CITY OF
SANTA CLARA
FOUNDED 1854

STORM WATER MANAGEMENT PROGRAM

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INTRODUCTION & BACKGROUND

GLOSSARY OF ACRONYMS

BMP: Best Management Practices

DWQ: State of Utah Division of Water Quality

EPA: Environmental Protection Agency

IDDE: Illicit Discharge Detection & Elimination

LID: Low Impact Development

MS4: Municipal Separate Storm Sewer Systems

NOI: Notice of Intent

NPDES: National Pollutant Discharge Elimination System

ORI: Outfall Reconnaissance Inventory

SWMP: Storm Water Management Plan

SWPPP: Storm Water Pollution Prevention Plan

INTRODUCTION & BACKGROUND

The Santa Clara Storm water Management Plan (Storm water Plan) has been developed to provide policy and management guidance for activities affecting storm water. It is intended to help the City comply with certain State and Federal water quality requirements and to meet local water resources management objectives. Through the implementation of the policies and management practices embodied in the Storm water Plan, Santa Clara hopes to improve storm water quality and prevent negative impacts to the regions waters.

Santa Clara has joined many small to medium-sized cities throughout the nation that fall under the Federal Clean Water Act (CWA) requirements to apply for and maintain a Municipal Separate Storm Sewer System (MS4) permit under the National Pollutant Discharge Elimination System (NPDES) program. Among the many provision of the State and Federal regulations guiding the issuance of the storm water discharge permit, is the requirement that the City demonstrate its efforts to reduce pollution in urban storm water "to the maximum extent practicable." The Clean Water Act joins the Endangered Species Act (ESA) and the Safe Drinking Water Act (SDWA) in protecting the "beneficial uses" of the nation's waters, including drinking, recreation, and fish/habitat uses."

Santa Clara is approximately 6.9 square miles and has approximately 8,000 residents. At an elevation of 2,762 Santa Clara is situated on the Santa Clara River, south of the Town of Ivins and approximately 5 miles north east of the Santa Clara River's confluence with the Virgin River. The area includes additional tributary streams that are traditionally dry most of the year, various other open waterways used for irrigation purposes, and a piped storm sewer system.

Over the last seventeen years Santa Clara City has been actively involved in the creation and implementation of a Storm water Management Program. The Storm water Program and its long-term objectives form the basis for the Goals, Policies and Implementation Actions that constitute the current standards for Santa Clara City Storm water Management Plan.

Santa Clara has complete authority and responsibility for planning, building, operating, maintaining, enforcing and regulation of the storm water drainage system. The Santa Clara River and the Tuacahn Wash are the two major receiving water resources within the City's jurisdiction.

Fiscal Analysis & Program Funding

Operations within the City's Storm Water Management Program, including development and implementation of the MS4 plan, is completely funded by user fees, which are billed on a monthly basis.

Storm water Utility Fee

Title 13 Chapter 24 of Santa Clara code requires that each developed parcel of real property in Santa Clara City be charged a storm water utility fee. The fee is based on the number of equivalent service units (ESUs) contained in the parcel. All developed non single-family residential parcels pay a multiple of this base rate, expressed in ESUs, according to the measured impervious area on the parcel. The amount charged for each ESU is established by resolution of the Santa Clara City Council. The Santa Clara City Council may establish exemptions and credits to the storm water utility fee by resolution. The City's current storm water utility fee is $13.85. For additional information on storm water utility fees visit www.sccity.org.

Santa Clara will conduct an annual analysis of its capital, operation and maintenance expenditures that are spent and allocated to meet the MS4 permit requirements. A summary of this analysis will be submitted to DEQ with the City's annual report. Santa Clara's approved stormwater budget for fiscal year 2020-2021 is $579,805.

PROGRAM OVERVIEW

- Public Education and Outreach
- Developer/Engineer/Contractor Outreach and Education
- Municipal Employee Training and Education
- Public Participation/Involvement
- Illicit Discharge Detection and Elimination
- Construction Site Runoff Control
- Post-Construction Runoff Control
- Pollution Prevention/Good Housekeeping
- Storm Water and Outfall System Mapping
- Inspection, Maintenance and Enforcement of Existing Developments
- Facility, Operations, Maintenance Program

MINIMUM CONTROL MEASURES

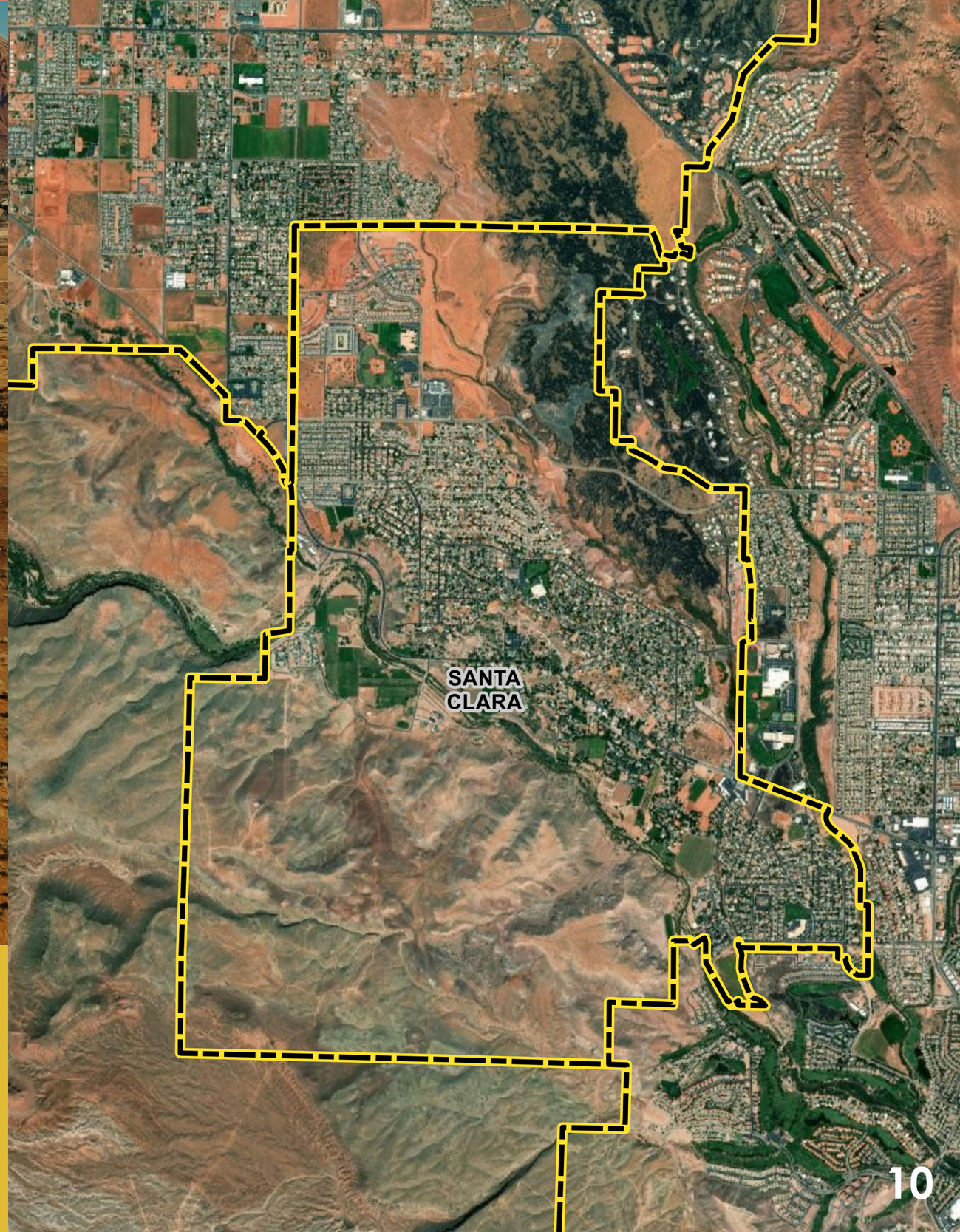
This SWMP has been developed to meet the terms of the UPDES permit and consists of the six minimum control measures. Implementation of these control measures is expected to result in reductions of pollutants discharged into receiving waters. These six control measures are addressed in separate sections of this plan.

- Public Education and Outreach
- Public Participation and Involvement
- Illicit Discharge Detection and Elimination
- Construction Site Runoff Control
- Post-Construction Storm Water Management
- Pollution Prevention and Good Housekeeping

SANTA CLARA CITY

STORM WATER MANAGEMENT PLAN

UPDES STORM WATER DISCHARGE PERMIT NO. UTR090050



STORM WATER PROGRAM RESPONSIBILITIES

PUBLIC WORKS ADMINISTRATIVE ASSISTANT
Kristelle Hill

PUBLIC WORKS DIRECTOR
Jack Taylor

Public Education & Outreach

Public Involvment & Participation

Building Official & Registered Storm Water Inspector for Individual Lots
Corey Bundy

- Illicit Discharge & Elimination (IDDE)
- Post Construction Management
- Construction Site Runoff Control
- RSI for Individual Lots

CITY CONSTRUCTION & SUBDIVISION INSPECTOR
Fred Fage

PUBLIC WORKS SUPERVISOR
Dustin Mouritsen

- Illicit Discharge & Elimination (IDDE)
- Pollution Prevention & Good Housekeeping

STORM WATER COORDINATOR & CODE ENFORCEMENT
Scott Bannon

- Construction Site Runoff Control
- Post Construction Management
- Pollution Prevention & Good Housekeeping
- Public Education & Outreach
- Public Involvment & Participation
- Illicit Discharge & Elimination (IDDE)

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PUBLIC EDUCATION & OUTREACH

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Santa Clara selected the following BMPs in order to cover a wide range of audience including homeowners, businesses, developers, contractors, engineers, and municipal employees. Coordinating with other agencies like the Washington County Water Conservancy District, Dixie Clean Storm water Coalition, Washington County Solid Waste District and others, helps to address a wider range of water quality concerns. Continually taking advantages of events that are already being hosted, making the program more cost effective and efficient.

Storm water education starts with a well-developed outreach plan. The outreach plan should identify goals and objectives, classify the target audience, identify the message, and explain how the message will be distributed. The Storm water Coordinator will be responsible for the implementation of this BMP and its evaluation. The involvement of the other City departments will be utilized when possible.

Santa Clara uses coordinating efforts through the Dixie Clean Storm water Coalition (DCSWC) to reach out to a variety of audiences. Santa Clara will continue work with adjacent MS4s to develop better coordination of resources and more cost-effective solutions. The City website, monthly newsletters, and radio broadcasting will be used to encourage a variety of stakeholders to participate in these meetings and gather input. We continue to participate in the annual water fair, generally held at DSU to educate and involve students promoting volunteerism to build Storm Water general awareness. As a City, we continue to educate contractors on a one-to-one basis when building permit applications are submitted and approved. The Storm Water coordinator is responsible for continually reevaluating training and education of its employees to achieve best management practices.

MEASURABLE GOALS

- **Educating the public through our City website, monthly newsletters, and radio broadcasting events**
- **Participation in Annual Water Fair**
- **Storm Water educational banner advertisements during City events**

PUBLIC INVOLVEMENT & PARTICIPATION

PUBLIC INVOLVEMENT & PARTICIPATION

Santa Clara currently provides several opportunities for public involvement and participation. Santa Clara is participating in a formal organization known as the Dixie Clean Storm Water Coalition. The DCSWC developed a Community Hot line as a mechanism for citizens to report illicit discharges and illegal dumping. Citizens can also contact the City directly to inform or file a complaint for violations related to Storm Water.

The coalition meets on a minimum monthly basis to discuss storm water related issues that affect the surrounding communities. The organization is comprised of representatives from the various municipalities, private consultants, contractors, developers, SUHBA and other community members.

A long-term goal of the storm water coalition is to share the cost of implementation for their respective storm water management programs, particularly in the areas where their programs overlap to maintain consistency.

Over the next five years, the City will work to provide additional opportunities for public involvement in its Storm water Program. One area of the Minimum Control Measures is focused on public meetings, and providing more opportunities for Storm Water related activities in the community. One of the programs Santa Clara City has implemented is called “Adopt-a-Stream”. Where Dixie State University environmental science student volunteer at the arboretum. The purpose of this program includes restoration projects, tree planting which helps reduce sediment and improves storm water quality. Santa Clara sponsors quarterly community clean up days which provides dumpsters at various locations for citizens to utilize. We also promote the “County Wide Hazardous Waste Day” by announcements through our website and Community Newsletter. As previously mentioned in the Public Education and Outreach section, the City hopes to utilize professionals from the community for its Storm Water education and outreach efforts.

MEASURABLE GOALS

- **Increase volunteer participation of our citizens with pollutants/ trash cleanup program throughout the City**
- **Expand our Public Education booth at the Transportation Expo to include Storm Water information**

ILLICIT DISCHARGE DETECTION & ELIMINATION

ILLICIT DISCHARGE DETECTION & ELIMINATION

Illicit discharges are generally any discharge into a storm drain system that is not composed entirely of storm water. Illicit discharges are detrimental to receiving waters, because storm water generally flows to waterways without any additional treatment. Illicit discharges often include pathogens, nutrients, surfactants, and various toxic pollutants. Studies indicate that dry weather discharges contribute significant pollutants to receiving waters. The Detection and Elimination Program (IDDE) requires the establishment of adequate legal authority to prohibit illicit discharges. The program assesses and prioritizes potential areas for pollutants, coordinates existing resources, and establishes a mechanism to track activities and measurable goals.

Santa Clara has developed a comprehensive program to address these non-storm water discharges. With the creation of a citizen reporting hot line for Illicit Discharges within the community. Clear policies and procedures have been established to ensure that individual incidents are addressed consistently in cases where discharges result in criminal negligence. The City will utilize existing resources, programs, and establish responsibilities for tracking program goals. The results of these activities will be used to develop an Illicit Discharge Detection and Elimination pamphlet.

Through ordinances and or other regulatory mechanism, non-storm water discharges to the MS4, including spills, illicit connections, illegal dumping, sanitary sewer overflows, into Santa Clara's Storm Drain System. The removal of such discharge is required, along with appropriate enforcement action for the incident. Enforcement procedures have been developed pursuant to Utah's Division of Environmental Quality requirements. Ordinances will be reviewed and updated as necessary within our manual. The permittee must have a variety of enforcement options available to meet the severity of the violation.

Standard Operating Procedures for field assessment activities (ORIs) are in place for verifying outfall locations along with detecting illicit discharges. Activities include dry weather screening of out falls and facilities serving priority areas.

MEASURABLE GOALS

- **Develop a video explaining detection and elimination of an illicit discharge and be placed on the City website**
- **Implement the use of a Storm Water Netting Trash Trap in high pollutant areas**
- **Create a community education pamphlet on Illicit Discharge Detection and Elimination**

CONSTRUCTION RUNOFF CONTROL

CONSTRUCTION RUN OFF CONTROL

All Permittees shall develop, implement and enforce a program to reduce pollutants in any storm water runoff to the MS4. Construction sites with a land disturbance of greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale according to the minimum performance measures listed below within 18 months of receiving coverage under this Permit. Public and private projects, including projects proposed by the Permittees own departments and agencies, shall comply with these requirements.

All Permittees shall develop and implement SOPs or similar type of documents for construction site inspection and enforcement of construction storm water pollution control measures. The procedures must clearly define who is responsible for site inspections as well as who has authority to implement enforcement procedures. The Permittee must have the authority by law for imposing sanctions to ensure compliance.

These BMP's are intended to provide for maintenance, review, and augmentation of City Ordinances and Codes. These ordinances have been adopted to enable administration and enforcement of programs aimed at reducing and/or eliminating erosion and sedimentation associated with both public and private construction locations.

Erosion and sedimentation from construction sites can lead to reduced water quality and other environmental problems. Per DEQ requirements, Santa Clara must implement a storm water management program that includes a component for controlling erosion and sediment on construction sites disturbing at least one acre, or sites less than one acre that are part of a common development.

The following procedures will be used to evaluate pre-construction site inspections, SWPPP reviews, and the implementation for use of low impact design (LID) State requirements. High-priority construction sites will be identified in the plan review process. A list of high-priority construction sites will be kept by the City.

Prior to Construction the city conducts a pre-construction meeting, pre-construction inspection, monthly Storm Water inspections, visual and periodic inspections, follow up inspections for corrective actions, a close-out inspection and "NOT" verification through Utah DEQ. Investigative inspections will be on observations or complaints received by all City employees. Upon completion, these complaints will be documented within our Storm water program module within City Inspect.

LOW IMPACT DEVELOPMENT (LID)

In December 2018, the Utah Department of Environmental Quality Division of Water Quality (UT DWQ) prepared a manual intended to serve as a reference and guide for incorporating Low Impact Development (LID) approaches into new development and redevelopment projects in Utah. The manual was intended to provide guidance for planners and designers as well as small Municipal Separate Storm Sewer System (MS4) storm water managers in selecting appropriate practices for their communities.

To meet the requirements of the State Permit, MS4 municipalities require that LID practices be discussed and analyzed at the initial stages of development prior to the approval of the concept plans, development plans or preliminary plats.

UT DWQ guidance was provided to reduce to the maximum extent practicable pollutants transported in untreated storm water to the waters of the United States by using key Low Impact Development (LID) principles such as; mimicking natural processes, promoting infiltration/ evapotranspiration/ harvesting/ reuse, and managing storm water with distributed systems close to the source. Additional LID requirements are expected for permitted MS4's, to develop a LID approach for retention of storm water, from the 80th percentile storm event for all new development and redevelopment projects that are greater than 1 acre or equal to or part of a common plan of development. In so doing, the UT DWQ guidance is designed to increase the use of LID practices and specific applications.

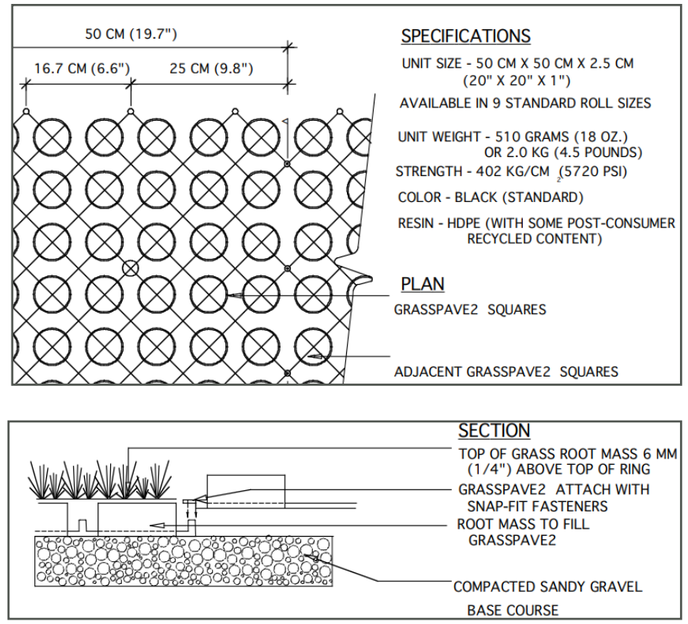
LID CODE REQUIREMENTS

A. Projects Greater Than Or Equal To One (1) Acre: Newly developed and redeveloped projects that disturb greater than or equal to one (1) acre, including projects less than one (1) acre that are of a larger common plan of development or sale, are required to submit a low impact development (LID) approach to be evaluated by the City of Santa Clara. An LID approach promotes the implementation of BMPs that allow storm water to infiltrate, evapotranspire or harvest and use storm water on site to reduce runoff from the site and protect water quality. Guidance for implementing LID can be found in State of Utah DWQ's LID controls which are appropriate for use in the State of Utah and can be found in A Guide to Low Impact Development within Utah (the Guide), available on DWQ's website or Green Infrastructure and Low Impact Development Application Guidance for Washington County Utah, available from the City of Santa Clara.

B. Specific Criteria: Newly developed and redeveloped projects must meet the required that best management practices (BMPs) are designed to manage rainfall on-site, and prevent the off-site discharge of the precipitation from all rainfall events less than or equal to the 80th percentile rainfall event or a pre development hydrologic condition, whichever is less. This objective must be accomplished by the use of practices that are designed, constructed, and maintained to infiltrate, evapotranspire and/or harvest and reuse rainwater and must be incorporated into the permittee's development plans and long term storm water management plan which includes the LID approach. If meeting the 80th percentile standard is infeasible an alternative design approach may be used provided that the permittee documents that infiltration, evapotranspiration, and rainwater harvesting have been used to the maximum extent feasible and that full employment of these controls are infeasible due to constraints. For guidance including alternative design approaches see "A Guide to Low Impact Development within Utah" published by the DWQ, and "Green Infrastructure and Low Impact Development Application Guidance for Washington County Utah."

C. Inspections of Storm Water Management Facilities: Owners/operators shall perform necessary maintenance to protect water quality and reduce the discharge of pollutants to the MS4. Owners/operators of newly developed and redeveloped projects shall conduct inspections at least every other year and provide certification that adequate maintenance has been performed and the structural controls are operating as designed to protect water quality. This required inspection shall be conducted by the property owner/operators or qualified third parties. On sites where the property owner/operator is conducting maintenance, the permittee shall allow municipal inspections to conduct inspections at least once every five (5) years, or more frequently as needed to show that adequate maintenance is being performed. The owner shall grant access to the City of Santa Clara to inspect storm water control measures on private properties that discharge to the MS4 to ensure that adequate maintenance is being performed. The findings of each inspection shall be documented in an inspection report, and must contain the following:

- Inspection date;
- Name and signature of inspector;
- Project location;
- Current ownership information;
- A description of the condition of the storm water control measure including the quality of: vegetation and soils; inlet and outlet channels and structures; catch basins; spillways; weirs, and other control structures; and sediment and debris accumulation in storage as well as in and around inlet and outlet structures; and,
- Specific maintenance issues or violations found that need to be corrected by the property owner or operator along with deadlines and re-inspection dates If there is an observed failure of a facility to perform as designed, the failure must be corrected and documented in the inspection report.



Example of a recent new development in Santa Clara City who has implemented LID standards

MEASURABLE GOALS

- **Site plan review procedures for post-construction storm water management**
- **Create and streamline a video to educate contractors and developers the importance of erosion and sediment control at construction sites.**
- **Low Impact Development Best Management Practices will be identified and implemented within the first phase of the development approval process**
- **To identify within the City of Santa Clara area which applicable Best Management Practices would be used within the project area specific locations by the various geology and soils samples**

POST CONSTRUCTION RUNOFF CONTROL

POST CONSTRUCTION RUN OFF CONTROL

Santa Clara requires that contractors ensure that final BMPs are installed at the appropriate times in accordance with the accepted grading drawings. The City requires that the final BMPs be installed and functioning before a Notice of Termination (NOT) is issued by the City. It is the responsibility of the project manager to ensure that final BMPs are installed at the earliest opportunity.
The City has provided preferred BMPs including structural and non-structural BMPs that are recommended by the City to stabilize areas that are susceptible to erosion and sediment loss. The BMPs are also intended to implement measures for flood control and protect the integrity of natural resources and sensitive areas.

Santa Clara will conduct an investigation into structural and non-structural BMPs most suited and appropriate for the area. These requirements will be published by the City. The City's procedures in this publication will include a process to evaluate and encourage a Low Impact Development (LID) approach to the implementation of structural BMPs, where feasible, that infiltrate or evapotranspire to protect water quality. The City□s evaluation of structural controls will include green infrastructure practices such as rainwater harvesting, rain gardens, permeable pavement, and vegetated swales. considerations to be used in evaluation post-construction controls include; clogging or obstruction issues, freeze-thaw problems, effect on slope stability, groundwater, and the ability to effectively maintain the control.

Development can alter landscapes by increasing imperviousness and changing drainage patterns, thereby increasing the volume and velocity of runoff from the site. Increased volume leads to degradation of receiving waters and increases in the occurrence of flooding.
Storm water from developed impervious areas can also contain a variety of pollutants that are detrimental to water quality, such as sediment, nutrients, road salts, and heavy metals.
Considering water quality impacts early in the design process can provide long-term water quality benefits. New development projects on undeveloped land offer many opportunities to reduce storm water runoff from the site. Redevelopment projects, which replace an existing development and are typically in more urban areas, usually have less land area available for storm water controls.
Santa Clara is required to develop ordinances that require property owners and operators to include a combination of structural and non-structural BMPs and ensure adequate long-term operation and maintenance of BMPs. To do this, the City intends to review development plans to ensure that they minimize water quality impacts from the site after construction is complete.

Santa Clara will implement procedures for site plan review that will incorporate consideration of water quality impacts. The City will review Storm Water Pollution Prevention Plans (SWPPPs) prior to construction. This review will include all new development and redevelopment sites that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common development. The objective of this review is to ensure that the SWPPPs include long- term storm water management measures that meet the requirements of the permit for the post-construction control measure.
The City will provide developers contractors and design professionals with preferred Best Management Practices/Low Impact Development examples for post-construction runoff control. Procedures require Construction design standards to be followed in all development and redevelopment projects. Plans must be approved prior to construction. On site inspections and testing must pass on structural and non-structural BMP's installed and final walk through before acceptance.

Routine inspection and maintenance help prevent potential nuisances and reduces the need for repair maintenance. Maintenance of BMPs also reduces the chance of pollutants being in storm water runoff by finding and fixing problems before the next storm event. Qualified City staff, or a qualified third party, will inspect permanent structural BMPs at least once during installation. Santa Clara provides inspector training and will continue to provide continuing education to inspectors to keep current with required regulations, control methods etc.
The City will maintain training records for dates, activities, and names of staff in attendance.

MEASURABLE GOALS

- **Implementation of LID State requirements for developers and contractors in beginning stages of development process**
- **Prepare draft ordinance, status of review, and anticipated approval dates for LID and 80% Retention requirement**

POLLUTION PREVENTION & GOOD HOUSEKEEPING

POLLUTION PREVENTION & GOOD HOUSEKEEPING

The objective of Santa Clara City in managing storm water at municipal facilities, is to prevent or reduce pollutants released during city activities from entering storm drain systems or receiving waters. The City will inventory its facilities associated with these activities to effectively prevent or reduce storm water pollution. During City projects, employees are continually revising activities or implementing new measures as seen fit. These activities and control measures are described within the Operations and Maintenance Manual.

The Operations and Maintenance Manual designed for City-owned or operated facilities have been developed to include inspections on a weekly, quarterly, and yearly basis. This manual is designed to teach staff about potential sources of storm water contamination and ways to minimize the water quality impact of municipal activities, such as park and open space maintenance, fleet and building maintenance, construction and land disturbances, and storm drain system maintenance. A strict street sweeping schedule is used to increase the efficiency of this program. Areas of concern are based on traffic volume, land use, field observations, sediment and trash accumulation. The number of curb-miles are maintained in logs along with the amount of waste collected. To comply with DEQ requirements, the City has developed SOPs and inspection reports which are recorded in our Storm Water module.

MEASURABLE GOALS

- To create and maintain a strict street sweeping schedule to increase the efficiency of the program
- Review, update and streamline the documentation process within City Inspect
- Create semi-annual aerial drone video inspection process for pollution prevention and good housekeeping procedures
- To implement employee Storm Water training during our employee recognition luncheons that are held bimonthly

The above items are documented and tracked through the program "City Inspect". The Stormwater Coordinator has the responsibility for the implementation of operational procedures and evaluations. The involvement of the other City employees/departments are utilized when possible. For each City owned facility and activity, a site-specific checklist has been developed for the following locations:

- **Buildings & Facilities**
- **Material Storage**
- **Heavy Equipment**
- **Maintenance Areas**
- **Parks & Open Space**
- **Vehicles & Equipment**
- **Roads, Highways, & Parking Lots**
- **Stormwater Collection & Conveyance System**
- **Other facilities & operations that would reasonably be expected to discharge contaminated runoff**

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Division of Water Quality

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