

### 3rd. Announcement

#### Introduction

In Mexico there is a natural average availability of 4,312 m<sup>3</sup>/person/day of water, which is more than European countries but less than the USA or Canada. It is important to state that availability should be analyzed from three angles; space and time distribution and region of service for supply.

Most of the rainfall in our country is during the summer, while the rest of the year it is relatively dry which further separates supply and demand. While some regions in the country have abundant rainfall and low population density, other regions are just the opposite. This shows that the real availability for each person is very different throughout the country and throughout the year. Nowadays about 70% of water used in Mexico for cities and rural communities comes from aquifers, supplying almost 100 million inhabitants.

Considering the importance of water as social and economic wellbeing with demand, scarcity and deterioration, it is important to study and develop techniques that lead us to a sustainable water use, considering reusing and managed replenishment as alternatives for scarcity and to mitigate the disparity between supply and demand.

In this context, in recent years, some effective methods have been developed for aquifers like managed aquifer recharge (MAR). MAR covers a wide variety of systems in which water is intentionally introduced into aquifers in order to increase availability and quality of water, among other objectives. The development of this idea, in our country and internationally has resulted in many new systems and techniques for aquifer replenishment. In Mexico, there are already projects using MAR, such as: San Luis Río Colorado, la Región Lagunera, San Luis Potosí, el Valle de México y los Valles Centrales de Oaxaca.

**The analysis group of MAR from UNAM Water Network** has the goal to promote and develop these kinds of projects exchanging all the information related to this in our country and promoting technical meetings to exchange experiences from throughout Mexico and from our international colleagues.

To meet this objective, there will be a technical conference to exchange experiences about MAR, among a multidisciplinary group of professionals and investigators that can debate the advantages and disadvantages of applications and recommendations of MAR as a goal at multiple levels. This meeting is part of Technical Meeting of Water of UNAM (<http://www.agua.unam.mx>). In this meeting we also want to work on an international proposal to develop a larger forum in Mexico, International Symposium on Managed Aquifer Recharge (ISMAR9), and also to establish the objectives to form a National Association about MAR.

This is a THIRD COMMUNICATION, for those interested in participating in the conference must send an email with general information to the contact email. The program outlined in the schedule below will cover one and half days that is distributed as follows:

### Wenesday August 28

Horario	Program
8:30-9:00	<b>REGISTRATION</b>
9:00-9:30	Welcome
9:30-10:30	<p><b>Plenary Presentation</b></p> <p><b>“Planificación, Diseño, Prueba y Operación de Plantas de Recarga de Acuíferos de Gran Capacidad: Ejemplos de su desarrollo en Arizona, E.U.A.”</b></p> <p>Mario Lluria. <i>Sustainable Hydrosystems, Inc.</i></p>
10:30-12:30	<p><b>Session 1: Managed Aquifer Recharge (MAR)</b></p> <p>Moderator: Adriana Palma</p>
	<p><b>Speaker 1:</b></p> <p>“La recarga artificial en México”          Rubén Chávez Guillén. <i>CONAGUA.</i></p> <p><b>Speaker 2:</b></p> <p>“Recarga Artificial en San Luis Río Colorado”          Humberto Hernández. <i>OOMAPAS.</i></p> <p><b>Speaker 3:</b></p> <p>“Aprovechamiento e Infiltración de Agua de Lluvia en la Ciudad de México”          Fernando Ávila. <i>SACM.</i></p> <p><b>Speaker 4:</b></p> <p>“Recycled Water MAR in California”          Tim Parker. <i>GRAC.</i></p>
12:30-13:00	<b>Coffee break</b>
13:00-15:00	<p><b>Session 2: MAR: Instrumentation / Characterization</b></p> <p>Moderator: Pedro Soto</p>
	<p><b>VIDEOCONFERENCE</b></p> <p>“Managing and regulating transboundary aquifers along the Mexico-US border”          Gabriel Eckstein. <i>International Water Law Project.</i></p> <p><b>Speaker 1:</b></p> <p>“Characterization, instrumentation and performance of managed aquifer recharge sites”          David O’Leary and John Ilzibick. <i>USGS.</i></p> <p><b>Speaker 2:</b></p> <p>“Criterios de selección de sitios de recarga artificial en acuíferos afectados por fallamiento regional, Valle de Querétaro, México”          Dora Carreón. <i>Centro de Geociencias, UNAM.</i></p> <p><b>Speaker 3:</b></p> <p>“Proyecto Piloto de Infiltración con Agua Residual Tratada en el Acuífero del Valle de las Palmas, B.C.”          Mario López. <i>CONAGUA.</i></p>
15:00-16:30	<b>Luch</b>
16:30-18:30	<p><b>Session 3: MAR: Applications</b></p> <p>Moderator: Claudia Hernández</p>
	<p><b>Speaker 1:</b></p> <p>“MAR to Market”. Avances del proyecto de I+D+I DINA-MAR y presentación del proyecto MAR-SOLutions          Enrique Fernández Escalante. <i>Tragsa I+D+i (MAGRAMA, ESPAÑA).</i></p> <p><b>Speaker 2:</b></p> <p>“Analysis of Projected Water Availability, Pajaro Valley, California”          Randall Hanson. <i>USGS.</i></p> <p><b>Speaker 3:</b></p> <p>“El Valle del Mezquital”          Fernando González Cárñez. <i>OCAVM.</i></p> <p><b>Speaker 4:</b></p> <p>“Gestión de la recarga artificial en Iztapalapa”          Alfonso Hernández López. <i>Delegación Iztapalapa.</i></p>

2<sup>as</sup> Jornadas Técnicas sobre la  
**RECARGA ARTIFICIAL**  
 DE **ACUÍFEROS**  
 Y **REÚSO DE AGUA**



Torre de Ingeniería, UNAM, México D.F.  
 28 y 29 de agosto de 2013

**Thursday August 29**

Horario	Program
9:00-10:00	<b>Plenary Presentation</b> Fernando J. González Villarreal, Coordinador Técnico Red del Agua, Director PUMAGUA.
10:30-12:00	<b>Desayuno: Trabajo conjunto del grupo de MAR.</b> ISMAR9 y Publicación.
12:30-13:00	<b>Receso café</b>
12:30-14:30	<b>Sesión 4: Presentación de proyectos MAR</b> Modera: Enrique Fernández  <b>Speaker 1:</b> "Anteproyecto de recarga artificial en la cuenca Chihuahua-Sacramento" Carlos Alonso. <i>JMAS.</i> <b>Speaker 2:</b> Experiencias de recarga al acuífero principal de la Comarca Lagunera. Carlos Gutierrez. <i>IMTA.</i> <b>Speaker 3:</b> "Estudio de Evaluación para la Recarga Artificial del Acuífero San José del Cabo" Susana Saval. <i>Instituto de Ingeniería. UNAM.</i> <b>Speaker 4:</b> "Planificación de la recarga artificial del acuífero Valle de Santo Domingo, B.C.S. México". Jobst Wurl. <i>UABCS.</i> <b>Speaker 5:</b> "Caso de Estudio de Infiltración Artificial en Ciudad Juárez" José Antonio Cervantes
14:30 – 15:30	<b>Closing remarks</b>

**Language**

Language during presentations will be in Spanish, but some of them will be in English.

**Location**

Engineering Tower at UNAM, Mexico City (Torre de Ingeniería de la UNAM)

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### Inscriptions

FREE. Seats are limited until full occupancy. Send your inscription with the following information to [apalman@iingen.unam.mx](mailto:apalman@iingen.unam.mx)

- Full name
- Company or Organization
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### Organization

Universidad Nacional Autónoma de México, Subdirección Hidráulica, Instituto de Ingeniería; Proyecto de la Red del Agua, UNAM, International Association of Hydrogeologist.