Three Rivers Solar Power, LLC
MEDEP Site Location of Development Application
Section 14. BASIC STANDARDS



14.0 BASIC STANDARDS

The Erosion Sedimentation, Inspection & Maintenance Plan (Exhibit 14-1) and the Stormwater Management Plan (Exhibit 12-1) were developed to establish an inspection and maintenance process to employ during construction of the project and is intended to meet the requirements set forth in Chapter 500, Section 4(B) of the Stormwater Management Rules.

Details regarding soil types can be found in the Soils Report (Exhibit 11-1), as well as the Stormwater Management Plan (Exhibit 12-1). There are no erosion problems currently existing at the project site. Protected natural resources are identified in the Protected Natural Resources Report (Section 7). Critical areas and design drawings to support erosion control measures and site stabilization can be found in the Stormwater Management Plan (Exhibit 12-1). The Sedimentation & Erosion Control Plan (Exhibit 14-1) include details to further support erosion control measures and site stabilization.

An implementation schedule can be found in the Design drawings of the Erosion and Sediment Control Plan in Section 14 (Exhibit 14-1). Details for temporary and permanent measures, design calculations, stabilization plan, and winter construction plan can be found in Stormwater, Section 12 (Exhibit 12-1).

Three Rivers Solar Power, LLC
MEDEP Site Location of Development Application
Section 14. BASIC STANDARDS



Exhibit 14-1

Three Rivers Solar Erosion and Sedimentation Control Inspection and Maintenance Plan



EROSION AND SEDIMENTATION CONTROL INSPECTION AND MAINTENANCE PLAN

Submitted by:

THREE RIVERS SOLAR POWER

TOWNSHIP 16 MD BPP HANCOCK COUNTY, MAINE

Prepared by:

Acheron Engineering Services

147 Main Street Newport, Maine 04953 (207) 368-5700

24466 Powell Road Brooksville, Florida 34602 (352) 796-6236

DATE:

OCTOBER, 2019

1.0 Introduction

The purpose of this plan is to establish an inspection and maintenance process to employ during construction of the project and is intended to meet the requirements set forth in Chapter 500, Section 4(B) of the Stormwater Management Rules. The following section includes:

- A description of the project.
- Responsible parties for implementing the plan.
- Inspection and maintenance procedures during construction.
- Inspection and maintenance procedures after construction.

This plan was prepared by or under the supervision of, Kirk Ball, P.E., Acheron Engineering Services, 147 Main Street Newport, Maine 04953.

2.0 Project Description

Three Rivers Solar proposes to develop a 100 megawatt utility scale solar facility located in Township 16MD, BPP, Hancock County, Maine (Project). The project parcel is approximately 1,115 acres in size.

The scope of work includes, but is not limited to:

- Stump and boulder removal.
- Stump grinding and or burning.
- Road regrading.
- Revegetation of gravel roads.
- Installation of solar panels with up to 100 megawatt capacity and associated support structures.
- Installation of 35 inverters.
- Installation of buried collector lines.
- Construction of a 115kV substation.

The stormwater management BMPs include forested and meadow buffers. Please see that attached plan for specific locations of the BMPs.

3.0 Responsible Parties

During construction Elliott Jordan & Son will be responsible to ensure that the inspections are performed as described in the following sections. Following construction, the Three Rivers Solar's Environmental Manager will be responsible for overseeing or conducting the inspections and record keeping as described in Section 5. Recertification requirement, within three months of the expiration of each five-year interval from the date of issuance of the permit, the permittee shall certify the following to the Department:

- 1. All areas of the project site have been inspected for areas of erosion, and appropriate steps have been taken to permanently stabilize these areas.
- 2. All aspects of the stormwater control system are operating as approved, have been inspected for damage, wear, and malfunction, and appropriate steps have been taken to repair or replace the system, or portions of the system, as necessary.
- 3. The stormwater maintenance plan for the site is being implemented as approved by the Department, and the maintenance log is being maintained.

Contact Information:

Three Rivers Solar Power, LLC 89 Main Street Yarmouth, ME 04096 Tel. 857-315-5292

General Contractor:

Elliott Jordan & Son 456 Cave Hill Rd, Waltham, ME 04605 Tel. 207-584-5403

4.0 Inspection and Maintenance During Construction

This plan applies to all temporary and permanent erosion control features/structures. During construction, all stormwater features and erosion control structures that remain in place shall be inspected weekly, or after each rainstorm producing 1" or greater rainfall, whichever is more frequent. All inspections shall be conducted/performed by an individual with knowledge of erosion and stormwater control practices and the conditions of the stormwater management permit issued by the Maine Department of Environmental Protection. All erosion and sedimentation controls structures shall be inspected and maintained for, but not limited to, the following:

A. Sediment Barriers

- 1. Inspect weekly, before and after a storm.
- 2. Verify that barriers are installed prior to any soil disturbance.
- 3. Verify if silt fence is keyed properly and tight.
- 4. Repair and/or replace barriers as needed.
- 5. Verify barriers are removed when the site is stabilized. Silt fence should be cut at the ground surface.
- 6. Water that is flowing under the silt-fence without treatment requires resetting the silt fence so the bottom of the fabric is buried into or covered with soil or stone.
- 7. Sediments that have built up behind silt fence should be removed and the section of the silt fence reset (with new fabric and posts if signs of damage are evident).

8. Rips or holes in fabric require replacement of the section of silt fence with new fabric from post to post. Examine area for cause of problem and remove the threat.

B. Temporary Stabilization

- 1. Inspect disturbed areas weekly, before and after a storm.
- 2. Verify that areas that are idle for more than 14 days have been stabilized.
- 3. Verify that disturbed areas within 100 feet of a natural resource are stabilized each day.

C. Mulch

- 1. Inspect disturbed areas weekly, before and after a storm.
- 2. Verify that areas are seeded and mulched within 7 days of obtaining final grade.
- 3. Verify that erosion control mix is 4-6 inches thick.
- 4. Verify that erosion control blankets or hay mulch are anchored.

D. Stormwater Channels

- 1. Inspect disturbed areas weekly, before and after a storm.
- 2. Verify that ditches and swales are clear of obstruction, accumulated sediments or debris.
- 3. Verify that ditch lining/bottoms are free of erosion.

E. Buffers

- 1. Inspect before and after a storm.
- 2. Verify that areas that buffer are free of erosion and concentrated flows.
- 3. Verify that area downgradient of level spreaders is stable.
- 4. Inspect and remove any sediment accumulation within the level spreaders.

F. Winter Construction (Nov 1st to April 15th)

- 1. Inspect erosion control measures daily.
 - i. Ensure final graded areas are mulched twice the normal rate and anchored.
 - ii. Ensure that newly constructed ditches are lined with riprap.

If any corrective correction actions are needed based on inspections, they shall be started by the end of the following work day and completed within seven days or prior to the next rain event. Document the corrective actions and maintain with inspection forms. Inspection forms and corrective action documents shall be maintained for three years after permanent stabilization is achieved.

(See Appendix B for Inspection and Maintenance Log)

5.0 Inspection and Maintenance After Construction

After construction is finished, inspections must take place once per quarter, or after each rainstorm producing at least 1 inch of rainfall, whichever is more frequent (Appendix A). Such inspections are necessary to ensure the structures are functioning properly and are necessary as part of the 5-year recertification process for long-term maintenance of stormwater systems. If any structures are not functioning properly, they shall be repaired or replaced. All inspections shall be conducted/performed by an individual with knowledge of erosion and stormwater control practices and the conditions of the stormwater management permit issued by the Maine Department of Environmental Protection. All control structures shall be inspected and maintained for, but not limited to, the following:

A. Ditches and Swales

- a. Inspect annually, in spring and late fall and after heavy rains.
- b. Sediment deposits shall be removed if the depth is greater than 3".
- c. If erosion has scoured the ditch inverts, they shall be repaired with new loam, seed, fertilizer, and protective mulch or mesh until a new catch of grass is established.
- d. Slumping of the banks which should be repaired, seeded, and protected with mulch until a new catch of grass is established.
- e. Water is flowing by or around check dams which shall be rebuilt or repaired with more stone.
- f. Remove any woody vegetation growing through riprap.
- g. Repair riprap where underlying filter fabric or gravel is showing or stone has been dislodged.

B. <u>Level Spreaders:</u>

- a. Inspect annually in fall and after heavy rains for sand accumulation and debris that may reduce level spreader capacity.
- b. Sediment build up within the level spreader should be removed when it has accumulated to approximately 25% of design volume or channel capacity. Dispose of sediments appropriately.
- c. Remove debris, such as leaf litter, branches, and tree growth, as needed from the spreader.
- d. Vegetated spreaders may require mowing.

Document the corrective actions and maintain with inspection forms. Inspection forms and corrective action documents shall be maintained for five years after permanent stabilization is achieved.

(See Appendix B for Inspection and Maintenance Log)

6.0 Housekeeping

A. Spill Prevention & Response

Controls must be used to prevent pollutants from construction and waste materials stored on site to enter stormwater, which includes storage practices to minimize exposure of the materials to stormwater. The site contractor or operator must develop, and implement as necessary, appropriate spill prevention, containment, and response planning measures.

NOTE: Any spill or release of toxic or hazardous substances must be reported to the Maine Department of Environmental Protection. For oil spills, call 1-800-482-0777 which is available 24 hours a day. For spills of toxic or hazardous material, call 1-800-452-4664 which is available 24 hours a day. For more information, visit the Department's website at: http://www.maine.gov/dep/spills/emergspillresp/

Clean-up assistance:

Clean Harbors Environmental: 207-772-2201

B. Groundwater protection

During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in areas of the site draining to an infiltration area. An "infiltration area" is any area of the site that by design or as a result of soils, topography and other relevant factors accumulates runoff that infiltrates into the soil. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials. Any project proposing infiltration of stormwater must provide adequate pre-treatment of stormwater prior to discharge of stormwater to the infiltration area, or provide for treatment within the infiltration area, in order to prevent the accumulation of fines, reduction in infiltration rate, and consequent flooding and destabilization. During dry months, all access roads should be wet down weekly or as needed.

C. Fugitive Sediment and Dust

Actions must be taken to ensure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil may not be used for dust control, but other water additives may be considered as needed. A stabilized construction entrance (SCE) should be included to minimize tracking of mud and sediment. If off-site tracking occurs, public roads should be swept immediately and no less than once a week and prior to significant storm events. Operations during dry months, that experience fugitive dust problems, should wet down unpaved access roads once a week or more frequently as needed with a water additive to suppress fugitive sediment and dust.

D. Debris and Other Materials

Minimize the exposure of construction debris, building and landscaping materials, trash, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials to precipitation and stormwater runoff. These materials must be prevented from becoming a pollutant source.

E. Excavation Dewatering

Excavation de-watering is the removal of water from trenches, foundations, coffer dams, ponds, and other areas within the construction area that retain water after excavation. In most cases the collected water is heavily silted and hinders correct and safe construction practices. The collected water removed from the ponded area, either through gravity or pumping, must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site. Equivalent measures may be taken if approved by the Maine Department of Environmental Protection.

F. <u>Authorized Non-stormwater Discharges</u>

Identify and prevent contamination by non-stormwater discharges. Where allowed non-stormwater discharges exist, they must be identified and steps should be taken to ensure the implementation of appropriate pollution prevention measures for the non-stormwater component(s) of the discharge. Authorized non-stormwater discharges are:

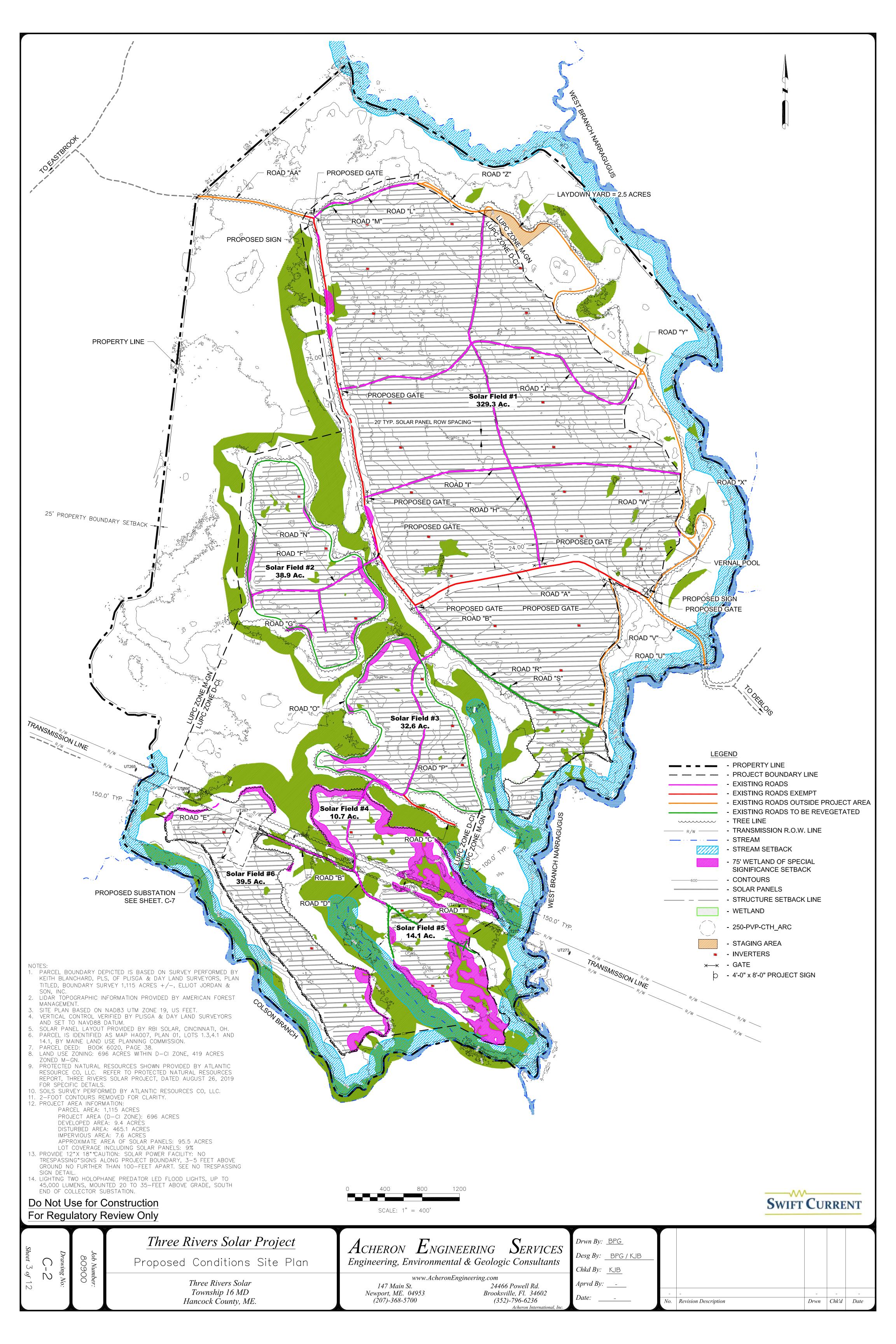
- 1. Discharges from firefighting activity;
- 2. Fire hydrant flushings;
- 3. Vehicle wash water if detergents are not used and washing is limited to the exterior of vehicles (engine, undercarriage and transmission washing is prohibited);
- 4. Dust control runoff in accordance with permit conditions;
- 5. Routine external building wash down, not including surface paint removal, that does not involve detergents;
- 6. Pavement wash water (where spills/leaks of toxic or hazardous materials have not occurred, unless all spilled material had been removed) if detergents are not used;
- 7. Uncontaminated air conditioning or compressor condensate;
- 8. Uncontaminated groundwater or spring water;
- 9. Foundation or footer drain-water where flows are not contaminated;
- 10. Uncontaminated excavation dewatering;
- 11. Potable water sources including waterline flushings; and
- 12. Landscape irrigation.

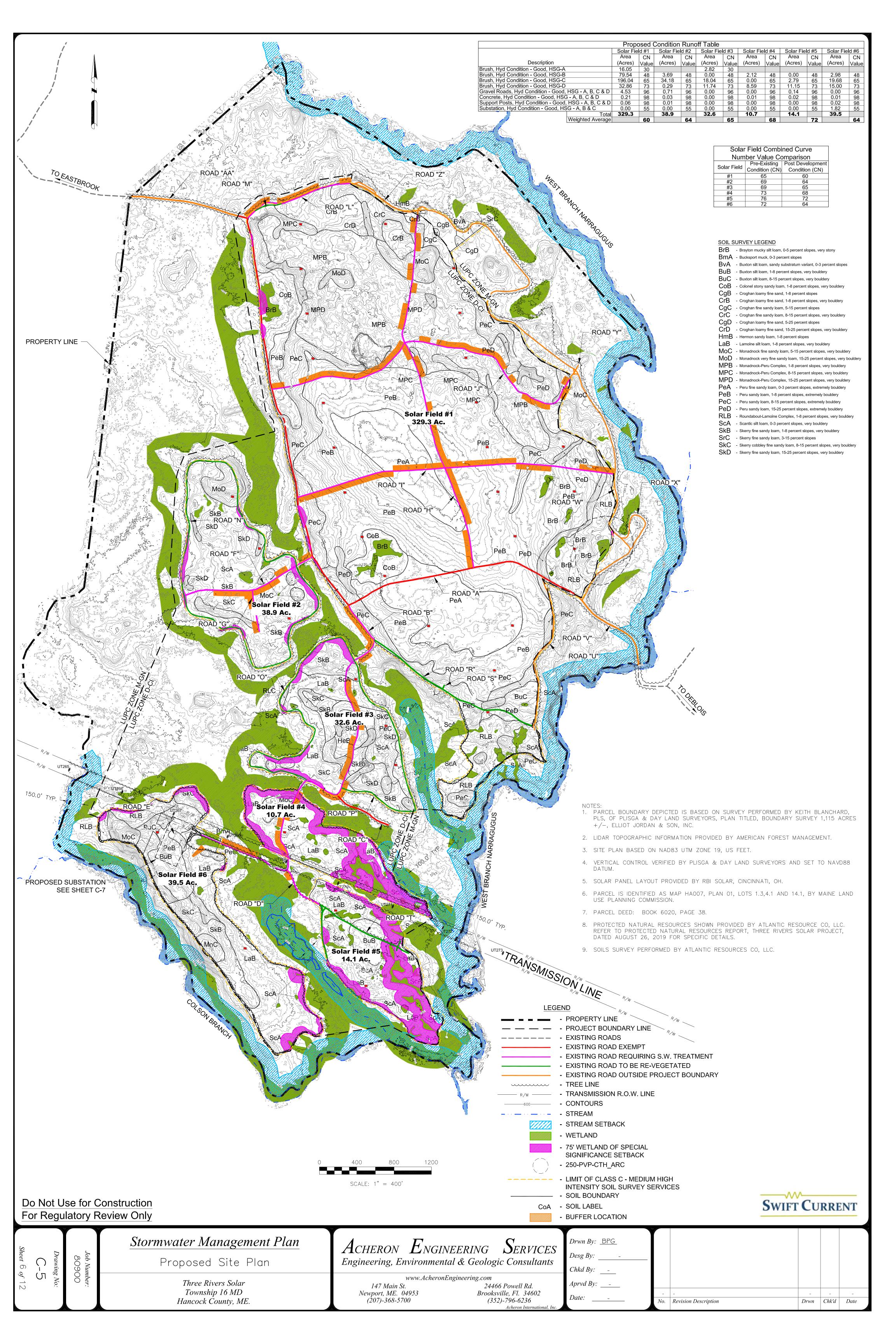
G. Unauthorized Non-stormwater Discharges

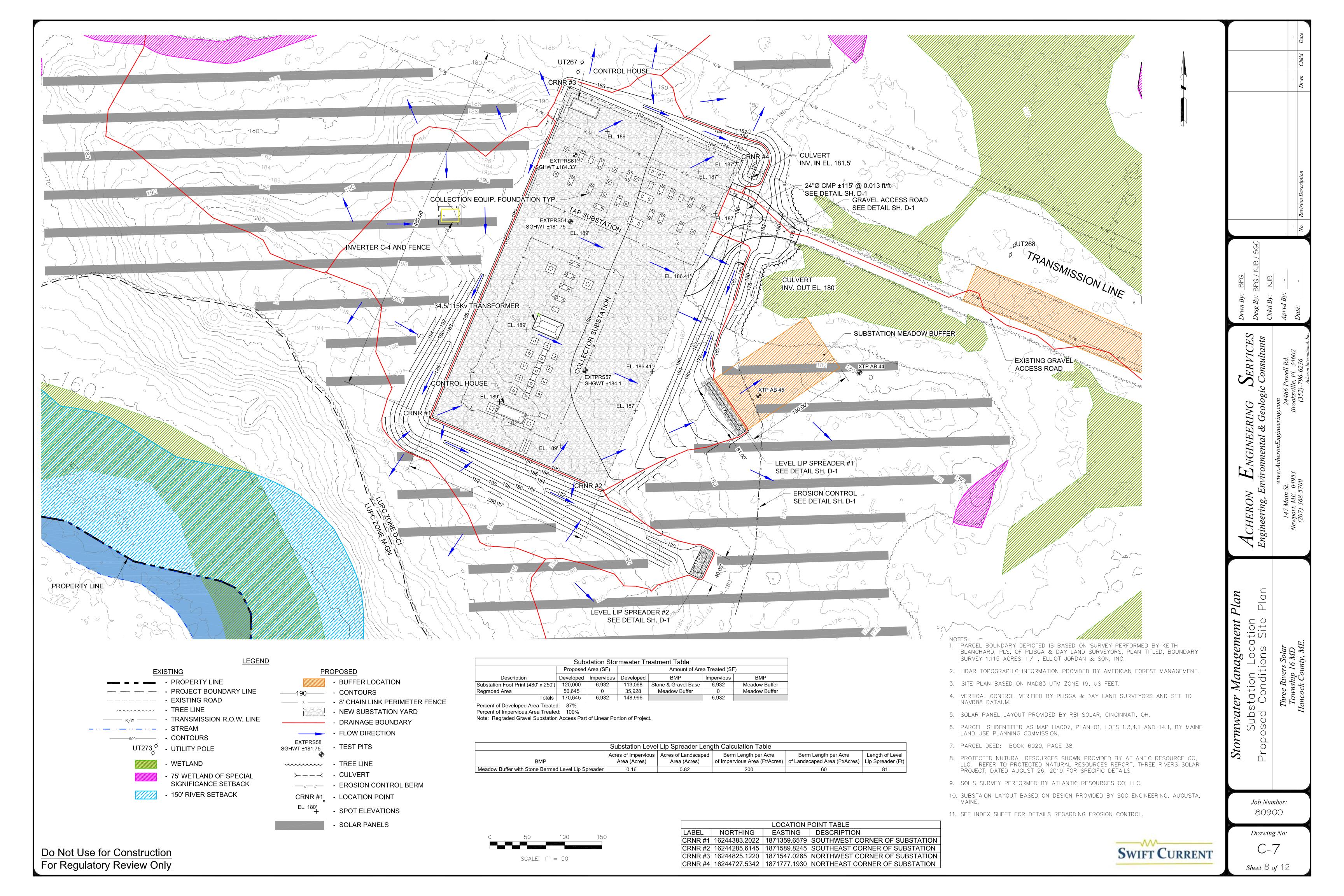
The Maine Department of Environmental Protections' approval does not authorize a discharge that is mixed with a source of non-stormwater, other than those discharges in compliance with Department regulations. Specifically, the Department's approval does not authorize discharges of the following:

- 1. Wastewater from the washout or cleanout of concrete, stucco, paint, form release oils, curing compounds or other construction materials;
- 2. Fuels, oils or other pollutants used in vehicle and equipment operation and maintenance;
- 3. Soaps, solvents, or detergents used in vehicle and equipment washing; and
- 4. Toxic or hazardous substances from a spill or other release.

APPENDIX A: PLAN







APPENDIX B: INSPECTION CHECK LISTS

THREE RIVERS SOLAR CONSTRUCTION INSPECTION FORM FOR EROSION AND SEDIMENT CONTROL							
General Information:							
Site Name:	Date:	Date: Inspect		ed by:			
Owner:				-			
Retained 3PI:	Last Rain Date:			Amount:			
Reason for Inspection:	Weekly				Rain Event Complaint		
	vveekiy	winter	ГШа	Rain Eveni	Complaint		
Description of disturbed area:							
Photos:							
	YES/NO/NA			COMMENTS			
1. Is an Erosion and Sediment Control Plan available	e?						
ESC plan on-site and followed							
Other:							
2 . Are all erosion control practices installed proper	rly, maintained and fu	nctioning?					
Disturbed areas stable							
Concentrated flow inlet/outlet protection							
All areas at final grade							
Disturbed dormant areas stabilized							
Access roads and parking							
Hillsides and stockpiles							
Other:							
3. Are all sedimentation control practices installed p	roperly, maintained a	nd functioning	?				
Construction entrance			-				
Sedimentation basins/traps/diversions							
Perimeter controls							
Check dams							
Other:							
4. Is maintenance of ESC measures, construction ac	tivities and housekee	ning kent-un?					
Sedimentation/erosion in ditches	TIVILIES UNA NOUSCREE	ping kept up:					
Tracked Sediment or dust at exits							
Hazardous material storage and spill							
control practices							
Waste management (concrete, hazardous material, etc.)							
Other:							
	•	•					
5. Violation, Corrective Actions, Recommendations Sediment discharged from site?							
Corrective action required?							
Site compliant with all permits?							
Notice of violation or stop work order							
issued?							
Comments/Corrective Actions (complete corrective action	ons before the next rain	event and with	n 7 day)				

Date:											
Date:											
Date:			POST CONSTRUCTION INSPECTION FORM FOR BUFFERS General Information:								
1		Inspected I	Inspected by:								
Last Rain Date:			Amount:								
Rain Monthly (Quarterly									
Event											
Yes/No	Comments										
		Rain Monthly Event	Rain Monthly Quarterly Event								