



THE WATER INSTITUTE  
OF THE GULF

**LOUISIANA WATER RESOURCE  
COMMISSION:  
ASSESSMENT FOR SUSTAINABILITY AND  
ENERGY MANAGEMENT**

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# ABOUT THE WATER INSTITUTE

- ◆ The Water Institute of the Gulf is a **not-for-profit, independent research institute** dedicated to advancing the understanding of coastal, deltaic, river and water resource systems, both within the **Gulf Coast and around the world.**
- ◆ Our mission supports the **practical application** of innovative science and engineering, providing solutions that **benefit society.**



# WATER IN LOUISIANA

- ◆ Louisiana is traditionally viewed as blessed with an abundance of water.
- ◆ Efforts have been made by several agencies in this state to properly manage Louisiana's groundwater and surface water resources.
- ◆ Particularly noteworthy are the efforts of the Water Resources Commission to be Louisiana's influential body in shaping the direction of water management policy going forward.
  - Additionally, these efforts are supported by multiple federal, state, and local agencies, and the NGOs and citizens engaged.



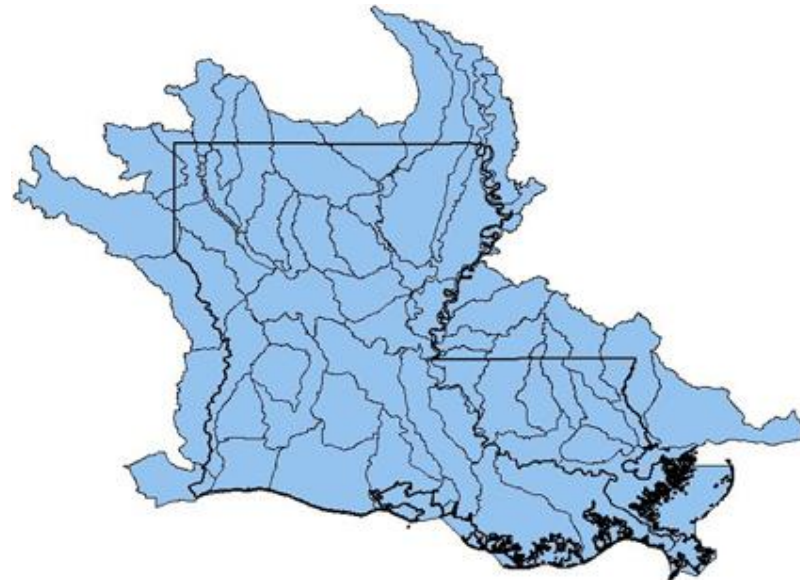
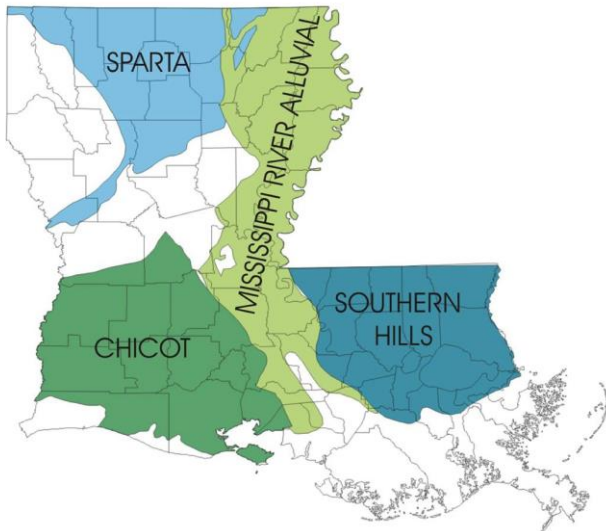
# LOUISIANA IS MORE FORTUNATE THAN MANY STATES

- ◆ But that doesn't mean we are without concerns.
- ◆ For many states there is something fundamentally broken in their water systems---they have the serious check engine light on.
- ◆ In Louisiana, it is more a cautionary light, a check your water light!
- ◆ A warning that we need to take special care of our precious water resources.



# WATER MANAGEMENT IN LOUISIANA

- ◆ Louisiana has made significant strides toward responsible management of its water resources.
  - Numerous previous studies, reports, and ongoing efforts.
- ◆ And it is moving toward even more comprehensive water management.
- ◆ In fact, Senate Resolution 171 has directed the Louisiana Law Institute to study divergence in surface and groundwater law, and make recommendations to Legislature on bringing these more closely together.



# MANAGING WATER IS DIFFICULT

- ◆ Water is vital to all living things and most economic activity.
  - Thus the laws and policies governing water can have far-reaching effects.
- ◆ Water also has unique features that make it difficult to regulate.
  - Water is mobile, linked through the hydrologic cycle, and often not confined within a single geographic boundary or political jurisdiction.
  - Its supply can vary by year, season or location.
  - A source of water can have many users, often leading to bitter conflicts over uses.
    - Determining who owns water – or has the right to manage, divert, use or sell it – can become very contentious.
  - Attempts to regulate water can lead to claims of the “taking” of private property.



# MANAGEMENT REQUIRES CERTAIN CRITICAL INFORMATION

- ◆ Water managers want to know how much water they have, how much they use, and how, when, and at what rate the water supplies are replenished.
- ◆ They want to know:
  - The amount of water that is there;
  - Where it is located;
  - What is its input, output and movement of through surface and groundwater;
  - How much is available for various uses (both natural and human);
  - What are the current and potential uses; and,
  - Most importantly, what is its future sustainability?
- ◆ This is called a Water Budget.



# LOUISIANA WATER RESOURCES ASSESSMENT FOR SUSTAINABILITY AND ENERGY MANAGEMENT

## A STEP TOWARD A WATER BUDGET FOCUSING ON PRIORITY AREAS AND ISSUES

◆ This project intends:

- To take the huge amount of data and information being generated and develop a Framework that makes it useful to decision makers
- Gauge the sustainability of water resources in light of present and projected uses
  - *Sustainability defined: A balance between use and supply that causes no further impairment to water resources, and maintains or improves the current health of these systems*
- Develop a system for analyzing and communicating these facts and figures to the public and key water managers around the state





# LOUISIANA WATER RESOURCES ASSESSMENT FOR SUSTAINABILITY AND ENERGY MANAGEMENT

## PROJECT METHODOLOGY

- ◆ **Activity 1.** Develop a Framework for appraising the health and sustainability of Louisiana's water resources.
- ◆ **Activity 2.** Review of Data Sources/Availability and select certain hydrologic units for detailed assessment.
- ◆ **Activity 3.** Conduct the appraisal of the hydrologic units selected through application of the Framework.
- ◆ **Activity 4.** Prepare a report that describes the Framework, its application to specific selected hydro units, and the resulting assessment of water resources sustainability.



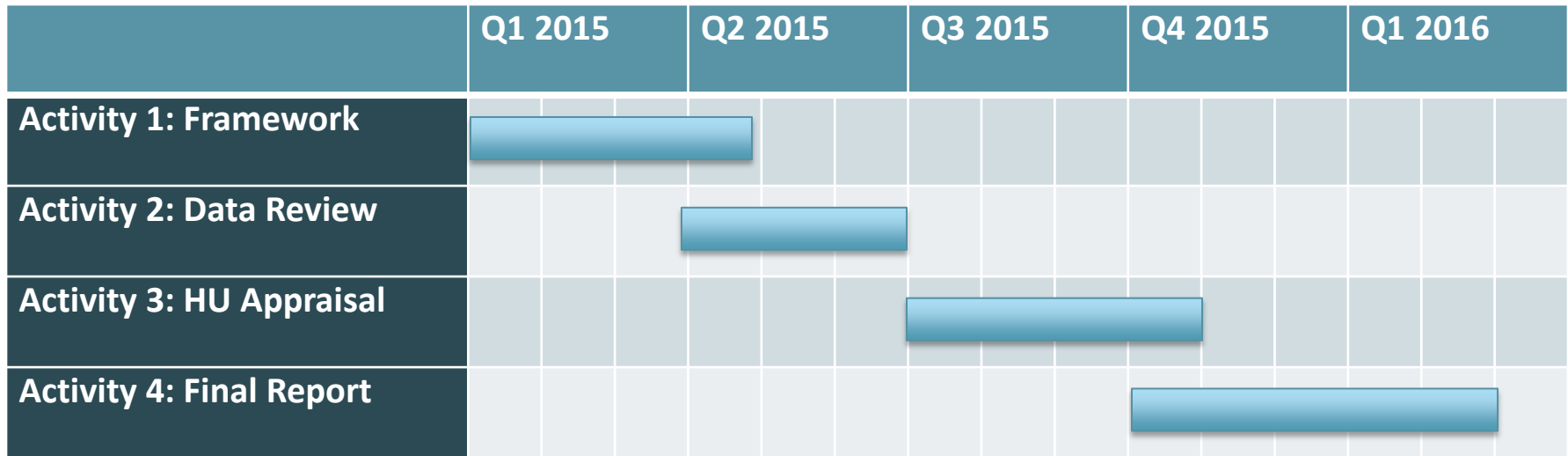
# LOUISIANA WATER RESOURCES ASSESSMENT FOR SUSTAINABILITY AND ENERGY MANAGEMENT

## REPORT

- ◆ Report will describe a management framework, its application to the specific selected hydrologic units, and the resulting assessment of water resources sustainability. It will include:
  - An overall description of the process used to conduct the assessment;
  - Recommendations regarding additional information needed to improve the accuracy and reliability of data used to derive the appraised values.
  - Examples of approaches to synthesizing results from various hydrologic units to effectively present trends in supply availability and/or use categories of special interest.
  - Example applications designed for use in developing priorities for future management activities that will account for economic and population growth while supporting a sustainable water supply and controlling the cost of the energy needed to provide that supply.



# TIMELINE OF KEY ACTIVITIES





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