



**ENVIRONMENTAL
QUALITY**
WATER QUALITY

APPENDIX A TO THE STATE NONPOINT SOURCE POLLUTION MANAGEMENT PLAN



Common Best Management Practices Implemented in Utah March 2018

Photo: Weber River Restoration Project near Morgan Utah

CONTENTS

1	Common Best Management Practices Implemented in Utah.....	3
2	Agriculture and Grazing - Best Management Practices.....	5
3	Soil Stabilization on Rangelands	6
4	Riparian Area Management	7
5	Riparian Area Stabilization	8
6	Cropland Management	9
7	Drainage Modification in Croplands	11
8	Agricultural Waste Management	12
9	Agricultural Pesticide Management	13
10	Urban Best Management Practices.....	15
11	Water Quality Protection in Urban Areas	16
12	Irrigation Water Management	17
13	Silviculture-Forest Water Quality Guidelines	18
14	Best Management Practices for Hydrologic Modification.....	19
15	UDOT Transportation Facilities - Best Management Practices	20

1 Common Best Management Practices Implemented in Utah

Best management practices (BMPs) may be defined as methods, measures, or combinations of measures that are determined by an agency after problem assessment to meet its nonpoint source (NPS) pollution control needs. They include, but are not limited to, structural and nonstructural controls and operation and maintenance procedures.

The diffuse nature of nonpoint source pollution complicates the issue of control. Apparent solutions are not necessarily effective, and the implementation of a control measure at one point may create a more serious problem at another. BMPs must be flexible and suited to the specific location at which they are to be implemented. Each site has different characteristics of soil, slope, vegetative cover, precipitation, and other variables that must be considered before control practices may be prescribed.

There is no practical way to achieve 100% control of NPS pollution due to natural sources and a constantly changing environment. The goal is to restore beneficial uses at a cost-effective level. Reductions in NPS pollution may often be gained at small cost by using commonsense solutions. The goal is not to implement a set of blanket BMPs across the state, but rather to effect improvements in water quality at the local level. Measures that accomplish this goal in a cost-effective manner should be emphasized.

Best management practices cannot be viewed in isolation. They must be part of a comprehensive management strategy or system. Seldom is one practice in isolation sufficient to resolve a nonpoint source problem. A combination of practices is usually required, along with a long term commitment to a management philosophy. BMPs and management systems require ongoing maintenance and management that must be recognized and agreed to at the outset.

Best management practices are appropriate and intended for use on state, federal, and private lands throughout Utah. These practices however are not intended to supersede the local knowledge of land managers and resource professionals. Public land management agencies will be expected to continue to follow their established procedures in the Memoranda of Agreement with the State Nonpoint Source Coordinator and Department of Environmental Quality. When other federal BMPs, for example those used by the Forest Service or BLM, fall below minimum standards established by the NRCS's Field Office Technical Guide, the NRCS's standards shall take precedence.

The BMPs already in use by agencies and legal subdivisions of the State of Utah are considered adequate unless they are shown to be deficient through an evaluation conducted by the Division of Water Quality.

The following agencies have developed formal BMPs to resolve NPS issues that have been determined to meet the minimum acceptable standards as provided in the NRCS's Field Office Technical Guide.

1. USDA-Forest Service Forest Service Handbook 2509.22 Soil and Water Conservation Practices Handbook
2. USDA-Forest Service FS-990a National Best Management Practices for Water Quality Management on National Forest System Lands
3. USDA-Natural Resources Conservation Service Field Office Technical Guide
4. Utah Department of Transportation Manual of Instruction, Part 4, Roadway Drainage
5. Utah's Forest Water Quality Guidelines—A Technical Manual for Landowners, Loggers and Resource Managers
6. U.S. Army Corps of Engineers (Utah Division of Water Rights) State of Utah, Administrative Rules for Stream Channel Alterations
7. Local Governments Uniform Building Code, Chapter 70

These agencies also have formal working agreements with the state which provide for periodic review of BMPs. BMPs will be reviewed for adequacy as deemed necessary by agency staff. On-site inspection and monitoring for water quality objectives will be included in the review for selected BMPs. Updates to agency manuals shall become a part of this plan. Modifications to BMPs may also become a part of this plan after recommendation of the Task Force and an opportunity for public review. Additional BMPs may be added by the same process. Unique practices may also be included for use in specific areas after review by the Task Force and the public.

NPS pollution control is best addressed through a locally led watershed planning process. This process is based on the premise that decision makers will make and implement wise resource use and treatment decisions if they understand the causes of the problems and the effects of their decisions. The planning process is designed for skilled technicians to assist land owners and decision makers determine how to improve and maintain soil, water, animal, plant, and air (SWAPA) resources. It provides a consistent and orderly method for determining objectives and reaching and implementing decisions. The programs can be used for either planning and/or implementation.

NPS water quality contaminants should be considered in the planning process along with other SWAPA resource issues as an integral part of a resource management system (RMS). An RMS is a combination of conservation management practices that, when installed, will protect the resource base. Similarly, NPS pollution cannot be effectively obtained by one conservation practice alone. A combination of management, vegetative, or structural practices is usually required to achieve protection of SWAPA resources. BMPs are part of a system that may be all or a portion of a complete RMS. The RMS identifies problems and treatments during the planning process.

Special consideration must be given to groundwater protection before implementing best management practices. Many BMPs are designed to reduce impacts on surface waters by increasing infiltration into the soil. This increased infiltration may have a negative impact on groundwater. Chemicals and nutrients may be carried through the soil into the geologic layers below, or percolating waters may contact a geologic formation, leading to degradation. Degradation is readily apparent in many areas of Utah where groundwater contacts saline layers and water quality is reduced. Nitrate from fertilizers and manure or hazardous chemicals may also be transported to underlying aquifers.

It is incumbent upon those who prescribe BMPs that groundwater resources are given due consideration. The following steps should be followed to determine the appropriate mix of BMPs to ensure that groundwater resources have been adequately considered:

Determine if the BMP or set of BMPs has the potential to impact groundwater resources.

- a. Determine the potential for BMPs to impact a locally or regionally important aquifer. (Important aquifers may be identified in the State Groundwater Plan or consult local water resource agencies).
- b. If the BMPs have the potential to impact groundwater quality and an important aquifer exists in the vicinity, then BMPs should be modified to the greatest extent practicable to prevent groundwater contamination. More detailed investigation may be required and the value of the surface versus ground-water resources should be considered before making adjustments to practices that provide a "best fit" in the local circumstance. Additional technical assistance from participating resource management agencies may also be necessary.

BMPs fall into three categories for implementation: 1) Those the state encourages; 2) Those which will be facilitated through financial cost share or loans; and 3) Those which will be mandated through regulations. Any of the BMPs referenced in this plan could be mandated on an individual basis to comply with Utah's narrative water quality standard (UAC R317-2-7.2). While it is not the intent of the state to develop new regulations, communities and counties in the state will be encouraged to adopt regulations to control pollutants from construction and development activities, including roads. Agricultural and grazing BMPs may be eligible for cost-sharing through USDA conservation programs or the Agriculture Resource Development Loan Program. Technical assistance and education will be provided on practices to the extent feasible for significant nonpoint sources.

The following section lists the BMPs available for NPS control in Utah. They are described in general terms with specific practices included by reference. The location of the reference material is also included.

2 Agriculture and Grazing - Best Management Practices

Grazing Management on Rangeland

Definition:

Grazing at an intensity that will maintain enough cover to protect the soil and maintain or improve the quantity and quality of desirable vegetation.

Purpose:

To: (1) increase the vigor and reproduction of key plants; (2) accumulate litter and mulch necessary to reduce erosion and sedimentation and improve water quality; (3) improve or maintain the condition of vegetation; (4) increase forage production; (5) maintain natural beauty; (6) reduce the hazard of wildfire; and (7) improve wildlife habitats.

Conditions Where Practice Applies:

On all rangeland, grazeable woodland, and grazed wildlife land.

Specification Guides:

Specification Guides are available in NRCS Field Office Technical Guides.

Management specification includes but is not limited to:

Access Roads 560	Prescribed Grazing 556 & 528A
Firebreak 394	Proper Woodland Grazing 530
Fence 382	Spring Development 574
Heavy Use Area Protection 561	Trough's or Tank 614
Pipeline 516	Use Exclusion 412

Note: Numeric codes following a practice coincide with NRCS standards and specification numbers.

Reference:

1) Natural Resources Conservation Service (NRCS), Field Office Technical Guide (<https://efotg.sc.egov.usda.gov/>)

3 Soil Stabilization on Rangelands

Definition:

Stabilizing soils on rangelands to reduce soil erosion, control surface runoff, and minimize groundwater contamination through vegetative management and structural practices.

Purpose:

To: (1) prevent excessive soil and water loss and improve water quality; (2) produce more forage for grazing or browsing animals on rangeland or land converted to range from other uses; and (3) improve the visual quality of grazing land.

Conditions Where Practice Applies:

On rangeland, grazable woodland and grazable wildlife land.

Specification Guides:

Specification guides are available in NRCS Field Office Technical Guides.

Management specification includes but is not limited to:

Animal Trails & Walkways 575	Prescribed Burning 338
Brush Management 314	Prescribed Grazing 528
Critical Area Planting 342	Range Planting 550
Diversion 362	Seeding Stock Trail and Walkway Fence 382
Spring Development 574	Filter Strip 393
Stream Channel Stabilization 584	Grazing Land Mechanical Treatment 548
Streambank Protection 580	Grade Stabilization Structures 410
Water & Sediment Containment Basins 638	Heavy Use Area Protection 561 Waterspreading 64
Wildlife Water Facility 648	

Note: Numeric codes following a practice coincide with SCS standards specification numbers.

Reference:

- 1) Natural Resources Conservation Service Field Office Technical Guide (<https://efotg.sc.egov.usda.gov/>)

4 Riparian Area Management

Definition:

Managing the riparian zone to minimize damage to streambanks, ground water recharge areas, shoreline and surface water quality from animal wastes, stomping and over-grazing.

Purpose:

To prevent surface and groundwater pollution from animal wastes, prevent excessive streambank and stream channel erosion, improve water quality, and maintain wildlife and fisheries habitat.

Conditions Where Practice Applies:

On all rangeland, pastureland and wildlife upland.

Specification Guides:

Specification Guides are available in NRCS Field Office Technical Guides.

Management Specification Includes but Is Not Limited To:

Fence 382
Filter Strip 393
Nutrient Management 590
Pipeline 516
Prescribed Grazing Use 528
Range Planting 550
Restoration & Mgt of Declining Habitat 643
Riparian Herbaceous Cover 390
Riparian Forest Buffer 391A
Tree/Shrub Establishment 612
Trough or Tank 614
Streambank Protection 580
Stream Channel Stabilization 584
Use Exclusion 472

Note: Numeric code following a practice coincides with NRCS standards specification numbers.

Reference:

1) Natural Resources Conservation Service (NRCS), Field Office Technical Guide (<https://efotg.sc.egov.usda.gov/>)

5 Riparian Area Stabilization

Definition:

Using vegetation or structures to stabilize and protect banks of streams or excavated channels against scour and erosion.

Purpose:

This standard applies to measures to stabilize and protect the aggradation or degradation in a stream channel and stream bank for one or more of the following purposes: (1) to prevent the loss of land or damage to utilities, roads, buildings, or other facilities adjacent to the channel banks; (2) to control channel meander that would adversely affect downstream facilities; (3) to reduce sediment loads causing downstream damages and pollution and; (4) to improve the stream for recreation or as a habitat for fish or wildlife.

Conditions Where Practice Applies:

This practice applies to natural or excavated channels undergoing damaging aggradation or degradation.

Specification Guide:

Management specification includes but is not limited to:

Channel Vegetation 322	Riparian Herbaceous Cover 390
Ditch and Canal Lining 428	Sediment Basins 350
Floodwater Diversion and Floodway 400,404	Streambank Protection 580
Grassed Waterways 412	Stream Channel Stabilization 584
Grade Stabilization Structure 410	Wildlife Watering Facility 648
Maintenance of Flow for Channel Stability	

Note: Numeric code following practice coincides with NRCS standards and specification number.

Reference:

- 1) Natural Resources Conservation Service Field Office Technical Guide, Codes 322, 400, 404, 410, 412, 428, 580 and 584 (<https://efotg.sc.egov.usda.gov/>)
- 2) State of Utah Administrative Rules for Stream Channel Alterations (<https://www.waterrights.utah.gov/strmalt/default.asp>)

6 Cropland Management

Definition:

Developing and maintaining residues or establishing temporary or a permanent cover crop to reduce runoff and increase the infiltration of water.

Purpose:

To improve or maintain good physical, chemical, and biological conditions of the soil; reduce erosion; improve water use efficiency and water quality; improve wildlife habitats; and/or break reproduction cycles of plant pests.

Conditions Where Practice Applies:

On all cropland or other lands where agricultural crops are grown.

Specifications Guides:

Specification Guides are available in NRCS Field Office Technical Guide.

The management specification includes but is not limited to:

- | | |
|----------------------------------|-----------------------------------|
| Chiseling and Subsoiling 324 | Conservation Cover 327 |
| Conservation Crop Rotation 328 | Cover and Green Manure Crop 340 |
| Critical Area Planting 342 | Filter Strip 393 |
| Grassed Waterway 412 | Heavy Use Area Protection 561 |
| Irrigation Water Management 499 | Irrigation System 442, 443, 444 |
| Mulching 484 | Nutrient Management 590 |
| Pasture and Hayland Planting 512 | Pest Management 595A |
| Pipeline 430 | Residue Management Use 329A, 329B |
| Strip Cropping Contour 585 | Strip Cropping Field 586 |

Note: Numeric code following a practice coincides with NRCS standards specification numbers.

Reference:

- 1) Natural Resources Conservation Service Field Office Technical Guide (<https://efotg.sc.egov.usda.gov/>)

7 Soil Stabilization in Croplands

Definition:

Stabilizing soils on croplands to reduce soil erosion, control surface runoff, and minimize groundwater contamination through vegetative management and structural practices.

Purpose:

To prevent sediment and other pollutants from entering the surface and subsurface waters.

Conditions Where Practice Applies:

On all the agricultural lands where the slope grade and length are significant because of soil type and local precipitation conditions.

Specification Guides:

Specification Guides are available in NRCS Field Office Technical Guide.

Management specification for this practice includes but is not limited to:

Conservation Cover 327	Cover and Green Manure Crop 340
Contour Farming 330	Critical Area Planting 342
Filter Strip 393	Field Border 386
Grassed Water Way 412	Nutrient Management 590
Pest Management 595A	Residue Management 329A, 329B
Terraces 600	Windbreak/Shelter belt 380

Note: Numeric code following a practice coincides with NRCS standards specification numbers.

Reference:

- 1) Natural Resources Conservation Service Field Office Technical Guide (<https://efotg.sc.egov.usda.gov/>)

8 Drainage Modification in Croplands

Definition:

Subsurface diversion and other similar practices (interception drains) to prevent the movement of deep percolated waters from cropland to groundwater.

Purpose:

To prevent groundwater pollution caused by the deep percolated waters.

Conditions Where Practice Applies:

On fields where the infiltration rate is very high (sandy soils) or the water table level is close to the surface and there is a likelihood of groundwater contamination from cultural practices. (This practice is intended for use on existing cropland and not for the purpose of bringing new land into production.)

Specification Guides:

Specification Guides are available in NRCS Field Office Technical Guides.

Management specification for this practice includes but is not limited to:

Bedding 310	Diversions 362
Mole Drain 482	Pumped Well Drain 532
Subsurface Drain 606	Surface drainage 607,608
Vertical Drain 630	Water Table Control 641

Note: Numeric code following a practice coincides with NRCS standards specification numbers.

Reference:

- 1) Natural Resources Conservation Service Field Office Technical Guide (<https://efotg.sc.egov.usda.gov/>)

9 Agricultural Waste Management

Definition:

Minimizing the transport of nutrients from confined animal feeding operations to surface and groundwater through vegetative and structural practices.

Purpose:

To prevent surface and subsurface water pollution from animal wastes.

Conditions Where Practice Applies:

On feed lots, dairies, hog farms, poultry farms, and other concentrated animal feedlots.

Specification Guide:

Management specification includes but is not limited to:

- | | |
|----------------------------|------------------------------|
| Composting Facility 317 | Filter Strips 393 |
| Nutrient Management 590 | Riparian Forest Buffer 391A |
| Roof Management System 570 | Roof Runoff Management 558 |
| Use Exclusion 472 | Waste Management Systems 312 |
| Waste Storage Pond 425 | Waste Storage Facility 313 |
| Waste Treatment Lagoon 359 | Waste Utilization 633 |

Note: Numeric code following a practice coincides with NRCS standard and specification number.

Reference:

- 1) Natural Resources Conservation Service Field Office Technical Guide (<https://efotg.sc.egov.usda.gov/>)

10 Agricultural Pesticide Management

Definition:

Managing pesticide applications to minimize the transport of chemicals and chemical residue to surface and groundwater through the utilization of alternative pesticides, alternative crops, proper timing, application rates, of pesticides. The term pesticides refers to all insecticides, herbicides, and fungicides.

Purpose:

To reduce pesticide loss to the surface and ground water.

Condition Where Practice Applies:

On all cropland or on other lands where pesticides are applied (e.g., rangeland).

Specification Guide:

Pest control actions include monitoring pest increases, the judicious use of a pesticide, or effective communication that no action is necessary.

Management specification includes but is not limited to:

Soil Testing

Use of Alternative Pesticides

Application Rate Adjustment

Use of Alternative Methods of Pest Control

Pest Management 595A

Planting Time Optimization

Timing of Applications

Timing of Field Tillage Operation

Use of Insect and Disease- Resistant Crop Varieties

Reference:

- 1) Planning Guide for Evaluating Agricultural Nonpoint Source Water Quality Controls. USEPA, 1982, Athens, GA. (<https://nepis.epa.gov>)
- 2) Natural Resources Conservation Service Field Office Technical Guide (<https://efotg.sc.egov.usda.gov/>)

11 Agricultural Fertilizer Management

Definition:

Managing fertilizer and manure applications to minimize the transport of nutrients to surface and groundwater through the utilization of proper timing and application rates.

Purpose:

To reduce fertilizer and manure loss to the surface and groundwater.

Conditions Where Practice Applies:

On all cropland or other lands where fertilizers or manure are applied.

Specification Guides:

Management specification includes but is not limited to:

Application Timing	Composting Facility 317
Nutrient Management 590	Optimizing the Planting Time
Proper Application Rates	Soil Testing
Tillage Operation Timing	Use of Adapted Fertilizers
Waste Management System 312	Waste Storage Facility 313
Waste Treatment Lagoon 359	Waste Utilization 633

Reference:

- 1) Planning Guide for Evaluating Agricultural Nonpoint Source Water Quality Controls. USEPA, 1982, Athens, GA. (<https://nepis.epa.gov>)
- 2) Natural Resources Conservation Service Field Office Technical Guide (<https://efotg.sc.egov.usda.gov/>)

12 Urban Best Management Practices

Wetland Management in Urban Areas

Definition:

Managing wetlands to control and trap pollutants and minimize the potential for transport of pollutants to surface and groundwater.

Purpose:

To control pollution from urban stormwater runoff through the construction and stabilization of wetland storm water basins

Conditions Where Practice Applies:

On any residential or nonresidential area where a wetland storm water basin is needed.

Specification Guides:

Management specification includes but is not limited to:

Streambank and Shoreline Protection 580

Water Table Control 641

Wetland Enhancement 659

Wetland Wildlife Habitat Management 644

Structures for Water Control 587

Wetland Creation 658

Wetland Restoration 657

Reference:

- 1) Stormwater Wet Pond and Wetland Management Guidebook
(<https://www3.epa.gov/npdes/pubs/pondmgmtguide.pdf>)
- 2) State of Utah Administrative Rules for Stream Channel Alteration
(<https://www.waterrights.utah.gov/strmalt/default.asp>)
- 3) Guiding Principles for Constructed Treatment Wetlands: Providing Water Quality and Wildlife Habitat
(<https://www.epa.gov/wetlands/guiding-principles-constructed-treatment-wetlands-providing-water-quality-and-wildlife>)

13 Water Quality Protection in Urban Areas

Definition:

Minimizing the transport of sediments, organic materials, pathogenic organisms, chemicals, and toxins to surface and groundwater from urban stormwater runoff through management and structural practices.

Purpose:

To protect surface and subsurface water quality from contamination carried by storm water.

Conditions Where Practice Applies:

In all urbanized areas.

Specification Guide:

Management specification includes but is not limited to:

- | | |
|---|--|
| Altering Time of Runoff | Street Paving |
| Concentration Community Pride | Sewerage System |
| Garbage and Trash Collection | Storm Water Collection System |
| Good Housekeeping Practices | Storage Basin |
| Grade Stabilization Structure 410 | Street Cleaning |
| Grassed Waterways 412 | Street De-icing |
| Heavy Use Area Protection 561 | Tree Planting 612 |
| Infiltration Fields | Water and Sediment Containment Basin 638 |
| Local Ordinance | Water Spreading 640 |
| Lined Waterway or Outlet 468 | |
| Mulching 484 | |
| Pet Ordinances | |
| Runoff Management System 570 | |
| Sediment Basin 350 | |
| Septic Tanks | |
| Stream Banks | |
| Streambank and Shoreline Protection 580 | |

Reference:

- 1) State of Utah Urban and Suburban Stormwater Management Plan (<https://deq.utah.gov/ProgramsServices/programs/water/nps/mgmtplan2013/docs/2013/06Jun/Utah%20Stormwater%20Management%20Plan%20mc.pdf>)
- 2) Salt Lake County 2014 Stormwater Management Plan (<http://slco.org/uploadedFiles/depot/publicWorks/engineering/swmp-2015-revision.pdf>)
- 3) Design and Construction of Urban Stormwater Management Systems, Water Environment Federation and American Society of Civil Engineers, 1992.

14 Irrigation Water Management

Definition:

Determining and controlling the rate, amount, and timing of irrigation water in a planned and efficient manner.

Purpose:

To effectively use available irrigation water supply in managing and controlling the moisture environment of crops to promote the desired crop response, to minimize soil erosion and an undesirable migration of chemicals (pesticides, nutrients, and salts), to control undesirable water loss, and to protect water quality.

Conditions Where Practice Applies:

This practice is suited to all areas that are suitable for irrigation and that have water supply of suitable quality and quantity.

Specification Guides:

The management specification includes but is not limited to:

Application Rate	Irrigation Scheduling
Tailwater Control	Recycling Irrigation Runoff
Salinity Control	Drainage Water Re-use
Irrigation and Sediment Removal	Optimal integration of water and chemical application
Site-specific guidelines	

Reference:

- 1) Natural Resources Conservation Service, Field Office Technical Guide, Code 449, 570, and 573 (<https://efotg.sc.egov.usda.gov/>)
- 2) Planning Guide for Evaluating Agricultural Nonpoint Source Water Quality Controls. USEPA, 1982, Athens, GA. (<https://nepis.epa.gov>)

15 Silviculture-Forest Water Quality Guidelines

These guidelines are described in Appendix H of the Nonpoint Source Management Plan. These guidelines are available by contacting the Division of Forestry, Fire and State Lands and are also available on the internet at <https://forestry.usu.edu/files-ou/UFWQGtech.pdf>.

16 Best Management Practices for Hydrologic Modification

These BMPs are described in the document entitled “State of Utah Nonpoint Source Management Plan for Hydrologic Modification,” and is included by reference as a part of this NPS Plan revision (See Appendix G). This document is available by contacting the Division of Water Quality or on the internet at <https://deq.utah.gov/ProgramsServices/programs/water/nps/mgmtplan2013/docs/2014/03Mar/DRAFThydro-modplanFinalmc3813.pdf>.

17 UDOT Transportation Facilities - Best Management Practices

Definition:

Incorporate Best Management Practices (BMPs) to control erosion, sediment and other pollutants.

Purpose:

To minimize the discharge of pollutants off the project site to downstream receiving waters and to comply with state and federal environmental regulations.

Conditions Where Practice Applies:

Projects where sensitive environmental resources are adjacent to the project site and projects that disturb one or more acres of ground surface.

Best Management Practices:

Check Dam	Drop Inlet Barrier
Fiber Roll	Flexible Channel Liner
Gutter Inlet Barrier	Pipe Inlet Barrier
Top Soil and Seeding	Sediment Trap
Silt Fence	Slope Drain
Stabilized Construction Entrance	Steep Slope Erosion Control
Straw Bale Barrier	Temporary Berm
Temporary Environmental Fence	Wood Fiber Mulch

Reference:

- 1) UDOT Standard Specification 01571 "Environmental Controls"
(<https://www.udot.utah.gov/main/uconowner.gf?n=11277913891497491>)
- 2) UDOT Erosion and Sediment Control Field Guide
(http://digitallibrary.utah.gov/awweb/main.jsp?flag=collection&smd=1&cl=all_lib&lb_document_id=53161&tm=1521577634876&itype=adv&menu=on)
- 3) UDOT Storm Water Management Program (SWMP) Plan
(<https://www.udot.utah.gov/main/uconowner.gf?n=29978914350912917>)