

STORM WATER MANAGEMENT PLAN 2.0



St. George Public Works

UPDES PERMIT #UTR090051

Rewritten January 2020

Revised November 2021

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STORMWATER MANAGEMENT INTRODUCTION

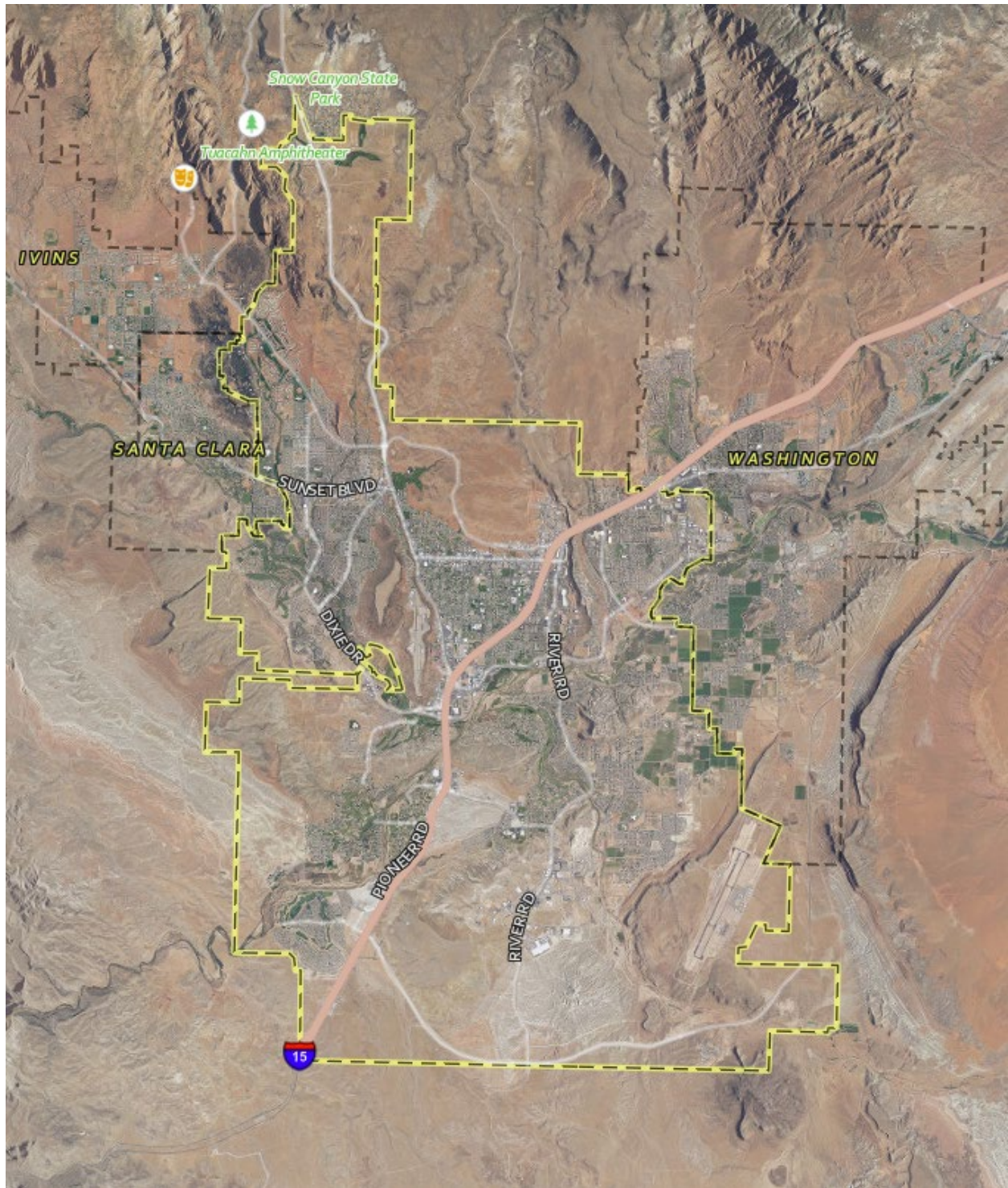
The City of St. George is a community in southern Utah. The population estimate is 95,342 based on the April 1, 2020 United States Census Bureau.

The original St. George Stormwater Management Plan (SWMP) was first created in February 2003 and has undergone several revisions. This SWMP 2.0 is not meant to be a revision but is written from scratch to reflect how St. George is currently managing the stormwater program. The stormwater program is designed to prevent polluted storm water runoff into the storm drain system and ultimately discharged into local rivers, washes and lakes without treatment. The electronic version of the SWMP with all appendixes can be found at <https://www.sgcity.org/swmp>.

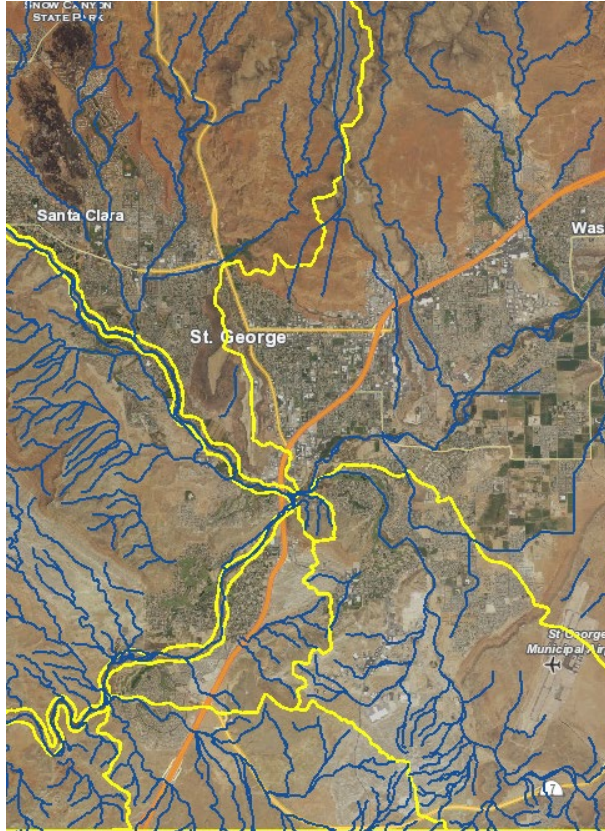
There are federal, state and local jurisdictions that work hand-in-hand to help enforce regulations pertaining to stormwater. The federal Environmental Protection Agency (EPA) established the Clean Water Act to regulate the discharge of pollutants into the nation's surface waters. The EPA has a permitting system called the National Pollutant Discharge Elimination System (NPDES). The State of Utah Department of Environmental Quality (DEQ) has adopted the Utah version of the EPA's permit called the Utah Pollutant Discharge Elimination System (UPDES). St. George is a Municipal Separate Storm Sewer System (MS4) and assists the EPA and DEQ on enforcing their permits on a local level.

Stormwater is the water from rain events that travels down our gutters into the storm drain. Stormwater starts off clean and flows directly into local rivers, washes and lakes. It is almost never treated, so everything stormwater collects from the land surface, roadways, sidewalks, parking lots, construction sites, business parks, etc., is carried to gutters, storm drains, canals, drainage ways, and finally ends up in our local washes and rivers untreated. It is estimated more than one-half of the pollution in our nation's waterways comes from stormwater runoff.

In our local area, stormwater flow directly to the Virgin River, Santa Clara River and Fort Pierce Wash with no treatment. Pollution of stormwater is a serious problem for wildlife dependent on our waterways and for the people who live near waterbodies or use them for recreation.



The yellow dashed line indicates the boundary for St. George.



The map above shows surface waters in our local area. The impairments are as follows:

Impaired Surface Water	Is this surface water impaired?	Pollutant(s) causing the impairment	Has a TMDL been completed?
Virgin River	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Temperature; Boron; Total Dissolved Solids	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 303d impaired, not completed to address all.
Santa Clara River	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Arsenic; Temperature; Total Dissolved Solids, Boron	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Currently not prioritized for TMDL Water with DWQ
Fort Pierce Wash	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total Dissolved Solids	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 303d impaired

The local water quality concerns come from:

- Construction related pollutants consisting of sediment and pollutants that adhere themselves to sediment, fugitive dust and trash. Construction activity is highly regulated, and St. George's permitting system has been effective at managing construction pollution sources.
- Occupied residential and commercial activities generating organic/nutrient pollutants from fallen leaves, grass clippings, fertilizers, landscape and pet waste left near or discharged to the public right-of-way.
- Commercial properties have the potential for other pollution sources and illegal stormwater system connections; however, source investigation and stormwater system mapping are ongoing.
- Spilled oil, fuel and fluids from vehicles and heavy equipment. This is managed with routine street sweeping.

SWMP STAFF AND RESOURCE ALLOCATION AND COORDINATION

ST. GEORGE

Explanation of responsibilities for implementing St. George's SWMP:

Public Works Director, Cameron Cutler

- Works with elected officials and city management
- Decides priorities for the stormwater management program
- Budget

Public Works City Engineer, Jay Sandberg

- Works with elected officials and city management
- Ensures that major stormwater program components such as ordinance updates, major Storm Water Management Program updates and fee changes are taken to public meetings and adequate Public Notice is given
- Coordinates development of long-term storm water management and low impact development standards
- Manages Stormwater Manager

Stormwater Manager, Kristi Schultz

- Coordinates the overall implementation of Storm Water Management Program
- Prepares Annual Reports
- Reviews and prepares updates for Storm Water Management Plan (SWMP)
- Oversees distribution of information and training for residents, businesses, contractors, and MS4 staff regarding pollution prevention, UPDES regulations, reporting spills, and reporting illicit discharges
- Conducts training for the Registered Stormwater Inspector (RSI) and Registered Stormwater Writer/Reviewer (RSW) classes
- Prepares and submits Storm Water Management Plan information to be posted on city's website
- Coordinates illicit discharge investigations and enforcement
- Performs stormwater pollution prevention plan (SWPPP) reviews for sites disturbing one acre or more or less than an acre if part of a Common Plan of Development sites
- Manage the Adopt-A-Waterway program
- Manages Stormwater Coordinator and assist with their responsibilities

Stormwater Coordinator, Karen Roundy

- Coordinates the execution of agreements for maintenance of long-term storm water controls
- Inspects sites within the city for post-construction compliance
- Inventories city-owned long-term controls and public LID controls
- Assists with illicit discharge prohibition, training and enforcement

- Coordinates the writing and implementation of standard operating procedures (SOPs) for stormwater pollution prevention for post-construction and city facilities and operations
- Conduct training for city employees that oversee stormwater BMPs and inspections for city owned sites
- Inspects city-owned long-term storm water controls
- Train MS4 employee on good housekeeping SOPs and inspection requirements

Stormwater Coordinator, Jeff Cottam

- Performs storm water pollution prevention plan (SWPPP) reviews for Common Plan of Development sites
- Inspects construction sites for storm water pollution prevention on Common Plan of Development sites and initiates enforcement measures
- Assists with illicit discharge prohibition, training and enforcement

Stormwater Coordinator, Kenneth Elliott

- Assist with MS4 compliance in all minimum control measures
- Perform outfall inspections and dry weather screenings and coordinate with the Streets Department for necessary maintenance
- Coordinates mapping of storm drain system, receiving waters, and outfalls
- Respond and follow up with illicit discharges and subsequent enforcement
- Inspects Construction General Permit sites for storm water pollution prevention and initiates enforcement measures

Streets Department

- Provides oversight for pollution prevention at municipal maintenance and storage yard and general streets maintenance including required inspections
- Performs and supervises corrective action from findings of maintenance and storage yard inspections and visual monitoring
- Coordinates video-inspection of storm water pipes
- Coordinates maintenance on the storm water collection system including inlet box cleaning, pipe cleaning, separator cleaning, and street/parking lot sweeping

Public Works Inspector/Project Managers

- Inspect Construction General Permit sites for storm water pollution prevention compliance and initiates enforcement measures

SOUTHWEST UTAH STORMWATER COALITION

MS4 coalition members include St. George, Washington City, Ivins, Santa Clara and UDOT Region 4. We have established the Southwest Utah Stormwater Coalition which meets regularly to discuss the needs of our communities. The Southwest Utah Stormwater Coalition's mission state is to: *"Reduce storm water pollution in local streams and rivers through public education and outreach, and collaboration of policies and standards to implement pollution control measures"*.

In addition to representative from the MS4's on the Southwest Utah Stormwater Coalition, we have invited others in the community to contribute to the stormwater conversation and training which include affiliations from Washington County Solid Waste, Associated General Contractors (AGC), Southern Utah Home Builders Association (SUHBA), third party SWPPP writers and inspectors, and community builders, sub-contractors and vendor/suppliers. More information can be found at <https://stormwater.sgcity.org/>

ADOPT-A-WATERWAY PROGRAM

The Adopt A Waterway Program is a program that facilitates the monitoring, clean up, and enhancement of stream/river segments of southern Utah and is open to individuals and organizations interested in helping the environment. To participate in the Adopt A Waterway program, volunteers will register to clean up a stream segment at least two time a year for a two year period. Once a group has achieved their first clean up event, the group qualifies to have their name on an Adopt A Waterway trail sign, in addition to recognition in marketing materials and on the website. More information can be found at <https://www.sgcity.org/adoptawaterway>.

SOUTHWEST PUBLIC HEALTH DEPARTMENT

If a spill were to occur that would cause serious environmental threat to humans or the environment the SWPHD would be contacted at 435-986-2556.

GIVE YOUR LAND A HAND

Washington County has a campaign to keep the county clean. They organize service projects and clean-up efforts with a variety of volunteers and partners. More information can be found at <http://www.giveyourlandahand.com/>. St.



George attends meetings to determine any opportunity to get involved to promote stormwater awareness and community involvement.

LOVE WHERE YOU LIVE UTAH

St. George promotes and assists the Love Where You Live Utah Facebook page to encourage community clean-up events. In addition to organized events, the Facebook page allows for a platform for individuals to post regarding their personal experience with clean-up efforts within our community. More information can be found on Facebook: Love Where You Live Utah and @lovewhereyouliveut.

PROGRAM SUMMARY

The SWMP has been developed to meet the requirements of the UPDES permit and consists of six minimum control measures established by the EPA and DEQ for municipal stormwater discharges. Implementation of these control measures are designed for the purpose of minimizing the discharge of stormwater pollutants to surface waters. Each control measure contains best management practices (BMPs) necessary for proper stormwater management. The BMPs contained herein include specific tasks to meet the objective of that control measure. The SWMP will include the regulation from the UPDES permit, program details of how the control measure is being implemented, and goals and assessment to determine the effectiveness. The six minimum control measures include:

- Public Education and Outreach
- Public Involvement/Participation
- Illicit Discharge Detection and Elimination (IDDE)
- Construction Site Stormwater Runoff Control Program
- Long-Term Stormwater Management in New Development and Redevelopment (Post-Construction Storm Water Management)
- Pollution Prevention and Good Housekeeping for Municipal Operations

CERTIFICATION

In accordance with Section 6.8.3 of the MS4 UPDES permit, the following statement must be incorporated and signed in this document:

Certification Statement:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

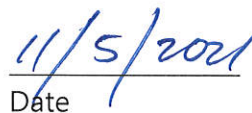
I also hereby designate the City Engineer and Stormwater Manager to be a duly authorized representative for the purpose of overseeing compliance with environmental requirements, including in the UPDES General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4) permit. The designee is authorized to sign reports required by the MS4 permit and other information by the Director of the Utah Division of Water Quality, or by an authorized representative of the Executive.



Signature of principal executive officer or ranking elected official



Print Name



Date

MINIMUM CONTROL MEASURE #1

PUBLIC EDUCATION AND OUTREACH

REQUIREMENT

MS4 UPDES Section 4.2.1

St. George must... "implement a public education and outreach program to promote behavior change by the public to reduce water quality impacts associated with pollutants in storm water runoff and illicit discharges. Outreach and educational efforts shall include a multimedia approach and shall be targeted and presented to specific audiences for increased effectiveness. The educational program must include documented education and outreach efforts for the following four audiences: (1) residents, (2) institutions, industrial, and commercial facilities, (3) developers and contractors (construction), and (4) MS4-owned or operated facilities."

PROGRAM DETAILS

Public education and outreach will be provided to one target group each year. This may include: the general public, development community, homeowners, Homeowner Associations (HOAs), businesses or schools. A different group will be targeted each year with one or more topics used in the public education and outreach program. The following topics are used:

- Potential impacts of animal waste on water quality and the need to clean up and properly dispose of pet waste to minimize runoff of pollutants in stormwater
- Spill prevention, proper handling and disposal of toxic and hazardous materials, and measures to contain and minimize discharges and general trash to the storm sewer system
- Illicit discharges and illegal dumping, proper management of non-stormwater discharges, and providing information on reporting spills, dumping, and illicit discharges
- Post-construction and Low Impact Development ordinances and long-term maintenance requirements for permanent stormwater control
- Potential water quality impacts of application of pesticides, herbicides and fertilizer and control measures to minimize runoff of pollutants in stormwater
- Nitrogen and phosphorus reduction associated with nutrient pollution

The outreach topic selected, and the target group will be reported in every Annual Report including the impacts and successes.

IMPLEMENTAION

STORMWATER OUTREACH:

St. George and/or the Southwest Utah Stormwater Coalition attends a variety of stormwater related public awareness activities every year including the Transportation Expo, 4th Grade Water Fair, SWPPP Smart Training sponsored by Southern Utah Home Builders Association (SUHBA) and Associated General Contractors (AGC), St. George neighborhood meetings and Cotton Days Festival. St. George is also an active member of USWAC and Give Your Land A Hand.

The Adopt A Waterway Program was established in 2021 to facilitates the monitoring, clean up, and enhancement of stream/river segments of southern Utah and is open to individuals and organizations interested in helping the environment. To participate in the Adopt A Waterway program, volunteers will register to clean up a waterway segment at least two time a year for a two year period. Once a group has achieved their first clean up event, the group qualifies to have their name on an Adopt A Waterway trail sign, in addition to recognition in marketing materials and on the website. More information can be found at <https://www.sgcity.org/adoptawaterway>.

St. George distributes stormwater swag at these events, as well as promote the southern Utah Stormwater Coalition website. The Southwest Utah Stormwater Coalition website has topics such as: yard and landscape waste disposal, pet waste, general construction information, low impact development, etc. (<https://stormwater.sgcity.org/>). St. George also partners with the Southwest Utah Stormwater Coalition to do public service announcements which includes radio announcements, Facebook and website posts.

EDUCATION PROGRAM FOR GENERAL PUBLIC AND RESIDENTIAL:

St. George will utilize the website, social media, radio ads, flyers, programs, etc. to educate the general public on stormwater awareness, regulations and the effects of nutrient pollution.

EDUCATION PROGRAM FOR DEVELOPERS, CONTRACTORS AND ENGINEERS:

The Southern Utah Stormwater Coalition has created a customized SWPPPP Template to assist contractors and/or owner builders giving them guidance on how to obtain a Common Plan of Development Storm Water Pollution Prevention Plan (SWPPP), Notice of Intent (NOI) and Notice of Termination (NOT) as required in the UPDES permit.

Software, City Inspect, was implemented in 2020. Training has been provided to promote the use of the software for permits and inspections. The training has been targeted to MS4 staff, developers, contractors and third-party inspectors.

Kristi Schultz is an instructor for the Registered Stormwater Inspector (RSI) and Registered Stormwater Writer/Reviewer (RSW) classes. The courses are targeted to contractors, engineers, third-party SWPPP inspectors/writers and MS4 inspectors to discuss the importance of SWPPPs,

BMPs, inspections and enforcement. The classes have been adapted to online due to COVID19; however, individual training and assistance with the required inspections are conducted by the Stormwater Manager or stormwater staff.

EDUCATION PROGRAM FOR BUSINESSES:

The Southwest Utah Stormwater Coalition has hosted training regarding the implementation of Low Impact Development (LID). Topics discussed are DEQ requirements, Southwest Utah Coalition Low Impact Development Guidance Manual (see Appendix F), submittal requirements, standards for “technically infeasible”, and long-term maintenance/inspections.

Business education flyers, letters or emails will be provided throughout the year for such business as carpet cleaning, auto repair shops, mobile cleaners, food services, fuel stations, concrete suppliers, landscape companies, waste management companies, etc. to promote stormwater awareness and potential enforcement actions.

GOALS AND ASSESSMENT

TARGET AUDIENCE	TOPIC	GOALS	YEAR
General Public	Manage website for both St. George and the Southwest Utah Stormwater Coalition	Keep current and usable information available to the public including information on nutrient pollutions to reduce nitrogen and phosphorus. Major updates were done to both websites in 2021. Updates are ongoing.	2020-2025
	Pet waste, landscaping, oil disposal, how to clean and/or report spills, pesticides, etc.	Track the number of views on the Southwest Utah Stormwater Coalition and city websites and continue to advertise to increase web views.	Beginning 2022 and report in the DEQ Annual Report
	General stormwater awareness	Attend the Transportation Expo, 4 th Grade Water Fair, SWPPP Smart Training, Cotton Day Festival and community meeting. Offer evaluation forms to determine audience take-a-ways and track attendance. Due to Covid19 the 4 th Grade Water Fair and SWPPP Smart Training was not offered in 2019-2020.	2020-2025
	Adopt A Waterway	Promote participation to encourage adoptions and clean up events in our local waterways. A media blitz was conducted in July 2021 and another media blitz will be done in Spring 2022.	2021-2025
MS4 Employees, Engineers, Developers, Contractors	LID Outreach	Significant training took place in 2020 with the new MS4 requirements effective July 1, 2020. Training will continue to be conducted with MS4 employees as well as the engineer and developer communities. We will evaluate our process and received feedback from the community, and fine-tune standard operating procedures as the program evolves.	2020-2025

	RSI and RSW classes	Promote certifications in our community to offer a better understanding of SWPPP requirements and BMPs. Promote the SWPPP Writer requirements in Section 7.2 of the CGP to encourage attendance by January 1, 2021.	2020-2025
Businesses	Post Construction and LID Best Management Practices	Train and implement new requirements for LID and post-construction inspections to ensure long term BMPs are effectively managed.	2020-2025
	Business education flyers/letters	Run reports of businesses that impact stormwater such as carpet cleaner, auto shops, food services, fuel stations, concrete suppliers, landscapers, waste management, etc. and mail flyers, letters or emails promoting awareness and enforcement. Work hand-in-hand with city Business Licensing Department to create processes to withhold business licenses for businesses that impact stormwater until training and/or acknowledgement is obtained.	2022-2025

MINIMUM CONTROL MEASURE #2

PUBLIC INVOLVEMENT/PARTICIPATION

REQUIREMENT

MS4 UPDES Section 4.2.2

St. George must...“ implement a program that complies with applicable State and Local public notice requirements. The SWMP shall include ongoing opportunities for public involvement and participation, but at a minimum two (2) times annually. Permittees can meet this requirement through advisory panels, public hearings, watershed committees, stewardship programs, environmental activities, volunteer opportunities, or other similar activities. The Permittee should involve potentially affected stakeholder groups, including but is not limited to, commercial and industrial businesses, trade associations, environmental groups, homeowners’ associations, and education organizations.”

PROGRAM DETAILS

St. George engages the public to help spread the message on preventing stormwater pollution by undertaking group activities that highlight storm drain pollution, and contributions from volunteers through community events to restore and protect local water resources. The following details the outreach strategy used.

The city implements at least one of the following during each year of the permit to provide fundamental support to the city’s Stormwater Management Plan (SWMP). The number of complaints reported, amounts of garbage/waste collected from street sweeping, attendance at public/volunteer activities, and effectiveness and evaluation of the activity are documented in the Annual Report.

- Adopt A Waterway Program
- Spring and Fall City Clean-up Days
- City employee and community volunteers to assist with clean-up prior to major city hosted events.
- Encourage participation and attendance from the community in the Southwest Utah Stormwater Coalition.
- The Southwest Utah Stormwater Coalition and St. George Stormwater websites provides residents, businesses, contractors, developers, engineers and planners with information to understand and comply with community standards, ordinances, and programs that pertain to MS4 requirements. Information is provided for fertilizers, pesticides, typical residential landscaping and maintenance pollutants and debris, garage chemicals and petrochemicals and other similar waste, as well as waste related to similar activities associated with

commercial properties. The site also provides information on how to report an illicit discharge (see <https://stormwater.sgcity.org/> and <https://www.sgcity.org/transportationandengineering/stormwater> .

IMPLEMENTAION

ADOPT A WATERWAY PROGRAM:

The Adopt A Waterway Program was established in 2021 to facilitates the monitoring, clean up, and enhancement of stream/river segments of southern Utah and is open to individuals and organizations interested in helping the environment. To participate in the Adopt A Waterway program, volunteers will register to clean up a waterway segment at least two time a year for a two year period. Once a group has achieved their first clean up event, the group qualifies to have their name on an Adopt A Waterway trail sign, in addition to recognition in marketing materials and on the website. More information can be found at <https://www.sgcity.org/adoptawaterway>.

SPRING AND FALL CLEAN-UP DAYS:

The city facilitates two city wide clean-up events a year. The events are advertised on the city website, utility billing announcements, newspaper and city staff emails. The city provides staff from several departments to assist with resident's curb-side pickup and several dumpster locations for drop off. Staff is there to encourage residents to participate in keeping our community clean and dispose of unwanted waste or items responsibly.

CITY EVENTS:

St. George is host to many local, state and national events/competitions. The city takes great pride in making sure our city stands out in a positive light for our local, state, national and international visitors. Prior to events such as the St. George Marathon, Iron Man, Senior Games, Art Festival, softball/baseball competitions, etc. city employee and volunteers assist in making St. George shine.

NEIGHBORHOOD MEETINGS:

Four times a year the city goes onsite to different neighborhoods throughout the community. They have several departments in attendance that discuss projects and concerns within the community. Stormwater attends to give our community an opportunity to get involved, share concerns and learn about the importance of stormwater runoff. Topics of discussion are pet waste, trail cleanliness, lawn care, and general education that anything entering the storm drain system is untreated. The Adopt A Waterway participation will be promoted at these neighborhood meetings.

COALITIONS AND INVOLVEMENT:

St. George is an active participant in the Southwest Utah Stormwater Coalition, USWAC and Give Your Land A Hand committee. All organizations are there to support and encourage community involvement and awareness. In addition to MS4s from St. George, Washington, Ivin's, Santa Clara and UDOT we have participants from SUBA, AGC, ASCE, contractors, subcontractors and third party SWPPP companies.

GOALS AND ASSESSMENT

TARGET AUDIENCE	TOPIC	GOALS	YEAR
General Public	Pet waste, landscaping, oil disposal, how to clean and/or report spills, pesticides, etc.	Link Facebook articles to the Dixie Coalition website and track the number of views and continue to advertise to increase web views.	2022-2025
	General cleanliness pre and post special events.	Work closely with city departments to use events as an opportunity to promote anti-litter information. Major events include the Iron Man, St. George Marathon and Senior Games	2020-2025
	Pet waste, trail cleanliness, lawn care, and general education that anything that enters the storm drain system is untreated.	Continue to attend and display stormwater awareness onsite of several different neighborhood events throughout St. George. Events are typically held quarterly. Track attendance and evaluations. Promote Adopt A Waterway program and increase participation.	2021-2025
	Community cleanliness	Add additional information in the city's Fall and Spring Clean-up Days advertising and promote stormwater awareness and consequences to our environment and community when residence do not comply. Encourage more resident participation in City Clean-up Days. Promote Adopt A Waterway program and increase participation. Promote the city and/or coalition website to education regarding nutrient pollution.	2022-2025
	Storm Water Management Plan (SWMP)	Provide the SWMP on the city website. Any revisions will be made available for 180 day review period to allow for public comment. Comments can be sent to stormwater@sgcity.org .	2021-2025
Community Partners	Give Your Land A Hand http://www.giveyourlandahand.com/	Partner with other community leaders and volunteers to promote stormwater awareness. There are several organized events per year.	2020-2025

	Facebook: Love Where You Live Utah @lovewhereyouliveutah	Partner with other community leaders and volunteers to promote stormwater awareness. There are several organized events per year.	2020-2025
	Southwest Utah Stormwater Coalition https://stormwater.sgcity.org/	Encourage participation from the community.	2020-2025
MS4	Create SOPs for pre and post events	Work with Park and Recreation employees to establish SOPs for pre and post city events. Conduct training for city employees	2021

MINIMUM CONTROL MEASURE #3

ILLCIT DISCHARGE DETENTION AND ELIMINATION (IDDE)

REQUIREMENT

MS4 UPDES Section 4.2.3

St. George shall...” implement and enforce an Illicit Discharge and Elimination (IDDE) program to systematically find and eliminate sources of non-storm water discharges from the MS4 and to implement defined procedures to prevent illicit connections and discharges according to the minimum performance measures...the IDDE program must be described in writing, incorporated as part of the Permittee’s SWMP document, and contain the elements detailed in this part of the Permit.”

PROGRAM DETAILS

This program will be integrated with all six minimum control measures to promote awareness of the important of protecting the stormwater system from illicit discharge and the impact to receiving waters. The following items will be addressed:

- MS4 Employee Training
- Spill Prevention and Response Plan
- Outfall Inspections/Dry Weather Screening
- Illicit Discharge Elimination and Enforcement

IMPLEMENTAION

MS4 EMPLOYEE TRAINING:

New employees of St. George attend an onboarding orientation. Every employee, despite their job responsibilities, watch a video titled Stormwater IDDE Employee Training. Upon completion of the video there is a quiz to verify participation and awareness. The process is facilitated by Human Resources and all tabulations of attendance are provided annually by their office.

There are a minimum if two annual employee trainings conducted each year:

- One is specific to the Stormwater staff and Streets Department. Topics include illicit discharge and detection, spill reporting and response, standard operating procedures, street sweeping and waste disposal, proper material storage, vehicle and equipment maintenance and inspections.
- The second annual training is for city Stormwater Reps. This training is conducted for the lead positions from the Police Department, Fire Department, Parks, Recreation/Golf, Facility

Maintenance, Fleet Maintenance, Water, Wastewater, Energy, Public Works, Engineering and Legal Department. Topics include illicit discharge and detection, spill reporting and response, site maintenance, inspections, standard operating procedures and our legal responsibilities as an MS4.

SPILL PREVENTION AND RESPONSE PLAN:

The city has Standard Operating Procedures (SOP) to assist in facilitation the detection and elimination of a spill (see Appendix G). The SOPs is reviewed annually, or as needed, to determine necessary charges.

OUTFALL INSPECTIONS/DRY WEATHER SCREENING:

The city has 526 outfall locations. Outfall inspections are currently conducted by the Stormwater Coordinator. A service request is created for any outfalls requiring maintenance and submitted to the Streets Department. The Stormwater Manager is notified of any potential illicit discharge for further investigation and enforcement. A list of outfall locations can be found in Appendix I.

The city hired a new employee in 2020 to conduct dry weather screening of all outfalls, field tests as needed, document inspections and findings, and verify locations with existing GIS data (quality control of existing data). A process for recording inspection in software, City Works, was created.

ILLICIT DISCHARGE ELIMINATION AND ENFORCEMENT:

The city has ordinances in Title 9 Chapter 14 (see Appendix C) which contains provisions to enforce against any party shown to have illicit connections, discharging pollutants to the storm drain system, and supports compliance to the UPDES Construction General Permit and Common Plan of Development Permit for construction activity and subsequent enforcement actions.

APODT A WATERWAY PROGRAM:

Adopting organization representative are trained by the Stormwater Manager on what an outfall is and how to detect “red flags” for illicit discharges. Anything alarming is noted on the Cleanup Data Form for further MS4 investigation.

GOALS AND ASSESSMENT

TARGET AUDIENCE	TOPIC	GOALS	YEAR
MS4 Employees	Illicit discharge and detection, spill response, reporting, standard operating procedures, street sweeping and waste disposal, proper material storage, vehicle and equipment maintenance, inspections and our legal responsibilities as an MS4.	<p>Have full participation in MS4 training. New hires receive IDDE training during the onboarding process. Current employees receive the following training:</p> <ul style="list-style-type: none"> • Streets Department – Annually • Stormwater Representative (Police Department, Fire Department, Parks, Recreation/Golf, Facility Maintenance, Fleet Maintenance, Water, Wastewater, Energy, Public Works, Engineering and Legal Department) – Annually (except 2019-2020 due to Covid) • Public Works RSI Inspectors – Stormwater issues are discussed at a weekly meeting 	2020-2025
	All six minimum control measures and outfall inspections and dry weather screening	The city hired a new Stormwater employee in 2020 to assist with all aspects of the stormwater program, but more specifically oversee the outfall inspections, dry weather screening, quality control of all GIS data and enforcement of illicit discharge detection and elimination.	2020-2021
General Public	Illicit Discharge Reporting	Encourage residents to report illicit discharges. Emphasize the resources on the website and track how many views on the site and incidents reported. Track the data to determine if illicit discharges are isolated to a specific area.	2020-2025
		City web designer is working on an online illicit discharge submittal process for the Southern Utah Stormwater Coalition website.	2021
		Encourage and promote the Adopt A Waterway program to community members. The number of adoptions and data related to the clean-up events will be provided in the DEQ annual reports.	Created in 2021
Business Owners and HOA's	Stormwater Regulation	Run reports of businesses that impact stormwater such as carpet cleaner, auto shops, food services, fuel stations, concrete suppliers, landscape companies, waste management companies, etc. and mail flyers, letters or emails that promote awareness and enforcement. Work hand-in-hand with city Business Licensing Department to create processes to withhold business licenses for businesses that impact stormwater until training and/or acknowledgement is obtained.	2022-2025
		Obtain Long Term Post Construction Maintenance Agreements and Plans from business.	

MINIMUM CONTROL MEASURE #4 CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

REQUIREMENT

MS4 UPDES Section 4.2.4

St. George shall...” implement and enforce a program to reduce pollutants in any storm water runoff to the MS4 from construction sites with a land disturbance of greater than or equal to one acre. This includes projects less than one acre that are part of a larger common plan of development or sale which collectively disturbs land greater than or equal to one acre according to the minimum performance measures...”

PROGRAM DETAILS

The city requires all new development and redevelopment construction sites greater than or equal to one acre, or smaller sites that are part of a common plan of development have a Storm Water Pollution Prevention Plan (SWPPP) and Notice of Intent (NOI). The SWPPP and NOI are both required prior to obtaining a grading and/or building permit (see details in SOP Manual in Appendix G). The following measures have been put into place:

- We have software called City Inspect that prevents issuing building permits without the proper storm water documents and review process.
- The MS4 inspectors and general contractor and/or third-party inspectors log the required inspections in City Inspect.
- City Inspect has been programmed not to allow a Final or Certificate of Occupancy inspection without a Notice of Termination (NOT) inspection complete. At the time of the NOT inspection, the city inspector will confirm the NOT has been requested on the CDX.
- City Inspect is our source for record keeping for the required reviews, documents, inspections and enforcement.
- The city has ordinances in Title 9 Chapter 14 (see Appendix C) which contains provisions to enforce against any party shown to discharge pollutants to the storm drain system, and supports compliance to the UPDES Construction General Permit and Common Plan of Development Permit for construction activity and subsequent escalating enforcement procedures and an appeal process.

IMPLEMENTAION

REVIEW PROCESS FOR CONSTRUCTION GENERAL PERMITS:

Development Services reviews the construction drawings and issues grading permits (see detailed information in the SOP in Appendix G). Prior to issuing the grading permit they will:

- Require SWPPP and NOI documents be submitted to the Stormwater Manager or Stormwater Coordinator for review and approval.
- Review the Storm Water Quality Report and Low Impact Development drawings to determine if LID requirements have been met.
- Require Post Construction Long Term Maintenance Agreements and Plans have been submitted to the Stormwater Coordinator for review and approval.

REVIEW PROCESS FOR COMMON PLAN OF DEVELOPMENT PERMITS:

SWPPP, site map and NOI must be uploaded to City Inspect with all other required building permit documents. The SWPPP and site map will be reviewed, and the NOI will be confirmed on the CDX. Once SWPPP documents have been accepted, the Building Department is given the green light. Permits cannot be issued without having stormwater approval.

SITE INSPECTIONS:

A preconstruction meeting is required as part of the grading permit. Stormwater BMPs and inspection requirements are discussed at the preconstruction meeting.

The MS4 inspectors and general contractor and/or third-party inspectors log the required inspections during construction in City Inspect. Frequency of inspections are determined in the SWPPP.

Once the site is complete the contractor is required to request a termination of the NOI on the CDX. The city Public Works Inspectors verify the site has met the final stabilization requirements per the UPDES permit.

ORDINANCES:

The ordinance in Title 9 Chapter 14 (see Appendix C) supports compliance to the UPDES Construction General Permit and Common Plan of Development Permit for construction activity with subsequent enforcement action.

The city has ordinances to enforce against any party shown to be discharging pollutants to the storm drain system and requires the responsible party to eliminate the discharge and perform clean-up activities as needed or face enforcement action/penalties.

GOALS AND ASSESSMENT

TARGET AUDIENCE	TOPIC	GOALS	YEAR
MS4 Employees	Registered Stormwater Inspectors	All MS4 inspectors that oversee stormwater compliance maintain a current RSI certification with Utah LTAP.	2020-2025
	Low Impact Development	Development Services, Engineering and Public Works employees have attended training on LID requirements, submittal processes and post-construction inspections. Significant training was conducted in 2020 and is ongoing.	2020-2025
	Development Review	Development Review meetings are held weekly to discuss projects, special site conditions, SWPPP requirements, LID/post construction requirements, enforcement, etc.	2020-2025
Contractors, Developers, Engineers, 3 rd Party SWPPP providers	RSI/RSW Training	Kristi Schultz is the instructor for the southern Utah region for the Registered Stormwater Inspector/Writer classes. There is also an online process through Utah LTAP for the RSI classes. The city encourages attendance for stormwater education and compliance.	2020-2025
	City Inspect	The city has conducted several training opportunities to educate on the stormwater permit software, process, inspections and Notice of Termination requirement. There has been significant training in 2020 and is ongoing.	2020-2025
		The city is currently creating a development module in software, City Inspect, for development plan review for sites with land disturbance of greater than or equal to one acre or less than one acre if part of a common plan of development. The software will be used by contractors, developers and engineers to upload the required documents for preliminary and final plats, site plans, LID, etc. for MS4 review and approval. Grading permits will be issued from City Inspect and all subsequent inspections (pre-construction, construction and final inspections/Notice of Termination).	Software development 2021-2022
Common Plan of Development (CPOD) SWPPP Template	The Southern Utah Stormwater Coalition created a CPOD template to be used in all MS4s. The template provides information specific to southern Utah such as the impaired waters since it was routinely missed and often a correction item during SWPPP reviews. The template is provided in the SOP Manual in Appendix G.	Created in 2020 and will be utilized 2020-2025	

MINIMUM CONTROL MEASURE #5

LONG-TERM STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND RE-DEVELOPMENT (POST-CONSTRUCTION STORM WATER MANAGEMENT)

REQUIREMENT

MS4 UPDES Section 4.2.5

St. George shall...“implement, and enforce a program to address post-construction storm water runoff to the MS4 from private and public new development and redevelopment construction sites meeting the thresholds below. The water quality considerations of this minimum control measure do not replace or substitute for water quantity or flood management requirements implemented on the local level for new development or redevelopment sites. The water quality controls may be incorporated into the design of structures intended for flow control; or water quality control may be achieved with separate control measures. The program must apply to private and public development sites.”

PROGRAM DETAILS

The city requires all new development and redevelopment construction sites greater than or equal to one acre, or smaller sites that are part of a common plan of development, have a Low Impact Development (LID) engineering drawing and Stormwater Quality Report submitted to Development staff for review (see Appendix F or <https://stormwater.sgcity.org/>). This will ensure any storm water controls, or management practices will meet LID requirements, including managing precipitation from all rainfall events to prevent off-site discharge to less than the 80th percentile. The city stormwater ordinance (see Appendix C) requires a long-term stormwater maintenance agreement (LTSWMA) and long-term stormwater management plan (LTSWMP) be submitted for all new development and redevelopment construction sites greater than or equal to one acre, or smaller sites that are part of a common plan of development. The LTSWMP includes BMP's and SOP's to prevent pollutants to be discharged from the site and requires site inspections every other year.

The following measures have been put into place:

- The city has developed and adopted a city ordinance (Title 9 Chapter 14 Section 5) requiring long-term post construction stormwater controls. The ordinance requires BMP selection, design, installation, operation and maintenance standards to protect water quality and reduce the discharge of pollutants, which includes an appeal process and enforcement provisions.
- The city has software to maintain documentation for each LTSWMP, including selected BMP's, site inspections and enforcement of post-construction control measures.
- The city has implemented SOP's for site inspection and enforcement of post-construction stormwater control measures.

IMPLEMENTAION

REVIEW PROCESS FOR COMMERCIAL GENERAL AND COMMON PLAN OF DEVELOPMENT LONG-TERM STORMWATER MANAGEMENT:

A technical review with Development Services and Engineering ensures minimal impacts to water quality and LID compliance. Prior to issuing the grading permit they will:

- Review the Storm Water Quality Report and Low Impact Development drawings to determine if LID requirements have been met.
- Require Post Construction Long Term Maintenance Agreements and Plans have been submitted to the Stormwater Coordinator for review and approval.

POST-CONSTRUCTION SITE INSPECTION PROCESS FOR COMMERCIAL GENERAL AND COMMON PLAN OF DEVELOPMENT PERMITS:

- The city has software to maintain documentation for each LTSWMP, including selected BMP's, site inspections and enforcement of post-construction control measures.
- The city has implemented SOP's for site inspection and enforcement of post-construction stormwater control measures.
- The city Public Works inspectors will inspect the site during construction and final inspection to verify long-term BMP's were constructed as designed.
- The city requires owners, managers, or associations to submit site inspections every other year, with the city Stormwater Coordinator inspecting sites every five years. These inspections will be documented in the city software program.

ORDINANCES:

- The city has ordinances in Title 9 Chapter 14 Section 5 (see Appendix C) which contains provisions to review LID, submit LTSWMA and LTSWMP, require inspections every other year to be submitted by the property owner and city inspections to be performed every 5 years and enforcement to correct any non-compliance or violations.

TRAINING AND DOCUMENTATION

- Human Resources requires stormwater training for all new hires at orientation.
- Annual trainings are scheduled by departments throughout the year and documented in city software.

GOALS AND ASSESSMENT

TARGET AUDIENCE	TOPIC	GOALS	YEAR
MS4 Employee	LID plan reviews and construction inspections	LID will be reviewed by Development Services with all other construction documents. The city is currently creating a Development Module in our software City Inspect. We expect to complete the transition from our current system to City Inspect by Spring 2022. City Inspect will be our record keeping mechanism for SWPPP and LID review, and BMP installation inspections.	2022-2025
	Post-Construction agreements, plans, inspections and enforcement	The city has chosen to manage post-construction documents in software City Works. We are in the process of setting up the computer program to track agreements, post construction LID, inspections and enforcement. We expect to complete the transition from our current system to City Works by Spring 2022.	
Property Owners and Property Management Companies	Post-Construction maintenance	Have fewer illicit discharges by educating property owners/managers of their responsibility for a clean site. Education opportunities come with explaining and acquiring the post construction maintenance agreement and plans.	2020-2025
		Work with the city Business Licensing Department to create a process for homebased businesses that have potential negative impact on storm water such as carpet cleaners, painters, mobile detailing, etc. to have them sign an acknowledgement about proper BMPs to prevent an illicit discharge and to inform them of city ordinance/enforcement.	2022-2025
Developers, Engineers, and Contractors	LID requirements and compliance	Training was provided by the Southern Utah Stormwater Coalition and sponsored by the Southern Utah Branch of ASCE, Southern Utah Home Builders Association (SUBA), and Associated General Contractors (AGC) to discuss the LID requirements, Southern Utah Stormwater Coalition LID Guidance Manual, submittal/review processes and post-construction inspection requirements. As the program evolves the city and/or coalition will offer additional training.	9/2020 training and proposed training in 2022

MINIMUM CONTROL MEASURE #6

POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

REQUIREMENT

MS4 UPDES Section 4.2.6

St. George shall...“implement a program for Permittee-owned or operated facilities, operations and structural storm water controls that includes SOPs, pollution prevention BMPs, storm water pollution prevention plans or similar type of documents, and a training component that have the ultimate goal of preventing or reducing the runoff of pollutants to the MS4 and waters of the state. All components of the program shall be included in the SWMP document and must identify the department responsible for performing each activity described in this section. The Permittee shall develop an inventory of all such Permittee-owned or operated facilities. The Permittee must review this inventory annually and update as necessary.”

PROGRAM DETAILS

The city has developed a written inventory of all facilities owned or operated by the city. The properties have been assessed to determine common pollutants and how to prevent them from entering the storm drain. Based on this assessment the city has identified the “high-priority” facilities and created SWPPP and Long-Term Storm Water Management Plan (LTSWMP) for each site. The SWPPP and LTSWMP contain BMP’s to target specific pollutants generated onsite. All documentation for this minimum control measure can be found at <https://www.sgcity.org/swmp> and City Inspect.

IMPLEMENTATION

POST-CONSTRUCTION SITE INSPECTION PROCESS FOR CITY OWNED FACILITIES:

- We have obtained a list of city properties from Risk Management, created a written inventory and identified common pollutants that originated at the facilities. We determined preventative methods to implement and created SOPs.
- We have assessed the list of city properties to create a “high-priority” list. We have created a SWPPP and LTSWMP document for each “high-priority” site.
- We have scheduled monthly visual inspections of “high-priority” facilities to be assigned to city staff on site, as noted on the City Facilities High-Priority List included in the SWMP
- Semi-Annual comprehensive inspection to be performed by the Stormwater Coordinator, records to be kept on City Works.
- Annual visual observation of storm water discharge inspections will be performed by the Stormwater Coordinator, records to be kept of city software.

- The city has developed and implemented SOPs at each of the facilities owned or operated by the city for buildings and facilities; material storage areas, heavy equipment storage areas and maintenance areas; parks and open space; vehicle and equipment; roads, highways and parking lots; and storm water collection and conveyance systems.
- The city maintains an inventory of all floor drains inside all city owned or operated buildings and ensures that the drains discharge to appropriate locations.
- The city will ensure contractors performing operations and maintenance activities follow SOPs.
- The city has developed and implemented a process to assess water quality impacts in the design of new flood management structural controls by requiring floodplain permits to be reviewed by a city Engineer prior to issuing any grading permit or building permit. The city Engineer reviews structural controls and determines if changes or additions should be made to minimize impacts to water quality.
- The city is working on an itemize project list for LID retrofit for existing developed sites.
- The city provides training for new employees at hire and annually within each department. Documentation is kept in the city software program.

GOALS AND ASSESSMENT

TARGET AUDIENCE	TOPIC	GOALS	YEAR
MS4	SOPs for all City Facilities	Obtain updated SOPs for all city facilities	2020 and updated based on revised MS4 permit to include additional SOPs for high priority sites in 2021
	High Priority Inspections	Document inspections on city software	2020 we utilized spreadsheets and in 2021-2022 we are converting to software, City Works
	Itemize list for LID retrofit	Create itemized LID retrofit list	2022
New Hire MS4	Training	Full participation from staff at annual training with each department. Ongoing training will be conducted to train on new software, City Works.	2020-2025

See the city website at <https://www.sgcity.org/stormwater/ms4stormwaterinformation> for Appendixes B-I.

- Appendix B – GENERAL PERMIT FOR DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4S)
- Appendix C – ST. GEORGE ORDINANCE – TITLE 9 CHAPTER 14
- Appendix D – UPDES CONSTRUCTION GENERAL PERMIT (CGP)
- Appendix E – UPDES COMMON PLAN OF DEVELOPMENT PERMIT (CPOD)
- Appendix F – DIXIE STORMWATER COALITION LOW IMPACT DEVELOPMENT GUIDANCE MANUAL
- Appendix G – STANDARD OPERATING PROCEDURE MANUAL
- Appendix H – CITY FACILITIES AND HIGH PRIORITY SITES
- Appendix I – OUTFALL INVENTORY