

DRAFT COPY FOR WATER SHORTAGE TASK FORCE DISCUSSION (2/27/09)

VIII. Water Use Priorities

A. ~~General~~ Introduction (?) Background (?) Overview (?)

Water shortage can be defined as a situation in which the demands of competing users exceed the available supply. During a shortage, water will be allocated among competing users in one or more of the following ways:

1. First come, first served (in the absence of an allocation policy)
2. Administrative rule (as determined and enforced by public policy)
3. An established system of water rights (established in public law)
4. Water allocations (defined for categories of water users)
5. Water pricing (perhaps in combination with water allocations)
6. Water sales or water marketing (in combination with water rights or water allocations)

The State of Indiana can determine how these 6 methods will be used to allocate water during shortages. In the absence of water policy development, most water will be allocated according to the first come, first served rationale. If the State wishes to assign priorities regarding water use during shortages, it will develop administrative rules expressing those priorities. Alternatively, the State might engage in a long-term process of developing a system of lawful water rights that define how water will be allocated during times of plenty and during shortages. In the medium term, the State might choose to develop a system of water allocations that places limits on withdrawals by users within selected categories. For example, the State might impose restrictions on withdrawals from Surface Water Withdrawal Facilities, limit groundwater withdrawals, or require minimum instream flows to protect natural habitats. Upgrades of existing measurement and reporting capabilities might be required to support such a system of water allocations.

The State might also consider economic incentives to assist in allocating water during shortages. Water prices influence water use in all sectors, and water pricing structures can be designed to encourage conservation, particularly during shortages. Conservation can be encouraged also by promoting water sales (water marketing), in conjunction with a system of water rights or water allocations. Improvements in water delivery and measuring capability will be needed in some areas to support innovative water pricing and water marketing programs.

It is likely that several of the six methods of water allocation will be observed in Indiana during water shortages in the next 5 to 10 years. Over time, the State can select the allocation methods that appear to generate the greatest public welfare, and design policies to implement or promote those methods. There is a large body of literature and substantial empirical evidence describing the advantages and challenges of alternative water allocation methods and policies.

The following information, based largely on the Indiana Code, might be helpful in forming preliminary ideas regarding how the State should proceed in developing comprehensive, long-term policies for allocating water during shortages. Some of the information pertains to the

notion of water use priorities, given the inclination to declare priorities for allocating scarce resources. However, the assignment of water use priorities should be viewed as one policy option within the method of allocating water by administrative rule.

B. ~~Helpful Information~~ Related Existing Authority

1. Domestic Water Use

~~During times of water shortage, the need to reduce demand on the resource can and will exist. Decisions regarding the uses which are deemed to have the highest priority will not be easy and may not be clear cut. The priority of domestic water use during a water shortage appears to be established in~~ Indiana Code 14-25-1-3, ~~which~~ provides that: **“the owner of land contiguous to or encompassing a public water course shall at all times have the right to the use of water therefrom in the quantity necessary to satisfy his needs for domestic purposes, which shall include, but not be limited to, water for household drinking purposes and drinking water for livestock, poultry and domestic animals. The use of water for domestic purposes shall have priority and be superior to any and all water uses.”** ~~The priorities of other uses must therefore be determined on some reasonable standard.~~

2. Other Beneficial Uses

~~Guidance in these decisions may~~ ~~for other water use priorities implemented during a water shortage can also~~ be found in policy statements made in both Indiana Code 14-25-1-1 and 14-25-3-3 which state: **“(a) that the general welfare of the people of the State of Indiana requires that the surface water resources of the state be put to beneficial uses to the fullest extent and that the use of water for non beneficial uses be prevented...”; and (b) “It is a public policy of this state in the interest of the economy, health, welfare of the state and the citizens of Indiana, to conserve and protect the ground water resources of the state...”**

3. Water Sales From [State Financed](#) Reservoirs

Also of potential interest is [Rule 312 IAC 6.3-4-1](#), which establishes the following water allocation priorities for withdrawals from State financed reservoirs under the provisions of IC 14-25-2:

- A) First Priority is for the use of water for domestic purposes as described in IC 14-25-1-3.
- B) Second priority is for the use of water for health and safety.
- C) Third priority is for the use of water for power production that meets the contingency planning provisions of the drought alerts described in 312 IAC 6.3-5-2.
- D) Fourth priority is for the use of water for industry and agriculture (not described in A, B, or C) that meets the contingency planning provisions of the drought alerts described in 312 IAC 6.3-5-2.

E) Fifth priority is for the use of water for a purpose described in clause (C) or (D) that does not meet the contingency planning provisions of the drought alerts described in 312 IAC 6.3-5-2.

F) Sixth priority is for the use of water for any other purpose.

4. Significant Water Withdrawal Facilities In accordance with IC 14-25-7-15, all significant water withdrawal facilities (SWWF) must register with the Department of Natural Resources and report water use annually. A SWWF is defined in the statute as “the water withdrawal facilities of a person that, in the aggregate for all sources and by all methods, has the capability of withdrawing more than one hundred thousand (100,000) gallons of ground water, surface water, or ground and surface water combined in one (1) day. In establishing priorities, emphasis must be given to high capacity water uses since these users have the largest impact on the resource. The following six (6) water use categories have been established for registered SWWFs in the State these users and include the following 7 uses:

- (1) Domestic Supply
- (2) Public Supply
- (3) Energy Production
- (4) Irrigation
- (5) Industrial
- (6) Rural
- (7) Miscellaneous

When establishing water use priorities, consideration must be given to registered SWWFs due to their potential impacts on the State’s water resources. Some of the six SWWF water withdrawal categories are not found in all of the 12 nine Water Shortage Identification Regions.

5. Instream Uses

The SWWF water withdrawal categories do not include instream uses. The optimal allocation of instream flows during water shortages requires consideration of both private and public benefits. Some instream uses such as swimming, recreational boating and aesthetic appearances might be assigned little or no priority during serious drought water shortages, but may bring the loudest public outcry. Included in these uses would be swimming, recreational boating, and aesthetic appearances. A higher priority might be assigned to maintaining minimum stream flows streamflow to prevent water quality degradation or preserve wetlands.

6. Emergency Regulation of Ground Water Rights

Some priority of use has been established for small capacity water wells (typically domestic wells) by Indiana Code 14-25-4 which provides protection for a small capacity well owner against the impacts of pumping by a one or more significant ground water withdrawal facility if the withdrawals substantially lowers ground water levels, resulting in the failure of a domestic well to provide its normal supply of water. In addition, Section 12 of the statute allows for the

restriction of pumping by a SWWF if “there is reasonable belief that continued ground water withdrawals from the facility will exceed the recharge capability of the ground water resource of the area”.

7). Indiana Department of Environmental Management Allocation Priority Considerations

It is recognized that the geographic area affected by drought conditions could vary greatly in size and distribution water resources. The prioritization of allocations should consider the nature and composition of the affected area and decisions about allocations should account for local conditions. For instance, if all of the drinking water in a drought-affected area was from ground-water sources which showed minimal effects from drought, then allocations should be made using that information and priorities outlined below should be adjusted.

- A) Health Protection - which includes water uses such as: drinking water; medical services; maintaining sanitary conditions in homes, hospitals, schools and places of business; fire protection; and other supporting mechanisms that maintain these water uses. This water use should be given highest priority.
- B) Public Safety - which includes water used for power generation to operate critical infrastructure such as: transportation; food supply; drinking water facilities; wastewater facilities; and other facilities designed to protect public safety along with essential residential uses.
- C) Commerce – which includes water used for industry and agriculture. Uses which support health protection and public safety such as production of power, medical supplies, food supplies, fuel supplies, etc., should receive primary consideration.
- D) Natural Resources – which includes water used for the maintenance of wildlife habitat. Priority should be given to unique habitats and species.

~~In managing a reduced resource in times of water shortage it is important to recognize that portions of the water utilized in each of the above segments is necessary while others are not. For example:~~

- ~~1. Drinking water for customers, health care facilities, and fire fighting is high priority while water for lawn watering and car washing is not.~~
- ~~2. Cooling water for electrical generating stations is necessary for the production of electricity; however, in times of water shortage the continuous running of air conditioners raises demand but may not be necessary for all users.~~
- ~~3. Irrigation uses involve both crop production and golf course watering. Crop production would seem to be more important than keeping green grass on a golf course.~~

~~A simple ranking of the eight above mentioned uses (instream uses being number 8) would be a simplistic approach to managing the water resource. In addition to the problems within each of these categories, within each withdrawal use, some users will be more efficient or more effective in conserving the resources.~~

B. Conclusion

It is recommended that the “water allocation priorities” established in Rule 312 IAC 6.3-4-1 be implemented during a water shortage. In addition, the following recommendations are made relative to establishing other water use priorities in times of water shortage:

1. Consideration should be given to both instream and withdrawal uses, and whether the source is from surface water or ground water.
2. All management decisions should attempt to preserve minimum stream flows ~~streamflow~~ in accordance with the discussion in the section which follows.
3. Domestic water supply shall have the highest priority.
4. All uses essential for protecting the public health, safety, and welfare shall have priority.
53. Priorities should be assessed in each ~~Water Shortage Identification~~ Region based upon existing uses. Regional advisory boards consisting of at least a representative of each water use may be created once a Water Shortage Warning is in effect.
64. Non-Essential uses should be given lowest priority.
75. Water use restrictions should be evaluated in light of the use. For example, a 10% mandatory reduction on all uses may result in a loss of a higher percentage of generating capacity at a power plant.
86. ~~Water~~ users promoting or demonstrating efficiency and/or conservation in use, or that comply with contingency planning provisions, should be given higher priority than those ~~users~~ not demonstrating such capability.
97. Existing users shall be given priority over new users ~~within each of the six water allocation priorities specified in Rule 312 IAC 6.3-4-1~~ unless such use is necessary for maintaining the public health, safety and welfare.
108. Distinctions should be made between consumptive and non-consumptive uses.
119. In accordance with IC 14-25-4-12, the ground-water resource of an area shall be protected against high capacity withdrawals that exceed the recharge capability of the resource.

C. Recommendations

- 1) Task force should establish policy that sets framework for water use priorities rather than establishing actual list for state.**
- 2) Health and Safety should have highest priority per IDEM experience (2007 drought and 2008 floods).**
- 3) State should determine existing statutory “top priority uses” and factors for establishing additional priorities.**
- 4) Priorities must be established locally/regionally to be effective, and should not be based solely on statutory requirements, but reflect available water resource (and current water use?).**
- 5) List of priorities can be modified by local/regional entities during planning process.**
- 6) Funding is necessary to assist communities establish water plans and priorities. Planning should be completed with state assistance.**
- 7) Water supply planning should be incremental. Initial regulation of SWWFs may be appropriate.**
- 8) Task force may recommend legislation requiring regional planning that includes water use priorities with implementation support by state agency staff.**