ENVIRONMENTAL HEALTH & SAFETY

Stormwater Guidance

for UNM Staff & Contractors

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DOCUMENT REVISION LOG

All parties wishing to provide comments on or modify this guidance should submit proposed changes, along with a rationale for the proposal, to EHS for consideration. EHS reserves full discretion to implement proposed changes. Revisions will occur annually or more frequently as deemed necessary by the *Environmental Health Manager*.

Document: **Stormwater Guidance**

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0	**11/11/2021**	**Initial Publication**	**N/A**	**Kolt H. Vaughn, *EHS Tech III***

ACRONYMS & DEFINITIONS

≥ 1 ac	Shorthand for "greater than or equal to one acre"
AMAFCA	Albuquerque Metropolitan Arroyo Flood Control Authority
BMP	Best Management Practice
Carbon dioxide or CO_2	An important heat-trapping (greenhouse) gas, which is released through human and natural activities. It is the primary pollutant driving global climate change.
DO	Dissolved Oxygen
EHS	Environmental Health & Safety (UNM Department; formerly SRS)
EPA	U.S. Environmental Protection Agency
Et seq.	And sequential; and what follows *(Latin)*
Evapotranspiration	The loss of water from the soil (to the atmosphere) both by evaporation from the soil surface and by transpiration from the leaves of the plants growing on it
FM	Facilities Management (UNM department)
GSI	Green Stormwater Infrastructure (Note GSI and LID are equivalent terms in this document)
Ibid.	In the same place —used to indicate that a reference is from the same source as a previous reference *(Latin)*
IDDE	Illicit Discharge Detection and Elimination program; administered by EHS
Infiltration	The downward movement of water through soil and eventually the water table or aquifer.
LEED	Leadership in Energy and Environmental Design program; administered by the U.S. Green Building Council
LID	Low Impact Development (Note LID and GSI are equivalent terms in this document)
Maintenance Personnel	Any UNM staff or contractor tasked with the short-term or long-term maintenance of stormwater infrastructure. Examples of Maintenance Personnel include (1) FM Grounds and Landscaping or (2) a maintenance manager for a site owned by UNM but operated by a private, separate firm.

MRG	Middle Rio Grande (see MS4 Permit)
MS4 Permit	Middle Rio Grande Watershed-Based Municipal Separate Storm Sewer System Permit
NPDES	The NPDES or National Pollutant Discharge Elimination System is a regulatory tool (created by the U.S. Congress) authorizing MS4, wastewater, dredge and fill, industrial, and construction discharge permits.
NMAC	New Mexico Administrative Code
NMSA	New Mexico Statutes Annotated
PDC	Planning, Design & Construction (UNM department)
PIC	Person in Charge. The principal UNM department involved with a project (e.g., PDC, FM Engineering, HSC Construction) must designate a Person In Charge, or PIC. The PIC must assume the responsibilities detailed in this guidance document. The PIC may be a department manager, team leader, project leader, facility owner, journeyman technician, or any other person appointed by the appropriate UNM department. The PIC must be a single person and may be either a UNM employee (for UNM-performed construction work) or a contractor employee (for contracted construction work).
SRS	Safety & Risk Services (EHS's former department name)
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
TMDL	TMDLs or Total Maximum Daily Loads are standards establishing the upper allowable limits for the discharge of pollutants of concern into impaired (polluted) waters and their tributaries.
Urban Heat Island	An urban area or metropolitan area that is significantly warmer than its surrounding rural areas due to human activities such as replacing natural land cover with dense concentrations of pavement, buildings, and other surfaces that absorb and retain heat.
U.S.C.	United States Code

TABLE OF CONTENTS

1. PURPOSE

To facilitate compliance with stormwater regulations and encourage the appropriate use of **Best Management Practices (BMPs)**.[1]

2. SCOPE

This guidance applies to all UNM staff and contractors that plan, design, construct, operate, or maintain stormwater infrastructure.

3. ROLES & RESPONSIBILITIES

Specific responsibilities of the Environmental Health & Safety department, or EHS, include the following:

1. Utilize this guidance document to educate UNM staff and contractors about stormwater requirements and best management practices.
2. Communicate the material herein by providing a live presentation training session as necessary.
3. Enforce all stormwater rules as required by internal, local, state, and federal policies.
4. Revise this guidance document as necessary.

Specific responsibilities of the **Person In Charge**, or **PIC**,[2] include the following:

1. Review this guidance document.
2. Incorporate this guidance – and the policies herein – into all operations.
3. Attend a live presentation training session with EHS before planning, designing, or constructing any project that disturbs greater than or equal to one acre (≥ 1 ac) of land. All UNM project

[1] In general, **Best Management Practices (BMPs)** treat rain where it falls. BMPs address three criteria that are critical to managing UNM's stormwater runoff: (1) volume, (2) peak discharge, and (3) water quality. BMPs are discussed in more detail at the construction and post-construction sections below.

[2] The principal UNM department involved with a project (e.g., PDC, FM Engineering, HSC Construction) must designate a **Person In Charge** (**PIC**). The PIC must assume the responsibilities detailed in this guidance document. The PIC may a department manager, team leader, project leader, facility owner, journeyman technician, or any person appointed by the appropriate UNM Department. The PIC must be a single person, and may be either a UNM employee (for UNM-performed construction work) or a contractor employee (for contracted construction work).

managers that may become a PIC must attend annual training. A contractor that becomes a PIC must request training from EHS.

4. Notify EHS (EHSWEB-L@list.unm.edu) when assuming the role of the PIC for a specific project.

Specific responsibilities of the **Maintenance Personnel**[3] include the following:

1. Review this guidance document.
2. Incorporate this guidance – and the policies herein – into all operations.
3. Attend a live presentation training session with EHS before operating or maintaining any stormwater infrastructure resulting from new or redevelopment that is ≥ 1 ac. All UNM Maintenance Personnel must attend annual training. Contractors that become Maintenance Personnel must request training from EHS.
4. Notify EHS (EHSWEB-L@list.unm.edu) when assuming the role of Maintenance Personnel for specific stormwater infrastructure or a group of stormwater infrastructure.

4. DISCLAIMER

This document is intended for educational purposes only. All rules and regulations mentioned herein shall have final authority in place of this document.

5. GUIDANCE

This guidance clarifies stormwater requirements stemming from the rules and regulations governing UNM's **Stormwater Management Program (SWMP)**.[4] The SWMP is a required program of a permit designed to ensure the chemical, physical, and biological integrity of the Rio Grande and its tributaries. The **MS4 Permit**, or "Permit," refers to the Middle Rio Grande Watershed-Based Municipal Separate Storm Sewer System Permit.[5] Other regulated municipalities subject to the Permit include the City of Albuquerque, AMAFCA, and Kirtland Air Force Base. The U.S. Environmental Protection Agency (EPA) issues this Permit to protect the Rio Grande as required by the federal Clean Water Act.[6]

[3] **Maintenance Personnel** is any UNM staff or contractor tasked with the short-term or long-term maintenance of stormwater infrastructure. Examples of Maintenance Personnel include (1) FM Grounds and Landscaping or (2) a maintenance manager for a site owned by UNM but operated by a private, separate firm.

[4] The **SWMP** describes how UNM manages stormwater programs to reduce discharges of pollution. See more below.

[5] See the **MS4 Permit**, number NMR04A000, here. Alternatively, review the EPA's description here.

[6] Clean Water Act, 33 U.S.C. 1251 et seq.

Beyond the regulatory requirements, this guidance document intends to reduce UNM's environmental impact and steward water resources sustainably, in line with UNM's 2040 sustainability goals. Unfortunately, increasing the footprint of impervious areas (e.g., paved surfaces, buildings, compacted soils) contributes to stormwater pollution and flooding by disrupting the natural water cycle. Likewise, improperly managed construction activities can cause similar adverse impacts. Thus, properly managing stormwater infrastructure ultimately protects community health and the Middle Rio Grande ecosystem.

5.1 Guidance for Construction

Appropriate on-site management, including utilizing BMPs to reduce pollution, is required when one of the following is true:

(1) Construction activity disturbs ≥ 1 ac, or
(2) Construction activity is less than one acre but is part of a larger common plan ≥ 1 ac. [7]

When neither condition is met, appropriate on-site management is highly recommended to support environmental health but not federally enforceable. Table 1 displays a menu of BMPs for convenience.

The PIC must plan, review, permit, and monitor construction activities to ensure controls are in place to eliminate erosion and maintain sediment on site. The PIC must also collaborate with relevant parties (e.g., EHS, Maintenance Personnel) to ensure the same. [8]

Construction site operators (as designated by the PIC) must develop, implement, and maintain an erosion and sediment control plan (i.e., a Storm Water Pollution Prevention Plan or SWPPP) that utilizes BMPs. The SWPPP must be implemented to prevent the illegal discharge of soil, chemical contaminants, waste, and floatables (trash) throughout construction. [9]

Likewise, construction site operators must also comply with the **Construction General Permit**. Of particular importance, construction site operators must comply with Notice of Intent (NOI) and Notice of Termination (NOT) rules. [10] Upon submitting NOI or NOT forms to EPA, the PIC must ensure EHS is notified. To notify EHS, provide written confirmation of the EPA submission (i.e., a receipt of submission). The PIC should work with a construction representative from EHS to ensure proper notification. If a representative is unavailable, the PIC must email the receipt of submission to EHSWEB-L@list.unm.edu. EHS may request additional information to verify a receipt of submission.

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[7] MS4 Permit Part I.D.5.a.(i)

[8] MS4 Permit Part I.D.5.a.(ii)-(iv)

[9] MS4 Permit Part I.D.5.a.(ii)

[10] **Construction General Permit** refers to the 2017 NPDES General Permit for Discharges from Construction Activities (as modified), issued by the EPA here. Special attention should be given to appendices '**J'** (Notice of Intent Form and Instructions) and '**K'** (Notice of Termination Form and Instructions).

5.1.1 Construction BMPs

Table 1 lists typical BMPs for preventing pollution, eliminating erosion, and retaining sediment on-site during construction. The menu is not comprehensive, but it offers a valuable starting place when deciding which BMPs are necessary to include in an SWPPP.

Table 1 – Menu of BMPs for pollution prevention and erosion and sediment control during construction. Hyperlinks connect to fact sheets for that specific technology.[11]

Category	Construction BMPs	
Temporary Soil Stabilization	Preservation of Existing Vegetation	Sodding
	Hydraulic Mulch	Hydroseeding
	Straw or Wood Mulch	Slope Drains
	Soil Binders	Earth Dikes, Drainage Swales & Ditches
	Geotextiles, Plastic Covers, Compost Blankets and Mats, and Riprap	Outlet Protection/Velocity Dissipation Devices
Temporary Sediment Control	Silt Fences	Street Sweeping and Vacuuming
	Storm Drain Inlet Protectors	Brush, Straw, or Sandbag Barriers or Fences
	Sediment Traps	Fiber Rolls
	Check Dams	Gradient Terraces
	Desilting Basins	Compost or Gravel Filter Berms and Socks
Roadways	Stabilized Construction Entrances/Exits	Stabilized Construction Roadways
	Trackpads	Other Sediment Removal Techniques
Other	Wind-Erosion & Dust Control (i.e., wind fences)	Sequencing (i.e., sequence construction activities to minimize exposed soils)
	Preserving Natural Vegetation	Soil Roughening (to promote infiltration)
Waste Management & Pollution Control	Material Delivery and Storage	Hazardous Waste Management
	Material Use	Contaminated Soil Management
	Stockpile Management	Concrete Washout and Waste Management
	Spill Prevention and Control	Sanitary/Septic Waste Management
	Solid Waste Management	Liquid Waste Management

[11] Table 1 adapted from:
(a) EPA. 2021. "National Menu of Best Management Practices (BMPs) for Stormwater-Construction." Available here. &
(b) California Department of Transportation. 2003. "Construction Site BMP Field Manual and Troubleshooting Guide." Available here.

5.2 Guidance for Pre- & Post-Construction

Post-construction requirements are the standards for the final construction product. Meeting post-construction requirements involves considering various factors in the pre-construction phase. Consequently, the two phases are heavily interconnected and should be treated as such. To meet post-construction requirements outlined in UNM's MS4 Permit, projects ≥ 1 ac must incorporate BMPs into the planning, designing, constructing, operating, and maintaining processes. EHS can assist in incorporating BMPs into every project phase. Note that ineffective, improperly constructed, or inadequately maintained BMPs may subject responsible parties (e.g., PICs or Maintenance Personnel) to enforcement penalties. [12]

When development is less than one acre, the following are highly recommended but not federally enforceable. However, for projects ≥ 1 ac, the PIC must ensure compliance by:

1. Incorporating BMPs into the planning and design processes;
2. Establishing an operation and maintenance plan acceptable to responsible Maintenance Personnel before commencing construction;
3. Verifying BMPs are being built according to design standards during construction;
4. Verifying BMPs are built according to design standards after construction (during the post-construction phases); and
5. Submitting as-built plans to responsible Maintenance Personnel and EHS (EHSWEB-L@list.unm.edu) within 90 calendar days of project completion.

The PIC must also ensure that projects (≥ 1 ac):

1. Control stormwater to prevent or minimize water quality impacts;
2. Prevent the discharge of anything other than stormwater, including excess fertilizers and plant matter, which may reduce **dissolved oxygen (DO)** in the Rio Grande (implementing control measures and reporting efforts to EHS is required if activities may decrease DO); [13]
3. Direct all gutter and roof drain discharge into post-construction BMPs (or to other beneficial reuse) before discharging into the storm sewer; [14]
4. Manage the discharge volume (on-site) from a **90th percentile storm event** or smaller (new development only); [15]
5. Manage the discharge volume (on-site) from an **80th percentile storm event** or smaller (redevelopment only). [16]

[12] MS4 Permit Part I.D.5.b.(ii).c

[13] See the FAQ section for more information about activities that may reduce **dissolved oxygen (DO)**.

[14] MS4 Permit Part I.D.5.b.(ii).a-b

[15] See the FAQ section below for more information about **90th and 80th percentile storm events**.

[16] Ibid.

5.2.1 Post-Construction BMPs

Table 2 lists typical BMPs to prevent or minimize water quality impacts to the Rio Grande. These BMPs are for incorporation into post-construction or final site designs. The menu is not comprehensive, but it offers a valuable starting place when deciding which BMPs are necessary for a project.

Table 2 – Menu of BMPs to minimize water quality impacts for new or redevelopment. Hyperlinks connect to scientific fact sheets or product lists for that specific technology. [17]

Category	Post-Construction BMPs	
Innovative	Open Space Designs	Narrower Streets
	Conservation Easements	Riparian/Forested Buffers
	Protection of Urban Forests and Natural Features	**Greenroofs***
	Eliminating Curbs and Gutters	Green Parking
Infiltration (infiltrates into groundwater)	Grassed Swales	**Permeable Pavements*** (e.g., permeable concrete/asphalt, interlocking pavers)
	Infiltration Basins	Infiltration Trenches
Filtration (discharge to surface water)	**Bioretention Cells*** (i.e., Rain Gardens)	Organic and Sand Filters
	Planter Boxes	Vegetated Filter Strips
Retention & Detention	Dry (Detention) Ponds	Constructed Wetlands
	Wet (Retention) Ponds	Rain Barrels/Cisterns/Underground Tanks/**Rainwater Harvesting***
Other	Manufactured Products for Stormwater Inlets (e.g., catch basins, filter socks)	Disconnection (i.e., disconnecting downspouts from impervious surfaces and connecting them with another BMP)

* Often considered Green Stormwater Infrastructure (GSI) or Low Impact Development (LID). See more below.

Note: any controls utilizing impoundments (e.g., retention ponds) that are also used for flood control, that are located in areas where the New Mexico Office of the State Engineer requirements apply, must comply with New Mexico's (1) **Natural Resources and Wildlife**[18] and (2) **Construction and Operation of Dams** statutes[19].

As mentioned previously, the PIC must establish an operation and maintenance plan acceptable to responsible Maintenance Personnel during pre-construction. In other words, before construction begins,

[17] Table 2 adapted from EPA. 2021. "National Menu of Best Management Practices (BMPs) for Stormwater-Post-Construction." Available here.

[18] **Natural Resources and Wildlife**, Surface Water, 19.26.2.15 NMAC; available here.

[19] **Construction and Operation of Dams**, NMSA, § 72-5-32; available here.

Maintenance Personnel must approve an operation and maintenance plan for planned post-construction BMPs. Then, the PIC must furnish as-built plans to Maintenance Personnel and EHS within 90 calendar days of project completion.

Lastly, The PIC should ensure that the construction contractor provides training to the maintenance staff on the proper maintenance and operation of the infrastructure and landscaping during the final phases of construction. Maintenance Personnel must implement the operation and maintenance plan for the life of the system to ensure the longevity and functionality of the BMPs. FM Grounds and Landscaping will typically assume operation and maintenance responsibilities, although other Maintenance Personnel may play similar roles.

5.2.2 GSI and LID

The premier stormwater design standards are called Green Stormwater Infrastructure (GSI) and Low Impact Development (LID). For this document, these two terms (i.e., GSI and LID) are interchangeable. GSI includes an array of products, technologies, and practices that use natural systems – or engineered systems that mimic natural processes – to enhance overall environmental quality and provide utility services. Generally, GSI techniques use soils and vegetation to **infiltrate**[20], **evapotranspirate**[21], or recycle stormwater runoff. When used as components of a stormwater management system, GSI can produce various economic, environmental, and social benefits. These technologies can simultaneously help filter air pollutants, reduce energy demands, mitigate **urban heat islands**[22], and sequester **carbon dioxide**[23]. GSI can also provide UNM with aesthetic and natural resource benefits, including increased property values and habitats for pollinator species.

Many certification programs for building and landscape design (e.g., **LEED**[24]) require GSI to attain various levels of achievement and recognition. An excellent resource for identifying low-impact design strategies for use in UNM's arid environment is the Bernalillo County GSI Guide. Similarly, the Arid LID Coalition

[20] **Infiltration** is the downward movement of water through soil and eventually the water table or aquifer.

[21] **Evapotranspiration** is the loss of water from the soil (to the atmosphere) both by evaporation from the soil surface and by transpiration from the leaves of the plants growing on it.

[22] An **urban heat island** is an urban area or metropolitan area that is significantly warmer than its surrounding rural areas due to human activities such as replacing natural land cover with dense concentrations of pavement, buildings, and other surfaces that absorb and retain heat.

[23] **Carbon dioxide**, or **CO_2**, is an important heat-trapping (greenhouse) gas, which is released through human and natural activities. It is the primary pollutant driving global climate change.

[24] **LEED** (Leadership in Energy and Environmental Design) is the most widely used green building rating system in the world. Available for virtually all building types, LEED provides a framework for healthy, highly efficient, sustainable, and cost-saving green buildings.

maintains an interactive map and research and resources on GSI projects in the Middle Rio Grande Watershed.

GSI is highly recommended and encouraged to manage stormwater around UNM campuses when technically and fiscally feasible. However, when planning and designing a site (≥ 1 ac), the PIC must evaluate opportunities to implement GSI. Then, when opportunities exist, the PIC must encourage stakeholders to incorporate BMPs into the site designs.[25] Likewise, Maintenance Personnel must maintain and ensure proper operation of the BMPs according to the operations and maintenance plan.

Attachment B includes resources for navigating federal funding for GSI.

6. FAQs

The Frequently Asked Questions (FAQs) below address various topics. For additional inquires, review the materials from the Existing Resources section below or contact a member of the Environmental Health division of EHS - contact information is available here.

6.1 What is allowed to discharge into a storm drain?

a. ONLY stormwater! Any substances or materials mixed into stormwater are generally forbidden. In other words, prohibitions include:
   i. non-stormwater discharge;
   ii. construction stormwater discharge;
   iii. industrial stormwater discharge;
   iv. discharge covered under another **NPDES**[26] permit; [27]
   v. discharge that compromises water quality, as defined by EPA before the issuance of the current MS4 Permit; and
   vi. discharge inconsistent with an approved **TMDL.**[28]
b. Limited exceptions exist. Contact EHS for more information.

[25] MS4 Permit Part I.D.5.a.(v)

[26] The **NPDES** or **National Pollutant Discharge Elimination System** is a regulatory tool (created by the U.S. Congress) authorizing MS4, wastewater, dredge and fill, industrial, and construction discharge permits.

[27] This scenario is uncommon for UNM projects.

[28] **TMDLs** or **Total Maximum Daily Loads** are standards establishing the upper allowable limits for the discharge of pollutants of concern into impaired (polluted) waters and their tributaries. Learn more here.

6.2 Which campuses are subject to the requirements described in this document?

a. All UNM owned and operated facilities, excluding UNM Hospital (UMMH) facilities, inside of the Middle Rio Grande Watershed (i.e., the red line in Figure 1 in Attachment A) are subject to the requirements outlined in this document.
b. UNMH may be subject to similar requirements, but those facilities are subject to compliance and enforcement through the City of Albuquerque. EHS does not possess jurisdiction over UNMH operations.
c. UNM owned and operated property outside the Middle Rio Grande watershed is subject to the **Construction General Permit**,[29] unless expressly exempted, and may be subject to other permitting requirements not contained within this document.

6.3 Which activities reduce dissolved oxygen (DO) in the Rio Grande?

a. Various factors can reduce DO, including human-caused and natural factors. Primarily, staff and contractors are to prevent or minimize human-induced factors. Chemicals such as nitrogen, phosphorous, or chlorine can reduce DO and should be stored and disposed of properly. These chemicals typically stem from standard industrial and household fertilizers, pesticides, and salty products, or wastewater outfalls, for example. Simpler elements, such as dead grass or plants (i.e., decaying organic matter) that enter streams can also reduce DO. Likewise, sediment in runoff or reductions in the vegetated area can reduce DO.[30] Consequently, any activity that involves the use of or modification to those chemicals or natural elements has the potential to reduce DO, and proper BMPs should be implemented to minimize risks.

6.4 What does it mean to design infrastructure to capture an 80th or 90th percentile storm?

a. *80th percentile:* When UNM undertakes a redevelopment project (≥ 1 ac), the PIC must install BMPs that capture all the area's precipitation, minus the largest 20% of storms. Historical observations demonstrate that BMPs installed for redevelopment projects must capture all of the discharge for a storm event that produces **0.5 inches of precipitation or less**.
b. *90th percentile:* Similarly, historical observations demonstrate that BMPs installed for new development projects must capture all of the discharge for a storm event that produces **0.65 inches of precipitation or less**.
c. Note:
    i. The 80th percentile requirement applies to redevelopment projects.

[29] See footnote 10.

[30] EPA 2021. "Dissolved Oxygen." Causal Analysis/Diagnosis Decision Information System, Vol. 2. Available here.

ii. The 90th percentile requirement applies to new development projects.

6.5 Can the gutters on my building direct stormwater into the street?

a. No. All gutters must drain into a best management practice (e.g., grassed swales, wet ponds, bioretention cells).[31] An exception could be a gutter draining from a properly designed and maintained greenroof.

6.6 Am I allowed to collect stormwater in a rain barrel and use it?

a. All rain barrels on UNM property must be reviewed and approved, in writing, by Maintenance Personnel prior to installation. Maintenance Personnel often discourages these systems because they require greater maintenance than alternatives and can attract unwanted life forms. Inquire with the appropriate Maintenance Personnel to assess the feasibility of installation and long-term maintenance.
b. Regardless of the above, all rain barrels must slowly drain into a natural or engineered landscape within 96 hours of the storm event. The captured rainwater must not be used for commercial purposes.[32] Exercise caution when using the water – it may contain pollutants.

7. EXISTING RESOURCES

7.1 EHS's Contact Information:

An updated information hub that **provides methods to contact EHS personnel**.

- https://ehs.unm.edu/about-us/contact-us.html

7.2 EHS's Stormwater Web Page:

An updated narrative description for the public about how and why EHS manages UNM's stormwater program. The page includes links to various resources.

- https://ehs.unm.edu/environmental-affairs/stormwater.html

7.3 UNM's MS4 Permit:

The ultimate authority governing stormwater management on UNM campuses within the Middle Rio Grande watershed boundary (i.e., the red line in Figure 1 in Attachment A). The Middle Rio Grande Watershed Based Municipal Separate Storm Sewer System Permit (the "MS4 Permit") is authorized by the EPA, as required by the NPDES program of the Clean Water Act.[33] Although the Permit "expired" on

[31] MS4 Permit Part I.D.5.b.(ii).a-b

[32] MS4 Permit Part I.D.5.b.(ii)

[33] See footnotes 6 and 26.

12/19/2019, it remains effective under the administrative continuance via the Administrative Procedures Act.[34]

- https://ehs.unm.edu/assets/documents/misc-environmental-health/April_9_2015_Final_MRG_MS4_Permit_Mod.pdf

7.4 UNM's Illicit Discharge Detection and Elimination (IDDE) Plan:

Guides how EHS identifies and eradicates illegal dumping into the stormwater system.

- https://ehs.unm.edu/assets/documents/misc-environmental-health/idde-plan.pdf

7.5 UNM's Storm Water Management Plan (SWMP):

Describes how EHS manages stormwater to reduce the discharge of pollutants to the maximum extent practicable necessary to protect water quality (including that of downstream state or tribal waters) and satisfy applicable surface water quality standards. This document is revised and republished each year in Autumn on the EHS Stormwater Web Page. The original SWMP is available at:

- https://ehs.unm.edu/assets/documents/misc-environmental-health/UNM_SWMP.pdf

7.6 EHS/SRS Construction Safety Manual:

Created under the former department name "Safety & Risk Services," the manual **enhances construction safety awareness and proposes hazard mitigation strategies** associated with construction for employees, workers, UNM, the public, and the environment.

- https://ehs.unm.edu/assets/documents/sop-copies/safety-manual1.pdf

7.7 National Pollutant Discharge Elimination System (NPDES) Manual:

This 2020 edition of the *Storm Water Management Guidelines for Construction, MS4, and Industrial Activities* should be used as guidance for construction projects. Originally authored by several New Mexico institutions, including UNM, it **guides users through the NPDES process, accounting for regulatory revisions**.

- https://www.dot.state.nm.us/content/dam/nmdot/Infrastructure/NPDES%20Manual%20Rev3%202020.pdf

7.8 UNM Spill Prevention, Control, and Countermeasure Plan:

Created under the former department name "Safety & Risk Services," this plan **helps UNM prevent and manage a discharge of regulated petroleum substances** into waters of the U.S. or adjoining shorelines, such as lakes, rivers, and streams. This document is available from EHS upon request.

[34] Administrative Procedures Act, 5 U.S.C. 551 et seq.

ATTACHMENT A

A-1 Middle Rio Grande Watershed Map

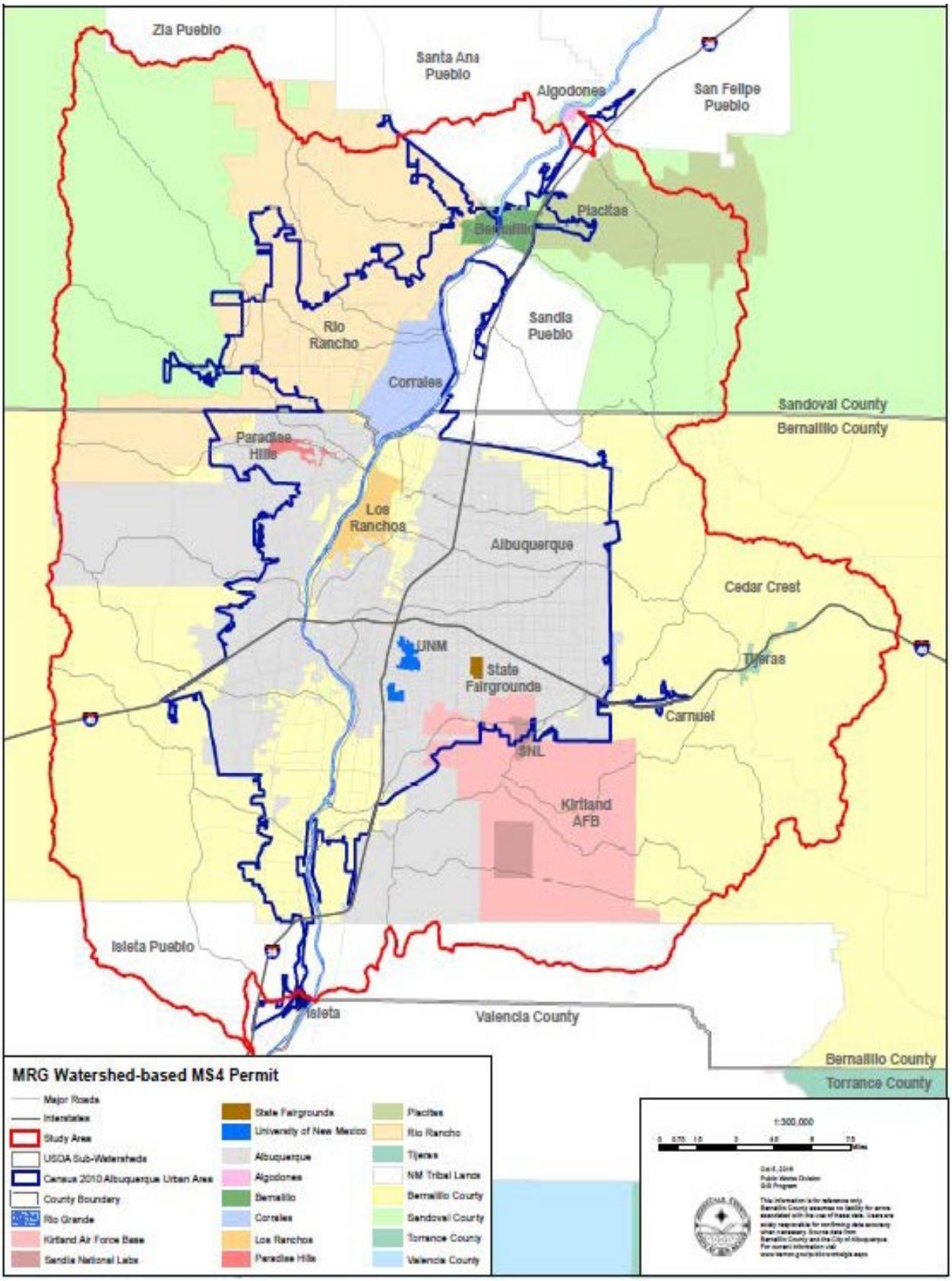

Figure 1 - Middle Rio Grande Watershed Map

ATTACHMENT B

B-1 Federal Funding Resources for Green Stormwater Infrastructure

The Green Infrastructure Federal Collaborative fosters engagement and cooperation between federal agencies that actively work to promote the implementation of green infrastructure. Below, Table 3 offers a menu of select federal programs for which GSI projects at UNM may qualify. The four columns on the right indicate if the program offers funds for the listed project stage.

Table 3 - Menu of federal programs offering funding for green infrastructure.[35]

AGENCY	PROGRAM (hyperlinks to website)	PLANNING & DESIGN	CONSTRUCTION	OPERATIONS & MAINTENANCE	MONITORING
EPA	Overflow and Stormwater Grants (OSG)	Y	Y	N	N
EPA	Clean Water State Revolving Fund (CWSRF)	Y	Y	N	N
EPA	Water Infrastructure Finance and Innovation Act (WIFIA)	Y	Y	N	N
EPA	Section 319 Non-Point Source Grants	Y	Y	Y	Y
EPA	Environmental Justice Small Grants	Y	N	N	Y
EPA	Green Streets, Green Jobs, Green Towns (G3)	Y	Y	N	N
USDA NRCS	Watershed and Flood Prevention Operations Program	Y	Y	N	N
USDA NRCS	Watershed Rehabilitation Program	Y	Y	N	N
USDA NRCS	Regional Conservation Partnership Program	Y	Y	Y	Y
HUD	Community Development Block Grant (CDBG)	Y	Y	N	N
FEMA	Building Resilient Infrastructure & Communities (BRIC)	Y	Y	N	N
USACE	Floodplain Management Services Program - Technical Assistance	Y	N	N	N
USACE	Planning Assistance to States (PAS)	Y	N	N	N

[35] Table 3 represents an adapted summary of funding resources given during a webinar on November 2, 2021, by the Green Infrastructure Federal Collaborative. There are other federal programs that fund green infrastructure not included on this list.

USACE	Continuing Authorities Program (CAP) Sec 205 - Small Flood Risk Management Projects	Y	Y	N	Y
USACE	CAP Sec 204 - Beneficial Use of Dredged Material	Y	Y	N	Y
USACE	CAP Sec 1135 - Modification of Projects for the Environment	Y	Y	N	Y
USACE	Individually Authorized Feasibility Studies and Projects	Y	Y	Y	Y
USACE	Watershed Studies (Sec 729)	Y	N	N	N
EDA	Public Works & Economic Adjustment Assistance Funds	Y	Y	N	N
EDA	American Rescue Plan Program: Economic Adjustment Assistance Funds	Y	Y	N	N

Key:

Y indicates *Yes, funding is available for this phase of new or redevelopment*.

N indicates *No, funding is not available for this phase of new or redevelopment.*

Agency Acronyms:

USDA NRCS – United States Department of Agriculture, Natural Resource Conservation Service

HUD – Department of Housing and Urban Development

FEMA – Federal Emergency Management Agency

USACE – United States Army Corps of Engineers

EDA – Economic Development Administration

Stormwater Guidance for UNM Staff and Contractors (2021-11-11) FINAL

Final Audit Report 2021-11-12

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