SERVICE AREA

Statement of Qualifications: Water and Agriculture

SELECTED PROJECT SUMMARIES

As demands on limited water resources increase in the face of development, population growth and climate change, effective water resource management is essential for sustainable food production in both rain-fed and irrigated agricultural systems. LimnoTech is recognized as a leader in the development of customized decision-support tools including computer models, and we have pioneered new data collection and analysis techniques. We bring the best science, technology and innovation to all our projects, to support sound investments that lead to sustainable and resilient outcomes. Selected project examples that illustrate our capabilities in this area are provided below.

Improved Irrigation and Sustainable Water Assessments in India for International Finance Corporation

Limited water resources contribute to significant food security challenges in India, as agriculture accounts for 85% of the nation's water consumption. Water tables are declining and climate change, population growth with rising incomes, and increased water use put food security and local livelihoods at risk. LimnoTech was contracted by The International Finance Corporation (IFC), an investment and advisory partner for Jain Irrigation Systems. In collaboration with The Nature Conservancy, we conducted a water footprint assessment that measured water consumption across the supply chain of dehydrated onion production, assessed the sustainability of water use, and developed recommendations for improving sustainable water supplies. The work included a training workshop and field visits in Maharashtra.

The team developed a suite of response strategies to alleviate water scarcity and improve the sustainability of water use in the region including: increased use of drip irrigation by existing onion farmers; support for the government's push for new, less water-intensive cropping strategies, which will reduce overall groundwater consumption; increased use of rainwater harvesting and aquifer recharge projects to improve supply reliability; and support for more effective water resource management through establishment of a River Basin Water User's Dialogue. The final IFC/Jain Irrigation report is available for download at: http://www.limno.com/pdfs/Jain_Irriga_2010_WaterFtprnt.pdf

Development of Water Benefit Certification Drip Irrigation Methodology

LimnoTech is serving as a scientific advisor to First Climate in Germany, a carbon asset management and climate neutral service provider. First Climate is working with the Swiss Agency for Development and Cooperation (SDC) to develop a new and innovative financing mechanism for water projects, including improved agricultural practices that improve food security. The "Water Benefit Certificate" (WBC) mechanism is managed through a Public Private Partnership called "Water Benefit Partners." Each credit certifies that a volume of water has been supplied, purified or saved. LimnoTech's role is methodology development and application to ensure credible defensible claims. We are currently developing a methodology for WBC projects in India that replace water-intensive irrigation techniques with drip irrigation systems to increase water productivity. LimnoTech recently presented during a workshop and participated in a site visit in India where the methodology is being tested. This financing mechanism will allow water project financing to be linked to measurable and verifiable project benefits that account for water savings and increased crop productivity.

Support to Coca-Cola's Water Stewardship and Sustainable Agriculture Programs

The Coca-Cola Company set an ambitious water neutrality goal in 2007, referred to as the "Replenish target." LimnoTech developed and is applying the technical framework for quantification of replenish benefits to demonstrate progress

LimnoTech is helping to develop agricultural systems that will provide water savings and increased crop productivity.

LimnoTech is developing and applying sophisticated watershed models to project potential benefits of conservation strategies and best management practices.

toward this 2020 goal. Over the past five years we have conducted field visits, collected data, and quantified benefits for hundreds of Community Water Partnership projects across the globe that the company is implementing by leveraging partnerships with USAID (e.g., Project RAIN in Africa), World Wildlife Fund and numerous other organizations. In addition to technical support, LimnoTech has prepared user-friendly guidance documents and conducted a series of international "Replenish workshops" to help business units, bottlers and partners understand the program and quantification methods, and learn how to be strategic in the selection of future projects.

Many replenish projects are focused on increased efficiency and sustainable food production in irrigated agricultural systems. LimnoTech collects and synthesizes large volumes of data and quantifies the water savings of these activities. As an example, Coca-Cola in partnership with The Nature Conservancy supports Latin America Water Funds, where water users pay into conservation funds to ensure sustainable safe water supply for agriculture and other uses.

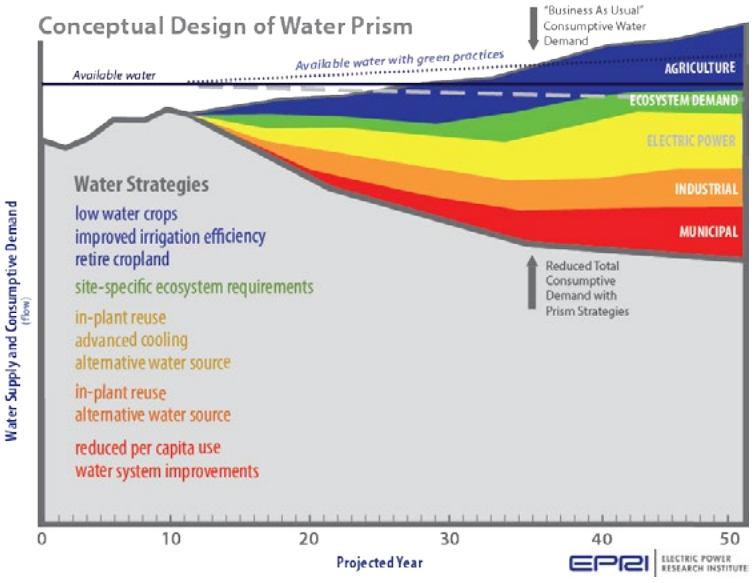
LimnoTech is also directly supporting Coca-Cola's ongoing sustainable agriculture initiatives. The company has set a target for all key ingredients to be 100% sustainably sourced by 2020. We are currently providing technical support for development of a customized sustainable agriculture standards tool that will be used in working with Coca-Cola's suppliers to improve the sustainable production of key ingredients. We also conducted a water footprint assessment for two orange juice products to help Coca-Cola understand water use across the supply chain, and support increased and expanded efficient and sustainable food production in regions with limited water resources. The project involved collection and synthesis of a significant volume of data and information on water use in a complex supply chain spanning four countries. The results highlighted how water use varies by region, identified where water use is greatest in the supply chain, and highlighted how water use overlaps with regions with limited water resources. The project demonstrated that most water use is associated with crop production, and outcomes supported the need for a corporate sustainable agriculture initiative.

Support to Chiquita for Improvements in Rain-Fed and Irrigated Agriculture

In collaboration with World Wildlife Fund (WWF) International, LimnoTech conducted a water footprint assessment of bananas produced in Central America and lettuce produced in the U.S. The objective was to compile critical baseline water data and related information to help validate the importance of further engagement on water issues, identify key priority areas, and provide a high level indication of best practices. The results support an improved understanding of the differences between growing regions in terms of water requirements and also to show the benefits of various irrigation practices and technologies to mitigate impacts of climate change. Chiquita is currently building on the results to support development of a corporate water strategy.

Water Prism Decision Support System for Multi-Sector Water-Saving Strategies

Thet two largest water users in the U.S. and globally are agriculture and energy. To address the challenges of sustainable water managment, the EPRI reasearch institute recognizes that effective water resources management is key to sustainable outcomes for all sectors. LimnoTech developed a decision-support system ("Water Prism") to evaluate benefits of multi-sector water-saving strategies



LimnoTech developed a decision-support system ("Water Prism") to evaluate benefits of multi-sector water-saving strategies and support the design of programs that minimize competition and conflicts over water.

and support the design of programs that minimize competition and conflicts over water. Water Prism scenarios are constructed to explore how the implementation of various water-saving strategies in all sectors especially agriculture and energy may result in a shift of the demand curve so that water needs will be met within the bounds of available supply. Although Water Prism was designed to support decision-making to be used at a watershed scale to evaluate the benefits of measures that are implemented by agricultural, and energy producers, municipalities and other large water users.

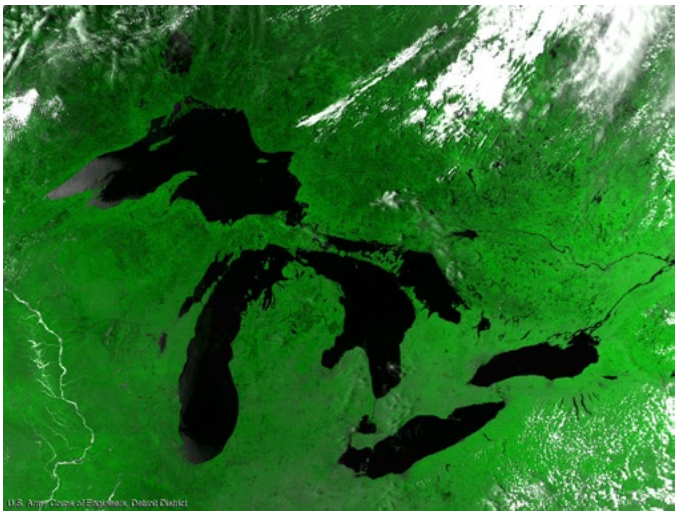
Development of a Great Lakes Watershed Ecological Sustainability Strategy

LimnoTech, in collaboration with The Nature Conservancy and Michigan State University, is developing key aspects of a Great Lakes Watershed Ecological Sustainability Strategy (GLWESS) within the agricultural regions of the Great Lakes. The strategy calls for identifying and quantifying the extent to which watershed restoration actions for a given watershed will reverse or mitigate the impacts on water quantity, water quality, and biological communities, and will improve watershed and coastal ecosystem function. We are examining the potential for three categories of market-based transactions to successfully implement the strategy. This will be accomplished through the development of modeling tools to quantify the ecological benefits of agricultural BMPs, optimization of their deployment in a given watershed, and exploration of the concept of agricultural certification and testing of three transactions to encourage implementation of these activities in the Great Lakes Basin.

Water Quality Modeling to Address Eutrophication Issues in Agricultural Watersheds

LimnoTech is recognized as a leader in water quality modeling, with 40 years' experience in the development and application of watershed, hydraulics, water quality, and sediment transport models. Water quality modeling is widely used in agricultural watersheds to link sources of nutrients and other contaminants with actions on the land and the associated water quality response quality of receiving water bodies.

As an example, LimnoTech is developing an Agricultural Management Watershed Model to support improved water quality in the Maumee River watershed in Ohio and Western Lake Erie Basin. The watershed is 80% agricultural, and long-term farming practices including use of fertilizers have contributed to sedimentation, nutrient enrichment and algal blooms in receiving waters. To support effective water resource management, LimnoTech is developing and applying sophisticated watershed models that simulate erosion and sediment delivery pathways and loads; simulate



LimnoTech is helping to develop a strategy to identify and quantify the extent to which watershed restoration actions for a given watershed will improve watershed and coastal ecosystem function.

fate and transport of nutrients; and project potential benefits of conservation strategies and best management practices under various future scenarios. This effort requires collection and synthesis of large data sets including high-resolution elevation data obtained during Space Shuttle flights. When completed, the model will be used to evaluate agricultural management practices, and performance of land treatment (site-specific conservation practices) on reducing erosion and sediment and nutrient delivery