



Council Agenda Report

To: Mayor Grisanti and the Honorable Members of the City Council

Prepared by: Rob DuBoux, Public Works Director/City Engineer

Approved by: Steve McClary, Interim City Manager

Date prepared: July 21, 2021

Meeting date: August 9, 2021

Subject: Legacy Park History and Operation

RECOMMENDED ACTION: Receive and file a report on Legacy Park's history and operation.

FISCAL IMPACT: There is no fiscal impact associated with the recommended action. All operation and maintenance costs of Legacy Park and the City's storm water facilities are included in the Fiscal Year 2021-2022 Budget. Staff will evaluate any operational costs associated with maintaining water in the Legacy Park storm water detention basin during the dry season and report these back to Council.

Maintaining water in the basin reduces the capacity for storm water retention. If not handled carefully, there would be a risk of discharge into Malibu Creek that could leave the City responsible for potential fines and open to lawsuits.

WORK PLAN: Maintaining water in the Legacy Park storm water detention basin was not included in the Adopted Work Plan for Fiscal Year 2021-2022. The operation and maintenance of Legacy Park is included in the Work Plan as Item 8.c. The operation and maintenance of the City's storm water facilities is included as Item 8.g.

DISCUSSION: Legacy Park is a multi-benefit project that includes passive walking trails, natural habitats and landscaping, public art, and a storm water detention basin. The project was originally developed in 2005 and completed in 2010. Within the last few weeks, there have been several inquiries into the water levels in the Legacy Park basin and an expressed desire to keep the basin full. The following is a discussion of the history, purpose, and future operations of Legacy Park.

Background: Prior to the construction of the Legacy Park project, approximately 330 acres in the Civic Center area drained into an existing County Flood Control storm drain located on Civic Center Way. This drain discharges into Malibu Creek approximately 500 feet east of the Cross Creek Road and Civic Center Way intersection. Storm water flows that discharge into natural drainage courses, such as Malibu Creek are subjected to water quality requirements from the Regional Water Quality Control Board. Discharges into Malibu Creek must meet specific bacteria, trash, nutrient load and sediment limits. Failure to meet the water quality requirements could lead the City into non-compliance, potential fines and third-party lawsuits. In an effort to reduce any non-compliance and potential lawsuits, the City evaluated options to improve water quality in the Civic Center area.

In 2005, the City prepared a Civic Center Integrated Water Quality Management Plan. A portion of this plan included analyzing the sources of bacteria and the feasibility of storm water quality management solutions to reduce bacteria in storm water discharges. The study determined that storm water and urban runoff are a major source of water quality degradation in the Civic Center area. A hydraulic model was used to determine the possible ways to detain and treat storm water runoff in a way that would comply with the water quality requirements for Malibu Creek and Lagoon. The study concluded that a combination of a flow-through storm water treatment facility and a large storm water detention basin would be sufficient to meet the water quality requirements. The old Chili Cook-Off Site (now Legacy Park) was identified as a potential location of the storm water detention basin.

In the Fall of 2007, the City completed the construction of the Civic Center Storm Water Treatment Facility. This facility is designed to capture storm water flows in the County Flood Control storm drain located on Civic Center Way. The storm flows are then diverted to a series of filters to remove sediment and debris and then disinfected through an ozone treatment chamber. The system was designed to re-use the treated storm water for landscaping in the Civic Center Area, specifically in Legacy Park. The facility has the ability to treat up to 3 cubic feet per second (1,400 gallons per minute).



Civic Center Storm Water Treatment Facility

As mentioned above, the 2005 Civic Center Integrated Water Quality Management Plan concluded that a combination of a flow-through storm water treatment facility and a large storm water detention basin would be sufficient to meet the water quality requirements in the Civic Center area. Hydraulic analysis has determined that storm water flows in the County Flood Control storm drain located on Civic Center Way can exceed a flow rate of 30 cubic feet per second. The Civic Center Storm Water Treatment Facility can treat storm water flows up to 3 cubic feet per second. A storm water detention basin can be utilized along with the treatment facility to capture and treat the additional storm water flow to meet the Regional Board's water quality requirements. Therefore, the installation of a large storm water detention basin was recommended in Legacy Park to meet the water quality requirements.



In the Fall of 2010, the City completed the Legacy Park project. The Legacy Park project included the construction of a new 8 ac-foot (350,000 cubic feet) storm water detention basin, an irrigation system, and the planting of native plants and trees. The addition of this storm water detention basin along with the Civic Center Storm Water Treatment Facility provides 100% compliance with the water quality standards for Malibu Creek and Lagoon.

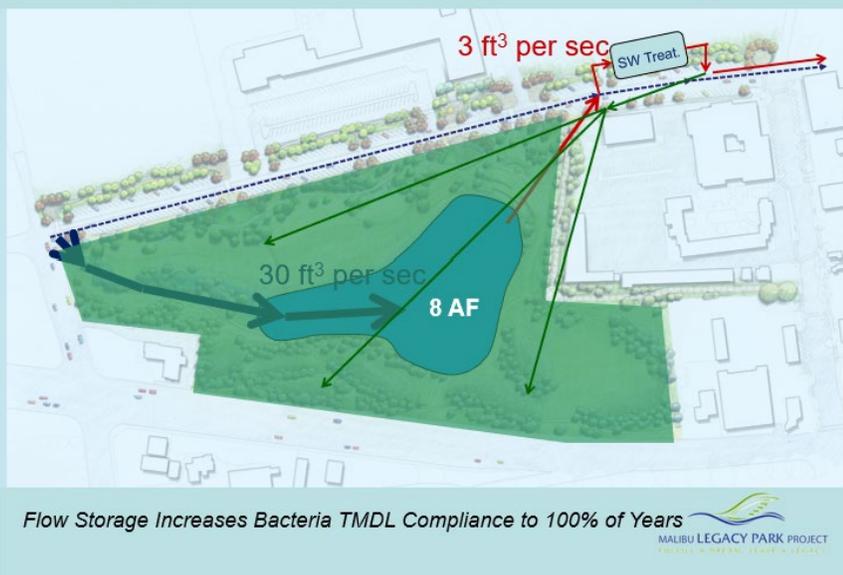
Runoff Storage: Increases Performance of City's Treatment Plant

	Without Storage	Upstream Storage
Peak runoff flowrate that can be treated	3 ft ³ /sec	30 ft ³ /sec
% of years TMDL compliant	74%	100%
Average number storms exceeding WQ standards (17 allowable)	20 per year	< 3 per year

MALIBU LEGACY PARK PROJECT
NURTURE • INSPIRE • LEAVE A LEGACY

Legacy Park diverts the storm water runoff from approximately 330 acres in the Civic Center area into the western portion of Legacy Park. Legacy Park's storm water detention basin then releases the captured storm water at a rate of 3 cubic feet per second towards the Civic Center Storm Water Treatment Facility. As mentioned above, the storm water is filtered and treated to remove bacteria. The treated storm water is then returned to Legacy Park to be used for irrigation. This process eliminates storm water discharges into Malibu Creek with the exception of very large storm events.

Operation with Legacy Park Storage



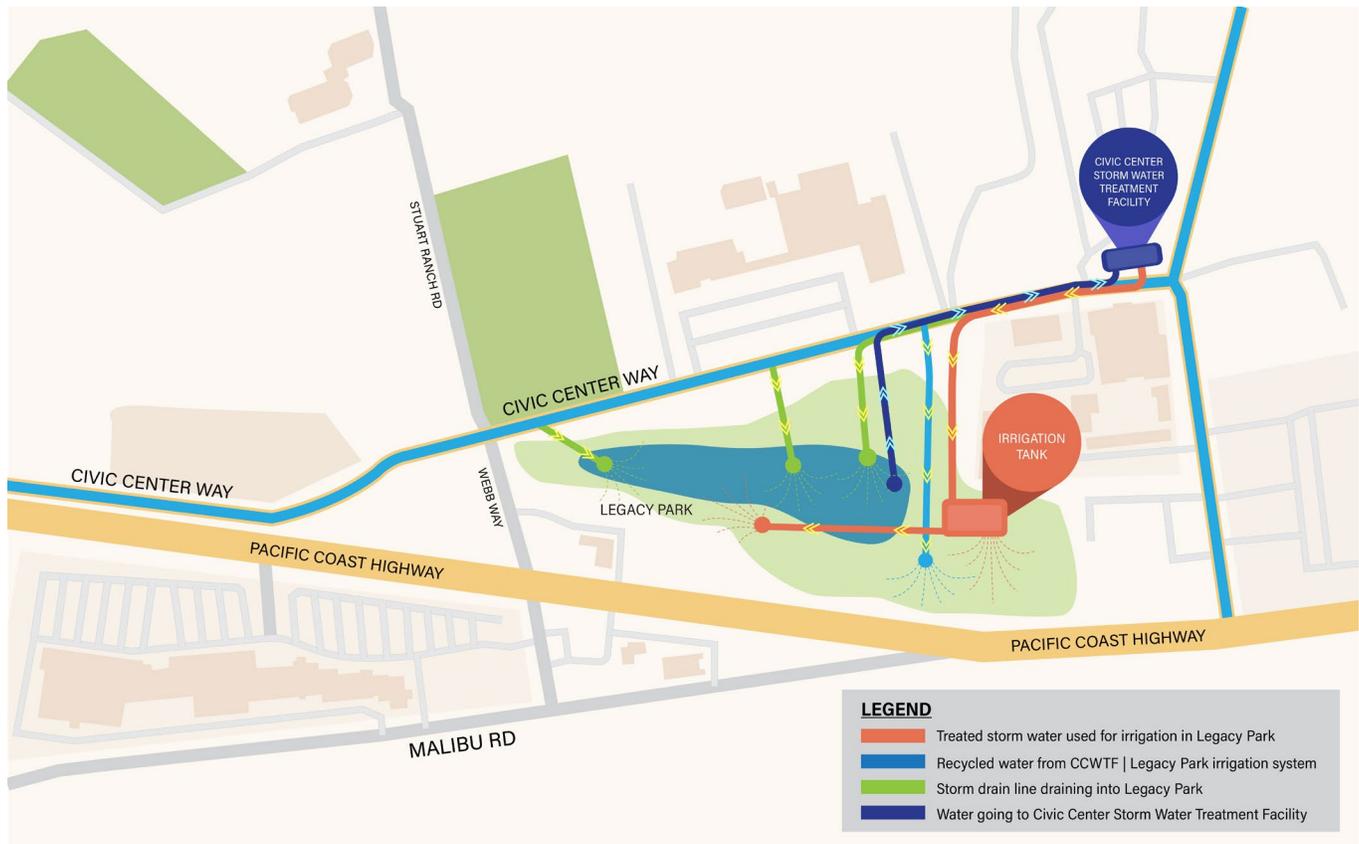
The City is mandated to meet storm water discharge requirements as stated by a Regional Board permit. The City's current permit, Regional Board Order R4-2012-0175, requires the City to meet very specific water quality requirements for all storm water discharges to surface waters, including Malibu Creek. The current Regional Board permit also allows the City the flexibility to develop an Enhanced Watershed Management Program (EWMP) to comply with the terms and conditions contained in the permit. The EWMP allows the City to demonstrate compliance with all water quality standards through projects that can retain, infiltrate or capture and reuse the storm water volume from the 0.75-inch 24-hour storm events. The City of Malibu, the County of Los Angeles, and the Los Angeles County Flood Control District created the North Santa Monica Bay Coastal Watershed (NSMBCW) EWMP in 2015 which was approved by the Regional Board in April 2016.

In the NSMBCW EWMP, the City identified Legacy Park as a project designed to eliminate discharges into Malibu Creek during 0.75-inch 24-hour storm events. Legacy Park captures and reuses storm water as irrigation water for the park. Because Legacy Park performs this function, the City has demonstrated automatic compliance with all water quality requirements for the drainage area to Legacy Park. Should the City no longer be able to demonstrate that Legacy Park is eliminating discharges into Malibu Creek, then the City would be required to immediately comply with all water quality requirements for Malibu Creek.

In 2008, the Natural Resources Defense Council (NRDC) and the Santa Monica Baykeeper (Baykeeper) filed a lawsuit against the City claiming that the City had in the past violated and continued to violate Sections 301(a) and 402 of the Clean Water Act, 33 U.S.C. §§ 1311(a) and 1342, by discharging pollutants into receiving waters, including Malibu Creek and Lagoon and the Mugu to Latigo ASBS, in violation of the National Pollutant Discharge Elimination System Permit No. CAS004001 Regional Board Order No. 01-182. In 2012, the City entered into a settlement agreement with the NRDC and Baykeeper regarding the lawsuit. The settlement required the City to install a flow meter and sensor to verify if City is discharging from Legacy Park into Malibu Creek. If the City does discharge into Malibu Creek, the City must collect a sample of the discharge and test for bacteria. If the discharge does not meet the Regional Board's requirements for bacteria, then the City would be in violation of the settlement agreement.

Legacy Park Irrigation: The landscaping in Legacy Park is irrigated by several water sources. The primary source is from treated storm water. As mentioned above, storm water is captured and stored in Legacy Park's 8-acre-foot detention basin. It is then sent to the Civic Center Storm Water Treatment Facility where the storm water is screened and treated for bacteria. The treated storm water is returned to Legacy Park and discharged into a 15,000 gallon below-ground irrigation tank. Potable water is used to supplement treated storm water during periods where the storm water in Legacy Park is not sufficient for the irrigation demand.

In an effort to further reduce the need for potable water at Legacy Park, the City will be connecting the recycled water from the Civic Center Water Treatment Facility to a portion of the Legacy Park irrigation system. Staff is currently working on making this connection including obtaining the required permits.



Water in the Legacy Park Basin: There has been a request to continuously have water in the Legacy Park storm water detention basin. As stated above, the purpose of Legacy Park’s detention basin is to capture storm runoff and to reduce potential discharges into Malibu Creek. Eight (8) acre-feet of storm water storage is required to meet this outcome. Any water in the detention basin will reduce the storage capacity and in turn increase the City’s chances of discharging into Malibu Creek. Storm flows that discharge into Malibu Creek which are the result of insufficient detention basin storage are not likely to be treated and could exceed the water quality requirements.

Recently, the water levels in Legacy Park were significantly reduced. It was discovered that the existing pumps and equipment at the Civic Center Storm Water Treatment Facility were malfunctioning. Staff was able to identify the issue and have been able to send storm water back to Legacy Park.

Another option to fill a portion of the Legacy Park basin is to temporarily use construction dewatering from the La Paz development. The La Paz development is currently discharging approximately 200,000 gallons per day to Malibu Creek. They are currently permitted to discharge up to 432,000 gallons per day or reuse water onsite for dust control or soil compaction by the Regional Board Order No. R4-2018-0125, NPDES No. CAG994004, CI-10490. Staff is looking into the feasibility of having the La Paz development discharge some of their dewatering activities into the Legacy Park detention basin. Staff has confirmed with the Regional Board that a slight modification to La Paz's current permit would allow La Paz to discharge into the City's storm drain system and eventually into Legacy Park. Staff is coordinating with the La Paz development to develop a plan to accept some of their discharge.

Legacy Park Operations: Staff will continue to monitor the water level in Legacy Park and will adjust its operation to maintain some water in Legacy Park during the dry season. Staff is evaluating the irrigation demand along with the volume of treated storm water, recycled water, and potable water supply to adjust as necessary to minimize the reliance on potable water for irrigation.

Lastly, staff can modify its operation to ensure that the Legacy Park detention basin contains some water during the spring and summer months but will reduce the water level prior to storm events. Staff will also monitor the size of upcoming storm events and will calculate the required storm water storage volume for the storms. This operation is necessary to maintain the functional purpose of the Legacy Park storm water detention basin to eliminate storm water discharges into Malibu Creek.

ATTACHMENTS: None.