

MEMORANDUM OF UNDERSTANDING
between the
METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO
and
EPTRI, HYDERABAD, Telangana, India

This Memorandum of Understanding (“MOU”) is made and enacted on the _____ day of _____, 2017, by and between the Metropolitan Water Reclamation District of Greater Chicago (“District”) and the Environment Protection Training and Research Institute, Hyderabad, Telangana, India (“EPTRI”). The District and EPTRI Hyderabad may hereinafter collectively be referred to as the “Parties.”

WHEREAS, the District is an independent Government and taxing body encompassing approximately 91 percent of the land area and 98 percent of the assessed valuation of Cook County of Illinois, United States of America; and

WHEREAS, the District's mission is to protect the health and safety of the public in its service area, protect the quality of the water of the water supply source (Lake Michigan), improve the quality of water courses in its service area, protect businesses and homes from flood damages, and manage water as a vital resource for its service areas; and

WHEREAS, the District owns and operates seven water reclamation plants that treat domestic, industrial, and combined sewage, serving a population of approximately 5.25 million real people, a commercial and industrial equivalent of 4.5 million people, and a combined sewer overflow equivalent of 0.5 million people; and

WHEREAS, the District has a great history for more than 12 decades in the operation, maintenance, and management of wastewater collection and treatment infrastructure and the application of best management practices for the sustainability of water resources, not only in its service area, but also of Lake Michigan, which serves as the primary drinking water source for most of the residents of Cook County; and

WHEREAS, the District is committed to achieving the highest standards of excellence in fulfilling its mission; and

WHEREAS, the Environment Protection Training and Research Institute (hereinafter referred to as “EPTRI” represented by the Director General, which expression shall unless excluded by or repugnant to meaning or context thereof, be deemed to include its successors and assignees). The EPTRI was set up as an independent registered Society in 1992 under Andhra Pradesh (Telangana Areas) Public Societies Registration Act, 1350F (Act I of 1350F) and amended on 17.06.2016 (CC No. 420/16). Government of India facilitated the bilateral assistance for technical collaboration between EPTRI and Swedish International Development Agency (SIDA). EPTRI is managed by a Board of Governors. Chief Secretary, Government of Telangana is the Chairman of Board of Governors. Director General is the Vice Chairman of Board of Governors and Chief Executive of the Institute. The main objectives of EPTRI are to provide training, consultancy, applied research services and extends advocacy in the area of environment protection to industries, regulatory bodies, Government Organizations and NGOs and works towards bringing about change for a more balanced development. It is involved in various activities covering environmental issues such

as protected areas and biodiversity, urban agglomeration, environmental awareness, Human Resource Development, Capacity Building and Research.

WHEREAS, EPTRI, Hyderabad is an independent and autonomous Society (juristic person) dedicated to excellence in Environment Protection and Training and has recognitions such as (i) Environmental Impact Assessment (EIA) consultant Institute since 2008 according to the National Registration Board for Personnel and Training (NRBPT), Quality Council of India (QCI) (ii) Empanelled Training Institute of Government of India for imparting training under the Technical Cooperation Scheme of the Colombo Plan (iii) Centre for Climate Change and Nodal Agency for Clean Development Mechanism (iv) Technical Consultant of Municipal Solid Waste Management (v) 'Empanelled agency' to provide technical support to States / ULBs to carryout investigation, design and thereafter to prepare the DPRs to help structure and manage schemes/ programmes in the field of municipal solid waste management. (vi) Environmental Information System (ENVIS) Centres for Ecology of Eastern Ghats and State of Environment Report & related issues (vii) Nodal agency for Climate Change and Clean Development Mechanism (CDM). EPTRI Laboratory has recognitions and accreditations from (i) NABL (National Accreditation Board for Testing and Calibration Laboratories) in the fields of Chemical and Bio-technology (ii) Scientific and Industrial Organisation (SIRO) - recognised by Department of Scientific Research, Government of India (iii) Environmental Laboratory under the Environment Protection Act, 1986 (iv) Certification under Occupational Health and Safety Management System.

WHEREAS, staff at EPTRI Hyderabad have extensive knowledge, expertise and resources related to water and wastewater treatment and one of its primary missions is to educate and train students to prepare them to play active professional roles to operate and manage the numerous water and wastewater treatment plants and the associated infrastructure as India is preparing to build them; and plans to implement a one-year diploma program entitled **“Technology, Operation, and Maintenance of Water and Wastewater Treatment Plants,”** and a two year PGDM course entitled **“Post Graduate Diploma in Env. Management”** on a regular basis to prepare and train students to become operators and managers of water, sewage, and effluent treatment plants for a lifetime of employment and community service to protect the water environment and for overall Environmental Management; and

WHEREAS, EPTRI offers consultancy services in the field of water and wastewater treatment and management to various local bodies under the Government and industries and also advises the Government on related issues; and

WHEREAS, the District and EPTRI Hyderabad would mutually benefit by sharing knowledge, engaging in exchanges, and conducting thoughtful discourse about the water sector and the wastewater treatment area for the benefit of the entities, their employees, their communities, and the environment.

Now, therefore, the District and EPTRI Hyderabad hereby acknowledge and declare as follows:

1. The Parties agree to establish a basis for knowledge sharing and cooperation as it relates to best practices in wastewater treatment and related services.

2. AREAS OF INTEREST: The following are the suggested areas of common interest, which may be expanded upon, modified, or added to over time as needs arise:

- a. Water and Wastewater treatment technology
- b. Energy Management and Energy Neutrality
- c. Storm water Management
- d. Operation of wastewater and water treatment plants
- e. Process control, monitoring, and instrumentation
- f. Sustainable Utility Management
- g. Staff Exchange

3. INITIAL ACTIVITIES OF COOPERATION: A number of activities will initially be undertaken for the purpose of developing a working relationship between the Parties. The activities described below reflect the initial intentions discussed between the Parties, but are not limited to same, as a more complete and appropriate list will be developed according to the wishes and capabilities of the Parties. It is understood by the Parties that these elements may be updated as experience is gained.

A. KNOWLEDGE SHARING: During the term of this MOU, the Parties will consider mutual visits (EPTRI, Hyderabad, to Chicago, and possibly Chicago to Hyderabad, India) during which the Parties will learn how wastewater and water treatment plants are organized and operated. To the extent possible, the Parties will share information and benchmarking on their main activities within wastewater. On the Indian side, Director General, EPTRI, or his designee will participate in the planning and execution of the knowledge sharing activities.

B. Prof. Prakasam Tata (Retired Assistant Director of R&D Department of the District and currently the Executive Director of the Center for Transformation of Waste Technology, Naperville, IL 60540 USA) will also contribute his knowledge and resources and serve as a liaison between the Parties. The contact person at the District for sharing information and coordinating activities will be the Director of Engineering or her designee, who is available at (312) 751-7905.

C. The District will share related information and expertise that may be of assistance to EPTRI as EPTRI engages in the following activities:

- Developing an appropriate course for the award of a diploma in the Water and Wastewater Treatment Technology and Operation of Wastewater Treatment.
- Providing assistance to municipal agencies within Telangana and other states of India in reviewing proposals, contract documents, conducting training programs and workshops, etc.
- Facilitating visits to the District by managers to observe and learn best management practices of administration, wastewater treatment and management for achieving clean effluents, stormwater control, water reuse, and conservation.
- Offering assistance / inputs for environmental organizations, environmental engineering/science consulting firms, and industries to facilitate visits to the District and its operations.
- Collaborating on research projects.
- Assisting any municipal agency within the jurisdiction of Telangana to evaluate and solve any water pollution problems that they encounter.

- Providing assistance to potential trainers from EPTRI, who visit the District's water reclamation plants, to observe and learn the maintenance, operation, and management protocols practiced at the District.
 - Advising on possible solutions to EPTRI on potential environmental pollution problems that might arise in the future
- C. **COURSE DEVELOPMENT:** EPTRI Hyderabad plans to design, develop, deliver and offer a diploma course in the Water and Wastewater Treatment Technology (1 year duration) and a PGDEM (2 year duration) for the B.Sc. MPC/ITI civil/Mechanical/M.Sc Chemistry and Biology and background graduates, future Environmental Managers and also plant operators and water and wastewater treatment plant managers. EPTRI Hyderabad will build up with the shared knowledge, expertise and experience with the District to assist it in developing course content. EPTRI Hyderabad intends to offer structured syllabi and class work for the course. Also, EPTRI plans to develop four different levels of operator training courses for certification of operators for various wastewater treatment facilities based on the complexity of technologies involved.
- C. **WORKSHOPS:** EPTRI Hyderabad and the District will consider seminars, workshops, conferences, etc., which would be of mutual benefit and interest.
- D. **INTERNATIONAL FRIENDSHIP OPPORTUNITIES:** The Parties intend to promote international friendship through cooperation and information sharing, as EPTRI Hyderabad creates opportunities for students interested in entering the field of water or wastewater treatment technology, enabling prospective plant operators and managers to obtain their certification, the process of which is not currently available in India.
- E. **EXCHANGE OF VISITS:** EPTRI Hyderabad welcomes the opportunity to discuss the framework for potential visits of District personnel for 1 to 2 weeks to EPTRI Hyderabad and to other wastewater and effluent plants in Telengana and its neighbouring states. Visits of staff of EPTRI Hyderabad and other managers and operators of wastewater treatment plants may be facilitated by EPTRI Hyderabad or its designee to the District's water reclamation plants and other facilities at mutually agreeable dates.
- F. **OTHER MATTERS:** During the mutual visits, other subsequent activities may be discussed and developed. For example, these activities could include the establishment of specific technical working groups on physical, chemical and biological treatment of wastewater, energy management, sustainable utility management, cooperation on research and development projects, etc. Each technical group or project team may establish its own functional criteria to track its progress, as needed. The Metropolitan Water Reclamation District of Greater Chicago (District) has more than 125 years of experience in the following fields:
- Wastewater treatment, design, operation and management of wastewater treatment plants.
 - Controlling discharges from industries through an ordinance and generating revenue by treating such discharges.

- Controlling and treating storm-water discharges according to the rules and regulations developed through an ordinance.
- Conducting research adopting new technologies to the control of nutrients.
- Monitoring of water quality.
- Sludge treatment, utilization, and disposal for beneficial use.
- Management of water resources in the greater metropolitan area of Chicago.
- Conducting regular training programs to staff to keep a high level of professionalism and job performance.
- Obtaining information on wastewater and water treatment technologies as needed.
- Assistance in the development of any courses related to sustainability of water resources.
- Development of training courses for STP and CETP plant operators.
- Development of a certification program for treatment plant operators.
- Development of a reference analytical laboratory to certify commercial laboratories and to get them accredited by US certification agencies.
- Development of an incubator cell where it can conduct feasibility studies to help industries in finding solutions to their wastewater treatment plant problems.

4. **COSTS:** All travel, hotel, living costs, and other expenses are to be covered by the respective Parties for their own personnel, in accordance with the existing policies and procedures of each Party for such expenditures.

5. **TIME SCHEDULE.** The term of this MOU is three years from the date of execution. Prior to expiration, the MOU will be evaluated and upon mutual agreement, extended and modified.

6. **DISCLAIMERS:** The provisions set forth in this MOU are intended solely as guidance to improve the working relationship of the Parties in carrying out their respective responsibilities for their communities. This MOU does not, and is not intended to, impose any legally binding requirements on either Party. This MOU is to be construed in a manner consistent with all existing laws and regulations. This MOU neither expands, nor is in derogation of, those powers and authorities vested in the participating Parties by applicable laws, statutes, or regulations.

7. **FUNDING:** Any endeavor involving the reimbursement or contribution of funds between the Parties to the MOU shall be in accordance with applicable laws, regulations, and procedures of the respective Party. Such endeavors, if any, will be outlined in separate agreements that shall be made in writing by representatives of the Parties and shall be independently authorized by appropriate legal authority. Nothing in this MOU, in and of itself, requires any Party to enter into any contract, grant, or interagency agreement. All provisions in this MOU are subject to the availability of funds.

8. **MODIFICATION AND TERMINATION:** This MOU may be modified or amended at any time upon written notice of either party to the other party for the reasons mentioned therein. This MOU may be terminated by either party upon providing sixty (60) days advance written notice.

9. EPTRI reserves the right to rescind the MoU if Government of India or the Government of Telangana advises it to do so, during the period of the MoU.

Metropolitan Water Reclamation District
Of Greater Chicago

EPTRI

By _____
David St. Pierre
Executive Director

EPTRI
Director General

Date: _____

Date: _____

Chairman of Committee on Engineering

Date

ATTEST:

Clerk

Date

APPROVED AS TO ENGINEERING AND TECHNICAL MATTERS:

Director of Engineering

Date

APPROVED AS TO FORM AND LEGALITY:

Head Assistant Attorney

Date

General Counsel

Date