Iowa's Water Resources - water law

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Water-Key Resource - What/How!

- What Are Our Water Resources?
- How Much Water Do We Have?
- How Much Water Do We Use?
Groundwater is below us everywhere, but…

- **Quantity**--Is there “enough” for our purpose?
  --Will it adversely impact others?
  How do you decide?

- **Quality**--Is it “good enough”?

- **Sustainability**--Is it dependable for the long haul?
  --Will there be “enough” in the future?
  How do you decide?
Is it Sustainable for the Long Term?

- Sustainability assessments lacking, in general.
- Information needed on GW recharge rates.
- Droughts are known to affect water table aquifers and streamflows.
- Declines in confined aquifers are known in a variety of areas.
- AND………How do we seriously address the situation when a SPECIFIC conflict arises???? (Like in Sioux County……)
Who Gets It? From 1985 Iowa Water Plan:
Permitting and Drought Allocation Priorities

1. **Self-supplied domestic**: non-regulated, self-supplied water with limited ability for water elsewhere.

2. **Domestic part of rural water & municipal systems**: water for preserving human life & welfare.

3. **Livestock**: water for preservation of animal life.

4. **Power**: water used incidental to power generation.

5. **Industrial**: water used by commercial and industrial facilities.

6. **Non-traditional irrigation**: water for fruit, vegetables & other newly introduced crops.

7. **Irrigation** of traditional Iowa crops: water for soybeans, corn, alfalfa, etc.

8. **Recreation**: water for lawn and golf course watering, car washing, other incidental uses.

9. **Out of state export**: water exported to another state.
Here is a quick overview of Iowa water rights law. This attempts to focus on groundwater sources, though some of the concepts originally arose out of surface water-related conflicts, so the discussion must begin there.
Appropriation doctrine

• Used in 17 western states
• “First in time, first in right”
• Further appropriation ONLY if $H_2O$ is physically available
• The trick is discerning $H_2O$ availability
Riparian doctrine

- Owner of land adjacent to stream (riparian land) is entitled to receive full natural flow, undiminished in quantity or quality. Used in 30 eastern states.
IOWA uses…. 

A combination of these which is best described as “modified riparian”. This focuses on preservation of instream $H_2O$ uses. The concept originated in South Carolina and Mississippi. However, Iowa is the first state to extensively implement it.
Beneficial use

• The purpose of the law, adopted in 1957, is to “…assure that water resources be put to beneficial use to fullest extent possible, that waste or unreasonable use of water be prevented, and that conservation be required”. 
Use, not ownership

• The right of a riparian owner to prohibit use of the \( h_2o \) by nonriparian neighbors is established; this right by no means makes the \( h_2o \) in the stream his property. The \( h_2o \) is considered a “wealth” of the people of the State. That is actually an old Roman Law concept.
How Do We **Allocate** Water?

- **Iowa Code**
  - All waters are “public waters and public wealth” of Iowa citizens. Iowa statute provides an allocation system based on “beneficial use”.
    - Waste, unreasonable use, and unreasonable methods of water use are prevented.
    - Water conservation is expected.

- **Permit System**
  - Withdrawals in excess of 25,000 gallons/day from streams or aquifers require a permit from IDNR.

- **Permit Reviews and Evaluations**
WHY A PERMIT SYSTEM?

- Water permits are used in Iowa to assure “water rights”.
- All water permits are ‘tied” to the land in question. They remain an appurtenance to the land. If a property is sold, it does not follow the person.
- All permit must consider “effect on the natural flow” and the river’s established “average minimum flow”.
- Goal is to maintain level to satisfy demand.
- Also must consider effects on landowners with “prior or superior rights”. How this is done is ambiguous. IDNR’s role. Use of an agency is common in “Western” States.
Competing Uses

• Iowa’s water allocation program sorts through competing uses
  – A permitting program to ensure consistency in decisions on use of water.
  – Ensure water is available for normal [unregulated] domestic and livestock use.
  – Provisions for public involvement in issuing water allocation permits.
  – Administrative procedure to resolve use conflicts.
WHAT DOES “VESTED” MEAN?

• Chapter 455A, the water rights statute, continues this ambiguity by use of vague provisions in referring to prior, superior, or vested rights.

• In practice, it is IDNR’s responsibility to sort this out. The use of a public agency to resolve water allocation conflicts is a western phenomenon.
What about groundwater???

- Rules similar to the riparian doctrine apply to groundwater. However....
- State laws all tend to be obsolete in using “good” hydrogeological science.
- Iowa is no exception to this. Groundwater is treated as “Diffused surface water…”
- Iowa DOES differentiate between confined and unconfined aquifers. Slightly. Five foot confining layer concept defines this.
- Opinion has varied on whether this gw analysis should be done on a local basis, an aquifer basis or a “whole-State basis”. This has never really been resolved.
Groundwater treated similar to surface water?

- Permitting system subject to specified conditions.
- “Threshold parameters” are drainage area of adjacent stream, and proximity to stream.
- (1/8 mile Protected Flow, 1/4 mile $7_{Q10}$). Restrictions arise or are imposed similar to surface water applications.
- Some specific attention to Cambrian Jordan Sandstone (1977 Baseline level restriction) and to Cretaceous Dakota Sandstone formation (nearby well survey required).
For Information:

Department of Natural Resources

http://www.iowadnr.com/index.html

• Water Supply-Allocation Program

http://www.iowadnr.com/water/wse/allocation.html

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