# 14th World Lake Conference

## First Announcement

# *"Lakes, Rivers, Groundwater and Coastal Areas: Understanding Linkages"*

**October 31 - November 4, 2011**
**Austin, Texas USA**

**Organizers:**

**River Systems Institute, Texas State University**
**International Lake Environment Committee Foundation**

RIVER SYSTEMS INSTITUTE
Texas State University

ILEC

## PREFACE

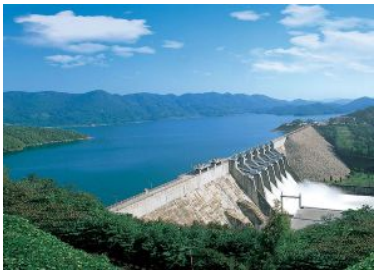
The World Lake Conferences, a biennial global-scale event co-organized by local host organizations and the International Lake Environment Committee Foundation (ILEC) have previously been held in Argentina, China, Denmark, Hungary, India, Italy, Japan, Kenya and USA. The 14th World Lake Conference will be held in Austin, Texas, USA, during October 31 - November 4, 2011, co-sponsored by ILEC and the River Systems Institute - Texas State University. Anticipated participation in the conference includes international, national and state agencies, non-governmental organizations, academic institutions, private sector representatives and other water stakeholders.

## CONFERENCE THEME AND OBJECTIVES

Lakes and reservoirs are major water systems, containing at any given instant more than 90% of the liquid freshwater on the surface of our planet. They provide humanity with a greater range of life-supporting ecosystem services than any other water systems. They also are more sensitive to degradation from the impacts of human activities, such as population growth, urbanization and industrialization, and agricultural production than other types of water systems. Used for more purposes than other water systems, they also exhibit the greatest potential for water use conflicts. Manmade lakes (reservoirs) are especially prominent since they can be more readily manipulated for management purposes than natural lakes.

At the same time, it is important to recognize that lakes, whether natural or manmade, are not isolated water systems. Rather, they are dynamic water systems, hydrologically linked to other water systems, both upstream and downstream. Lakes are used to supply drinking water, irrigate crops, provide fisheries, fuel industry, provide recreational outlets, produce hydroelectric power, and serve as transportation corridors. Because of such multiple uses, they receive water and pollutant inputs from upstream portions of their basins via inflowing rivers and groundwater aquifers. In turn, their discharges can affect downstream rivers, groundwater aquifers and coastal areas. Thus, the structure and function of all these water systems, and the ecosystem services they provide to humanity, depends significantly on the hydrologic linkages between the still (lentic) and flowing (lotic) waters that characterize them. This hydrologic reality requires that we assess and manage lakes and their upstream and downstream waterbodies in an integrated manner that recognizes and considers their linkages. This approach must not only consider the relevant scientific and technical issues, but also the socio-economic and governance elements that control our use of these linked water systems for meeting human water demands, and for maintaining the viability of aquatic ecosystems.

ILEC's World Lake Conferences provide an interactive forum for the diverse group of people and organizations in both developed and developing countries to exchange their knowledge and experiences on important lake science and management issues. The 14th World Lake Conference continues this long tradition. It also addresses an exciting new topic, however, in emphasizing the hydrologic linkages between lakes and their upstream and downstream water systems (rivers, groundwater aquifers, coastal areas), as highlighted in the title of the conference, ***"Lakes, Rivers, Groundwater and Coastal Areas: Understanding Linkages."*** The global perspective of the conference will facilitate discussions of the environmental and socioeconomic status of lakes and reservoirs, their linked upstream, downstream surface and sub-surface water systems, and their complex, and sometimes competing, uses. ILEC has been exploring these transmedia lentic-lotic linkages and interactions, and their management implications, over the past several years in a global study, and will highlight their interesting results at the conference.



Another unique feature of the 14th World Lake Conference is that all lakes in Texas are manmade (reservoirs), being used for multiple purposes to meet both human and ecosystem water needs. The assessment and management characteristics of reservoirs differ from those of natural lakes. The average annual precipitation ranges from 7-fold across the state (more than 1,400 mm in the forested region of East Texas to 200 mm in the mountainous, desert West Texas region). Large portions of the state also are subjected to recurring and unpredictable droughts. Thus, Texas reservoirs serve a wide range of water needs, being subjected to a range of water quantity and quality stresses. The experiences of managing multiple-use Texas reservoirs under these varying conditions are another major conference topic. Bordering Mexico, the 14th World Lake Conference also provides a gateway to Latin America, offering the opportunity to discuss lake and reservoir issues in Central and South America.

## CONFERENCE ACTIVITIES AND EVENTS

The anticipated events to take place at the 14th World Lake Conference include the following:

- Plenary Lectures, including Invited Guest Expert Speakers;
- Thematic Sessions on a Wide Range of Lake/Reservoir Scientific, Technical, Socio-economic, Management and Governance issues;
- High-Level Government Dialogue and/or Round Table;
- Poster Session;
- Student Session on Water-related Issues;
- Water-related Equipment and Technology Exhibition Area
- Mid-conference field trip to Highland Lakes, Edwards Artesian Aquifer System and Other Waterbodies;
- Banquet and Cultural Events;
- Pre- or Post-conference Workshops (to be confirmed);
- Special Excursions for Accompanying Spouses (to be confirmed).

## CONFERENCE TOPICS (PROPOSED)

With emphasis on the lotic-lentic linkages that comprise lakes and their basins, the following topics are being considered for discussion at the 14th World Lake Conference:

- Comparative Limnology of Lakes/Reservoirs in Temperate, Tropical and Arid Regions
- Reservoir Assessment and Management in Arid Regions
- Lake/Reservoir Aquatic Biodiversity and Invasive Species Issues
- Lake/Reservoir Basin Governance Issues (Institutions; Policy; Stakeholder Participation; Sustainable Financing; Information; Technology)
- Integrated Lake Basin Management (ILBM)
- Linkages and Interactions Between Lakes/Reservoirs, Rivers, Groundwater Aquifers and Coastal Areas
- Lake/Reservoir Ecosystem Goods and Services
- Facilitating Sustainable Use of Lakes/Reservoirs and Their Basins
- Climate Change Implications for Sustainable Use of Lakes/ Reservoirs and Their Basins
- Lake/Reservoir Basin Management Tools (Models, GIS, etc.)
- Hard and Soft Lake/Reservoir Basin Management Approaches
- Eco-Friendly Lake/Reservoir Restoration Technologies in Varied Environmental Settings
- Lake/Reservoir Physical Mixing and Transport Processes

- Land Uses and Impacts in Lake/Reservoir Basins
- Indigenous Peoples and Cultural Issues Relevant to Lake/Reservoir Basins
- Emerging Lake/Reservoir Basin Issues (Health and Personal Care Products, etc)
- International Dimensions of Integrated Lake Basin Management (ILBM)
- Lake/Reservoir Monitoring Challenges

Presentations on these topics, and other topics consistent with the overall objectives of the 14th World Lake Conference, are invited. Further conference information, including instructions regarding submission of abstracts, will be provided in the 2nd Announcement, anticipated for distribution in January, 2011. Depending on the topic, the authors of selected presentations will be invited to submit an expanded version of their presentation for possible publication in the peer-reviewed ILEC Journal, *Lakes and Reservoirs: Research and Management.*

**INTERNATIONAL SCIENTIFIC ORGANIZING COMMITTEE**

Although it will be supplemented by other individuals as conference organization continues, current members of the International Organizing Committee include the following (listed alphabetically):

- ALADIN, Nikolay, Professor, Zoological Institute, Russian Academy of Science, St. Petersburg, Russia
- AZEVEDO, Sandra, Professor, Biophysics Institute, Federal University of Rio de Janeiro, Brazil
- CARRERA, Eduardo, Chief Executive Officer, Ducks Unlimited of Mexico, A.C. Mexico
- DIOP, Salif, Head, Ecosystems Section, Division of Early Warning and Assessment, UNEP, Nairobi, Kenya
- HAMANAKA, Hironori, Director General, International Lake Environment Committee Foundation, Japan
- JIN, Xiangcan, Chinese Research Academy of Environmental Sciences, Beijing
- JUAREZ-AGUILAR, Alejandro, President CORAZON de la TIERRA, Mexico
- MAGADZA, Chris, Retired Professor, University of Zimbabwe, Harare
- MATSUI, Saburo, Emeritus Professor, Kyoto University, Japan
- NAKAMURA, Masahisa, Professor, Research Center for Sustainability and Environment, Shiga University, Japan, and Chair, ILEC Scientific Committee
- NASELLI-FLORES, Luigi, Professor, Department of Botanical Sciences, University of Palermo, Italy
- OLAGO, Daniel, Senior Lecturer, Department of Geology, University of Nairobi, Kenya
- PATIÑO, Carlos, Mexican Institute of Water Technology (IMTA), Moreles, Mexico
- RAST, Walter, Professor, Aquatic Resources Program, Texas State University, USA and Vice-Chair, ILEC Scientific Committee
- ROBARTS, Richard, Director, UNEP Global Environment Monitoring System (GEMS)/Water, Canada
- SANTOS-BORJA, Adelina, Chief, Research and Development, Laguna Lake Development Authority, Manila, Philippines
- VIDAL, Omar, Executive Director, WWF-Mexico, Mexico City
- SKINNER, Juan, Vice-President, Lake Atitlan Environmental Protection Society, Guatemala
- WATANABE, Tsugihiro, Professor, Research Institute for Humanity and Nature, Japan

## LOCAL CONFERENCE ORGANIZING COMMITTEE

Although it will be supplemented by other individuals as conference organization continues, current members of the Local Organizing Committee include the following (listed alphabetically):

- BONDY, Karen, Director of Water Resources, Lower Colorado River Authority, Austin
- CARDENAS, Adele, Senior Policy Advisor, U.S. Environmental Protection Agency
- CHARLES, Joni, Associate Professor, Department of Finance and Economics, Texas State University
- HODGES, Ben, Department of Civil, Architectural and Environmental Engineering, University of Texas
- LIND, Owen, Professor, Department of Biology, Baylor University
- LOPES, Vincent, Professor, Environmental Studies, Texas State University
- MENDELMAN, Eric, Program Manager, River Systems Institute, Texas State University
- MIX, Ken, Assistant Professor, Department of Agriculture, Texas State University
- MOLTZ, Heidi, Senior Water Scientist, Interstate Commission on Potomac River Basin, Maryland
- PULICH, Warren, Estuarine Scientist, River Systems Institute, Texas State University
- RAST, Walter, Professor, Aquatic Resources, Texas State University, and Vice-Chair, ILEC Scientific Committee
- ROBERTS, Susan, Groundwater Resources Scientist, River Systems Institute, Texas State University
- SANSOM, Andrew, Director, River Systems Institute, Texas State University
- SMITH, Chad, Assistant Professor, Sociology Department, Texas State University;
- THORNTON, Jeffrey, Environmental Planning, Southeast Wisconsin Regional Planning Commission
- VOTTELER, Todd, Director of Water Policy, Guadalupe-Blanco River Authority, Seguin, Texas
- WARREN, Emily, Associate Director, River Systems Institute, Texas State University

## FURTHER CONFERENCE DETAILS

The participation of other international, national and state-level partners is anticipated as the conference is further developed. The language of the conference will be English. Further details about the 14th World Lake Conference are provided on the conference website: www.rivers.txstate.edu/wlc14.

## CONFERENCE VENUE – AUSTIN, TEXAS

The venue for the 14th World Lake Conference is the picturesque capitol city of Austin, in the 'Lone Star State' of Texas. The city offers a range of interesting and exciting attractions. The state capitol building in Austin is a replica of the national capitol, except that it stands nearly three meters higher. Located in central Texas, Austin is situated along the six coupled Highland Lakes, a major cascade reservoir system in central Texas. A myriad of rivers and springs are also located in the immediate proximity. Austin is home to the Texas legislature, and major national and state water agencies, civic organizations, and binational authorities. It also contains the home campus of the University of Texas (UT), the largest university in the USA, nationally renowned for its water-related programs and research facilities. The UT campus is the home of the largest national presidential library, housing papers and memorabilia of Lyndon Baines Johnson, 36th President of the USA. The city also contains an historic entertainment district, the center of Austin's live music, and many casual dining spots and university student night clubs. The nearby "Warehouse District" boasts many restaurants, several microbreweries, old fashioned pubs, and coffee houses.

## ABOUT ILEC

ILEC's broad vision is that all lakes and reservoirs in the world be managed and conserved on a sustainable basis for the long-term and future benefit of all mankind. Its continuing mission is to advance international cooperation to conserve lake environments, and promote environmentally-sound management of world lakes, through encouraging investigations and research on rational and suitable methods for harmony between environmental management and sustainable development, and scientific knowledge on lake environments internationally. In pursuit of this mission, ILEC has been involved in lake basin management activities for many years, including organizing past World Lake Conferences, preparing and publishing lake management guideline books, maintaining its global Lake Data Base, and developing and elaborating international lake basin scientific and management projects, including 'Integrated Lake Basin Management' (ILBM). These activities have been implemented jointly with a range of organizations, including the Global Environment Facility, World Bank, UNEP, and Japanese, Kenyan, Indian, Chinese and other government agencies, among others.

## ABOUT TEXAS STATE UNIVERSITY - RIVER SYSTEMS INSTITUTE


Texas State University is the largest institution in the Texas State University System, and the state's 5th largest university. The River Systems Institute (RSI) at Texas State University is the integrating mechanism for the University's multi-disciplinary expertise in aquatic resources assessment and management. It lies in close proximity to a range of linked freshwater systems–San Marcos Springs emerge on the university campus as an outflow from the Edwards Aquifer, one of the most prolific artesian aquifers in North America. It flows into Spring Lake, the headwaters of the San Marcos River, both also originating on the university campus. The RSI is located about 45 km from Austin, its legislature, and its myriad of national and state water agencies, a critical requirement for its mission of facilitating access to the many stakeholders concerned with finding solutions to real-world water issues.

## CONTACT INFORMATION

**River Systems Institute**
**Texas State University**
601 University Dr.
San Marcos, Texas 78666-4616
USA
Tel: +(1-512) 245-9200
Fax: +(1-512) 245-7371
Website: http://www.rivers.txstate.edu/wlc14
Email: wr10@txstate.edu

**International Lake Environment Committee Foundation (ILEC)**
1091 Oroshimo-cho, Kusatsu
Shiga 525-0001
JAPAN
Tel: +(81-77) 568-4567
Fax: +(81-77) 568-4568
Website: http://www.ilec.or.jp/
Email: WLC14@ilec.or.jp