

## **ILLUSTRATIVE PROJECT IDEAS**

### **HEALTHY USES, HEALTHY WATERS**

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By way of illustration, ideas for potential projects are outlined below. These are meant to provide examples of what teams might do, and are neither a desired list of activity nor a “preferred” project list.

- A project could organize a process for chosen industrial or economic sectors to continuously improve their efficiency in water use through conservation strategies by driving down natural resource impact per gallon. The team could develop a set of measures for the water resource impacts of categories of economic activity. These measures could be estimated as basin-wide benchmarks that would be, in essence, the average water impact for a given activity or industry type. Individual plants, value chains or cities could use the practices available to them to manage those impacts and measure the results. The team could compare results to the benchmarks to measure progress. Such work might support or be used in a water use certification scheme.
- A project could design and pilot a series of water conservation and efficiency measures for one or more key industrial sectors in the basin. Based on pilot efforts, the team could create a series of technical support documents that describe current typical uses of water in a given sector of the economy and lay the basis for assessing the efficiency of current and proposed uses of water and where, if economically feasible, conservation opportunities exist.
- A project might create a system to track the water impacts of particular crops (i.e., those that are used to produce biofuels, prepared foods and/or dairy products) throughout the product lifecycle. The water impacts of the cropping system; the transportation and storage of feedstock; the refining process; and the distribution, sale, and use of the crops would be catalogued and made available for purchasers. The team could establish a “buyers club” or product label/brand based on these principles. This general idea could also be tried for paper products, water supplies, and trade in live organisms.
- A project could create and test accounting systems to show impacts upon a particular water resource by users, by an investment, or by a purchaser of a good or service. These systems would create measures of water withdrawal impacts, as well as water pollution and discharge impacts. Ideally, this system would be tested in a number of settings in the basin as a way of shaping basin-friendly behavior.
- A project might identify how various categories of water use relate to one another so that the consequences of a particular use are understood in terms of other uses that are either facilitated or foreclosed. For example, one use might eliminate others, as irrigation could impact the ability of others to irrigate or use a well for drinking water. Other uses necessitate complementary uses, like how a public water supply requires a discharge of treated wastewater, which could, in turn, impact other

potential users. In a system where water is used many times before it leaves, understanding how uses affect one another is critical to meeting the objectives of the Great Lakes Compact. A team could explore how categories of users could change behavior to increase the value of downstream uses.

- A project could analyze the various ways water creates wealth in the basin, identify where the economic gains are greatest, what costs are assigned to the public, and explain why. Ideally, the project would test ways to replace high public costs with high public benefits. Such work would include ways to assess and minimize all impacts associated with water use, including consumption of electrical power and related emissions; the infrastructure development needed or avoided; and other negative natural resources impacts. The project would also test how to maximize contributions to resource health.
- A project could test the effectiveness of green infrastructure or other management techniques using one or more of the measures created in past Fund-supported work, and/or other techniques. Such work would illustrate how the path that water follows across or through the land determines the ecological health of streams, rivers, and lakes and evaluate how well different measures of hydrologic integrity perform in different places. Such work would create a new water use framework that includes drainage as a category of use, and/or creates ecosystem service markets around these practices. Such work should also be designed to anticipate, and prepare for, likely changes in climate and associated changes in precipitation, stream energy, and channel dynamics.
- A project could pilot a new public utility model that includes water productivity and resource improvement as specific objectives. Such a utility might integrate drinking water supply, wastewater treatment, runoff management and other services at a watershed scale. The team would design this work to achieve a set of environmental objectives including flow restoration, biological and chemical water quality endpoints, and reduction in emissions due to decreases in power consumed.
- A project could demonstrate how groups using shared groundwater resources can adapt to more users without impacting the health of conjoined surface waters. For example, a team could expand and test the water withdrawal impact assessment system developed in Michigan (visit <http://www.miwwat.org> to learn more) to other areas of the basin.
- A team could create a tool that targets the kinds of water uses the region should be attracting and indicates or suggests appropriate watershed locations for these uses, based on the compatibility of the uses with the locations. A team could identify various water types in the basin, develop key use-response relationships, and overlay the water requirements of various industrial sectors. Such a tool would match the water needs of a particular use to the hydrologic systems that could support, and perhaps benefit from, that use. This could create a “preferred” user scheme that could attract new industries to the region.

- A team could create a hierarchy of water use “offsets” to aid companies that have made commitments to water neutrality in their product value chains. The team would survey the basin for opportunities for these businesses to use water differently, develop protocols for measuring resource responses to these new uses, and create a registry of opportunities to test different water use scenarios. A pilot test could demonstrate the impact of water neutrality pledges.