STORMWATER MANAGEMENT PLAN (SWMP)

Prepared for:

Raindance Construction LLC

Project:

Raindance Eleventh Filing

Prepared by:
CMS Environmental Solutions
1778 S. Broadway
Denver, CO 80120
303-593-2107

Location:

In the Vicinity of Iron Wheel Drive & Long Shadow Drive

Town of Windsor, County of Weld, State of Colorado 80550

August 2020

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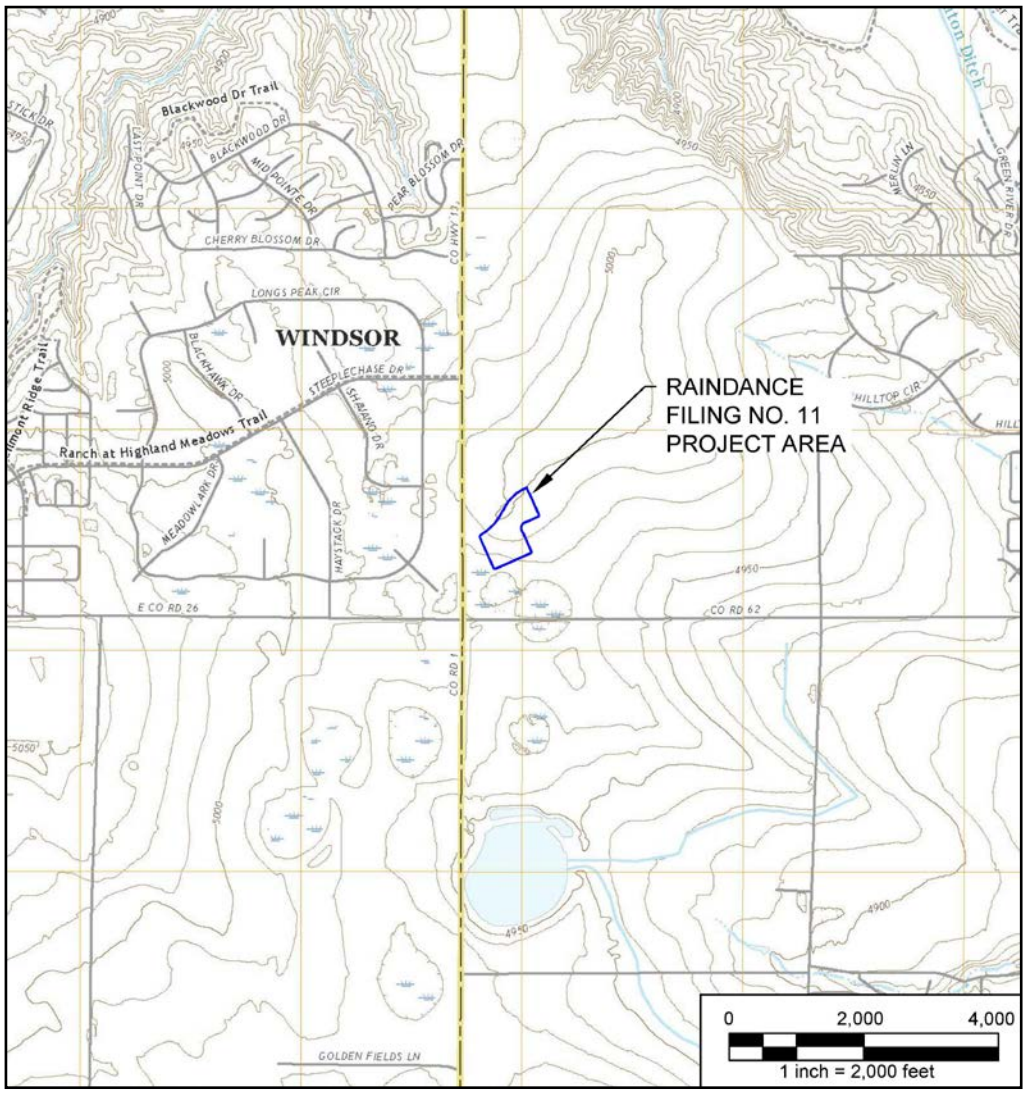
1 INTRODUCTION

1.1 Project Name and Location

Project/Site Name:	Raindance Eleventh Filing	
Location:	Iron Wheel Dr. & Long Shadow Dr.	
City:	Town of Windsor	
County:	Weld	
Latitude:	40.438629°	Longitude: -104.939808°
Permittee:	Raindance Construction LLC	
CDPS Permit #:	COR409704	

Is this project a federal facility? Yes ☐ No ☒
Is this project located on Native American property? Yes ☐ No ☒

Figure 1. Raindance Eleventh Filing



1.2 Purpose & Objective of Stormwater Management Plan

The Colorado Discharge Permit System (CDPS) general permit COR400000 (Permit) requires a stormwater management plan (SWMP) be developed prior to commencement of construction activities. The goal of the SWMP is to identify construction site potential pollutant sources that may contribute pollutants to stormwater, and identify control measures that, when implemented in accordance with good engineering, hydrologic and pollution control practices, will reduce or eliminate any possible water quality impacts. The Permittee must implement the provisions of the SWMP as written and updated, from commencement of construction activity until final stabilization. A copy of the SWMP must be retained onsite or be onsite when construction activities are occurring at the site unless the permittee specifies another location and obtains approval from the division.

1.3 Co-Permittees

The Permit requires both the Owner and Operator as defined in the permit to be co-permittees. Both the Owner and Operator (Table 1) will be subject to the same obligations, including implementation of the SWMP. In cases where the duties of the owner and operator are managed by the owner, both signatures may be completed by the owner.

Table 1. Owner & Operator Contact Information

Owner:	Operator:
Raindance Construction LLC Landon Hoover, Agent 4801 Goodman Rd. Timnath, CO 80547 Phone: (970) 674-1109 Email: landon@hartfordco.com	Crow Creek Construction, LLC Joe Schumacher, Agent 7251 W. 20th Street L101B Greeley, CO 80634 Phone: (970) 330-5070 Email: joe@crow-creek.com

1.4 Qualified Stormwater Managers and Other Project Contacts

The Permit requires a Qualified Stormwater Manager as defined in the permit to be designated to be responsible for implementing the SWMP in its entirety. The Permit also requires the stormwater inspector to be a Qualified Stormwater Manager. These roles may be filled by more than one individual, resulting in a Qualified Stormwater Manager team see Table 2 below.

Table 2. SWMP Qualified Stormwater Managers

(Permittee) Qualified Stormwater Manager:	(Site Contacts) Qualified Stormwater Manager:
Crow Creek Construction, LLC Joe Schumacher, Agent 7251 W. 20th Street L101B Greeley, CO 80634 Phone: (970) 330-5070 Email: joe@crow-creek.com	Crow Creek Construction, LLC Max Gonzalez, Superintendent 7251 W. 20th Street L101B Greeley, CO 80634 Phone: (970) 330-5070 Email: joe@crow-creek.com

Additional Qualified Stormwater Managers

(Stormwater Inspections) Qualified Stormwater Manager:
CMS Environmental Solutions Environmental Analyst 1778 S. Broadway Denver, CO 80210 Phone: (303) 472-6651 Fax: 303.923.3416 *Refer to the Inspector Qualifications tab of this SWMP for a list of inspectors.*

Nicholas Weston
Environmental Analyst
720-388-0450

Crow Creek Construction, LLC
Tommy Gribble
Stormwater Foreman
(970) 397-9872
tommy@crow-creek.com

Crow Creek Construction, LLC
Justin Marshall
Project Manager
(970) 397-9875
justin@crow-creek.com

Table 3. Other Project Contacts

Contact	Area of Responsibility
Developer of SWMP CMS Environmental Solutions, LLC Chase Cabalka, Project Scientist Denver, Colorado 80210 Phone: (720) 460-7113 Facsimile: (303) 923-3416 Email: ccabalka@cmsenviro.com	Develop a SWMP binder to document control measure inspections, correspondence, amendments, training, and other SWMP related items.
Contractor/ Sub-contractor (Erosion and Sediment Controls)	Install, maintain, repair, and replace erosion and sediment controls under the supervision of the Qualified Stormwater Manager.
HAZMAT Emergency Response Contractor Custom Environmental Services 8041 N. I-70 Frontage Rd.	Hazardous materials contractor that is available 24/7 to respond to a significant or major spill.

In House
Crow Creek Construction
Tommy Gribble
Stormwater Foreman
(970) 397-9872
tommy@crow-creek.com

Omerta
Eli Ochoa
President
(303) 280-7115
erosioncontrol@omertaswm.com

Contact	Area of Responsibility
Unit 11 Arvada, CO 80002 Emergency Number: 1-800-310-7445 FAX: 303-423-1854	See Spill Prevention and Response Plan Section 2.
Other:	
Other:	

2 SPILL PREVENTION AND RESPONSE PLAN & MATERIALS HANDLING

2.1 Spill Prevention & Response Plan

Reference the full spill prevention and response plan in separate tab

The Permittee will take all measures necessary to prevent spills that could impact stormwater. This includes, but is not limited to, the proper storage and handling of materials and chemicals. Bulk storage, 55 gallons or greater, for petroleum products and other liquid chemicals will have secondary containment, or equivalent protection, in order to contain spills and to prevent spilled material from entering state waters. See the full Spill Prevention & Response Plan included in the tab of this SWMP for further details. Additional spill related contacts are listed below:

Table 4. Spill and Emergency Contact Information

Emergency Local Fire, Police or Ambulance	**911**
EPA National Response Center	**1-800-424-8802**
Colorado Department of Public Health and Environment	**1-877-518-5608**
Colorado Emergency Planning Committee	**303-273-1622**
Town of Windsor – Public Works	**970-674-5400**

Stormwater Coordinator- Janine Hegeman 970-674-2490

2.2 Materials Handling

The SWMP must describe and locate all control measures implemented at the site to minimize impacts from handling significant materials that could contribute pollutants to runoff. These handling procedures can include control measures for pollutants and activities such as listed in Table 5 below.

Table 5. Materials Handling Control Measures

Material	Control Measure Description
Exposed storage of building material	See Potential Pollutants Table 6, No. 5
Paints and solvents	See Potential Pollutants Table 6, No. 16
Landscape materials	See Potential Pollutants Table 6, No. 14
Fertilizers or chemicals	See Potential Pollutants Table 6, Nos. 5, 8, 14-16
Sanitary waste material	See Potential Pollutants Table 6, No.12
Trash	See Potential Pollutants Table 6, No. 12
Equipment maintenance	See Potential Pollutants Table 6, Nos. 6 and 8
Fueling procedures	See Potential Pollutants Table 6, No. 17

3 POTENTIAL POLLUTANT SOURCES

The SWMP must list all potential sources of pollution which may reasonably be expected to affect the quality of stormwater discharges associated with construction activity from the site. This shall include, but is not limited to, the following pollutant sources:

(a) disturbed and stored soils;
(b) vehicle tracking of sediments;
(c) management of contaminated soils;
(d) loading and unloading operations;
(e) outdoor storage activities (erodible building materials, fertilizers, chemicals, etc.);
(f) vehicle and equipment maintenance and fueling;
(g) significant dust or particulate generating processes (e.g., saw cutting material, including dust);
(h) routine maintenance activities involving fertilizers, pesticides, herbicides, detergents, fuels, solvents, oils, etc.;
(i) on-site waste management practices (waste piles, liquid wastes, dumpsters);
(j) concrete truck/equipment washing, including washing of the concrete truck chute and associated fixtures and equipment;
(k) dedicated asphalt, concrete batch plants and masonry mixing stations;
(l) non-industrial waste sources such as worker trash and portable toilets.

Other control measures not mentioned in this column may also be used to manage pollutant sources; All structural controls on site can be found in the BMP details tab

Wherever SWMP refers to BMP, please read as control measure

Table 6. Potential Pollutants Sources and Planned Control Measures

Potential Pollutant Sources	Project potential	Associated activities	Planned Control Measures
1. All disturbed and stored soils	Yes	Land development activities, foundation excavation, backfill, Stockpile management. Building construction and final stabilization	Perimeter BMPs, sediment barriers such as silt fence, erosion control blanket, vehicle tracking control measures, inlet protections, phasing, training all workers and street sweeping. Note: BMPs must be implemented downgradient of disturbed and stored soils prior to disturbance.
2. Vehicle tracking of sediments	Yes	Points of Ingress and Egress	Practices must be implemented for all areas of potential vehicle tracking, and can include: minimizing site access, street sweeping or scraping, tracking pads, graveled parking areas, requiring that vehicles stay on paved areas on-site, wash racks, and contractor education. Tracking control measures will be maintained and monitored regularly for effectiveness. Street sweeping as needed.

Qualified Stormwater Manager

Potential Pollutant Sources	Project potential	Associated activities	Planned Control Measures
3. Management of contaminated soils	Low	**No known contaminated soils exist on this site.**	If contaminated soils are encountered work relating to the contamination must stop and the ~~SWMP Administrator~~ will be notified. Soils should be properly stored in a 55-gallon drum and disposed of. Refer to the spill prevention & response plan. CMS should also be notified to determine if activities can continue or if further site analysis is required
4. Loading and unloading operations	Yes	Delivery of materials.	It is recommended that when material delivery or loading/unloading occurs that equipment tires do not come in contact with soil or when soil is dry utilize access point and do not track soil onto streets. Otherwise access through stabilized construction entrance, parking area or other control measure as conditions require. If access does occur while wet and mud is tracked onto the roadway it must be cleaned up immediately.
5. Outdoor storage of erodible building materials, fertilizers, chemicals, etc.)	Yes	Delivery of materials, staging.	Storage area or per lot. Implement perimeter controls and good housekeeping. Also see Nos. 14-16 below.
6. Vehicle and equipment maintenance and fueling	Yes	Off-site fueling shall be conducted whenever it is practical. Some equipment may be fueled onsite.	Fueling operations shall be conducted by qualified personnel who are trained in fueling procedures, including the use of drip pans and proper spill cleanup and reporting procedures.
7. Significant dust or particulate generating processes	Yes	Soil moving activities	Moisture condition soil and/or cease soil disturbing operations during high winds. During land development another option is to slow down scraper or construction traffic speeds to reduce dust generation.
8. Routine maintenance activities involving fertilizers, pesticides, detergents, fuels, solvents, oils, etc	Yes	Vehicle use and storage, foundation forms, vertical construction, and final stabilization	All activities will be conducted by personnel trained in good housekeeping, use of on-site BMPs, perimeter BMPs, and spill response and prevention.

Reference section 4.3 table 8 for additional information

Potential Pollutant Sources	Project potential	Associated activities	Planned Control Measures
9. On-site waste management practices (waste piles, liquid wastes, dumpsters, etc.)	Yes	Building construction and final stabilization	Trash shall be emptied prior to overflow, and all liquid wastes will either be hauled off site and properly disposed of, if materials are onsite then while onsite they must be stored in a manner where a release of those waste to stormwater is not likely to occur.
10. Concrete truck/equipment washing, including washing of the concrete truck chute and associated fixtures and equipment. Mortar, or portable mortar mixers.	Yes	Curb and Gutter, Inlet Construction. Foundation construction, flatwork and brick installation.	Concrete washout area (See Table 8), and secondary containment (i.e. earth berm) for mortar mixers.
11. Dedicated asphalt and concrete batch plants	No	Not anticipated for this project	Not applicable for this site at the time of the SWMP. If such activities are added then the SWMP shall be amended.
12. Non-industrial waste sources such as worker trash and portable toilets. Sanitary waste.	Yes	All activities	Dumpsters will be provided on site. A licensed company will be contracted to empty the dumpsters, as needed. Portable sanitary facilities will be provided on-site. A licensed company will be hired to maintain and clean the units, inspect for any deficiencies, and keep the units in good working order.
13. Other areas or procedures where potential spills can occur	No	None identified at this time	Not applicable for this site at the time of the SWMP. If such activities are added then the SWMP shall be amended.
14. Fertilizers, Pesticides, herbicides, soil amendments, and related landscape materials	Yes	Final Stabilization	These materials will typically be in use onsite and stored offsite. If stored on-site they will be either covered or have secondary containment provided. Trades will remove and properly dispose of all unused products and wastes off site.
15. Glues, adhesives, caulks and related products	Yes	Utility installation, building construction, final stabilization	These materials will typically be in use onsite and stored offsite. If stored on-site they will be either covered or have secondary containment provided. Trades will remove and properly dispose of all unused products and wastes off site.

Potential Pollutant Sources	Project potential	Associated activities	Planned Control Measures
16. Paint, stains, solvents and related products	Yes	Utility installation, building construction, final stabilization	These materials will typically be in use onsite and stored offsite. If stored on-site they will be either covered or have secondary containment provided. Trades will remove and properly dispose of all unused products and wastes off site.
17. Petroleum products-fuels, oils, grease and form oil (other hydrocarbons)	Yes	During all construction activities onsite.	These products must be stored with individual trade vehicles and use of these products is to be used by only those individuals who are trained in spill response and or are certified mechanics. Any waste or by products shall be hauled offsite and properly disposed of.
18. Stockpile Management	Yes	During land development, over excavation and foundation installation	Stockpiles must be behind adequate BMPs to prevent materials from migrating off site and into the storm sewer system. For temporary stockpiles on the interior portion of a construction site, where other downgradient controls, including perimeter control, are in place, stockpile perimeter controls may not be required.

Reference section 4.3 table 8 for additional information

For specific locations see Site Map for most current data.

4 IMPLEMENTATION OF CONTROL MEASURES USED TO MEET EFFLUENT LIMITATIONS

The SWMP must include design specifications that contain information on the implementation of control measures in accordance with good engineering hydrologic and pollution control practices; including as applicable drawings, dimensions, installation information, materials, implementation processes, control measure-specific inspection expectations, and maintenance requirements.

If control measures are being used that are outside of the permitted area, then a use agreement between the two parties must be made, ensuring that control measures are being properly designed, installed, inspected and maintained.

4.1 Control Measures Located Outside Permitted Area

Are there any control measures located outside of the permit boundary being used by this project that are not under control of this permittee? Yes ☐ No ☒

If yes, the SWMP must include a documented use agreement between the permittee and the owner or operator of any control measures located outside of the permitted area, that are utilized by the permittee's construction site for compliance with this permit, but not under the direct control of the permittee. The permittee is responsible for ensuring that all control measures located outside of their permitted area, that are being utilized by the permittee's construction site, are properly maintained and in compliance with all terms and conditions of the permit. The SWMP must include all information required of and relevant to any such control measures located outside the permitted area, including location, installation specifications, design specifications and maintenance requirements.

4.2 Control Measures for Erosion and Sediment Control

The permittee must implement structural and/or nonstructural control measures that effectively minimize erosion, sediment transport, and the release of other pollutants related to construction activity to the maximum extent practicable.

The Site Maps (Section 6) show the locations of all structural and non-structural control measures. The Control Measures Specification Details tab attached to the SWMP includes the specifications, implementation, and maintenance requirements for each control measure. Control Measures will be evaluated, reviewed and revised on a regular basis in order to maintain compliance and maximize site efficiency. All changes to Control Measures, including installation and removal, are reflected in the SWMP and documented on the active site map.

Part I.B.1.a.i. of the Permit outlines specific Control Measures requirements which are summarized in Tables 7 and 8 below.

Table 7. Permit-Specific Control Measure Requirements

Requirement	Planned Control Measures
Part I.B.1.a.i.(a). Vehicle tracking controls shall either be implemented to minimize vehicle tracking	Vehicle tracking control measures are addressed in Table 6, in Section 3 of this SWMP and shown

Requirement	Planned Control Measures
of sediment from disturbed areas, or the areas where vehicle tracking occurs shall meet subsection Part I.B.1.a.i(b).	on the Site Map. Also reference the Control Measures Specifications Details tab of this SWMP.
Part I.B.1.a.i.(b). Stormwater runoff from all disturbed areas and soil storage areas for which permanent or temporary stabilization is not implemented, must flow to at least one control measure to minimize sediment in the discharge. This may be accomplished through filtering, settling, or straining. The control measure must be selected, designed, installed and adequately sized in accordance with good engineering, hydrologic and pollution control practices. The control measure(s) must contain or filter flows in order to prevent the bypass of flows without treatment and must be appropriate for stormwater runoff from disturbed areas and for the expected flow rate, duration, and flow conditions (i.e., sheet or concentrated flow).	The Control Measures outlined and designed in the erosion and sediment control plans and updated Site Maps attached to this SWMP consisting of one or more control measures that treat flows to minimize sediment in the discharge. Also reference the current Site Map and associated Control Measures Specifications Details.
Part I.B.1.a.i.(c). Outlets that withdraw water from or near the surface shall be installed when discharging from basins and impoundments, unless infeasible.	The sediment basin used in this plan have outlets that discharge at or near the surface and conform to Town of Winsor detail requirements.
Part I.B.1.a.i.(d). Maintain pre-existing vegetation or equivalent control measures for areas within 50 horizontal feet of receiving water as defined by this permit, unless infeasible.	The project does not have receiving waters or areas within 50 horizontal feet of a receiving water within the project boundary.
Part I.B.1.a.i.(e). Soil compaction must be minimized for areas where infiltration control measures will occur or where final stabilization will be achieved through vegetative cover.	Soil compaction may be minimized by limiting points of ingress and egress within the project. Typical and unavoidable equipment wheel or tracks in contact with soil throughout the site is not considered soil compaction for purposes of this definition. If compaction occurs on areas to be seeded it shall be adequately scarified in accordance with the implementation of final stabilization prior to applying seed. Compaction efforts shall be applied in areas deemed necessary by the soils engineer, public works or building division.
Part I.B.1.a.i.(f). Unless infeasible, topsoil shall be preserved for those areas of a site that will utilize vegetative final stabilization	Preserve topsoil for those areas of a site that will utilize vegetative final stabilization, unless

Requirement	Planned Control Measures
	infeasible. A common example includes tracts that are to be revegetated. Areas of stockpiled topsoil will be noted on the active site map, or if preservation is infeasible, the reasons will be added to the SWMP. Final stabilization for vertical construction will utilize landscaping, sod, and/or hardscaping therefore preserving topsoil does not apply for vertical construction.
Part I.B.1.a.i.(g). Minimize the amount of soil exposed during construction activity, including the disturbance of steep slopes	The Permit requires to minimize the amount of soil exposed during construction. Phasing is implemented on this project that minimizes disturbance to the extent practicable. Steep slopes are defined as (3:1 or greater where no other definition exists).

4.3 Practices for Other Common Pollutants

Table 8. Other Common Pollutants and Control Measures

Requirement:	Control Measure Description
Part I.B.1.a.ii.(a). Bulk storage, 55 gallons or greater, for petroleum products and other liquid chemicals must have secondary containment, or equivalent protection, in order to contain spills and to prevent spilled material from entering state waters	During the Land Development phase of construction bulk storage of materials is located in the staging area noted on the site map. During vertical, bulk storage of materials greater than 55 gallons is not anticipated. Typically, if 55 gallons of material such as concrete curing agent is observed it would be an in-use product and is not to be stored onsite. If materials are stored on-site then adequate secondary containment will be utilized and noted on the site map.
Part I.B.1.a.ii.(b). Control measures designed for concrete washout waste must be implemented. This includes washout waste discharged to the ground as authorized under this permit and washout waste from concrete trucks and masonry operations contained on site. The permittee must ensure the washing activities do not contribute pollutants to stormwater runoff, or receiving waters in accordance Part I.A.1.b.ii. Discharges that may	Concrete washout waste is controlled by use of a concrete washout area (CWA). The CWA is not located near shallow groundwater, drainages, springs or wetlands. Soil conditions beneath the CWA are expected to have adequate buffering capacity to prevent any impact groundwater. Concrete waste may be temporarily stored onsite, prior to being removed as long as it does not have

Requirement:	Control Measure Description
reach groundwater must flow through soil that has buffering capacity prior to reaching groundwater, as necessary to meet the effluent limits in this permit, including Part I.B.3.a. The concrete washout location shall be not be located in an area where shallow groundwater may be present and would result in buffering capacity not being adequate, such as near natural drainages, springs, or wetlands. This permit authorizes discharges to the ground of concrete washout waste	the potential to discharge offsite in stormwater. Concrete waste cannot be disposed onsite. While Concrete spills may accidentally be discharged onto the ground during construction, it must be cleaned up or contained by the end of the day, or prior to a storm event – whichever is first. Any materials must be cleaned up prior to rough grading or fine grading activities See CWA Detail in Control Measure Specification Tab.

4.4 Temporary Stabilization Requirements

Temporary stabilization must be implemented for earth disturbing activities on any portion of the site where ground disturbing construction activity has permanently ceased, or temporarily ceased for more than 14 calendar days. Temporary stabilization methods may include, but are not limited to, tarps, soil tackifier, and hydroseed. The permittee may exceed the 14-day schedule when either the function of the specific area of the site requires it to remain disturbed, or, physical characteristics of the terrain and climate prevent stabilization. The SWMP must document the constraints necessitating the alternative schedule, provide the alternate stabilization schedule, and identify all locations where the alternative schedule is applicable on the site map.

Other temporary stabilization measures include, but are not limited to, terracing, ripping/grooving (surface roughening), crimp mulching or other similar practice.

For sites that are conducting land development, it should be understood that a section of disturbed area will remain active until final grades are achieved, at which time final stabilization should be implemented. If final stabilization cannot be implemented within 14 days then temporary stabilization shall be implemented. If the site is to temporarily cease overall site activities for any reason other than the Winter Conditions Inspections Exclusion for 14 days or more then temporary stabilization efforts must be implemented, even if final grades have not been achieved.

5 SITE DESCRIPTION

5.1 Nature of Construction Activity

Raindance Construction LLC plans to develop land, install curb & gutter, pave roads, install permanent water quality facilities, and complete vertical construction of multi-family homes within the Raindance Eleventh Filing Subdivisions. Soil disturbing activities include clearing, grubbing, over-lot grading, utilities, road installation, foundation excavation and stockpiling, foundation backfill and compaction, home building activities and staging, until final stabilization (landscaping) is complete.

Construction Activity:

☐ Single Family Residential ☒ Multi-family residential

☒ Land Development ☒ Vertical Construction

☐ Commercial ☐ Industrial ☒ Road Construction ☒ Utility (Linear)

☐ Other _____

Is this an Emergency Related Project Yes ☐ No ☒

If yes, document the cause of the public emergency and information sustaining its occurrence.

5.2 Schedule and Sequence of Major Construction Activities and the Planned Implementation of Control Measures for Each Phase

Actual Start: 8/7/2020

Estimated Project Start Date: 07/2020 Estimated Project Completion Date: 11/2023

The following table describes the sequencing of the project as well as the planned control measures for each phase. Specific locations of control measures are shown on the Site Maps (Section 6). Potential Pollutants for the project are described in Section 3, and installation and maintenance specifications for each control measure are described in Section 4 and Control Measures Specifications Details section of the SWMP. Also it is always important to plan accordingly and minimize disturbed areas to the maximum extent practicable through proper planning.

Table 9. Land Development Sequencing

Phase - Construction Activity and Planned Control Measures	Anticipated Start Date	Anticipated End Date
Pre-Construction -Obtain permits -Pre-construction meeting or equivalent	Permit Issued: 07/29/2020 Precon: 08/10/2020 Est. Start Work: 08/11/2020	08/2020 Precon Actual: 08/7/2020 Actual Start: 8/7/2020

Phase - Construction Activity and Planned Control Measures	Anticipated Start Date	Anticipated End Date
Phase I - Mobilize Equipment, Install Initial Control Measures, Clearing & Grubbing - Install vehicle tracking control measures - Install perimeter sediment controls - Install inlet protections on existing storm inlets - Install temporary sediment basins and diversion ditches - Preserve topsoil unless infeasible.	08/2020 Actual: 8/7/2020	10/2020 Actual: 8/7/2020
Phase II – Over-lot Grading, Utilities, Infrastructure, Paving, Permanent Water Quality Facilities -Maintain perimeter sediment controls and throughout site -Maintain existing inlet protections -Implement stockpile management -Surface roughening -Dust control -Concrete washout area must be implemented prior to use of concrete -Rough cut street controls -Once new storm inlets are installed, install inlet protection -Street sweeping -Implement good housekeeping -Install back of curb controls after paving -Implement stabilization measures as appropriate.	09/2020 Actual Start: 8/10/2020	12/2021
Phase III - Vertical Construction (Refer to Table 10 below)	07/2021	07/2023
Phase IV - Final Stabilization -Provide final stabilization of tracts, common areas, or for finished developed lots not immediately transitioning to vertical construction in Table 10. Stabilize with seed, mulch, sod, rock or paving per landscaping plan.	06/2022	08/2023
Post-Construction -Once all areas have been stabilized remove any remaining sediment control devices and permanently stabilize those areas disturbed by this process. -File Notice of Termination with CDPHE.	08/2023	11/2023

Table 10. Vertical Construction Sequencing

Construction Activity	Anticipated Start Date	Anticipated End Date
Phase I - Lot Start, Install Initial Control Measures (Based on lot sales), Excavation, Foundation Installation and Backfill -Maintain or install back of curb controls. When applicable install rear and side lot controls, multi-lot construction may share same block controls. -Install or maintain inlet protections. -Install dumpsters and portable sanitary facilities. -Implement vehicle tracking control measures, -Locate and protect stockpiles as needed. -Install or maintain concrete washout area for project. -Maintain perimeter controls and inlet protections. -Street sweeping, -Implement good housekeeping, maintain dumpsters and portable sanitary	07/2021	07/2022

Construction Activity	Anticipated Start Date	Anticipated End Date
facilities.		
Phase II - Frame, Roof, Exterior Siding and Masonry, Interior Finishes -Maintain lot or block sediment controls as appropriate -Maintain inlet protections -Implement materials handling control measures -Use secondary containment for mixing operations. Berms to be used for masonry mixing operations. Tarps, trays, "kiddie pools", or equivalent to be used when mixing liquids (ex: drywall, paint, stains, etc.) -Upon completion of home/unit construction fine grade lots -Street sweeping -Implement good housekeeping, maintain dumpsters and portable sanitary facilities.	03/2022	06/2023
Phase III - Final Stabilization (Residential) -Per sale agreement with homeowner, stabilize front yard only with sod and/or landscaping -Remove front perimeter controls, dumpsters, and portable sanitary facilities -Once construction activities on the residential lot is complete and lot sold to the homeowner and the other provisions of Part I.A.j of the Permit are met, permit coverage for the lot may be terminated -Refer to Table 9 Phase IV.	06/2022	08/2023

5.3 Estimate of Total and Disturbed Acreage

The total area of the project site is ~12.0 acres.

Total area of the project disturbance from construction activities is ~12.0 acres.

Reference the most recent site inspection report for approximate current acreage disturbed.

5.4 Soils and Potential for Soil Erosion

NCRS soils data was obtained for the site. The existing soils onsite are Colby loam, 3 to 5 percent slopes and Weld loam, 1 to 3 percent slopes.

Table 11. Soil Attributes for this Project

Map symbol and soil name	Pct of AOI	Hydrologic group	Kf	T factor	% Sand	% Silt	% Clay	WEG Rating
16 – Colby loam, 3 to 5 percent slopes	60.8	-	-	-	-	-	-	6
Colby	-	B	.43	5	36.9	42.1	21.0	-
79 – Weld loam, 1 to 3 percent slopes	39.2	-	-	-	-	-	-	6
Weld	-	C	43	5	39.8	37.7	22.5	-

Group A and B soils are well to moderately-well drained soils. An erosion factor (Kf) of 0.2 represents a moderately-low susceptibility to sheet and rill erosion.

For a detailed explanation of the erosive properties of these soils see the full NCRS report in the soils tab.

5.5 Existing Vegetative Ground Cover

Typical vegetation at this site consist of grasses, weeds, and various shrubs. Existing vegetation density at the site was visually determined during a pre-construction site visit performed on 8/10/2020. Pre-existing vegetation density is estimated to be approximately 70%.

5.6 Allowable Non-Stormwater Discharges

The following non-stormwater discharges are allowable under the Permit if the discharges are identified in the SWMP in accordance with Part I.C. and if they have appropriate control measures in accordance with Part I.B.1.

Table 12. Allowable Non-Stormwater Discharges

Allowable Non-Stormwater Discharge	Control Measures
i. Discharges from uncontaminated springs that do not originate from an area of land disturbance.	There are no known spring waters on the site.
ii. Discharges to the ground of concrete washout water associated with the washing of concrete tools and concrete mixer chutes. Discharges of concrete washout water must not leave the site as surface runoff or reach receiving waters as defined by this permit.	A concrete wash-out area will be utilized to capture waste water and waste products resulting from the cleaning of concrete and masonry equipment. See Section 4, Table 8 for further details.
iii. Discharges of landscape irrigation return flow.	Down gradient controls will be installed prior to the installation and testing of irrigation lines. These controls include sediment controls. The builder does not have control of private homeowners' irrigation systems once the homes are transferred to them.

Note: Discharges resulting from emergency firefighting activities are authorized by the Permit.

5.7 Discharges Under Low Risk Discharge Guidance Policy or Other Regulation

There is the potential of other sources of non-stormwater at the site that are not classified as allowable non-stormwater discharges under the Permit but may be managed and conditionally discharged to land in accordance with the CDPHE Water Quality Policy (WQP)-27 Low Risk Discharges or other appropriate regulations.

Table 13. Non-Stormwater Under CDPHE Low-Risk Policy or Other Regulation

Non-Stormwater Source	WQP Policy or Regulation	Control Measures
Fire hydrant flushing	CDPHE Low Risk Discharge Guidance –	Flushing is the responsibility of the local municipality. It is important that the local municipality leave in place

Non-Stormwater Source	WQP Policy or Regulation	Control Measures
	Discharges of Potable Water	down gradient BMPs prior to flushing. Refer to CDPHE low risk guidance for further details. Please note the permittee does not have control over the local municipality or permitting authority.
Waters used to wash vehicles or wash down buildings where detergents are not used	CDPHE Low Risk Discharge Guidance - Discharges from Surface Cosmetic Power Washing Operations to Land.	Vehicle washing will not be allowed on site however the builder does not have control of private homeowners once the homes are transferred to them. If the water will come in contact of any other pollutants other than soil, then the activities are to cease immediately until those other pollutants have been removed. Refer to CDPHE low risk guidance for further details.
Water used to flush waterlines	CDPHE Low Risk Discharge Guidance – Discharges of Potable Water	Waterlines may be flushed as part of installation. The discharge of potable water from a potable water distribution system must meet the conditions set forth in the low risk guidance. Refer to CDPHE low risk guidance for further details.
Groundwater dewatering to land and discharges from foundation drains	CDPHE Low Risk Discharge Guidance – Discharges of Uncontaminated Groundwater to Land	The CDPHE Low Risk Discharge Guidance allows groundwater to be discharged to the ground provided that: -The source is groundwater and/or groundwater combined with stormwater that does not contain pollutants in excess of State groundwater standards in Regulations 5 CCR 1002-41 and 42. -The water infiltrates into the soil without leaving the site as surface water or to surface waters. -The source and associated Control Measures are identified in the SWMP, and Control Measures are implemented in accordance with the SWMP such as secondary containment on generators for pumps. -Refer to CDPHE low risk guidance for further details. Residential foundation drain discharges will be allowed to infiltrate into the ground. The builder does not have control of private homeowners' foundation drains once the homes are transferred to them. Note: Dewatering of stormwater-only that ponds in excavations or depressions etc. falls under the stormwater general permit.
Air conditioning condensate	Uncontaminated Non-Potable Water – Discharge to Sanitary	Air conditioning condensate will be discharged into a floor drain in the basement of the completed homes that is connected to sanitary sewer system.

Non-Stormwater Source	WQP Policy or Regulation	Control Measures
Water used to moisture condition soil	CDPHE Low Risk Discharge Guidance – Discharges of Potable Water	Water will be discharged to ground within existing perimeter controls of the project site and will not be applied at a rate to cause erosion or to discharge off-site.

5.8 Receiving Waters

Does site discharge to Municipal Separate Storm Sewer System?: Yes ☒ No ☐

If yes, the MS4 name and permit number: Town of Winsor COR090112

Immediate Receiving Waters

Name: Unnamed drainage

Proximity to site: approximately 0.3 miles east of the project area

Ultimate Receiving Waters

Name: Cache La Poudre River and South Platte River

Proximity to site: approximately 2.4 miles northeast and 17.4 miles east of the project area, respectively.

Is the immediate receiving water a designated Outstanding Water? Yes ☐ No ☒

If yes, see inspection frequency Section 9.

Is the immediate receiving water (excluding MS4) within the project area? Yes ☐ No ☒

If yes, maintain pre-existing vegetation or equivalent control measures for areas within 50 horizontal feet of receiving water, unless infeasible. See Section 4.

Are the immediate receiving waters on the 303 (d) list of impaired waters: Yes ☐ No ☒

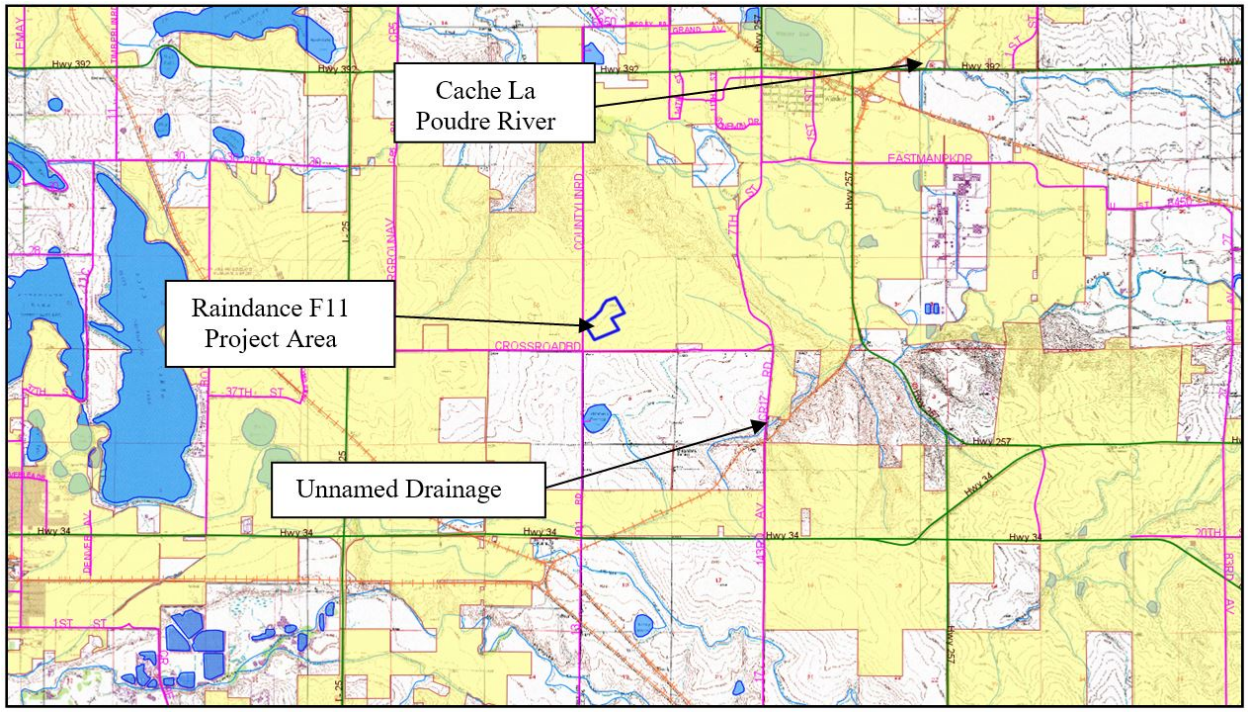
Impaired Receiving Waters

Name: N/A

Cause of impairment: N/A

Are the immediate receiving waters subject to TMDLs: Yes ☐ No ☒

Figure 2. Map showing locations of Raindance Eleventh Filing receiving waters.



5.9 Stream Crossings

Are any temporary stream crossings associated with this project? Yes ☐ No ☒

If yes, provide description of all temporary stream crossing(s) located within the construction site and locate on site map:

5.10 Federally Endangered and Threatened Species

Are federally listed endangered or threatened species and critical habitats within the project area?

Yes ☐ No ☒

If yes, describe the species and/or critical habitat. (Additional certifications may be necessary and eligibility criterion established.)

Please refer to the attached USFWS IPaC report that may list species, critical habitat, migratory birds or other natural resources that may potentially be in the project area. Please note the above and IPaC report provides general information only obtained from on-line resources from the USFWS and does not constitute a site-specific biological assessment or specific clearance from the USFWS.

5.11 Historical Locations

There are no historical properties within the construction boundaries of the project. See the Historical Buildings Section of this SWMP for all historical sites located in the Town of Windsor, Colorado.

6 SITE MAP

The Site Map is a living document that needs to be routinely updated to reflect site conditions specifically as they are in the field. All potential pollutant sources as well as all pertinent control measures (structural and non-structural) need to be marked on the map using the symbols found in the control measures legend.

6.1 Site Map Contents

The SWMP must include a site map which includes, at a minimum, the following:

(a) construction site boundaries;
(b) flow arrows that depict stormwater flow directions on-site and runoff direction;
(c) areas of ground disturbance including areas of borrow and fill;
(d) areas used for storage of soil;
(e) locations of all waste accumulation areas, including areas for liquid, concrete, masonry, and asphalt;
(f) locations of dedicated asphalt, concrete batch plants and masonry mixing stations;
(g) locations of all structural control measures;
(h) locations of all non-structural control measures;
(i) locations of springs, streams, wetlands and other state waters, including areas that require pre-existing vegetation be maintained within 50 feet of a receiving water, where determined feasible in accordance with Part I.B.1.a.i.(d).; and
(j) locations of all stream crossings located within the construction site boundary.

Reference the proposed vs existing contours on the grading plans in the Civil Drawings tab

See Site maps tab attached to SWMP.

7 FINAL STABILIZATION REQUIREMENTS & LONG-TERM STORMWATER MANAGEMENT

7.1 Final Stabilization Requirements

Final stabilization is reached when all ground surface disturbing activities at the construction site are complete; and, for all areas of ground surface disturbing activities, either a uniform vegetative cover with an individual plant density of at least 70 percent of pre-disturbance levels is established, or equivalent permanent alternative stabilization methods are implemented. Final stabilization must be designed and installed as a permanent feature. Reference the site specific landscaping plans in the Civil Drawings tab

For Raindance Eleventh Filing, Raindance Construction LLC anticipates to sod, landscape, or hardscape the areas of tracts and ponds after final grade and land development is complete.

For the residential lots, Raindance Construction LLC anticipates to convey each residential lot to homeowners with front landscaping only. Raindance Construction LLC will leave front and/or rear lot perimeter controls in place as appropriate upon transfer of the lot to the homeowner. It will be up to the individual homeowner to maintain those sediment controls until all landscaping has been installed in accordance with the local HOA if such rules apply. Once construction activities on the residential lot is complete and the lot sold to the homeowner and all the other provisions of Part I.A.j of the Permit are met, permit coverage for the lot may be terminated.

It is not anticipated that Raindance Construction LLC will disturb areas outside the permitted areas however should such a disturbance occur seed and temporary erosion controls may need to be installed until final stabilization is achieved.

Refer to the details for seed mix and application rates. Refer to the Site Map for locations vegetated and non-vegetated final stabilization locations.

The permittee(s) must ensure all temporary control measures are removed from the construction site once final stabilization is achieved, except when the control measure specifications allow the control measure to be left in place (i.e., bio-degradable control measures).

7.2 Long-Term Water Quality Management

Long-term stormwater management for the project will utilize regional down gradient stormwater quality facilities installed during the greater common Raindance subdivision development in order to address permanent water quality and flood attenuation.

8 SWMP REVIEW AND REVISIONS, AVAILABILITY, AND RETENTION OF RECORDS

8.1 SWMP Review and Revisions

Permittees must keep a record of SWMP changes made that includes the date and identification of the changes. The SWMP must be amended when the following occurs:

- a change in design, construction, operation, or maintenance of the site requiring implementation of new or revised control measures;
- the SWMP proves ineffective in controlling pollutants in stormwater runoff in compliance with the permit conditions;
- control measures identified in the SWMP are no longer necessary and are removed; and
- corrective actions are taken onsite that result in a change to the SWMP.

For SWMP revisions made prior to or following a change(s) onsite, including revisions to sections addressing site conditions and control measures, a notation must be included in the SWMP that identifies the date of the site change, the control measure removed, or modified, the location(s) of those control measures, and any changes to the control measure(s). The permittee must ensure the site changes are reflected in the SWMP. The permittee is noncompliant with the permit until the SWMP revisions have been made.

8.2 SWMP Availability

A copy of the SWMP must be provided upon request to the division, EPA, and any local agency with authority for approving sediment and erosion plans, grading plans or stormwater management plans within the time frame specified in the request. If the SWMP is required to be submitted to any of these entities, the submission must include a signed certification in accordance with Part I.A.3.e., certifying that the SWMP is complete and compliant with all terms and conditions of the permit.

All SWMPs required under this permit are considered reports that must be available to the public under Section 308(b) of the CWA and Section 61.5(4) of the CDPS regulations. The permittee must make plans available to members of the public upon request. However, the permittee may claim any portion of a SWMP as confidential in accordance with 40 CFR Part 2.

As of 8/24/2020 this SWMP will be managed and made available digitally

9 INSPECTION FREQUENCY AND SCOPE

9.1 Inspection Frequency

Site inspections shall start within 7 calendar days of the commencement of construction activities on site. Permittees must conduct site inspections in accordance with one of the following minimum frequencies, unless the site meets the requirements of Part I.D.3

- At least one inspection every 7 calendar days. Or
- At least one inspection every 14 calendar days, if post-storm event inspections are conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosion. Post-storm inspections may be used to fulfill the 14-day routine inspection requirement. Or
- Reduced inspection frequency reference 9.3

Inspection frequency for this project is?

7-day ☒ ~~14 day and post-storm ☒~~ Once every 30 days* ☐

*Reduced inspection frequency must meet conditions of Part I.D.4. of permit and described in Section 9.3 below.

9.2 Inspection Frequency for Discharges to Outstanding Waters

Permittees must conduct site inspections at least once every 7 calendar days for sites that discharge to a water body designated as an Outstanding Water by the Water Quality Control Commission.

Does the site discharge to Outstanding Waters? Yes ☐ No ☒

9.3 Reduced Inspection Frequency

The permittee may perform site inspections at the following reduced frequencies when one of the following conditions exists:

Post-Storm Inspections at Temporarily Idle Sites

For permittees choosing to combine 14-day inspections and post-storm-event- inspections, if no construction activities will occur following a storm event, post-storm event inspections must be conducted prior to re-commencing construction activities, but no later than 72 hours following the storm event. The delay of any post-storm event inspection must be documented in the inspection record. Routine inspections must still be conducted at least every 14 calendar days.

Inspections at Completed Sites/Areas

When the site, or portions of a site are awaiting establishment of a vegetative ground cover and final stabilization, the permittee must conduct a thorough inspection of the stormwater management system at least once every 30 days. Post-storm event inspections are not required under this schedule. This reduced inspection schedule is allowed if all of the following criteria are met:

i. all construction activities resulting in ground disturbance are complete;
ii. all activities required for final stabilization, in accordance with the SWMP, have been completed, with the exception of the application of seed that has not occurred due to seasonal conditions or the necessity for additional seed application to augment previous efforts; and
iii. the SWMP has been amended to locate those areas to be inspected in accordance with the reduced schedule allowed for in this paragraph.

Winter Conditions Inspections Exclusion

Inspections are not required for sites that meet all of the following conditions: construction activities are temporarily halted, snow cover exists over the entire site for an extended period, and melting conditions posing a risk of surface erosion do not exist. This inspection exception is applicable only during the period where melting conditions do not exist, and applies to the routine 7-day, 14-day and monthly inspections, as well as the post-storm-event inspections. When this inspection exclusion is implemented, the following information must be documented in accordance with the requirements in Part II:

i. dates when snow cover existed;
ii. date when construction activities ceased; and
iii. date melting conditions began.

9.4 Inspection Scope

Areas to be Inspected

When conducting a site inspection, the following areas, if applicable, must be inspected for evidence of, or the potential for, pollutants leaving the construction site boundaries, entering the stormwater drainage system, or discharging to state waters:

i. construction site perimeter;
ii. all disturbed areas;
iii. designated haul routes;
iv. material and waste storage areas exposed to precipitation;
v. locations where stormwater has the potential to discharge offsite; and
vi. locations where vehicles exit the site.

Inspection Requirements

i. Visually verify whether all implemented control measures are in effective operational condition and are working as designed in their specifications to minimize pollutant discharges.
ii. Determine if there are new potential sources of pollutants.
iii. Assess the adequacy of control measures at the site to identify areas requiring new or modified control measures to minimize pollutant discharges.
iv. Identify all areas of non–compliance with the permit requirements and, if necessary, implement corrective action in accordance with Part IB.1.c.

If corrective actions are not completed immediately, a schedule will be provided and a reason for the delay will be documented.

Inspection Reports

The permittee must keep a record of all inspections conducted for each permitted site. Inspection reports must identify any incidents of noncompliance with the terms and conditions of this permit. Inspection records must be retained in accordance with Part II.O. and signed in accordance with Part I.A.3.f. At a minimum, the inspection report must include:

i. the inspection date;
ii. name(s) and title(s) of personnel conducting the inspection;
iii. weather conditions at the time of inspection;
iv. phase of construction at the time of inspection;
v. estimated acreage of disturbance at the time of inspection
vi. location(s) of discharges of sediment or other pollutants from the site;
vii. location(s) of control measures needing maintenance;
viii. location(s) and identification of inadequate control measures;
ix. location(s) and identification of additional control measures are needed that were not in place at the time of inspection;
x. description of the minimum inspection frequency (either in accordance with Part I.D.2., I.D.3. or I.D.4.) utilized when conducting each inspection.
xi. deviations from the minimum inspection schedule as required in Part I.D.2.;
xii. after adequate corrective action(s) and maintenance have been taken, or where a report does not identify any incidents requiring corrective action or maintenance, the report shall contain a statement as required in Part I.A.3.f.

Inspection Records are maintained in the Records tab of the SWMP.

9.5 Retention of Records

Post-Expiration or Termination Retention

Copies of documentation required by this permit, including records of all data used to complete the application for permit coverage to be covered by this permit, must be retained for at least three years from the date that permit coverage expires or is terminated. This period may be extended by request of EPA at any time.

On-site Retention

The permittee must retain an electronic version or hardcopy of the SWMP at the construction site from the date of the initiation of construction activities to the date of expiration or inactivation of permit coverage; unless another location, specified by the permittee, is approved by the division.

10 LOCAL MUNCIPALITY REQUIREMENTS

Insert additional local municipality information as needed.

11 SWMP PREPARER STATEMENT

This is to certify that this plan was prepared in accordance with the Clean Water Act. This document was also prepared in accordance with the Colorado Health and Environment General Permit No. COR-400000. This plan was prepared in accordance with good engineering, hydrologic and pollution control practices.

Signature: _____ Date: 8-24-2020

Name: Chase Cabalka

Title: Plan Preparer

Company CMS Environmental Solutions, LLC

12 LIMITATIONS

This SWMP was prepared in accordance with applicable stormwater regulations. This document represents a planning tool to assist the client to comply with all applicable stormwater regulations during the construction of the project.

It is the clients' sole responsibility on how to operate the construction site and not CMS Environmental Solutions, LLC. Therefore, CMS Environmental Solutions, LLC is not liable for operational decisions made by the client and for the clients' failure to follow recommendations as outlined in this SWMP.

Client agrees to hold CMS Environmental Solutions, LLC Harmless for any potential violations the client may receive for operational violations brought forth by any regulatory agency including all Federal, State and local agencies.

By accepting the SWMP the client agrees to this disclaimer and its conditions.