SWMP
APPENDIX A

BEST MANAGEMENT PRACTICES (BMPs)

UPDATED 2026

Contents

BMP: Animal Carcass Removal 4
BMP: Area Control Procedures 4
BMP: Buildings and Grounds Maintenance 5
BMP: Catch Basin Cleaning 5
BMP: Community Cleanup 6
BMP: Community Hotlines 6
BMP: Concrete Waste Management 7
BMP: Contractor Certification & Inspector Training 7
BMP: De-Icing Chemical Use and Storage 8
BMP: Design Standards 8
BMP: Dust Control 9
BMP: Education Materials 9
BMP: Employee Training 10
BMP: Erosion Control Plan 10
BMP: Hazardous Materials Storage Mapping 11
BMP: Housekeeping Practices 12
BMP: Identifying Illicit Connections 12
BMP: Illegal Dumping Controls 13
BMP: Infiltration 13
BMP: Infrastructure & Land Use Planning 14
BMP: Inlet Protection 14
BMP: Inspection & Maintenance of BMP's 15
BMP: Long-term Operation & Maintenance 15
BMP: Material Use 16
BMP: Ordinance Implementation 16
BMP: Portable Toilets 17
BMP: Riprap 17
BMP: Rock Check Dams 18

BMP: Site Revegetation 18
BMP: Septic System Controls 19
BMP: Silt Fence 19
BMP: Sorbents 20
BMP: Stabilized Construction Entrance 20
BMP: Straw Bale Barrier 21
BMP: Temporary Drains and Swales 21
BMP: Used Oil Recycling 22
BMP: Using the Media 22
BMP: Vehicle & Equipment Maintenance & Repair 23

BMP: Animal Carcass Removal

Description:

Removal and proper disposal of animal carcass' can improve storm water quality by reducing pollution or contamination.

Approach:

- Improper animal carcass disposal can have a negative impact upon water quality and can lead to pollution or contamination of water intended for domestic use. Carcasses should be disposed of within 24 hours and must not be disposed of in water or on a publicly used road. Animal carcasses may be disposed of at the Logan Landfill (193 N 1400 W Logan, UT 84321) during regular business hours.

Limitations:

- Public awareness.
- Ability for the public to haul carcasses.

Minimum Control Measures

- ☐Public Education and Outreach
- ☐Public Participation/Involvement
- ☐Illicit Discharge Detection and Elimination
- ☐Construction Site Runoff Control
- ☐Post-construction Runoff Control
- ☒Pollution Prevention/Good Housekeeping

Targeted Pollutants

- ☐Sediment
- ☒Nutrients
- ☐Heavy Metals
- ☒Toxic Materials
- ☒Oxygen Demanding Substances
- ☐Oil & Grease
- ☐Floatable Materials
- ☒Bacteria & Viruses
- ☐Other Waste

Impact

- ☒High
- ☐Medium
- ☐Low or Unknown

BMP: Area Control Procedures

Description:

Area control procedures involve practicing good housekeeping measures such as maintaining clean indoor/covered material storage and industrial processing areas. Keeping these locations clean reduces the risk of pollutants contacting storm water.

Approach:

- Area control Procedures can be used at any facility where materials may be tracked into areas where they can come in contact with storm water runoff including locations that store, process, or otherwise handle potentially polluting materials.
- Foot mats and other devices used to collect residual materials should be cleaned regularly.
- Material storage areas and industrial processing areas should be checked regularly to ensure good housekeeping measures are implemented.

Limitations:

- May not be effective in managing liquid pollutants.
- May not be effective in areas with high vehicle traffic.

Minimum Control Measures

- ☐Public Education and Outreach
- ☐Public Participation/Involvement
- ☐Illicit Discharge Detection and Elimination
- ☐Construction Site Runoff Control
- ☐Post-construction Runoff Control
- ☒Pollution Prevention/Good Housekeeping

Targeted Pollutants

- ☒Sediment
- ☒Nutrients
- ☒Heavy Metals
- ☒Toxic Materials
- ☐Oxygen Demanding Substances
- ☒Oil & Grease
- ☐Floatable Materials
- ☐Bacteria & Viruses
- ☒Other Waste

Impact

- ☐High
- ☒Medium
- ☐Low or Unknown

BMP: Buildings and Grounds Maintenance

Description:

Prevent or reduce the discharge of pollutants to storm water from buildings and grounds maintenance by washing and cleaning up with as little water as possible, preventing and cleaning up spills immediately, and maintaining the storm water collection system,

Approach:

- Preserve existing native vegetation to reduce water, fertilizer, and pesticide needs
- Carefully use pesticides and fertilizers in landscaping.
- Don't over water landscaped areas.
- Sweep paved surfaces.
- Map and clean storm drain system, including catch basins on a regular basis.
- Properly dispose of wash water, sweepings, and sediments.

Limitations:

- Public awareness.
- Ability for the public to haul carcasses.

Minimum Control Measures

☐Public Education and Outreach
☐Public Participation/Involvement
☐Illicit Discharge Detection and Elimination
☐Construction Site Runoff Control
☐Post-construction Runoff Control
☒Pollution Prevention/Good Housekeeping

Targeted Pollutants

☒Sediment
☒Nutrients
☒Heavy Metals
☒Toxic Materials
☒Oxygen Demanding Substances
☒Oil & Grease
☒Floatable Materials
☐Bacteria & Viruses
☐Other Waste

Impact

☒High
☐Medium
☐Low or Unknown

BMP: Catch Basin Cleaning

Description:

Maintain catch basin and storm water inlets on a regular basis to remove pollutants, prevent clogging of the downstream conveyance system, and restore the sediment trapping capacity. A catch basin is distinguished from a storm water inlet by having a sediment sump designed to catch and retain sediments below the overflow point.

Approach:

- Annual inspections.
- Prioritize maintenance to clean catch basins and inlets in areas with the highest pollutant loading or in high priority areas.
- Keep accurate logs of the number of catch basins cleaned.
- Record amount of waste collected.

Limitations:

- Staff time and/or funding to complete cleaning.
- Ensuring that private catch basins are maintained and inspected.

Minimum Control Measures

☐Public Education and Outreach
☐Public Participation/Involvement
☐Illicit Discharge Detection and Elimination
☐Construction Site Runoff Control
☐Post-construction Runoff Control
☒Pollution Prevention/Good Housekeeping

Targeted Pollutants

☒Sediment
☒Nutrients
☒Heavy Metals
☐Toxic Materials
☒Oxygen Demanding Substances
☒Oil & Grease
☒Floatable Materials
☐Bacteria & Viruses
☐Other Waste

Impact

☐High
☒Medium
☐Low or Unknown

BMP: Community Cleanup

Description:

Promote and encourage community members to clean up neighborhoods, city parks, streets, streams, or other properties. This effort involves the removal of litter and debris, green waste, and other types of undesirable vegetation

Approach:

- Provide localized green waste and recycling dumpsters throughout the valley and specified community locations.
- Provide roadside cleanup volunteers plastic bags for the collection and disposal of waste along city roads.

Limitations:

- The number of locations is limited based on cost of removal services.
- All trash waste must still be taken to the Logan Landfill.

Minimum Control Measures

- ☐Public Education and Outreach
- ☒Public Participation/Involvement
- ☐Illicit Discharge Detection and Elimination
- ☐Construction Site Runoff Control
- ☐Post-construction Runoff Control
- ☐Pollution Prevention/Good Housekeeping

Targeted Pollutants

- ☒Sediment
- ☐Nutrients
- ☒Heavy Metals
- ☒Toxic Materials
- ☒Oxygen Demanding Substances
- ☐Oil & Grease
- ☒Floatable Materials
- ☐Bacteria & Viruses
- ☐Other Waste

Impact

- ☐High
- ☒Medium
- ☐Low or Unknown

BMP: Community Hotlines

Description:

Government authorities cannot monitor all water bodies all the time, so community hotlines provide an additional means for citizens and agencies to contact the appropriate authority to report water quality concerns.

Approach:

- For emergencies where spills or discharges can pose an immediate threat to life or property, the public should be directed to call 911. Dispatch operators can then contact the correct local authority.
- Non-emergency storm water concerns can be emailed to cnelson@riverheights.gov or call 435-752-2646.
- All distributed materials should include pollution hotline numbers and information.

Limitations:

- The ability to properly inform the public about where to call and for what issues.
- No immediate staffing is available outside regular business hours for non-emergency spills.

Minimum Control Measures

- ☐Public Education and Outreach
- ☒Public Participation/Involvement
- ☒Illicit Discharge Detection and Elimination
- ☐Construction Site Runoff Control
- ☐Post-construction Runoff Control
- ☒Pollution Prevention/Good Housekeeping

Targeted Pollutants

- ☒Sediment
- ☐Nutrients
- ☒Heavy Metals
- ☒Toxic Materials
- ☒Oxygen Demanding Substances
- ☒Oil & Grease
- ☒Floatable Materials
- ☒Bacteria & Viruses
- ☒Other Waste

Impact

- ☒High
- ☐Medium
- ☐Low or Unknown

BMP: Concrete Waste Management

Description:

Prevent or reduce the discharge of pollutants to storm water from concrete waste by either conducting washout off-site or performing on-site washout in a designated area.

Approach:

- Store dry and wet materials undercover, away from drainage areas.
- Avoid mixing or ordering excess amounts of concrete.
- Use designated washout areas for all concrete waste.
- Allow concrete to harden then haul to the Logan Landfill.
- Train employees and contractors in proper concrete waste management.

Limitations:

- Off-site washout of concrete waste may not always be possible.

Minimum Control Measures

☐Public Education and Outreach
☐Public Participation/Involvement
☐Illicit Discharge Detection and Elimination
☒Construction Site Runoff Control
☐Post-construction Runoff Control
☐Pollution Prevention/Good Housekeeping

Targeted Pollutants

☒Sediment
☐Nutrients
☒Heavy Metals
☒Toxic Materials
☐Oxygen Demanding Substances
☐Oil & Grease
☐Floatable Materials
☐Bacteria & Viruses
☒Other Waste

Impact

☒High
☐Medium
☐Low or Unknown

BMP: Contractor Certification & Inspector Training

Description:

One of the most important factors determining whether erosion and sediment controls will be properly installed and maintained on a construction site is the knowledge and experience of the contractor. By providing training opportunities, contactors will have a better understanding of required and recommended storm water techniques.

Approach:

- Training and certification will help to ensure that storm water plans are properly implemented, and the best management practices are properly installed.
- Contractor certification can be accomplished through City/County sponsored training events.
- The City will have mandatory pre-construction meetings and conduct regular and final inspections visits to provide information to contractors.

Limitations:

- Contractor certification and inspector training programs require a substantial amount of time and effort.

Minimum Control Measures

☐Public Education and Outreach
☐Public Participation/Involvement
☐Illicit Discharge Detection and Elimination
☒Construction Site Runoff Control
☐Post-construction Runoff Control
☐Pollution Prevention/Good Housekeeping

Targeted Pollutants

☒Sediment
☒Nutrients
☐Heavy Metals
☒Toxic Materials
☐Oxygen Demanding Substances
☐Oil & Grease
☒Floatable Materials
☐Bacteria & Viruses
☐Other Waste

Impact

☒High
☐Medium
☐Low or Unknown

BMP: De-Icing Chemical Use and Storage

Description:

De-icing chemicals are used each winter on roads, parking lots, and sidewalks. Sodium chloride (salt) is the main chemical used. Proper use and storage of salt will reduce the chance of high chloride concentration in runoff that may damage the environment.

Approach:

- Store salt products in closed containers or covered locations. When not in use, long-term stockpiles should have a barrier placed to limit potential runoff.
- De-icing equipment should be calibrated annually prior to snow season to ensure proper application rates.
- Use only enough salt to break the ice/pavement bond.

Limitations:

- Public safety is of primary importance, and de-icing materials will be used as needed to maintain safe roadways.
- Environmental conditions of each storm create a variable need for de-icing material requiring adjustment of application rates.

Minimum Control Measures

☐Public Education and Outreach
☐Public Participation/Involvement
☐Illicit Discharge Detection and Elimination
☐Construction Site Runoff Control
☐Post-construction Runoff Control
☒Pollution Prevention/Good Housekeeping

Targeted Pollutants

☐Sediment
☒Nutrients
☐Heavy Metals
☒Toxic Materials
☐Oxygen Demanding Substances
☐Oil & Grease
☒Floatable Materials
☐Bacteria & Viruses
☐Other Waste

Impact

☒High
☐Medium
☐Low or Unknown

BMP: Design Standards

Description:

Standard drawings show contractors and inspectors what is proper practice and provides a minimum requirement. This also includes compilation of storm water-related drawings with other standard drawings.

Approach:

- Develop specifications that reduce water pollutants.
- Adopt standards that depict proper construction practices and acceptable designs and make them available to the public and contractors.
- Require that the design standards be met on all projects.
- Train inspectors and other City personnel on all storm water-related standards.

Limitations:

- Must be enforced to be effective.
- Sometimes site conditions are different than planned and standards must be changed.

Minimum Control Measures

☐Public Education and Outreach
☐Public Participation/Involvement
☒Illicit Discharge Detection and Elimination
☒Construction Site Runoff Control
☒Post-construction Runoff Control
☐Pollution Prevention/Good Housekeeping

Targeted Pollutants

☒Sediment
☒Nutrients
☒Heavy Metals
☒Toxic Materials
☒Oxygen Demanding Substances
☒Oil & Grease
☒Floatable Materials
☒Bacteria & Viruses
☒Other Waste

Impact

☒High
☐Medium
☐Low or Unknown

BMP: Dust Control

Description:

Dust control measures are used to stabilize soil from wind erosion and reduce dust by construction activities. This does not apply to gravel and dirt roads.

Approach:

- Water trucks are typically used for dust control on construction sites.
- Limit application of water to minimize runoff of site excavation.
- Depending on weather, water may need to be applied multiple times a day.
- Watch for possible sediment track out from construction site onto roadways.

Limitations:

- Topography may limit accessibility of water trucks.

Minimum Control Measures

☐Public Education and Outreach
☐Public Participation/Involvement
☐Illicit Discharge Detection and Elimination
☒Construction Site Runoff Control
☐Post-construction Runoff Control
☐Pollution Prevention/Good Housekeeping

Targeted Pollutants

☒Sediment
☐Nutrients
☐Heavy Metals
☐Toxic Materials
☐Oxygen Demanding Substances
☐Oil & Grease
☒Floatable Materials
☐Bacteria & Viruses
☐Other Waste

Impact

☐High
☒Medium
☐Low or Unknown

BMP: Education Materials

Description:

Education materials present information to the public on storm water issues, and water quality awareness is important to help the public, contractors and employees understand the need for and importance of the program. Providing storm water education online, and at the city office exposes the message to a wide variety of people. Topics can include water conservation, proper lawn and garden care, and disposal of hazardous household waste.

Approach:

- Building a strong relationship with citizens is an important step in providing storm water education.
- Education material can be tailored to all age groups and backgrounds.
- Educational materials should make people aware of the potential impacts of hazardous household materials, how to properly store and dispose of chemicals, proper use of fertilizers, and many others.

Limitations:

- Not everyone will read or incorporate the information into their everyday lives.

Minimum Control Measures

☒Public Education and Outreach
☒Public Participation/Involvement
☒Illicit Discharge Detection and Elimination
☒Construction Site Runoff Control
☒Post-construction Runoff Control
☐Pollution Prevention/Good Housekeeping

Targeted Pollutants

☒Sediment
☒Nutrients
☒Heavy Metals
☒Toxic Materials
☒Oxygen Demanding Substances
☒Oil & Grease
☒Floatable Materials
☒Bacteria & Viruses
☒Other Waste

Impact

☒High
☐Medium
☐Low or Unknown

BMP: Employee Training

Description:

Employee training is critical to operate an effective storm water program. Employees need to understand how storm water impacts their work activities and be able to inform contractors, businesses, and the public about storm water requirements.

Approach:

- Promote a clear identification and understanding of City and State storm water regulations, specific to each position and department's needs.
- Train employees on pertinent BMP's and SOP's
- Integrate employee feedback into the SWMP, BMP's, and SOP's implementation.
- Integrate training regarding storm water quality management with existing training programs that may be required for other regulations.

Limitations:

- Obtaining employee focus and acceptance on yet another requirement which may alter long-held standard practices.

Minimum Control Measures

☒Public Education and Outreach
☐Public Participation/Involvement
☒Illicit Discharge Detection and Elimination
☒Construction Site Runoff Control
☒Post-construction Runoff Control
☒Pollution Prevention/Good Housekeeping

Targeted Pollutants

☒Sediment
☒Nutrients
☒Heavy Metals
☒Toxic Materials
☒Oxygen Demanding Substances
☒Oil & Grease
☒Floatable Materials
☒Bacteria & Viruses
☒Other Waste

Impact

☒High
☐Medium
☐Low or Unknown

BMP: Erosion Control Plan

Description:

For erosion control measures to be effective during a construction project, an Erosion Control Plan will be submitted and approved before work can begin. An Erosion Control Plan describes what erosion control BMP's will be implemented during the project.

Approach:

- The City may assist contractors in creating a list of possible erosion control BMP's that could be implemented in any given project
- Require submittal of erosion & sediment control plans for projects that require it.
- Maintain comprehensive and easy to use checklists for City staff and contractors/builders so everyone is equally informed of requirements and expectations.

Limitations:

- Must be enforced to be effective.
- Sometimes site conditions are different than planned and the site plans must be modified.
- The BMP's have to be installed early on in the project, maintained, and removed at the end of the project.

Minimum Control Measures

☐Public Education and Outreach
☐Public Participation/Involvement
☐Illicit Discharge Detection and Elimination
☒Construction Site Runoff Control
☐Post-construction Runoff Control
☐Pollution Prevention/Good Housekeeping

Targeted Pollutants

☒Sediment
☒Nutrients
☐Heavy Metals
☐Toxic Materials
☐Oxygen Demanding Substances
☐Oil & Grease
☐Floatable Materials
☐Bacteria & Viruses
☐Other Waste

Impact

☒High
☐Medium
☐Low or Unknown

BMP: Hazardous Materials Storage Mapping

Description:

Create maps of existing hazardous materials storage locations to facilitate better housekeeping practices and emergency response.

Approach:

- Utilize GIS to create accurate maps of the hazardous materials storage, including the material stored, approximate quantities, storage address, and responsible party contact information.
- All City facilities should be inventoried and mapped.
- Private industrial and commercial facilities with large hazardous material storage areas should also be inventoried and mapped.

Limitations:

- It may be difficult to develop a complete and comprehensive list and location of all privately controlled hazardous materials.
- Maintaining accurate logs of the materials, quantities, and location may be difficult as those materials are used or new materials are received.

Minimum Control Measures

☐Public Education and Outreach
☐Public Participation/Involvement
☒Illicit Discharge Detection and Elimination
☐Construction Site Runoff Control
☐Post-construction Runoff Control
☒Pollution Prevention/Good Housekeeping

Targeted Pollutants

☐Sediment
☒Nutrients
☒Heavy Metals
☒Toxic Materials
☒Oxygen Demanding Substances
☒Oil & Grease
☐Floatable Materials
☐Bacteria & Viruses
☐Other Waste

Impact

☒High
☐Medium
☐Low or Unknown

BMP: Hazardous Waste Management

Description:

Prevent or reduce the discharge of pollutants to storm water from hazardous waste through proper material use, waste disposal, and training of employees, the public, and contractors. Many of the chemicals used on-site can be hazardous upon disposal. These wastes may include paint and solvents, petroleum products, herbicides, pesticides, acids, and concrete products.

Approach:

- Use all the product before disposing of the container.
- Do not remove the original product label, it contains important safety and disposal information.
- Apply herbicides and pesticides only as needed and only in accordance with the requirements established on the label.

Limitations:

- Educating the public and contractors about proper disposal of hazardous waste.

Minimum Control Measures

☒Public Education and Outreach
☐Public Participation/Involvement
☒Illicit Discharge Detection and Elimination
☐Construction Site Runoff Control
☐Post-construction Runoff Control
☒Pollution Prevention/Good Housekeeping

Targeted Pollutants

☐Sediment
☐Nutrients
☐Heavy Metals
☒Toxic Materials
☐Oxygen Demanding Substances
☒Oil & Grease
☐Floatable Materials
☐Bacteria & Viruses
☒Other Waste

Impact

☒High
☐Medium
☐Low or Unknown

BMP: Housekeeping Practices

Description:

Promote efficient and safe housekeeping practices (storage, use, and cleanup) when handling potentially harmful materials such as fertilizers, pesticides, cleaning solutions, paint products, and automotive products.

Approach:

- Integrate this BMP as much as possible with existing programs.
- Educate the public on the importance of safe storage and handling of hazardous products.
- City facilities should develop controls on the application of pesticides, herbicides, and fertilizers in public rights-of-way and city facilities.
- Follow user manuals for product use and application rates, equipment uses and maintenance procedures, keep maintenance and public notice records.

Limitations:

- It may be difficult finding the best medium to disseminate information to the public.

Minimum Control Measures

- ☒Public Education and Outreach
- ☐Public Participation/Involvement
- ☐Illicit Discharge Detection and Elimination
- ☐Construction Site Runoff Control
- ☐Post-construction Runoff Control
- ☒Pollution Prevention/Good Housekeeping

Targeted Pollutants

- ☒Sediment
- ☒Nutrients
- ☒Heavy Metals
- ☒Toxic Materials
- ☒Oxygen Demanding Substances
- ☒Oil & Grease
- ☒Floatable Materials
- ☒Bacteria & Viruses
- ☒Other Waste

Impact

- ☒High
- ☐Medium
- ☐Low or Unknown

BMP: Identifying Illicit Connections

Description:

Identification and elimination of illegal or inappropriate connections of industrial, commercial, residential, agricultural wastewater sources to the storm drain system or natural waterways. It attempts to prevent contamination of ground and surface water supplies by regulation, inspection, and removal of these connections.

Approach:

- Use visual inspections to identify possible illicit connections. Inspections with camera equipment.
- Review plans and plumbing details to examine potential sites where improper connections have occurred.
- Dye testing may be necessary to identify illegal connections between the sanitary sewer and storm drain system.
- Monitor storm drain flows during dry periods to check for illegal connections.

Limitations:

- Access to private property can be difficult.
- Rain fall can hamper efforts to monitor flows.

Minimum Control Measures

- ☐Public Education and Outreach
- ☐Public Participation/Involvement
- ☒Illicit Discharge Detection and Elimination
- ☐Construction Site Runoff Control
- ☐Post-construction Runoff Control
- ☐Pollution Prevention/Good Housekeeping

Targeted Pollutants

- ☒Sediment
- ☒Nutrients
- ☒Heavy Metals
- ☒Toxic Materials
- ☒Oxygen Demanding Substances
- ☒Oil & Grease
- ☒Floatable Materials
- ☒Bacteria & Viruses
- ☒Other Waste

Impact

- ☒High
- ☐Medium
- ☐Low or Unknown

BMP: Illegal Dumping Controls

Description:

Implement measures to detect, correct, and enforce against illegal dumping of pollutants on roads, into the storm drain system, on the ground, and into natural waterways. Illegally dumped substances include paints, automotive fluids, construction debris, chemicals, concrete, green waste, and pet waste.

Approach:

- Increase the public's awareness of the issue and help them identify the incident and correct it.
- Provide educational material for city staff and the public to recognize and report incidents.
- Track illegal dumping incidents which will identify location, date/time, type and quantity of material, and the responsible party if possible.
- Clean the illegally dumped materials as soon as possible.

Limitations:

- Ability to enforce is limited because identifying the party responsible is difficult.

Minimum Control Measures

☒Public Education and Outreach
☐Public Participation/Involvement
☒Illicit Discharge Detection and Elimination
☐Construction Site Runoff Control
☐Post-construction Runoff Control
☐Pollution Prevention/Good Housekeeping

Targeted Pollutants

☒Sediment
☒Nutrients
☒Heavy Metals
☒Toxic Materials
☒Oxygen Demanding Substances
☒Oil & Grease
☒Floatable Materials
☒Bacteria & Viruses
☒Other Waste

Impact

☒High
☐Medium
☐Low or Unknown

BMP: Infiltration

Description:

A series of systems in which much of the runoff from small storms is infiltrated into the ground rather than discharged to a surface water body. Infiltration systems include vegetated areas, ponds, vaults, trenches, dry wells, porous pavement, and concrete grids.

Approach:

- Volume of the BMP should be sized to capture a particular amount of runoff from an event.
- Emergency overflow or bypass for larger storms is needed.
- Infiltration surface must be protected during construction.
- Exposed earth needs vegetation or other stabilizing methods installed to prevent erosion.

Limitations:

- Loss of infiltrative capacity and high maintenance cost in fine soils.
- Low removal of dissolved pollutants in coarse soils.
- May not be suitable on steep slopes.

Minimum Control Measures

☐Public Education and Outreach
☐Public Participation/Involvement
☐Illicit Discharge Detection and Elimination
☒Construction Site Runoff Control
☒Post-construction Runoff Control
☐Pollution Prevention/Good Housekeeping

Targeted Pollutants

☒Sediment
☒Nutrients
☐Heavy Metals
☐Toxic Materials
☐Oxygen Demanding Substances
☐Oil & Grease
☒Floatable Materials
☐Bacteria & Viruses
☐Other Waste

Impact

☒High
☐Medium
☐Low or Unknown

BMP: Infrastructure & Land Use Planning

Description:

Infrastructure planning makes wise decisions about where to locate public services including water, sewer, roads, schools, and emergency services. Land use mechanisms should protect sensitive lands, encourage appropriate development, and minimize impact on natural areas.

Approach:

- Focus development into areas that have a broad range of services.
- Locate new development on or near roads already receiving services.
- Enforce zoning mechanisms that protect sensitive lands.

Limitations:

- Infrastructure planning is often difficult due to the limited amount of land available for development.

Minimum Control Measures

- ☐Public Education and Outreach
- ☐Public Participation/Involvement
- ☐Illicit Discharge Detection and Elimination
- ☒Construction Site Runoff Control
- ☒Post-construction Runoff Control
- ☒Pollution Prevention/Good Housekeeping

Targeted Pollutants

- ☒Sediment
- ☐Nutrients
- ☐Heavy Metals
- ☐Toxic Materials
- ☐Oxygen Demanding Substances
- ☐Oil & Grease
- ☐Floatable Materials
- ☐Bacteria & Viruses
- ☐Other Waste

Impact

- ☐High
- ☒Medium
- ☐Low or Unknown

BMP: Inlet Protection

Description:

Inlets at or near areas where construction activities will occur should be protected from sediments and other construction related pollutants and runoff.

Approach:

- Utilize an approved method to restrict sediment and other construction related pollutants from entering inlets. The type, method, and installation of inlet protection must be approved and inspected prior to construction activities.
- Inlet protection must be inspected periodically and after large storm events.
- Remove accumulated sediments on a regular basis to ensure proper functioning of the protection system.

Limitations:

- Excess flows may bypass the inlet protection requiring downgradient controls.
- Ponding may occur at inlet.

Minimum Control Measures

- ☐Public Education and Outreach
- ☐Public Participation/Involvement
- ☐Illicit Discharge Detection and Elimination
- ☒Construction Site Runoff Control
- ☐Post-construction Runoff Control
- ☐Pollution Prevention/Good Housekeeping

Targeted Pollutants

- ☒Sediment
- ☒Nutrients
- ☐Heavy Metals
- ☐Toxic Materials
- ☐Oxygen Demanding Substances
- ☐Oil & Grease
- ☐Floatable Materials
- ☐Bacteria & Viruses
- ☐Other Waste

Impact

- ☒High
- ☐Medium
- ☐Low or Unknown

BMP: Inspection & Maintenance of BMP's

Description:

Inspect and maintain all structural BMP's on a routine basis to remove pollutants from entering storm drain inlets. This includes the establishment of a schedule for inspections and maintenance.

Approach:

- Regular maintenance of all structural BMP's is necessary to ensure their proper functionality.
- Annual Inspections.
- Prioritize maintenance to clean, maintain, and repair or replace structures in areas with the highest pollutant loading.
- Keep accurate logs of what structures were maintained and when they were maintained.
- Record the amount of waste collected.

Limitations:

- Cost
- Availability of trained staff.
- Private facilities may not have a proper understanding of the needs and methods to complete the needed maintenance and inspections.

Minimum Control Measures

☐Public Education and Outreach
☐Public Participation/Involvement
☐Illicit Discharge Detection and Elimination
☐Construction Site Runoff Control
☒Post-construction Runoff Control
☒Pollution Prevention/Good Housekeeping

Targeted Pollutants

☒Sediment
☒Nutrients
☐Heavy Metals
☒Toxic Materials
☐Oxygen Demanding Substances
☒Oil & Grease
☒Floatable Materials
☐Bacteria & Viruses
☐Other Waste

Impact

☒High
☐Medium
☐Low or Unknown

BMP: Long-term Operation & Maintenance

Description:

Establish and implement a schedule for long-term operation and maintenance procedures for the existing storm drain system.

Approach:

- Review existing maintenance schedule and/or efforts.
- Review the requirements necessary to maintain the existing storm drain system.
- Implement a schedule for long-term operations and maintenance of the storm drain system.

Limitations:

- Cost
- Availability of trained staff.

Minimum Control Measures

☐Public Education and Outreach
☐Public Participation/Involvement
☐Illicit Discharge Detection and Elimination
☐Construction Site Runoff Control
☒Post-construction Runoff Control
☒Pollution Prevention/Good Housekeeping

Targeted Pollutants

☒Sediment
☒Nutrients
☐Heavy Metals
☐Toxic Materials
☐Oxygen Demanding Substances
☐Oil & Grease
☒Floatable Materials
☐Bacteria & Viruses
☐Other Waste

Impact

☒High
☐Medium
☐Low or Unknown

BMP: Material Use

Description:

Prevent or reduce the discharge of pollutants to storm water from material use by using alternative products, minimizing hazardous material use on-site, and training employees and subcontractors.

Approach:

- Use less hazardous, alternative materials when possible.
- Use materials only when and where needed to complete the construction activity.
- Follow manufacturer's instructions regarding uses, protective equipment, ventilation, flammability, and mixing of chemicals.
- Personnel who use hazardous materials should be trained in proper use.
- Allow sufficient dry time between chemical application and potential rain.

Limitations:

- Alternative materials may not be available, suitable, or effective in every case.

Minimum Control Measures

☒Public Education and Outreach
☐Public Participation/Involvement
☐Illicit Discharge Detection and Elimination
☐Construction Site Runoff Control
☐Post-construction Runoff Control
☒Pollution Prevention/Good Housekeeping

Targeted Pollutants

☐Sediment
☒Nutrients
☐Heavy Metals
☒Toxic Materials
☐Oxygen Demanding Substances
☐Oil & Grease
☐Floatable Materials
☐Bacteria & Viruses
☐Other Waste

Impact

☒High
☐Medium
☐Low or Unknown

BMP: Ordinance Implementation

Description:

Implement existing ordinances and policies to prohibit non-storm water discharges into the Municipal Separate Storm Sewer System (MS4) and meet the requirements of the Utah General Construction Permit.

Approach:

- Implement ordinances and infrastructure standards for consistency and compliance with state regulations.
- Ensure that ordinances, the SWMP, BMP's, and SOP's comply and meet the minimum requirements of the State.
- Educate the public about new/updated ordinances and standards to ensure enforcement is fair and equitable.

Limitations:

- Because of the complicated and comprehensive nature of the requirements, ensure clear and non-overlapping requirements in the appropriate location (ordinance, standards, SWMP, supporting materials) is difficult.

Minimum Control Measures

☒Public Education and Outreach
☐Public Participation/Involvement
☒Illicit Discharge Detection and Elimination
☒Construction Site Runoff Control
☒Post-construction Runoff Control
☐Pollution Prevention/Good Housekeeping

Targeted Pollutants

☒Sediment
☒Nutrients
☒Heavy Metals
☒Toxic Materials
☒Oxygen Demanding Substances
☒Oil & Grease
☒Floatable Materials
☒Bacteria & Viruses
☐Other Waste

Impact

☒High
☐Medium
☐Low or Unknown

BMP: Portable Toilets

Description:

Temporary on-site sanitary facilities for construction personnel.

Approach:

- Locate portable toilets in convenient locations throughout the site.
- Prepare level, gravel surface and provide clear access for servicing and for on-site personnel.
- Position portable toilets so they are secure and will not be tipped or knocked over.
- Position at least 10 feet from any storm water conveyance, inlet, curb or gutter.
- Portable toilets should be maintained in good working order with regular waste collection. All waste should be deposited in sanitary sewer system for treatment with appropriate agency approval.

Limitations:

- No limitation.

Minimum Control Measures

☐Public Education and Outreach
☐Public Participation/Involvement
☐Illicit Discharge Detection and Elimination
☒Construction Site Runoff Control
☐Post-construction Runoff Control
☐Pollution Prevention/Good Housekeeping

Targeted Pollutants

☐Sediment
☒Nutrients
☐Heavy Metals
☒Toxic Materials
☐Oxygen Demanding Substances
☐Oil & Grease
☒Floatable Materials
☒Bacteria & Viruses
☒Other Waste

Impact

☒High
☐Medium
☐Low or Unknown

BMP: Riprap

Description:

Riprap is a permanent, erosion-resistant protective layer made of rock. It is intended to protect soil from erosion in areas of concentrated runoff. Riprap may also be used to stabilize slopes that are unstable because of seepage problems.

Approach:

- Riprap is normally used at locations where erosive forces from water flow exceed the ability of the soil or vegetation cover to resist those forces.
- Riprap can be used for pipe outlet protection, channel lining, scour protection, etc.
- For slopes steeper than 2:1, consider using materials other than riprap for erosion protection.
- When working with streams, obtain any required State and Federal Permits and follow permit requirements.
- Riprap should be inspected annually and after major storms. Make repairs as necessary.

Limitations:

- Riprap may be unstable on steep slopes.

Minimum Control Measures

☐Public Education and Outreach
☐Public Participation/Involvement
☐Illicit Discharge Detection and Elimination
☒Construction Site Runoff Control
☒Post-construction Runoff Control
☐Pollution Prevention/Good Housekeeping

Targeted Pollutants

☒Sediment
☐Nutrients
☐Heavy Metals
☐Toxic Materials
☐Oxygen Demanding Substances
☐Oil & Grease
☐Floatable Materials
☐Bacteria & Viruses
☐Other Waste

Impact

☐High
☒Medium
☐Low or Unknown

BMP: Rock Check Dams

Description:

A small dam constructed across a drainage ditch to reduce velocity or concentrated storm water flows, thereby reducing the erosion of the ditch. Rock check dams can be utilized in temporary drainage paths, permanent drainage ways not yet stabilized, existing drainage paths receiving increased flows due to construction, or in steep drainages that cannot be stabilized with vegetation only.

Approach:

- Construct dams in conformance with City construction standards.

Limitations:

- Do not use in running streams or natural waterways.

Minimum Control Measures

- ☐Public Education and Outreach
- ☐Public Participation/Involvement
- ☐Illicit Discharge Detection and Elimination
- ☒Construction Site Runoff Control
- ☒Post-construction Runoff Control
- ☐Pollution Prevention/Good Housekeeping

Targeted Pollutants

- ☒Sediment
- ☐Nutrients
- ☐Heavy Metals
- ☐Toxic Materials
- ☐Oxygen Demanding Substances
- ☐Oil & Grease
- ☐Floatable Materials
- ☐Bacteria & Viruses
- ☐Other Waste

Impact

- ☐High
- ☒Medium
- ☐Low or Unknown

BMP: Site Revegetation

Description:

Seeding of grass and planting of trees, shrubs, vines, and ground covers provide long-term stabilization of soil. Grass can be planted for temporary and long-term stabilization. This BMP is the preferred method of site stabilization in the City.

Approach:

- Types of vegetation, site preparation, planting time, fertilization, and water requirements should be considered for each application.
- Use of native plant materials that require less water and maintenance are preferred.
- Grass or ground cover for immediate and full ground coverage, perennials, shrubs, and trees for more extensive stabilization of soils.
- Noxious or invasive weeds must be removed from site.

Limitations:

- Vegetation may not be appropriate in dry periods without irrigation.
- Grass may need to be watered and mowed.
- Fertilizer and green waste may create pollution.

Minimum Control Measures

- ☐Public Education and Outreach
- ☐Public Participation/Involvement
- ☐Illicit Discharge Detection and Elimination
- ☒Construction Site Runoff Control
- ☒Post-construction Runoff Control
- ☐Pollution Prevention/Good Housekeeping

Targeted Pollutants

- ☒Sediment
- ☒Nutrients
- ☐Heavy Metals
- ☐Toxic Materials
- ☐Oxygen Demanding Substances
- ☐Oil & Grease
- ☐Floatable Materials
- ☐Bacteria & Viruses
- ☐Other Waste

Impact

- ☐High
- ☒Medium
- ☐Low or Unknown

BMP: Septic System Controls

Description:

Locate failed septic systems, non-permitted systems, or systems that do not work appropriately.

Approach:

- Map all septic systems
- If failed systems are located, refer them to the Bear River Health Department for correction or replacement.

Limitations:

- Septic systems are completely under the control of the Sate of Utah and the Bear River Health Department.
- Perhaps the biggest limitation to correcting failing septic systems is the lack of techniques for detecting individual failed systems.

Minimum Control Measures

- ☐Public Education and Outreach
- ☐Public Participation/Involvement
- ☒Illicit Discharge Detection and Elimination
- ☐Construction Site Runoff Control
- ☐Post-construction Runoff Control
- ☐Pollution Prevention/Good Housekeeping

Targeted Pollutants

- ☐Sediment
- ☒Nutrients
- ☐Heavy Metals
- ☒Toxic Materials
- ☒Oxygen Demanding Substances
- ☐Oil & Grease
- ☐Floatable Materials
- ☒Bacteria & Viruses
- ☐Other Waste

Impact

- ☒High
- ☐Medium
- ☐Low or Unknown

BMP: Silt Fence

Description:

A temporary sediment barrier consisting of entrenched filter fabric stretched across and secured to supporting posts which can be used as perimeter barrier, sediment barrier, protection for existing waterways, and inlet protection.

Approach:

- Place posts 6 feet apart along contour (or use preassembled unit) and drive 2 feet minimum into ground. Excavate an anchor trench immediately upgradient of posts. Backfill trench over fabric.
- Inspect periodically and after rainfall events to ensure effectiveness. Repair or replace as needed.
- Remove accumulated sediment when it reaches ½ the height of the fence.

Limitations:

- Recommended maximum drainage of 0.5 acre per 100 feet of fence.
- Recommended maximum uphill grade of 2:1.
- Recommended maximum flow rate of 0.5 cfs.
- Ponding should not be allowed against fence.

Minimum Control Measures

- ☐Public Education and Outreach
- ☐Public Participation/Involvement
- ☐Illicit Discharge Detection and Elimination
- ☒Construction Site Runoff Control
- ☐Post-construction Runoff Control
- ☐Pollution Prevention/Good Housekeeping

Targeted Pollutants

- ☒Sediment
- ☐Nutrients
- ☐Heavy Metals
- ☐Toxic Materials
- ☐Oxygen Demanding Substances
- ☐Oil & Grease
- ☐Floatable Materials
- ☐Bacteria & Viruses
- ☐Other Waste

Impact

- ☐High
- ☒Medium
- ☐Low or Unknown

BMP: Sorbents

Description:

Sorbents are materials that can clean up spills through the chemical process of adsorption. Sorbents adsorb (an attraction to the outer surface of a material) or absorb (taken in by the material like a sponge) only when they come in contact with the sorbent material. Sorbents are a useful BMP for facilities with liquid materials on-site.

Approach:

- Apply sorbents immediately to the spill area to adsorb and absorb the spilled material.
- Properly dispose of the sorbent.

Limitations:

- Requires a knowledge of the chemical makeup of a spill to choose the best sorbent.
- May be an expensive practice for large spills.

Minimum Control Measures

- ☐Public Education and Outreach
- ☐Public Participation/Involvement
- ☒Illicit Discharge Detection and Elimination
- ☐Construction Site Runoff Control
- ☐Post-construction Runoff Control
- ☒Pollution Prevention/Good Housekeeping

Targeted Pollutants

- ☐Sediment
- ☐Nutrients
- ☐Heavy Metals
- ☒Toxic Materials
- ☐Oxygen Demanding Substances
- ☒Oil & Grease
- ☐Floatable Materials
- ☐Bacteria & Viruses
- ☐Other Waste

Impact

- ☒High
- ☐Medium
- ☐Low or Unknown

BMP: Stabilized Construction Entrance

Description:

A stabilized pad of crushed stone located where construction traffic enters or exits the site from or to a paved surface.

Approach:

- Clear and grub area and grade to provide minimum slope of 2% away from the paved roadway.
- Place and compact coarse aggregate, 1 to 2-1/2 inches in size, to a minimum depth of 8 inches.
- Inspect adjacent roadway daily for sediment deposits and clean by sweeping or shoveling.
- Repair entrance and replace gravel as required to maintain a good working condition.

Limitations:

- Requires periodic top dressing with additional gravel.
- Should be used in conjunction with street sweeping adjacent public right-of-way.

Minimum Control Measures

- ☐Public Education and Outreach
- ☐Public Participation/Involvement
- ☐Illicit Discharge Detection and Elimination
- ☒Construction Site Runoff Control
- ☐Post-construction Runoff Control
- ☐Pollution Prevention/Good Housekeeping

Targeted Pollutants

- ☒Sediment
- ☐Nutrients
- ☐Heavy Metals
- ☐Toxic Materials
- ☐Oxygen Demanding Substances
- ☐Oil & Grease
- ☐Floatable Materials
- ☐Bacteria & Viruses
- ☐Other Waste

Impact

- ☐High
- ☒Medium
- ☐Low or Unknown

BMP: Straw Bale Barrier

Description:

Temporary sediment barrier consisting of a row of entrenched straw bales that can be used as perimeter barrier, sediment barrier, protection for existing waterways, and inlet protection.

Approach:

- Excavate a 4-inch-deep trench, place bales in trench with ends tightly abutting, fill any gaps, anchor each bale with 2 stakes driven flush with top of bale, backfill and compact along the bales.
- Inspect immediately after any rainfall and daily during prolonged rainfall. Look for runoff bypassing or undercutting barrier.
- Repair or replace bales a necessary to prevent failure.

Limitations:

- Recommended maximum area of 0.5 acre per 100 feet of barrier.
- Recommended maximum uphill grade of 2:1.

Minimum Control Measures

- ☐Public Education and Outreach
- ☐Public Participation/Involvement
- ☐Illicit Discharge Detection and Elimination
- ☒Construction Site Runoff Control
- ☐Post-construction Runoff Control
- ☐Pollution Prevention/Good Housekeeping

Targeted Pollutants

- ☒Sediment
- ☐Nutrients
- ☐Heavy Metals
- ☐Toxic Materials
- ☐Oxygen Demanding Substances
- ☐Oil & Grease
- ☐Floatable Materials
- ☐Bacteria & Viruses
- ☐Other Waste

Impact

- ☐High
- ☒Medium
- ☐Low or Unknown

BMP: Temporary Drains and Swales

Description:

Temporary drains and swales are used to divert off-site runoff around the construction site, divert runoff from stabilized areas around disturbed areas, and direct runoff into sediment traps.

Approach:

- Temporary drainage swales will effectively convey runoff and avoid erosion if installed properly.
- The drain/swale should conform to predevelopment drainage patterns and capacities.
- Inspect weekly and after each rainfall. Repair any erosion immediately and remove any sediment built up.

Limitations:

- Temporary drains/swales must not adversely impact upstream or downstream properties.
- Temporary drains/swales must conform to local floodplain management requirements.

Minimum Control Measures

- ☐Public Education and Outreach
- ☐Public Participation/Involvement
- ☐Illicit Discharge Detection and Elimination
- ☒Construction Site Runoff Control
- ☐Post-construction Runoff Control
- ☐Pollution Prevention/Good Housekeeping

Targeted Pollutants

- ☒Sediment
- ☐Nutrients
- ☐Heavy Metals
- ☐Toxic Materials
- ☐Oxygen Demanding Substances
- ☐Oil & Grease
- ☐Floatable Materials
- ☐Bacteria & Viruses
- ☐Other Waste

Impact

- ☐High
- ☒Medium
- ☐Low or Unknown

BMP: Used Oil Recycling

Description:

Used motor oil is a hazardous waste because it contains heavy metals picked up from the engine during use. Since it is toxic to humans, wildlife, and plants, it should be disposed of properly.

Approach:

- Used oil should be disposed of at a vehicle service center that accepts used oil, Logan Landfill or other businesses that accept or use used oil.

Limitations:

- If oil is mixed with other substances or if storage containers have residues of other substances, this can contaminate oil and make it a hazardous waste.
- It is often difficult to effectively educate the public and convince them of the importance of recycling used oil.

Minimum Control Measures

☒Public Education and Outreach
☐Public Participation/Involvement
☒Illicit Discharge Detection and Elimination
☐Construction Site Runoff Control
☐Post-construction Runoff Control
☒Pollution Prevention/Good Housekeeping

Targeted Pollutants

☐Sediment
☐Nutrients
☒Heavy Metals
☒Toxic Materials
☐Oxygen Demanding Substances
☒Oil & Grease
☐Floatable Materials
☐Bacteria & Viruses
☐Other Waste

Impact

☒High
☐Medium
☐Low or Unknown

BMP: Using the Media

Description:

The media can help in educating the public about storm water issues. Through the media, a program can educate targeted or mass audiences about problems and solutions, build support for remediation and retrofit projects, or generate awareness and interest in storm water management.

Approach:

- Newsletters are a great way to deliver educational information, public notices, and other messages.
- Radio remains a strong media presence due to its affordable production costs and ability to reach targeted and mass audiences.
- The internet is a powerful means of communication and will be the primary method of information distribution used by the City.

Limitations:

- There can be costs associated with some forms of media presence.

Minimum Control Measures

☒Public Education and Outreach
☐Public Participation/Involvement
☐Illicit Discharge Detection and Elimination
☐Construction Site Runoff Control
☐Post-construction Runoff Control
☐Pollution Prevention/Good Housekeeping

Targeted Pollutants

☒Sediment
☒Nutrients
☒Heavy Metals
☒Toxic Materials
☒Oxygen Demanding Substances
☒Oil & Grease
☒Floatable Materials
☒Bacteria & Viruses
☒Other Waste

Impact

☒High
☐Medium
☐Low or Unknown

BMP: Vehicle & Equipment Maintenance & Repair

Description:

Prevent or reduce the discharge of pollutants to storm water from vehicles and equipment maintenance and repair by running a dry shop.

Approach:

- Keep equipment clean, don't allow excessive build-up of oil and grease.
- Keep drip pans under leaking equipment until repairs can be made.
- Do not change motor oil or perform maintenance in non-appropriate areas.
- Inspect equipment for leaks on a regular basis.
- Make sure oil filters are drained before disposal.
- Clean equipment yard storm drains regularly.
- Do not pour materials down drains.
- Sweep instead of hose down work areas.
- Recycle automotive fluids.

Limitations:

- Space and time limitations may preclude all work from being conducted indoors.
- Dry floor cleaning methods may not be sufficient for some spills.

Minimum Control Measures

☐Public Education and Outreach
☐Public Participation/Involvement
☐Illicit Discharge Detection and Elimination
☐Construction Site Runoff Control
☐Post-construction Runoff Control
☒Pollution Prevention/Good Housekeeping

Targeted Pollutants

☐Sediment
☐Nutrients
☒Heavy Metals
☒Toxic Materials
☐Oxygen Demanding Substances
☒Oil & Grease
☐Floatable Materials
☐Bacteria & Viruses
☐Other Waste

Impact

☒High
☐Medium
☐Low or Unknown