

## **Great Lakes Sustainable Water Planning Project: Supporting integrated resource planning within water supply, wastewater and stormwater planning**

### **Project Summary:**

This project aims to explore viable options for improved incorporation of integrated resource planning (IRP) within water supply, wastewater and stormwater management utilities in order to better manage the economic efficiency of utilities and conserve water resources in the Great Lakes region.

IRP encompasses least-cost planning concepts by ensuring demand-side initiatives are treated equally along side supply-side projects. IRP also emphasizes the importance of 1) scenario planning 2) establishing a more open and participatory decision-making process and 3) coordinating the many institutions that govern water resources. Sometimes referred to as integrated water resource planning and management, these terms can and have been used interchangeably. Two different, but similar working definitions of this type of methodology are listed below:

**Integrated resource planning (IRP)** “is a comprehensive form of planning that encompasses least-cost analyses of demand-side and supply-side management options as well as an open and participatory decision-making process, the development of water resource alternatives that incorporates consideration of a community’s quality of life and environmental issues that may be impacted by the ultimate decision, and recognition of the multiple institutions concerned with water resources and the competing policy goals among them. IRP attempts to consider all direct and indirect costs and benefits of demand management, supply management, and supply augmentation by using alternative planning scenarios, analyses across disciplines, community involvement in the planning, decision making, and implementation process, and consideration of other societal and environmental benefits.

IRP includes planning methods to identify the most efficient means of achieving the goals while considering the costs of project impacts on other community objectives and environmental management goals. These planning methods specifically require evaluation of all benefits and costs, including avoided costs and life-cycle costs.”

– AWWA White Paper on IRP

“IRP is a continuous process that results in the development of a comprehensive water resource management plan. It identifies and gives balanced consideration to supply and demand management planning alternatives. It includes analyses of engineering, economic, societal, and environmental costs and considerations while balancing the needs of competing users and multiple objectives of the use of the resource. It is an open and participatory process involving all stakeholders and striving for consensus, while encompassing least-cost analyses of short- and long-term planning options, and satisfying utility and regulatory policy goals. Finally, IRP explicitly seeks to identify and manage risk and uncertainty and provides for coordination of planning between water and wastewater utilities in a specific region.”

This project intends to make a strong economic case for the improved decision making process and planning methodology, which IRP can provide. By exploring current opportunities and barriers for these practices regionally, this work strives to improve sustainable water management practices within the Great Lakes region.

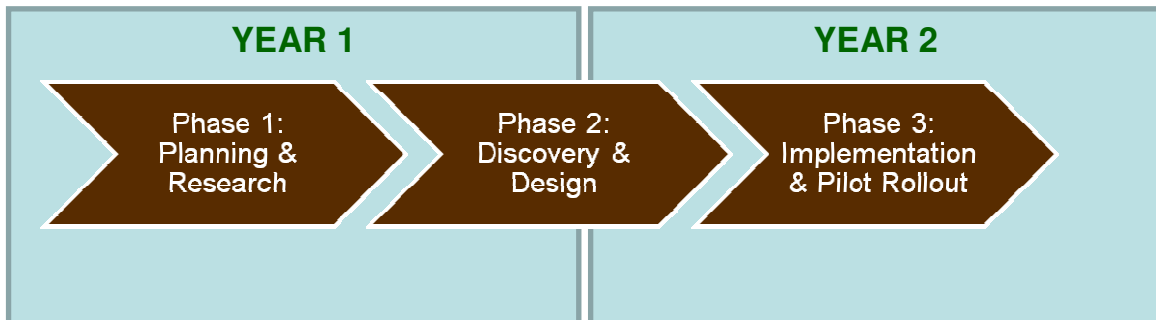
### **Project Goals:**

- Help shift water resource planning and management to a more service-oriented, transparent, and economically sound approach that equally explores the costs and benefits of both demand-side and supply-side strategies.
- Take initial steps in putting these strategies into action
  - o Promote adoption of policy recommendations within the region
  - o Engage local and regional practitioners in rolling out case studies, which incorporate methods and ideas established during the project

### **Project Activities:**

- Adapt workable integrated resource planning (IRP) principles from the energy and transportation sectors in order to maximize investment efficiency within water management.
  - o Identify IRP success stories within the energy, transportation, and water sectors
- Identify best practices in investment and implementation of IRP
  - o Develop or promote methods for identifying accurate full costs and benefits of conserved water and reduced treatment/infrastructure (in order to better compare with supply-side investments)
- Identify options for regional strategies of implementing IRP.
  - o Understand structural and regulatory opportunities and barriers to IRP within the regions water, wastewater and stormwater sectors
  - o Assemble municipal, regional, state, and federal policy measures that can make these practices a standard for water supply, wastewater, and stormwater managers in making water infrastructure investment decisions
- Gather policy and industry experts in a series of workshops to:
  - o Explore scaleable IRP strategies
  - o Identify best practices that integrate water supply, wastewater and stormwater regional planning
  - o Incorporate improved stormwater management via green infrastructure as a viable and preferred solution within this planning methodology
  - o Define policies and practices that move water agencies and customers towards IRP approaches
- Engage local and regional entities that have the potential and ability to put these practices and policies to work

- Begin the rollout of 2 sample projects within the region
- Advocate for policy that supports IRP and green infrastructure



### Project Deliverables:

- Report(s) highlighting:
  - Research
  - Advisory group activities/findings
  - Policy recommendations
  - Existing or potential web-based tools for assistance
- \* Working paper highlighting IWM to stimulate further discussion and activity
- \* Potential handbook outlining the tools and methods for best practices in integrated resource planning within water, wastewater and stormwater sectors?

### Potential Project Support:

- Great Lakes Compact requirements for water conservation
- New federal legislation may provide an opportunity to insert IRP initiatives
- Current economic crisis and infrastructure needs opens door to implement more economically efficient requirements within water infrastructure planning & policy
- Growing acceptance of scaleable green infrastructure as it relates to stormwater management
- Water industry is a rising-cost sector; viable, economically efficient planning is necessary for the future.
- Regional planning agencies around Lake Michigan coming together to plan – opportunity to use this platform to push the initiative
- Growing understanding of IRP within the water sector through popular press material & AWWA support