FACILITY TOURS

Facility Tours are an opportunity to observe active projects, construction, and/or operations at sites within the local host community, as well as an opportunity to earn Contact Hours. **Additional admission fees apply**. Transportation between McCormick Place South and the tour site(s) is included with admission. Tour buses load 15 minutes prior to the scheduled start time and depart promptly at the scheduled start time. Food and beverage are not provided unless otherwise indicated.

Participation is limited by the size of each facility. Registrants should wear proper attire, including long pants and closed-toe shoes with rubber soles. Skirts, shorts, tank tops, and high-heels are not appropriate. Facilities provide hard hats, safety glasses, and safety vests, if necessary.

Several host facilities in Chicago have security screening practices in place. Take note of the requirements indicated for each tour. **Registrants that fail to meet the requirements by the given deadlines will not be granted access to the tour bus or facility and will not receive a refund of their admission fees.**

Monday, September 28, 2015

T1 Collection Systems Tour: Metropolitan Water Reclamation District of Greater Chicago's Tunnel and Reservoir Project McCook Reservoir Stage 1

Monday, September 28 | 1:00 p.m. – 4:00 p.m.

Admission Fee: $40 | Limit: 40 people

Security Screening Measures: advance registration is required by August 28. No substitutions or additions after August 28. Guests must complete a waiver form and provide a copy of their photo ID (driver's license or passport) in advance. Bags may be subject to inspection.

The Metropolitan Water Reclamation District of Greater Chicago (MWRD) adopted the Tunnel and Reservoir Plan (TARP) in 1972 as the Chicago area's plan to cost-effectively comply with federal and state water-quality standards in the 970-km^2 (375-sq mile) combined sewer area consisting of Chicago and 51 suburbs. The TARP's main goals are to protect Lake Michigan—the region's drinking water supply—from raw wastewater pollution; improve water quality of area rivers and streams; and provide an outlet for floodwaters to reduce street and basement wastewater backup flooding. Construction of the Phase I tunnel systems commenced in 1975. The tunnel systems were put into service as portions were completed, starting in 1985. By 2006, all of Phase I was completed and in operation. The total system consists of 176 km (109.4 miles) of deep, large-diameter, rock tunnels providing 8705 ML (2.3 bil. gal) of volume to capture combined sewer overflows that previously discharged to hundreds of outfall locations.

Phase II of TARP consists of three reservoirs intended primarily for flood control but will also considerably enhance pollution control benefits provided under Phase I. The 1325-ML (350-mil. gal) Majewski Reservoir was completed in 1998, and the Thornton Reservoir was completed this year and has a total capacity of 29 900 ML (7.9 bil. gal). The McCook Reservoir is currently under construction and, when completed, will have a total capacity of 37 850 ML (10 bil. gal). Phase 1 of the reservoir is planned to be completed by 2017. The McCook Reservoir will provide more than $90 million per year in flood damage reduction benefits to 3,100,000 people in 37 communities.

Tuesday, September 29, 2015

T2 Metropolitan Water Reclamation District of Great Chicago's Stickney Water Reclamation Plant

Tuesday, September 29 | 9:00 a.m. – 12:30 p.m.

Admission Fee: $40 | Limit: 30 people

Security Screening Measures: advance registration is required by August 28. No substitutions or additions after August 28. Guests must complete a waiver form and provide a copy of their photo ID (driver's license or passport) in advance. Bags may be subject to inspection.

The Metropolitan Water Reclamation District of Great Chicago's (MWRD's) Stickney Water Reclamation Plant (WRP) is the largest wastewater treatment facility in the world, serving 2.38 million people in a 418-km^2 (260-sq mile) area, including the central part of Chicago and 43 suburban communities. One of seven MWRD water reclamation plants, the Stickney WRP has the capacity to treat 4542 ML/d (1200 mgd) and actually consists of two plants; the west side portion of the plant was placed into service in 1930 and the southwest portion of the plant was placed into service in 1939.

Charged with ensuring compliance, MWRD is working to transform the Stickney WRP from a wastewater treatment facility to a resource recovery facility by investing in a phosphorus recovery facility designed, built, and operated in partnership with Black & Veatch and Ostara Nutrient Recovery Technologies. Black & Veatch is providing design, procurement, and construction services. Ostara is providing the nutrient recovery system, including equipment, as well as operations and maintenance assistance to MWRD once the project is completed. Ostara will contract with MWRD to purchase the recovered nutrients, which it markets to commercial fertilizer blenders and distributors in the agriculture, turf, and ornamental sectors. Once fully operational in 2015, the facility will be the largest such facility in the world, with the potential capacity to produce between 9100 and 13 700 Mg (10 000 and 15 000 ton) of fertilizer annually.

T3 DuPage County's Woodridge–Greene Valley Wastewater Plant

Tuesday, September 29 | 1:00 p.m. – 4:00 p.m.

Admission Fee: $40 | Limit: 30 people

The DuPage County Woodridge–Greene Valley (WGV) Plant serves portions of DuPage County in the areas of the City of Lisle, Village of Woodridge, City of Naperville, City of Wheaton, and adjacent unincorporated areas. The tertiary facility is designed to treat 45 ML/d (12 mgd) of wastewater and is unique in its long history of operating a two-phase acid/gas digestion process and co-generation facility. The WGV facility has conducted many innovative pilot studies over the years and has recently been interested in nitrogen and phosphorus recovery to progress beneficial nutrient cycling in the environment and reduce the effect of struvite accumulation in post-digestion processes. The WGV facility is hosting a pilot technology developed by Nutrient Recovery and Upcycling, LLC (NRU), to recover a calcium phosphate mineral called brushite to reduce phosphorus discharge and produce a product that can be used as a high-grade fertilizer or industrial precursor. This tour of the WGV facility and NRU pilot technology will educate participants on the benefits of phosphorus recovery.

Wednesday, September 30, 2015

T4 City of Chicago's Jardine Water Purification Plant

Wednesday, September 30 | 9:00 a.m. – 12:30 p.m.

Admission Fee: $40 | Limit: 30 people

Security Screening Measures: advance registration is required by August 28. No substitutions or additions after August 28. Guests must bring a photo ID with them (driver's license or passport). Photography is prohibited. Bags may be subject to inspection.

The City of Chicago's Jardine Water Purification Plant is the largest capacity water filtration plant in the world. Drawing water from offshore cribs in Lake Michigan, the pumping station supplies almost 3785 ML/d (1 bil. gal/d) of water to consumers in north and central Chicago and suburbs. The facility includes pumping stations, chemical application and mixing basins, and a final filtration process composed of 96 dual graded sand and gravel filters. The tour will include current and historical purification processes (the plant began operating in the 1964).

T5 Thorn Creek Basin Sanitary District

Wednesday, September 30 | 9:00 a.m. – 12:00 p.m.

Admission Fee: $40 | Limit: 40 people

The Thorn Creek Basin Sanitary District is a municipal government that acts as the sole wastewater treatment agency for approximately 100,000 people. Organized in 1928 under Illinois state statutes, the Thorn Creek Basin Sanitary District provides wastewater treatment service for the communities of Chicago Heights, Homewood, Park Forest, South Chicago Heights, Steger, and Crete. The Sanitary District is governed by a board of trustees that is appointed by the elected legislative representatives of the communities served by the Sanitary District. Thanks to sound planning, efficient operations, modern technology, and a large-scale operation, Thorn Creek Basin's charges for services are among the lowest found in Illinois, and the District's quality of effluent surpasses U.S. Environmental Protection Agency standards by a wide margin.

T6 John G. Shedd Aquarium's Environmental Quality Laboratory and Life Support Systems

Wednesday, September 30 | 10:00 a.m. – 12:00 p.m.

Admission Fee: $40 | Limit: 20 people

Security Screening Measures: guests must bring a photo ID with them (driver's license or passport). Bags may be subject to inspection.

Opened in 1930, the Shedd Aquarium is the oldest original public aquarium building in North America and one of the preeminent aquariums in the world. Shedd has a rich history of engaging and inspiring its guests through award-winning animal exhibits, impactful conservation and education programs, and its world-renowned animal collection. The 26,000 animals at Shedd are naturally the stars of the aquarium, but the facility has its own interesting story as well. This tour will take you behind the scenes, including a look at the many animal life support systems, including the Reef Tank Filtration Unit; a tour through the operations center that houses the controls used for water-quality management; and a walk through the water-quality laboratory.

T7 Stormwater Management Tour: Calumet Stormwater Collaborative Projects

Wednesday, September 30 | 12:00 p.m. – 4:30 p.m.

Admission Fee: $40 | Limit: 40 people

This tour includes lunch courtesy of the Metropolitan Planning Council.

Since 1934, the Metropolitan Planning Council (MPC) has been dedicated to shaping a more sustainable and prosperous greater Chicago region. As an independent, nonprofit, nonpartisan organization, MPC serves communities and residents by developing, promoting, and implementing solutions for sound regional growth. The Calumet Stormwater Collaborative, facilitated by the MPC, has been working toward systemic stormwater management solutions since April 2014 and is one of the priority projects of the Millennium Reserve—a partnership that brings together communities, government, and businesses who have committed to common goals and a shared action agenda. Four sites will be explored during this tour, demonstrating how the Collaborative's work is translating to real world effect:

Village of Midlothian—the first tour stop will feature the *RainReady Community Plan* that the Center for Neighborhood Technology (CNT) is working on in partnership with the Village of Midlothian and the U.S. Army Corps of Engineers. This stop will also feature the community group, Floodlothian Midlothian, and its work with CNT in actively engaging the community on solving urban flooding issues and their progress to date.

City of Blue Island—what began as a bottom-up, community organizing effort to engage local residents in sustainability and stormwater through rain barrels and rain gardens has developed into a significant green/gray investment from Metropolitan Water Reclamation District of Greater Chicago (MWRD). The City of Blue Island and MWRD are working together with neighborhood residents to address basement backups and on-street flooding caused by Blue Island's aging combined sewer system. This partnership has leveraged additional funding from the South Suburban Mayors and Managers Association, Illinois Department of Natural Resources, Illinois Environmental Protection Agency, and the public–private Chi-Cal Rivers Fund.

Schmid Elementary School—Openlands and Healthy Schools Campaign have partnered with the Chicago Public Schools, MWRD, and the City of Chicago Department of Water Management to transform 34 elementary schools, such as Schmid Elementary, into dynamic green spaces for students and residents to learn and play. Innovative green infrastructure practices such as underground storage, native rain gardens, and porous playgrounds are integrated to each schoolyard design. Schmid Elementary is one of the only schools in the nation to capture and retain water from the school roof. Based on pilot school results, modeling and planned monitoring will likely demonstrate that the sites capture up to 100% of runoff and filter virtually all pollutants for 99% of all rain events.

A City of Chicago private residence—featuring a Chicago residence that has gone through site upgrades using the *RainReady Home* service to prevent on-site flooding issues. *RainReady Home* was designed in partnership between the CNT and Elevate Energy. *RainReady Home* is a home upgrade service complete with a property assessment, construction oversight, and upfront financing. Improvements can include downspout disconnection, regrading, foundation crack sealing, porous paving, rain gardens, and backwater valves. Landscape improvements are prioritized. This prototype home upgrade service is being tested with a focus on properties affected by sewer backup and seepage. To date, they have assessed the risks of more than 30 properties in the City of Chicago and identified appropriate home improvements.