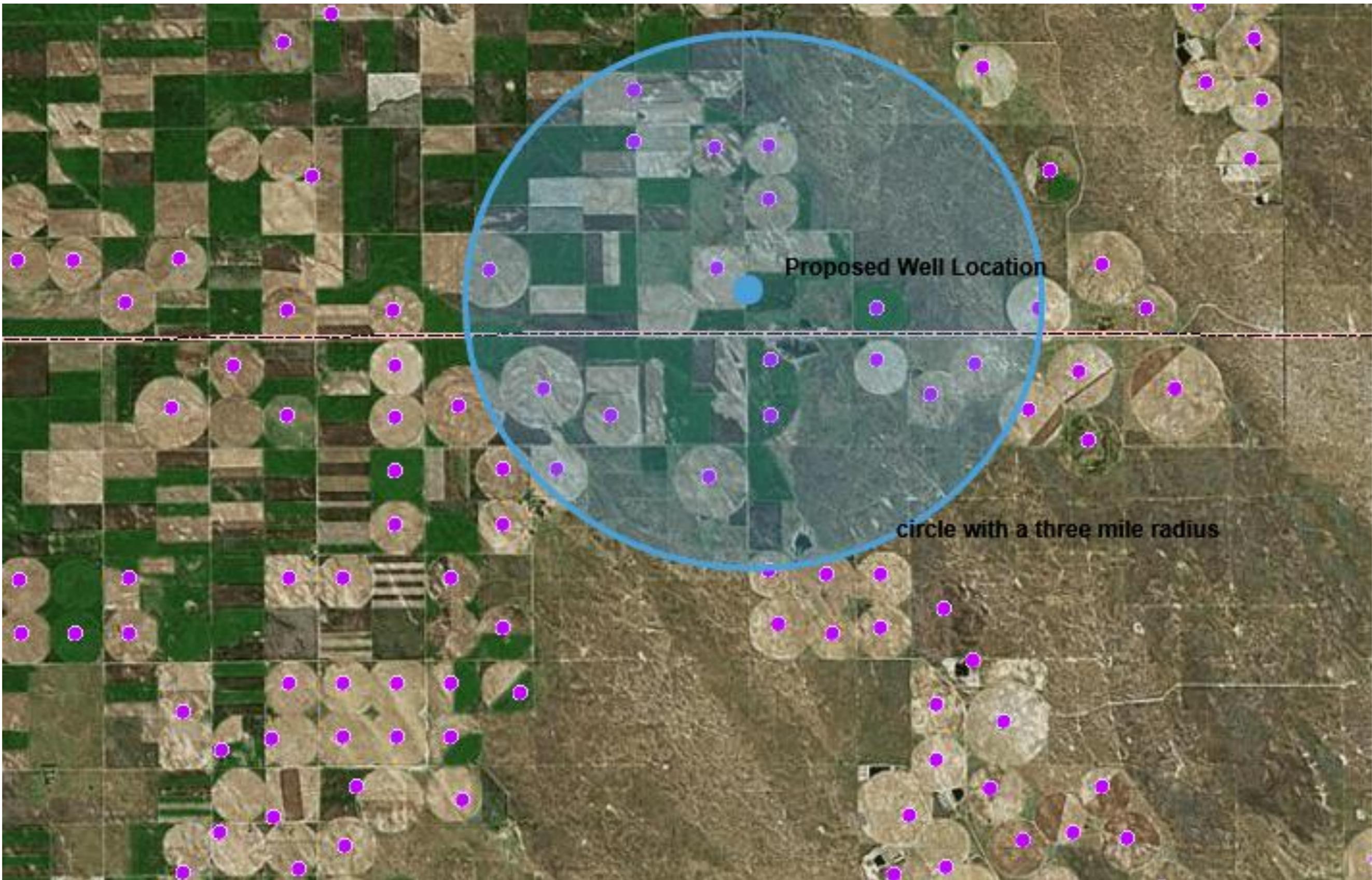
“USE IT OR LOSE IT”

FINAL PERMITS / CHANGES TO FINAL PERMIT / WASTE:

- A GWC Final Permit IS a water right (equivalent to a decreed absolute water right outside of basins). Unlike outside of the des. basins, the Ground Water Commission can't abandon a water right for lack of use.
- Changes to a Final Permit can generally only be initiated by the well owner (increase acres, change use, commingle). GWC staff will evaluate well's Historic Diversions AND HISTORIC CONSUMPTIVE BENEFICIAL USE (how much was actually needed for beneficial irrigation), and we limit the well to the lesser of the two for approval of the change.
- A *Use It or Lose It* mentality leads to wasteful irrigations practices. (when speaking about crop irrigation, waste can be explained as diverting and/or applying more water than is reasonably needed to meet the consumptive use of the crop.

Quantifying the Original Allocation in the Northern High Plains Des Basin

- IN 1966 GWC adopted criteria for issuing large capacity permits in the NHP des. basin:
 - No new large cap well permits would be issued if the proposed withdrawal after 25 years was projected to deplete the aquifer by more than 40% within a 3 mile circle of the well.
 - Calculate total amount of water in saturation within a circle (with a 3 mile radius).
 - Deduct existing permitted allocations from that total amount in saturation.
 - Whatever remained was the amount that could be appropriated. (up to 2.5 af per irrigated acre for flood irrigation).
 - Owner supplied Beneficial Use statement finalized water right.
 - Ground Water Commission issued a Final Permit.
- Well development exploded. In 1990, the rate of depletion became more stringent - 40% over 100 years - and the NHP effectively became a closed basin. This meant no new water to appropriate.
- The basin is in fact over-appropriated (there is more water permitted on paper than physically in saturation).



Proposed Well Location

circle with a three mile radius

Changing a Water Right

- To prevent material injury to other wells with Final Permits, when certain changes to an irrigation permit are requested staff must limit the allocation to either the avg. historic use OR the avg. crop irrigation requirement (whichever is less) over a ten year period of record to approve said changes. Type of changes:
 - Expanded acres
 - Change of use
 - Commingling
- **ONLY IF THE WELL OWNER REQUESTS A CHANGE WILL DWR THEN REDUCE THE PERMITTED ALLOCATION.**

Quantifying the Allocation in the NHP Des Basin When a Change to the Final Permit is Requested

Why does the GWC have a different standard for evaluating the water right when a change is requested?

- To ensure the water is not used to a greater extent under the new use than it was under the old use.
- To ensure that other water users in the basin are not impacted by the change (material injury).
- OVERAPPROPRIATED BASREDUCTIONS HELP BALANCE THE SYSTEM.

Quantifying the Allocation in the NHP Des Basin When a Change to the Final Permit is Requested

How does the GWC evaluate a change to the water right? What criteria are considered?

- Staff applies GWC Rule 7.10 - *It shall be the burden of the applicant to determine the average annual historic withdrawal and depletion by a well (Historic/Consumptive Use analysis). This evidence shall include:*
 - Irrigation system and pump efficiency test
 - Flow meter readings and water consumption records.
 - Power and crop data.
 - Annual temp, precip. and frost dates.
 - growing season for each year of record (based on frost dates).
 - Irrigation type.
- We look at ten or more most recent consecutive years of records above to determine average.
- No credit toward HCU is given for acres, use, or allocations in violation of the permit.

Quantifying the Allocation in the NHP Des Basin When a Change to the Final Permit is Requested

Changing a water right (cont)...

- The owner supplied data is input into a model (**Modified Blaney Criddle Model**) The Blaney-Criddle equation is a relatively simplistic method for calculating evapotranspiration (sum of evaporation. and plant transpiration/consumption).
- For GWC approval of the change, Staff will limit the allocation to either the historic use OR the Crop Irrigation Requirement (whichever is less).

Quantifying the Allocation in the NHP Des Basin When a Change to the Final Permit is Requested

City of Burlington Example:

- In 2015, the City of Burlington applied to change the use of an irrigation well.
- Well was permitted 800 af/year for the irrigation of 320 acres.
- We compared what was diverted to what was physically needed to grow the specific crops over a 10 year period of record.

WELL DIVERTED (on avg): **280 af/year** (based on flow meter readings and power usage)
WELL NEED TO PUMP (on avg): **210 af/year** (based on crop demand)

Change of Use approved for 210 af year. THIS IS A PERMANENT CHANGE! BUT DOES NOT BEGIN UNTIL OWNER NOTIFIES DWR.

Wrapping up....

So why is all of this important when we talk about the concept of “Use it or Lose it”?

- Because it demonstrates that pumping as much as you physically can from the well doesn't help you if and when you decide to change your permit.
- The measure of a water right is what is historically diverted compared to what was historically needed (whichever is less). Certain changes requested to a permit always result in less AF than what is allowed in the FINAL PERMIT.
- The measure of a water right is still its historical consumptive use which is limited by what the crop can actually consume.

Use It or Lose It? (FACTS and FICTION)

FICTION:

“If I don’t use all of the water I am permitted, the state will cut me back to only what I’ve used.”

FACT:

Unless the owner of a Final Permit applies to make changes to said Final Permit. The Colorado Ground Water Commission (GWC) does not have the statutory authority to arbitrarily reduce the allocation stated on a Final Permit. **SIGNIFICANT LEGISLATION WOULD BE REQUIRED FOR THE STATE OF COLORADO TO PERMANENTLY REDUCE A WELL’S WATER RIGHT.**

FICTION:

The state of Colorado is planning to limit wells to historically pumped amounts for conservation purposes.

FACT:

The State/GWC can’t legally do that (see above), however, the Ground Water Management Districts do have statutory authority to adopt controls, regs., or conservation measures. GWMD rules could further limit the allocation stated on a Final Permit.

Use It or Lose It? (FACTS and FICTION) cont...

FICTION:

“It doesn’t matter if I pump more than I need because it ends up going back into the aquifer anyway.”

FACT:

IT DOES MATTER! Pumping over what you need to effectively grow a specific crop is wasteful -- it hurts the aquifer; it hurts us in the Compact; it potentially impacts the other wells around you. *The Ground Water Commission can address a wasteful diversion, but that could not involve permanently reducing the well’s water right.*

FICTION:

“If I change the use of my large capacity well permit or apply to increase my well’s permitted irrigated acres, the State/GWC will limit me to whatever I have historically pumped. I need to pump as much as possible (up to my permit) to keep that historically diverted amount up.”

FACT:

The only time the GWC can change a large capacity well’s Final Permit allocation is when the owner requests a change to the permit (or if the well has overpumped, in which case we require the well owner to payback the water the following year).

Changes (for increase in acres or change of use) require that GWC staff perform a historic and beneficial consumptive use analysis as part of our evaluation for that change.

~~“Use it or lose it”~~

~~“Divert it or lose it”~~

~~“Beneficially use it or lose it”~~

“Establish and maintain a pattern of beneficially using it for its beneficial use over a representative period of time, without waste, and in compliance... or lose it if you decide to change your permit.”



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