

SOUTH JORDAN CITY

SUPPLEMENTAL DEVELOPMENT GUIDE
FOR WATER QUALITY

Storm Water Management Plan

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SUPPLEMENTAL GUIDE FOR CONTRACTORS AND DEVELOPERS

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Note: sections above marked with * do not apply for residential Common Plan of Development projects.

INTRODUCTION

This Supplemental Guide for Contractors and Developers is part of the South Jordan City Storm Water Management Plan (SWMP), included as Supplemental Development Guide for Water Quality. Developers, Contractors, and Engineers are required to understand the elements of this guide and any updates. Designs, construction methods and recording of plats are affected by the requirements herein. This guide has been adopted by South Jordan City for compliance with the Contractor/Developer Education requirements of State and Federal Storm Water permit law.

Including Water Quality on All Projects

4.2.6.7. The Permittee must develop and implement a process to assess the water quality impacts in the design of all new flood management structural controls that are associated with the Permittee or that discharge to the Municipal Separate Storm Sewer System (MS4). This process must include consideration of controls that can be used to minimize the impacts to site water quality and hydrology while meeting project objectives. A description of this process must be included in the SWMP document.

4.2.6.8. Construction Projects. Public construction projects shall comply with the requirements applied to private projects. All construction projects disturbing 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, owned or operated by the Permittee are required to be covered under the General UPDES Permit for Storm Water Discharges Associated with Construction Activities. All public projects approved after the effective date of this Permit shall include construction and post-construction controls selected and implemented pursuant to the requirements in Parts 4.2.4. and 4.2.5.

Developer/Contractor Required Design Review Questions (not applicable for projects that qualify as a common plan of development):

The following questions must be addressed in the design process and submitted to the Development Review Committee, and/or the City Engineer or designee.

1. During conceptual design review meetings – answer the questions –
 - a. *Is there opportunity to include water quality aspects to this project?*
 - b. *Are there any highly impacted areas?*
 - c. *Are there low-impact development concepts and ideas that might work for this project?*
 - d. *Can we limit directly connected impervious areas (DCIA) on this project?*
 - e. *What could be done to minimize runoff?*

The following items will need to be addressed, or performed during the review process.

1. Train all employees, contractors and developers on SOP's and BMP's for all projects.
2. Include SWPPP discussion as part of the agenda for preconstruction meetings for all projects.
3. Follow normal SWPPP review process/checklist review for all projects.

HYDROLOGIC METHODS AND DESIGN STANDARDS - (not applicable for projects that qualify as a common plan of development):

4.2.5.3. The Permittee's (*SOUTH JORDAN CITY*) new development/redevelopment program must have requirements or standards to ensure that any storm water controls or management practices for new development and redevelopment will prevent or minimize impacts to water quality.

4.2.5.3.4 Each Permittee (*SOUTH JORDAN CITY*) shall develop and define specific hydrologic method or methods for calculating runoff volumes and flow rates to ensure consistent sizing of structural BMPs in their jurisdiction and to facilitate plan review. Specific criteria which require that Best Management Practices (BMPs) are designed to treat the water from a specific design storm (e.g., the 2-year, 24-hour event) must be incorporated into the permittee's post-construction minimum control measure and documented in the SWMP. Permittees may allow other unique or complex methodologies.

DESIGN STANDARDS SHOULD INCLUDE:

In developing/revising standards you are encouraged (not required) to work with neighboring communities to develop consistency with analytical methods within the same watershed. The following subjects should be addressed.

1. Hydrology
 - a. Design storm (frequency and duration) for peak flows
 - b. Design storm for piping (10yr- 24hr event)
 - c. Design storm for storage (100yr- 24hr event)
2. Storage
 - a. Peak discharge allowances
 - i. 0.2 cfs per acre
 - ii. Match predevelopment runoff hydrograph
 - b. Freeboard requirement= 1'
3. System policies
 - a. No stormwater in irrigation ditches and canals
 - b. Minimum pipe sizing = 18"
 - c. Deal with storm water at the source
4. Permitting requirements
 - a. Possible Permits from others: 404, Stream Alteration



REQUIREMENTS FOR NOTICE OF INTENT

Who Must File a Notice of Intent (NOI) Form? State law UAC R317-8-3.9 prohibits point source discharges of storm water from construction activities to a waterbody(ies) of the State without a Utah Pollutant Discharge Elimination System (UPDES) permit. The operator of a construction activity that has such a storm water discharge must submit an NOI to obtain coverage under the UPDES Storm Water General Permit. If you have questions about whether you need a permit under the UPDES Storm Water program, or if you need information as to whether a particular program is administered by EPA or a State agency, contact the State Storm Water Coordinator at **(801) 536-4300**

File NOI Form with fee payment(s), at the following address:

Department of Environmental Quality
Division of Water Quality
P.O. Box 144870
Salt Lake City, UT 84114-4870

NOI can also be completed on line at:

<https://secure.utah.gov/account/log-in.html>

Requirements per UPDES Permit No. UTR090000

Section 4.2.4 (South Jordan City) “shall develop, 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, **including projects less than one acre that are part of a larger common plan of development or sale**”

Section 4.2.4.1.1 (South Jordan City) “shall, at a minimum, require construction operators to prepare a Storm Water Pollution Prevention Plan (SWPPP) and apply sediment and erosion control BMPs as necessary to protect water quality, reduce the discharge of pollutants, and control waste such as, but not limited to, discarded building materials, concrete truck washout, chemicals, litter and sanitary waste at the construction site that may cause adverse impacts to water quality.

NOTE: A template for a SWPPP is available at the following location:

<https://documents.deq.utah.gov/water-quality/permits/updes/DWQ-2018-006549.docx>



ENFORCEMENT

The South Jordan City Engineer or Designee, Stormwater Inspector, and/or Code Enforcement Officer shall enforce provisions of the UPDES permit within their jurisdiction by Municipal Code/ Land Disturbance Permit **including but not limited to; Class A or B Misdemeanor, Stop Work Order with reinstatement fee, and/or fines.**

Note: To view the South Jordan Municipal code visit the city website at <http://www.sjc.utah.gov/code-compliance/>

PRE-CONSTRUCTION REVIEW

Contractor/Developer is required to submit a compliant SWPPP with an erosion control plan for review before any construction activities begin. Failure to submit for review, and or properly permit per South Jordan City construction standards will result in a stop work order per South Jordan Municipal Code/Construction Standards.

South Jordan City Construction Standard Requirements

6.1.1 GENERAL

A. Storm Water Pollution Prevention Plan:

1. Shall be required for all construction activities as required under the Utah Pollutant Discharge and Elimination System (UPDES) permits and the following:

- a) 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.
- b) Any construction activity the City Engineer or Designee deems to pose a unique threat to water quality, air quality, or public health or safety.

2. SWPPP shall be managed through the South Jordan City online storm water management system.

NOTICE OF TERMINATION PROCESS

The Notice of Termination (NOT) formally closes the temporary permit to discharge stormwater from construction sites. This is a permit issued by the State and as such the State of Utah is the entity that grants a termination of the permit. However, the State of Utah requires through a permit with an MS4 that the MS4 inspect all phases of construction activity required within the permit. In this light the MS4 permit states:

4.2.4.4.2 The Permittee (South Jordan City) must inspect all phases of construction: prior to land disturbance, during active construction, and following active construction. The Permittee must include in its SWMP document a procedure for being notified by construction operators/owners of their completion of active construction so that verification of final stabilization and removal of all temporary control measures may be conducted.

Steps for Terminating the Discharge of Water Associated with Construction Activities

When a Construction Site is nearing completion and the permittee is desirous of terminating their permit with the State of Utah for discharging water associated with construction activities, the following steps should be taken:

1. The Contractor's SWPPP coordinator for the project should notify the City stormwater inspector that they are ready for final inspection, and file for an NOT with the State. This can be done by logging into the State's database to change the status of the permit from active to unconfirmed termination. <https://secure.utah.gov/account/log-in.html>
2. The City storm water inspector will verify the State database for permit status change. If the permit status has changed, the City inspector visits the site to determine if the site has reached final stabilization as determined by the UPDES Storm Water General Permit for Construction Activities. The City inspector also checks to see if all temporary BMP'S have been removed.
3. If the conditions have not been met to terminate the permit, the City inspector will issue Corrective Actions needed for completion of the Termination, and provide a copy to the permit holders SWPPP coordinator.
4. After all requirements for termination have been met, the City inspector will use the State database to confirm the termination of the permit.
5. Once the State has received confirmation that the site meets all the requirements the NOT is granted.
6. New responsible owner/operator; A Permittee may terminate its coverage under the Permit by Submitting an NOT if another party (or parties) assumes responsibility for all remaining SWPPP requirements. Termination of the Permittee's responsibilities under the SWPPP will not be final until the other party (or parties) submits an NOI.



Special Environmental Considerations

Discharges to Water Quality Impaired Waters

The MS4 permittee “must determine whether storm water discharge from any part of the MS4 contributes to a 303(d) listed (i.e. impaired) waterbody.” (Small MS4 General UPDES Permit 3.1.1.1) The 303(d) list of impaired waterbodies is found at:

<https://deq.utah.gov/water-quality/watershed-monitoring-program/approved-tmdls-watershed-management-program>

Threatened or Endangered Species

Where applicable, compliance efforts to this law shall be reflected in the SWMP document. (Small MS4 General UPDES Permit 3.2) The following web sites are helpful in determining the status of any species of interest.

<https://wildlife.utah.gov/discover/wildlife-action-plan.html>

<http://www.fws.gov/angered/>

Historic Properties

Where applicable, compliance efforts to this law shall be reflected in the SWMP document. (Small MS4 General UPDES Permit 3.2) Web sites include the following, along with possible County and City listings:

<https://history.utah.gov/inquire-2/markers-and-monuments/>

Low-Impact Development Techniques-(not applicable for projects that qualify as a common plan of development):

The state permit requires that South Jordan City consider Low Impact Developments (LID's). The following 7 categories with associated references are intended to assist communities in proper planning and construction to encourage LID practices.

South Jordan City requires the Developer/Contractor to submit the Low –Impact Development Techniques that were considered for the project during the design/review process. These should list the techniques considered, and reason for use. Use the example below to help with this requirement.

Bio-Retention areas: Designed for site specific conditions to optimize the effectiveness of water filtration and retention. There is no standard. Creativity, ingenuity and dedication are the key to success.

- ✓ Aquatic Buffers
- ✓ Green Parking Lots
- ✓ Bioretention
- ✓ Soil Amendments
- ✓ Soil Restoration
- ✓ Created Wetlands
- ✓ Dispersal Trench
- ✓ Conveyance Furrow
- ✓ Urban Forestry
- ✓ Vegetation Restoration
- ✓ Biofiltration
- ✓ Stormwater Planters

Green Roofs: A bio retention area as well as a form of rain water collection; it also adds a public place and social element.

- ✓ Green Roofs
- ✓ Biofiltration

Permeable Pavements: Allow for water to permeate through the surface, yet still give a hard surface for pedestrian and vehicular traffic.

- ✓ Break Up Flow Directions from Paved Surfaces
- ✓ Use Alternative Surfaces
- ✓ Green Parking Lots

Rain water collection: Utah law allows for re-use on site. For larger buildings such as offices and malls this is an impact that could greatly reduce storm drain usage in the area.

- ✓ Water Harvesting and Reuse
- ✓ Parking Lot and Street Storage
- ✓ Dispersal Trench
- ✓ Pop-Up Emitter

Riparian Buffers: Applied along a watershed by restricting development along creeks, streams, washes, etc. This keeps the natural flow of water, mitigates erosion and contamination, as well as provides an interconnected habitat for animals, and recreation opportunities.

- ✓ Protect Natural Site Functions
- ✓ Preserve Natural Corridors

- Aquatic Buffers

Green Street System: Includes the different aspects of rain gardens and swales along roads into an incorporated system for retention and filtration of storm water.

- Reduced Clearing and Grading
- Functional Grading
- Locate Impervious Surfaces to Drain to Natural Systems
- Minimize Directly Connected Impervious Areas
- Break Up Flow Directions From Paved Surfaces
- Trail and Path Network
- Narrow Roadways
- Reconfigure Driveways
- Alternative Turnarounds
- Green Parking Lots
- Stormwater Planters
- Urban Forestry
- Alternative Street Layouts
- Eliminate Curb and Gutter

Zoning/Alternative Development Configurations and Standards: creative zoning and development standards directed towards minimizing disturbances of the natural habitat and hydrology of the area.

- Site Fingerprinting
- Fit Development to Natural Gradient
- Alternative Development Configurations
- Define Development Envelope
- Identify Sensitive Areas
- Alternative Lot Configuration
- Reconfigure Driveways
- Alternative Turnarounds
- Reduced Sidewalk Application
- Alternative Street Layouts
- Eliminate Curb and Gutter
- Large lot sizes – higher impervious area percentage
- Cluster Zoning – consolidating development – fewer impacted areas
- Development credits – limiting overall development in a community
- Considering conservation easements
- Limit maximum Directly Connected Impervious Areas (DCIA)

References:

www.lid-stormwater.net (Tool created through Cooperative Assistance Agreement under the US EPA Office of Water 104b(3) Program)

<https://www.epa.gov/nps/urban-runoff-low-impact-development>

<http://www.deq.idaho.gov/assistance-resources/environmental-guide-for-local-govts/water-quality/surface-water/>

Permit Reference #: 4.2.5.3.2, 4.2.6.4, 4.2.4.3.3

Maintenance Agreements and Arrangements

The State of Utah Small MS4 General UPDES Permit section (4.2.5.5.1) requires the use of Maintenance Agreements between developer and the MS4 for any post construction BMP or Stormwater Treatment Practices (STP).

4.2.5.5.1 The ordinance or other regulatory mechanism shall include provisions for both construction-phase and post-construction access for Permittees to inspect storm water control measures on private properties that discharge to the MS4 to ensure that adequate maintenance is being performed. The ordinance or other regulatory mechanism may, in lieu of requiring that the Permittee's staff inspect and maintain storm water controls on private property, instead require private property owner/operators or qualified third parties to conduct maintenance and provide annual certification that adequate maintenance has been performed and the structural controls are operating as designed to protect water quality. In this case, the MS4 Permittee must require a maintenance agreement addressing maintenance requirements for any control measures installed on site. The agreement must allow the Permittee to conduct oversight inspections of the storm water control measures and also account for transfer of responsibility in leases and/or deeds. The agreement must also allow the Permittee to perform necessary maintenance or corrective actions neglected by the property owner/operator, and bill or recoup costs from the property owner/operator as needed.

A stormwater maintenance agreement is a formal contract between a local government and a property owner designed to guarantee that specific maintenance functions are performed in exchange for permission to develop that property. Local governments benefit from these agreements in that responsibility for regular maintenance of the Stormwater Treatment Practice (STP) can be placed upon the property owner or other legally recognized party, allowing agency staff more time for plan review and inspection.

Note: The South Jordan City Maintenance Agreement can be downloaded at: This agreement is pending and currently under review.

References and Additional Materials

SWPPP template: <http://www.sjc.utah.gov/wp-content/uploads/2016/02/SJC-SWPPP-TEMPLATE.pdf>

NOI- filing for notice of intent: <https://documents.deq.utah.gov/water-quality/stormwater/DWQ-2017-004363.pdf>

NOT- filing for notice of termination: <https://documents.deq.utah.gov/water-quality/stormwater/DWQ-2019-004092.pdf>

South Jordan City Construction Standards: <http://www.sjc.utah.gov/engineering/>

Maintenance Agreement: <http://www.sjc.utah.gov/wp-content/uploads/2016/02/South-Jordan-SD-Maintenance-Agreement.pdf>



Signature Page:

By signing below the signee acknowledges that he/she has read the Supplemental Development Guide for Water Quality and understands the content herein; and have fulfilled the requirements listed below. Furthermore the signee acknowledges that they are an approved representative of the developer, and/or contractor, or representative contracted to fulfill such obligations for the development listed below.

Requirements of this Guide:

1. Developer and/or representative has read and understands the content of this guide.
2. Developer has considered LID techniques, and submitted the required information on the consideration of such techniques as required in this Guide.
3. Developer agrees to obtain and follow the UPDES permit for construction activities, and South Jordan Construction Standards regarding said permit.

Development: _____

Representative Name/Title: _____

Signature: _____ Date: _____