

Establish procedures to monitor, assess, and inform the public regarding water shortage events

Why should the State establish procedures to monitor, assess, and inform the public regarding water shortage events?

- Basic data is the foundation for managing natural disasters such as drought.
 - What we know about Indiana's water resource is based on hydrologic information gathered from past and present networks of precipitation stations, stream gaging stations, lake and reservoir stations, and observation wells.
- The hydrologic cycle is complex.
 - Although lakes, streams, and aquifers are often viewed as isolated water systems, the interrelated elements of atmospheric moisture, precipitation, surface runoff, surface storage, soil moisture, infiltration, evapotranspiration, and aquifer storage all comprise the total water resource.
- Both federal and state governmental entities have established networks that monitor various aspects of the hydrologic cycle: precipitation, runoff of surface water (lake, reservoir, and stream gages), soil moisture, and ground water observation wells to monitor fluctuating ground water levels.
- However, each monitoring network has been designed for a specific purpose and generally tracks only one component of the hydrologic cycle.
- Data must not only be acquired, it must be handled, stored, analyzed, synthesized, and communicated.
 - There is often a significant time lag from when data are collected and when made available for analysis. With the internet, more real-time data are now becoming available; but there is still a need for analysis and synthesis.
- The fragmented nature and highly variable operating procedures of present climatic data programs do not promote rapid and comprehensive assessments of the status of the state's water resource.
 - Such assessments are crucial during water shortage events.
- There is a need for formal agreement on procedures for sharing data in a way that promotes a comprehensive picture of hydrology in a given area, not just one component of the resource.
 - A more integrated system is needed to ensure the ready availability and proper analysis of hydrological data.
- Communications with the public and appropriate entities regarding the status of the water resource are presently operating on an **ad hoc** basis.
 - There is a lack of formal procedures to assure that appropriate entities receive timely information about the status of the state's water resource.
- Data collection networks have been reduced dramatically in recent years due to budget cuts. The stream gaging network was reduced by nearly 43%. All but a

few lake gages have been eliminated. The state's observation well network has been reduced by approximately 60%.

- The state must therefore become more efficient and make better use of the data that are available.