

## **Retrofitting and Rehabilitating Areas of Existing Development**

Imperial Beach is committed to reducing the impact of storm water pollution from areas of existing development as demonstrated by the City's existing efforts to implement targeted BMPs throughout the City and the incorporation of LIDs into the design and construction of capital projects. The City intends to continue the same incremental approach to improving water quality over this next Permit cycle that considers the retrofit and rehabilitation of existing development by incorporating the following water quality improvement strategies summarized below.

### **Integrate LID retrofits where feasible into CIP rehabilitation projects**

Successful projects like the Eco Bikeway LIDs along Palm Ave, the Bayshore Bikeway Access Bio Swale at 10<sup>th</sup> Street, and the Sports Park Crosswalk Infiltration Area have demonstrated the multiple benefits to addressing storm water issues along with the rehabilitation of aging infrastructure. The LID facilities are considered successful by many in the community by enhancing the urban atmosphere while also allowing for an opportunity to capture pollutants and infiltrate urban runoff before reaching the receiving waters. Integrating LIDs and green areas in the community is also consistent with the City's mission statement to "maintain and enhance Imperial Beach as a Classic Southern California beach oriented community with a safe, small town, family atmosphere, rich in natural and cultural resources".

The City intends to continue integrating LID facilities into the design of future CIPs where practical and feasible. Major CIP projects in the City that are currently considering the incorporation of LID facilities include the retrofit of 1 mile of City Alley Improvements and the Palm Ave Master Plan along Highway 75.

### **Eliminate residential and commercial curb cuts**

The City no longer allows storm water curb cuts from residential or commercial properties, which is considered a direct connection to the City's MS4. Curb cuts also result in additional maintenance needs for cracked or damaged sidewalks. The City requires storm water to infiltrate to the MEP on private properties before being allowed to runoff into the street. Curb cuts will be systematically eliminated as either the street is rehabilitated through CIPs or the private property is redeveloped.

### **Encourage LID retrofits of residential and commercial areas for non-PDP redevelopment projects**

The integration of storm water infiltration areas is a shared responsibility for the entire community including residential and commercial areas. During the development plan review phase the Public Works Department provides enhanced storm water conditions for public improvements on private redevelopment projects that have a valuation improvement greater than \$50,000. Projects are required to maximize infiltration of storm water on site and not allow any direct connections to impervious surfaces. Applicants are encouraged to install permeable surfaces for hardscape and infiltration areas for storm water.

### **Partner with local, state, and federal agencies to retrofit non-jurisdictional areas**

The City has a strong working relationship with the U.S. Fish and Wildlife Service, Naval Base Coronado, Tijuana River National Estuarine Research Reserve, California State Parks, Caltrans, Port of San Diego, County of San Diego, Airport Authority, and South Bay Union and Sweetwater School Districts, all of which who share jurisdictional authority within the Imperial Beach City limits. Successful partnerships among these agencies have resulted in major wetlands restoration projects for the San Diego Bay salt ponds and the Tijuana Estuary and also minor projects such as storm water drainage and LID infiltration improvements for Mar Vista High School and the Tijuana Estuary. The City will continue to partner with these local, state, and federal agencies (including local universities) to leverage resources that improve water quality and wildlife habitat.

### **Retrofit of jurisdictional areas through incentive programs**

The City partners with local community groups with the support from EDCO and California American Water to implement community projects that retrofit existing developed areas. This effort is led by the Public Works Department who supports community led projects, such as Boy Scout Eagle Scout Projects, to retrofit existing municipal areas with drought tolerant plants or create impervious surfaces to infiltrate storm water. Recent projects include:

- City Hall xeriscape (2010)
- Marina Vista Center xeriscape (2010)
- Sewer Pump Station 8 xeriscape (2011)
- Elm Ave Planters (2013)
- Safety Center Planters (2013)
- Public Works xeriscape (2015)
- Sports Park planters (2015)
- Sheriff's Station City Hall xeriscape (2015)
- Triangle Park turf replacement (2015- under design)

### **Low Impact Development (LID) Facilities**

The City or its contractors provide maintenance of municipal areas that get retrofit with LID facilities to treat or infiltrate storm water runoff.

- Bikeway Access Bioswale (February 2014)
- Palm Ave Eco Bikeway LIDs (December 2013)
- Sports Park Crosswalk LID (August 2014)
- Skate Park Boiswale and Infiltration Trench (January 2011)
- Alley Retention System (800 block between 10<sup>th</sup> and 11<sup>th</sup>) (May 2007)
- Beachfront Sidewalk and Street End Permeable Pavers (Multiple)
- Emory St and Essex St Retention System (September 2006)
- Baseball Field Permeable Concrete (2003)

### **Storm Drain Inlet Filters**

The City maintains storm drain inlet filters at municipal locations and high trash areas listed below. The filters receive quarterly maintenance by the contract company Downstream Services to ensure proper functioning of the filter systems.

- SDF1: Northeast PW yard
- SDF2: Northwest PW yard parking area
- SDF3: Seacoast/Palm City Parking lot
- SDF4: Southwest parking lot Sports Park
- SDF5: City hall parking lot
- SDF6: Fire Station Parking area
- SDF10: Curb inlet SW corner 9th and Palm
- SDF11: 839 10th St in alley between Elm and Donax
- SDF12: Alley N side of Donax between 11th and Florida
- SDF13: 1459 Hemlock Ave

### **Vortech Storm Water Interceptor**

The City installed a CDS Vortech interceptor at 10<sup>th</sup> and Imperial Beach Blvd in December 2002 to capture trash, sediment, and hydrocarbons. The CDS Vortech interceptor provides treatment for the commercial areas on Imperial Beach Blvd and 13<sup>th</sup> St as well as the surrounding residential areas. The Sewer Division performs quarterly inspections of the interceptor and removes accumulated debris with the vacor truck as necessary to ensure proper functioning of the system.

### **Storm Water Diverters**

The City maintains 2 major storm water diverters along the beachfront at Palm Ave (installed January 2009) and Date Ave (installed 2004 and refurbished October 2014) that captures and diverts 137.2 acres of low flow urban runoff and first flush rain events into the sanitary sewer. The only coastal outfall in Imperial Beach not on a diverter system is at Ebony St end, which consists of a 12 inch outfall and drains a residential area of 2.2 acres. The City also maintains 3 vehicle and equipment washing areas (Public Works, Fire Station, and Lifeguards) that are connected to the sanitary sewer.

### **Nopalitano Restoration Project**

The restoration of the Nopalitano Trust property was a major project for the City to restore 1.25 acres of former wetland filled adjacent to the Tijuana Estuary. Construction was initiated in December 1998 and was completed in February 1999. The project received final sign-off from the permitting agencies in 2002 and turned over to the Tijuana River National Estuarine Research Reserve (TRNERR).