

Desert Research Institute

Storm Water Pollution Prevention Plan

1.0 Regulatory Background

- 1.1 The Environmental Protection Agency (EPA) is authorized by the federal Clean Water Act (CWA) to regulate discharges to surface waters in the United States. The Nevada Division of Environmental Protection (NDEP) Bureau of Water Pollution Control (BWPC) enforces federal and state regulations related to protection of State waters from the discharge of pollutants.
- 1.2 Storm water runoff from the Washoe County locations eventually makes its way, untreated, to the Truckee River, a major source of drinking water for the area, and ultimately into Pyramid Lake. In Washoe County, the Cities of Reno and Sparks and Washoe County have existing municipal codes and ordinances which grant them the authority to prohibit materials and wastes from being deposited on streets and public places, prohibit non-storm water discharges to the storm drain system, conduct inspections of industrial and commercial dischargers, and assess fees and fines. The City of Reno requires storm drains to be marked "No Dumping, Flows to the Truckee River". For additional information refer to [Truckee Meadows Regional Stormwater Quality Management Program](#).
- 1.3 Storm water runoff in the Las Vegas valley flows without treatment into Lake Mead, which is the primary source of municipal water for the area. In Clark County, storm water protection is managed by the **Stormwater Quality Management Committee (SQMC)**, a community partnership of the Clark County Regional Flood Control District, which is committed to the development and implementation of storm water pollution monitoring, control and outreach efforts within the Las Vegas Valley. The SQMC was formed to manage program development and compliance activities under the State issued [National Pollutant Discharge Elimination System](#) (NPDES) Municipal Separate Storm Sewer System (MS4) permit. The permit authorizes discharge of storm water to the Las Vegas Wash from storm sewer systems owned and operated by the cities of Las Vegas, North Las Vegas, Henderson and Clark County in return for implementation of certain storm water pollution reducing activities by the permittees.

2.0 Introduction

- 2.1 Of specific concern during storm water events is run off of chemical, pesticide/herbicide and other hazardous waste products and industrial pollutants. The Desert Research Institute (DRI) is committed to protection of the environment, which includes a commitment to protecting water from hazardous pollutants. The DRI Storm Water Pollution Prevention (SWPP) Plan was developed to outline ways to prevent releases of these pollutants to waterways through the implementation of best management practices and is consistent with "Final NPDES General Permits for Storm Water Discharges Associated with Industrial Activity" (Federal Register notice dated September 25, 1992) and the requirements of the State's water pollution control laws and regulations.

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2.2 The DRI SWPP plan is applicable to DRI facilities in Reno¹ and Stead, in Washoe County, Nevada and in Las Vegas and Boulder City in Clark County, Nevada. It was developed to provide guidance to DRI faculty, staff and students on how we can help prevent storm water pollution. Chemical management practices are also addressed in the DRI Chemical Hygiene Plan, a separate document that complies with 29 CFR 1910.1450 and applies to chemical usage in laboratories. Finally, proper control measures for hazardous waste are addressed in the DRI Hazardous Waste Preparedness and Prevention Plan.

2.3 The DRI SWPP plan is divided into two separate sections

- Best management practices that DRI utilizes to protect storm water runoff by eliminating or reducing pollution at its facilities.
- Requirements for construction activities disturbing 1 acre or more.

3.0 Best Management Practices for DRI Employees--In order to achieve the goal of preventing potential exposure of pollutants to storm water, the following concepts should be considered whenever designing a new process and should be reviewed for ongoing processes:

3.1 Processes Control: Change or modify processes to eliminate or reduce the production of hazardous waste. Eliminate processes that serve as an undue hazard for storm water runoff. Consider potential storm water pollution when designing new processes.

3.2 Source Reduction: Practice source reduction by ordering only the amount of hazardous materials that are needed to finish the project. Investigate the use of substitutes that are either non-hazardous or less hazardous than those currently in use. If only small amounts are needed contact coworkers to determine if you may utilize a small amount from another area's inventory.

3.3 Storage: Store hazardous materials inside buildings whenever practical. If outdoor storage is necessary, designate specific storage areas away from storm drain systems for storing equipment and hazardous materials. If outdoor hazardous materials storage areas are not fully enclosed, ensure the area is bermed to collect storm water until it can be tested before discharge.

3.4 Implement Good Housekeeping Practices: In addition to the general strategies listed above, DRI has adopted the following specific good housekeeping practices and consistently strives for their implementation at all facilities:

3.4.1 Particulate Producing Processes: Particulates are produced by metal working, grinding, sanding, drilling, etc. Regularly sweep and clean areas where these processes are performed and dispose of the swept up materials properly.

¹Protection of water resources is also addressed in the NNSC Spill Prevention Control and Countermeasures (SPCC) Plan, a separate document that applies to control of oil at the Reno DRI campus. Both the DRI SWPP and NNSC SPCC plans provide guidance to assure appropriate actions are taken in an emergency release, aim to minimize harm to the environment and human health and provide prevention measures.

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3.4.2 Dumpsters: Cover open dumpsters with secured tarps or plastic sheeting. Never clean out a dumpster or trash container by washing down into the storm water system.

3.4.3 Equipment Maintenance and Fueling: The following materials may cause water contamination and may be used in the fuel or repair of equipment:

- fuel (gasoline, diesel, kerosene, etc.)
- lubricants
- hydraulic fluid
- solvents
- degreasers
- paint
- detergents

Regularly inspect all machinery, tools and equipment for any leaks and spills. To reduce or eliminate the generation of waste, fix sources of drips or leaks where possible and regularly replace worn seals on equipment. Use drip pans for the possibility of leaks and other liquid spills. Use a funnel when pouring liquids. Place drip pans under the spouts of liquid storage containers to contain any incidental spills. Do not 'top off' or overfill fuel tanks of portable generators, lawn mowers, etc. Dispose of supplies utilized in maintenance through the appropriate waste stream. If possible, service equipment indoors. If outdoor service is necessary, use a drop cloth to contain spillage.

3.4.4 Loading Docks: Cover loading docks whenever possible. Ensure loading docks have adequate secondary containment to trap spills and leaks that may occur during loading and unloading operations.

3.4.5 Outdoor Cleanup: Do not hose down shop floors into streets or parking lots. It is best to dry sweep dust and debris regularly. Never hose down contaminants from outdoor asphalt or concrete into the storm water system. Never rinse containers utilized for hazardous materials storage into the storm water system. Never wash excess dirt or debris into storm water system. Do not wash vehicles or equipment in parking or open areas.

3.4.6 Outdoor Storage: Outdoor Storage of hazardous materials should be avoided. If necessary to store outdoors, provide covers and secondary containment for outdoor storage of hazardous materials. Make sure hazardous materials are not exposed to storm water runoff or located in flood prone areas. Strict spill control processes should be adhered to in all areas where hazardous materials are utilized outside of buildings including fueling locations and areas where pesticides and herbicides are applied.

3.4.7 Parking Lot Etiquette: Keep personal vehicles in good repair so they do not leak excess oil, lubricants or antifreeze onto parking surfaces. Do not perform auto maintenance, including auto detailing, on DRI property.

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- 3.5 Pest Management:** Integrated Pest Management (IPM) is a comprehensive approach to controlling pests such as rodents, insects, weeds and plant pathogens with environmentally and economically sound practices. It is the policy of the Desert Research Institute to control structural and landscape pests by using IPM practices. Details are outlined in the [DRI IPM program](#).
- 3.6 Spill Response:** Prepare and use easy to find spill containment and cleanup kits. Include safety equipment and cleanup materials appropriate to the type and quantity of materials that could spill. Spill response should only be conducted by employees who are trained to do so. If you do not know the identity of the spilled substance, have not been trained in the proper handling of the chemicals that are spilled, or are uncomfortable cleaning up the spill, immediately evacuate the area and contact EH&S via the emergency cell number 775-742-6330. If you are able to clean up a spill, do so quickly and thoroughly. Every spill is different and may require a different spill kit (i.e. solids, liquids, acids, caustics) for proper clean-up. Know the difference between each kit and how to use them before you need them. Material Safety Data Sheets should be reviewed prior to working with any hazardous chemical and will provide guidance for spill clean up. MSDSs are available on-line at <http://hazard.com>.
- 3.7 Waste Disposal:** Practice proper waste disposal. Many industrial waste fluids, including water-based paint, used oil and coolants can be recycled. Non-hazardous materials that cannot be recycled must be taken to an appropriate dumpster. Hazardous materials must be disposed of as hazardous waste, universal wastes or non-RCRA lab trash. Contact EH&S for guidance if you are unsure which waste stream you are generating or how to dispose of the waste materials.
- 3.8 Training:** Educate employees on storm water prevention. Audiovisual training materials are available from EH&S for use in a classroom or group setting.

4.0 Construction Activities

- 4.1 In 1987, Congress amended the CWA to require implementation, in two phases, of a comprehensive national program to control pollutants that enter the "waters of the United States" via storm water runoff. The registration portion of this regulation is required by the NPDES permit program, which was established by the CWA in 1972 to regulate point source discharges from municipal and industrial sources, including certain construction activities. The second phase of the storm water program (called Phase II), which was finalized on December 8, 1999 (64 FR 68722), requires permits for storm water discharges from construction sites that disturb between one and five acres of land to surface waters or into a Municipal Separate Storm Sewer Systems (MS4). Storm water discharges from activities disturbing less than one acre also are covered under Phase II if they are part of a "larger common plan of development or sale" with a planned disturbance of one acre or greater.
- 4.2 DRI requires contractors it hires who will disturb greater than one acre in total to submit a copy of their NDEP Storm water Discharge Permit to the appropriate DRI Facilities Department Project Manager prior to commencement of work at any site covered by this plan. (For construction activities in Washoe County a [Dust Control Permit](#) with the Washoe County District Health Department Air Quality Management Division is also required to be submitted). For construction projects conducted under the oversight of the Nevada Public

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Works Board (PWB), it shall be the responsibility of the PWB Building Inspector to ensure the appropriate permits are obtained and any permit conditions are followed.

- 4.3 Best Management Practices for Construction--**Best Management Practices (BMPs) for construction shall be followed. These practices include planning, run off control, erosion and sediment control, drainageway protection and general site BMPs. Both the City of Reno and Clark County have construction BMPs posted on the Internet; therefore these are not repeated in the DRI SWPP Plan. See [Reno](#) and [Clark County](#) Construction BMPs respectively for details

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Concurrence

Author: Martha A McRae
Director, Environmental Health & Safety
Rev. 0, April 2008

Approvals:

Signature:



Peter Ross
Assistant VP Campus Planning & Physical Plant

Date:

4/14/08

Signature:



John Naumann
Director of Facilities Management

Date:

4/16/08

Signature:



Kyle Ruf
Facilities Manager

Date:

4-14-08

Signature:

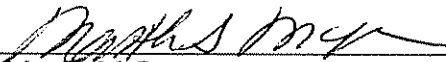


Walter Shingles
Facilities Manager

Date:

4/9/08

Signature:



Martha McRae
Director Environmental Health & Safety

Date:

4/16/08