



Date: November 20, 2014
To: Patrick H. West, City Manager *T. Maloian*
From: Ara Maloyan, Director of Public Works *A. Maloian*
For: Honorable Mayor and Members of the City Council
Subject: Long Beach Municipal Urban Stormwater Treatment (LB-MUST) Facility

Introduction

The purpose of this memo is to provide information on the City's proposed urban runoff and recycling facility. This facility, "Long Beach Municipal Urban Stormwater Treatment" (LB-MUST) would help Long Beach meet our State and federal stormwater compliance requirements. If constructed, the most beneficial location for it would be adjacent to, and on the eastside the Los Angeles River, south of the Shoemaker Bridge.

Background

The City of Long Beach is mandated to reduce stormwater pollution discharges into the Los Angeles River. This mandate is enforced under the National Pollutant Discharge Elimination System (NPDES) Permit, as well as under the Los Angeles River Total Maximum Daily Load (TMDL) requirement, which is overseen by the Los Angeles Regional Water Quality Control Board (LARWQCB), State Resources Control Board (SWRCB) and the United States Environmental Protection Agency (US-EPA) in accordance with the Clean Water Act. Violation of the Los Angeles River TMDL would result in fines of \$5,000 to \$10,000 per day, in addition to other fines and required reconciliation work assessed by the LARWQCB, SWRCB AND US-EPA.

In seeking ways to meet the Los Angeles River TMDL requirements, Long Beach has been exploring the potential for constructing a facility similar to the Santa Monica Urban Runoff Recycling Facility (SMURRF) in Long Beach. SMURRF is a successful state-of-the-art recycling facility that treats dry weather urban runoff. It was constructed in December of 2000 and implemented in 2001. The facility uses conventional and advance treatment systems to remove sediments, oil, grease, and pathogens from stormwater, and uses the treated stormwater to replace potable water. The SMURFF facility can treat, clean and reuse up to 500,000 gallons of runoff per day. The cost for the facility at the time it was constructed was \$12 million.

While the design of the SMURRF was groundbreaking in 2000, it does have limitations. Based on the location of the SMURRF, it was not economical to construct multiple treatment trains for every possible end-use. As a result, the SMURRF facility does not meet reclaimed water requirements.

Solution: LB-MUST

The limitations at SMURRF would not apply to a similar facility if one were to be built in Long Beach. Long Beach's proximity to the Los Angeles River, available park space

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near the Shoemaker Bridge, and recent advancements in technology make the City an ideal location to build an urban runoff and recycling facility. If constructed, the LB-MUST facility would treat diverted dry weather stormwater that would otherwise discharge into the Los Angeles River. By treating dry weather stormwater, the LB-MUST Facility will help reduce stormwater pollution and improve recreational water quality, which is also beneficial to aquatic life. Integration of the LB-MUST facility into the future Cesar-Chavez Drake Park Wetlands will also have the potential to help restore and sustain the wetlands and riparian habitat within the park complex.

In its first phase, the LB-MUST facility has the potential to produce 337,800 gallons of recycled water per day. Future phases of the project could bring in more dry weather runoff and result in the production of over 700,000 gallons of recycled water per day. The treated stormwater water from this facility will be used to replace potable water. Long Beach has traditionally purchased potable water to: 1) irrigate Long Beach parks and 2) meet operational needs such at the City's South East Resource Recovery Facility (SERRF). By using treated stormwater instead of purchasing potable water, the LB-MUST facility will help the City reduce operating costs at City parks and industrial facilities such as SERRF. In future phases of this project, the treated water could potentially be used to meet other public and industrial uses as well.

In summary, the LB-MUST project will help bring Long Beach into compliance with the Clean Water Requirements for the Los Angeles River. It offers the City an opportunity to significantly reduce the use of potable water, which reduces the City's operating costs for departments that have access to this "new" source of potable water, and unlike the SMURRF facility in Santa Monica, Long Beach plans to incorporate a treatment train design into our LB-MUST facility so that it will be compatible to Title 22 reclaimed water requirements.

The cost for the design and construction of the LB-MUST facility is estimated to be \$20 to \$30 million. In contrast, other Best Management Practices (BMP) Projects that have been proposed to help meet the Los Angeles River TMDL requirements have been estimated to be upwards of \$293 million. Long Beach will be required to participate in roughly 44% of the total BMP costs if we do not implement another solution that meets the Los Angeles River TMDL requirements. The City is proposing to construct the LB-MUST facility in lieu of the proposed BMPs.

Project Funding

Federal Funding. The Long Beach Water Department has access to funding from the United States Bureau of Reclamation. These funds are available in a Title XVI authorization for water recycling, which was authorized by Congress in 1996. There is currently \$4 to \$5 million remaining in this authorization. Federal funding from the Bureau of Reclamation can pay for 50% of feasibility study costs and 25% of construction costs. The City and the Water Department have already met with staff from the Bureau of Reclamation and they are supportive of the project moving forward.

Potential State Funding. In addition to federal funds, it is likely that State water recycling funds will also be needed to construct the LB-MUST facility. Proposition 1 provides \$725 million for water recycling and desalination, and up to 20% of

construction funds could be available from this source. Additional State funding from the Integrated Regional Water Management (IRWMP) program will also be available through a competitive grant process; Proposition 1 provides \$200 million for IRWMP stormwater projects.

Regional Cost Sharing. As stated above, the Los Angeles River TMDL applies to Long Beach, Signal Hill, and the Los Angeles County Flood Control District. These entities will be required to participate in stormwater pollution reductions. Best Management Practices (BMP) Projects proposed for meeting Los Angeles River TMDL requirements have been estimated to cost the region \$293 million. While Long Beach is responsible for 44% of costs, Signal Hill is responsible for 2.8%, and the Los Angeles County Flood Control District is responsible for 10% of the total BMP costs. Long Beach will be reaching out to these agencies to propose an alternative to the BMP cost with a lower cost-share agreement to help fund the remaining cost for the LB-MUST facility.

Next Steps

The City will begin working with our federal elected officials to appropriate federal funding from the Bureau of Reclamation to conduct the feasibility study and design for this project. Meanwhile, staff will search for State funding that can be used to construct this facility. As the project progresses, periodic updates will be transmitted to the Mayor and City Council.

cc: Charles Parkin, City Attorney
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