

# THRESHOLDS PROJECT

## Stakeholder Meeting 5 December 10, 2015

**Stakeholder Advisory Group Attendees:** Adam Birr, Heather Corcoran for Craig Johnson, Jon Eaton, Dell Erickson, Paul Gray, Kevin Hoppe, Ruth Hubbard, John Lenczewski, Jeff McManigle, Jay Riggs, Brian Ross, Joe Schneider, Steve Schultz, Steve Woods. **Other Attendees:** Jeff Berg, Barb Huberty, Andy Juelich, Bill Kemp, Brent Neisinger, Dave Schulenberg, Jon Stueve, Kathy Tingelstad, Steve Traut, Dan Whitney. **DNR Staff:** Luke Skinner, Jason Moeckel, Ian Chisholm, Jay Frischman, Tom Hovey, Greg Kruse, Doug Norris, Dan O’Shea, Suzanne Rhees, Brian Stenquist, Dave Wright; Charlie Peterson (Facilitator).

## Presentation of Stakeholder Review Draft Report

### Questions – Comments (*responses in italics*)

- Are both the “maximized” (15% threshold) and “stabilized” (10% threshold) options available?  
*Yes, potentially.*
- How will you implement throughout state? – Might be different for urban lawn watering than for a water-dependent business – therefore, need a public process in each geography. (report needs to explain ‘tolerance’ levels for risk)
- Focusing on worst case scenario – but if it never happens, thresholds are too restrictive – people in each area need to decide what they’re willing to accept – socioeconomic factors
- If trying to maximize, then more variability. What you leave in ground last year is available next year because of lag time in GW use. Don’t have industries that work that way. When setting low flows, need to think about implications for end user.
- If you’re sustaining water ‘above ground surface’ – do you ever get to use the ‘reservoir’? *The intent is that groundwater is used, but without driving systems below the point of recovery.*
- Won’t there be dips in the red (stabilized) line? *Maybe, under extreme drought conditions.*
- Would you need to give seasonal adjustments to cities? *Possibly – to encourage reduction in lawn irrigation, one could calibrate permits on a monthly basis.*
- Seems that the process is location-specific – you could set a protection level and not impact most existing permits, but might in the future.
- Suggest setting a conservative limit now, or risk amnesia in a drought year – people will ask for exemptions if it occurs.
- May be more places that would be impacted than shown on maps– lots of declining base flow due to land use changes, tile drainage – challenging for irrigators.
- If a lower limit, less chance of hitting it, will it be easier to monitor (for DNR?) – if a higher limit, does DNR have staff to monitor? – *Less conservative limits do suggest more intensive monitoring could be needed.*
- Report focuses on output – what are the options for recharging groundwater? Don’t assume it is all leaving the region.

- Report needs to make a recommendation, not just 2 options (10%/15%). Prefers stabilized approach. Certain areas could decide to maximize use – but who would pay for it? *We've kept both options in the draft to illustrate the shift in thinking from 15% to 10%.*
- For Cold Spring Brewery, water quality is a huge issue – changes treatment train. We are a “wet agricultural” industry. Could tolerate lower appropriations by purchasing (raw) water from city, under the maximized approach – but it's an unfunded mandate for city.
- Don't assume DNR must do all monitoring – could delegate to others.
- This isn't a technical peer review group – legislators will want to see peer review of science.
- Can the sustainable diversion limit (SDL) change over time? Trout streams might now be on edge due to climate. – *Yes, but not annually – over longer intervals, such as 5 years.*
- Depends on modeling – you'll discover that model needs adjustment. Should add some recognition of review and adjustment to the sustainable diversion limit.
- Explain the difference between diversion and withdrawals? – *“Withdrawals” pertain to individual appropriation permits for surface or groundwater use. The “diversion” pertains to water diverted from the stream – for example, if a flow of 2 cfs is the limit, users could use more groundwater than that limit, since not all of the groundwater is coming from the stream.*
- For wetlands, is this a “no net loss” policy? Or could you mitigate via recharge. – *Yes, could add that in to water budget.*
- Be careful that it doesn't cause barriers to recharge – certain surface water permits are functioning as a barrier to recharge. Permit process is so cumbersome that a collection and reuse system becomes too expensive. Water users don't get credit for the recharge. A net rather than absolute threshold could address issue.
- Anything in the report about ability to recharge? *No – Would you include that? Yes, will consider it.*
- Clarify that “diversion” = multiple withdrawals – ‘withdrawn cumulatively’
- How much of the water being retained in the ecosystem is saved for future users? Impact on local governments is significant.
- The definition of ecosystem harm is subjective – who decides? – *There are many examples of degradation – Index of Biological Integrity (IBI), water quality, temperature, etc. – that could be cited. Most ecosystems are being altered by human activity, so we need to make decisions about what is “desirable.”*
- Could you use a change in the IBI as an indicator? Don't want to come off as arbitrary. How are you going to weight all the many factors? – *That's why you would need a public process to consider and weight all factors.*

### Discussion of Definitions

- Keep definitions simple and add details: more explanation, possible triggers, how will it be reviewed/reset, likely exceptions
- “Diversion” should recognize inputs – injection, recharge, infiltration
  - Diversion limit models need to recognize all inputs and outputs, including uses with or without permits.

- *Irrigation is considered 80 – 100% consumptive – there are coefficients we take into account in permitting*
- “Alter riparian uses” is vague (negative impacts definition)
- Definitions create more questions – e.g., “harm,” “alter,” “long-term”
- Either drop “ecosystem harm” definition or expand it substantially in subsequent paragraphs to explain it further.
- We need the socioeconomic considerations of the geographic areas added to the definitions.
- Get other states’ data (on groundwater use)
- Add “short-term” to negative impact definition
- Define “less desirable and degraded conditions”
  - Definitions are too vague – “less desirable” compared to what?
- Concepts generally sound – not clear if you intend to do subsequent rule process to clarify.
- Definition of “diversion” creates overt opening for crediting recharge (aquifer storage and recovery)
- Define “diversion” as withdrawal by multiple permittees
- Add “riparian” to glossary
- Consider all uses with or without permits
- Put defined terms in **bold** or some other color to show the term is defined

### Discussion of Thresholds

- Recommend a method and a ‘number’ while being clear about the range of uncertainty
- Clarify how the process will be prioritized
- Include case studies (examples on ground) / complete appendix that illustrates thresholds
- In the Bonanza Valley, have permittees exceeded the 15% threshold? All 3 GWMA’s should be used as case studies.
- What were criteria for GWMA’s? Rapid increase in use or projected use?
- Prefer 10% threshold for streams
- 10% is too restrictive. Is the 15% based on typical August conditions or drought conditions? – *it’s based on period of record. Analogy for the sustainable diversion limit is a mortgage payment that is fixed each month compared to variable income.*
- 120-hour measurement period (for Q90 for surface withdrawals) may not be the best
- Need different thresholds for coldwater streams (10%) if you’re going to push the limit to see how good the modeling is.
  - On small trout streams, can’t measure a difference of 10% -- too small
  - Very good chance some trout streams will be negatively impacted even at 10%
- Is it possible to monitor and adapt to natural changes in time in an appropriate fashion?
- What happens if a 10% threshold is reached – are irrigators shut off? *No, however, appropriation permits might be altered in future.*
- *We don’t normally go to upper limits in appropriation permits – to provide a conservative bias in modeling, margin of safety*

- Woodbury example –effects on Afton trout stream – aquifer tests didn’t show obvious negative impact, but City minimized use.
- Will Woodbury need to pay for own monitoring wells? *Yes, but they’re doing it already for their system. Typical for larger systems, but difficult for smaller ones. Therefore the DNR tries to assist.*
- Not enough stream data for many areas – need at least 30 years data (back to 80s)
- How do you model ‘zero use’ – not just another 10% on top of what is already being used
- Test model on a system you won’t destroy – i.e. not a coldwater system
- Goal is to make durable investments.
- Switching from groundwater to river water will create huge costs for cities/users
- Pg. 13 vs. pg. 34 – contradictory (SW appropriations from trout streams)
- Funding system is not sustainable – too many different pots of money, too impermanent
- Lakes: less detailed than streams; seems to set a low upper limit
- Lake exceedance curve unclear
- Wetlands: happy that report notes this is far down the road
- For wetlands, the protection target should be where the resource graph approaches “0”

### Discussion of Implications for Permitting

- Local role in permitting?
- Need to better quantify and credit recharge – how to credit individual recharge to a “shared commons”?
- How to weight stakeholder input in determining a threshold? Would like local interests to choose their tradeoffs (when required). Need definition or description of this process.
- Will money to do all this work be available when needed 10 years, 20 years hence?
- Allow community-scale negotiating of trade-offs (crediting and trading?)
- Potential overdevelopment / overuse of limited resource (water)
- Consistency in the field [needed]
- How does this process impact other permits (i.e., MS4 permits)?
- Existing permit timing and frustrations (need reliability and predictability)
- Cities with golf courses will lose revenue if the course is ‘brown,’ thereby causing residents to pay more in taxes
- Hydrologic boundaries impact business locations
- Costs to businesses based on impacts of permits

### Discussion of Proposed Changes to Statutes

- Who else will review statutory language relating to groundwater and surface water
- Will trout streams be individually assessed? If so, should be stated in statute. Who will pay?
- Will other agencies be involved in reviewing proposed changes? *Yes, that’s our intent.*
- Consider using “old” threshold numbers as default until new ones are calculated?

- Is no change anticipated re trout streams? *If statutes are merged, then surface water pumping prohibition (temporary appropriations) would remain, but groundwater appropriations would be managed similar to other stream diversions.*
- Add item: direct executive branch agencies to pursue suite of recharge authorities from EPA. Link it to regional water supply plans, comp plans, WWTP planning. (MN is one of a few states that don't have EPA-delegated authority over recharge.)

### What Needs Clarification? What is Missing?

- Will cities need to prove “no impact” to get [permit] approval if there's a possible impact?
- Are local economic considerations/needs primary, or are ecological considerations?
- Does report address the potential vs. actual impacts issue?
- Is the goal to a) maximize resource use; or b) minimize environmental harm?
- Lake exceedance cure is unclear
- Clarify table on pg. 20 (lake sensitivity)
- Tell us what DNR would recommend as good statutory change (Do not wait for legislative compromise version.)
- Missing insights on how the proposed changes could have avoided problems with White Bear Lake, Cold Spring, etc.
- Missing a table showing the big picture – current policies, proposed, what would be gained/lost.
- Missing insight on how the proposed changes would affect the DNR's organization and operations.
- Missing clarity on what must be solved first and what can wait.
- What are the economic impacts to residents and businesses of water conservation – e.g., electric energy rates go up?
- Recharge efforts should be built on 30 – 50% of water could be reused.
- Recharge “makes the pie bigger” – process has helped clarify that.
- Water is economic livelihood for much of state. No problem addressing areas of concern, but not rest of state. Irrigators are becoming more efficient now.

### Thoughts on Process as a Whole

- Great job soliciting opinion, listening to people, documenting differences
- Educational – but what have we gained? (Were discussing a 15% threshold 5 years ago)
- Tension between consumption of resource and protection of system – still concerned as to how protective language will come out. First-rate work.
- What has the DNR learned from this exercise? New information? Changed perspectives?
- Wish the draft report had been discussed at earlier meetings.