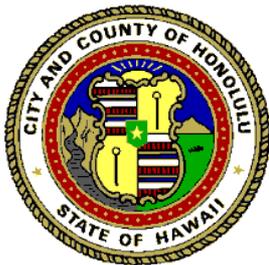


# Rules Relating to Water Quality for the Construction Community

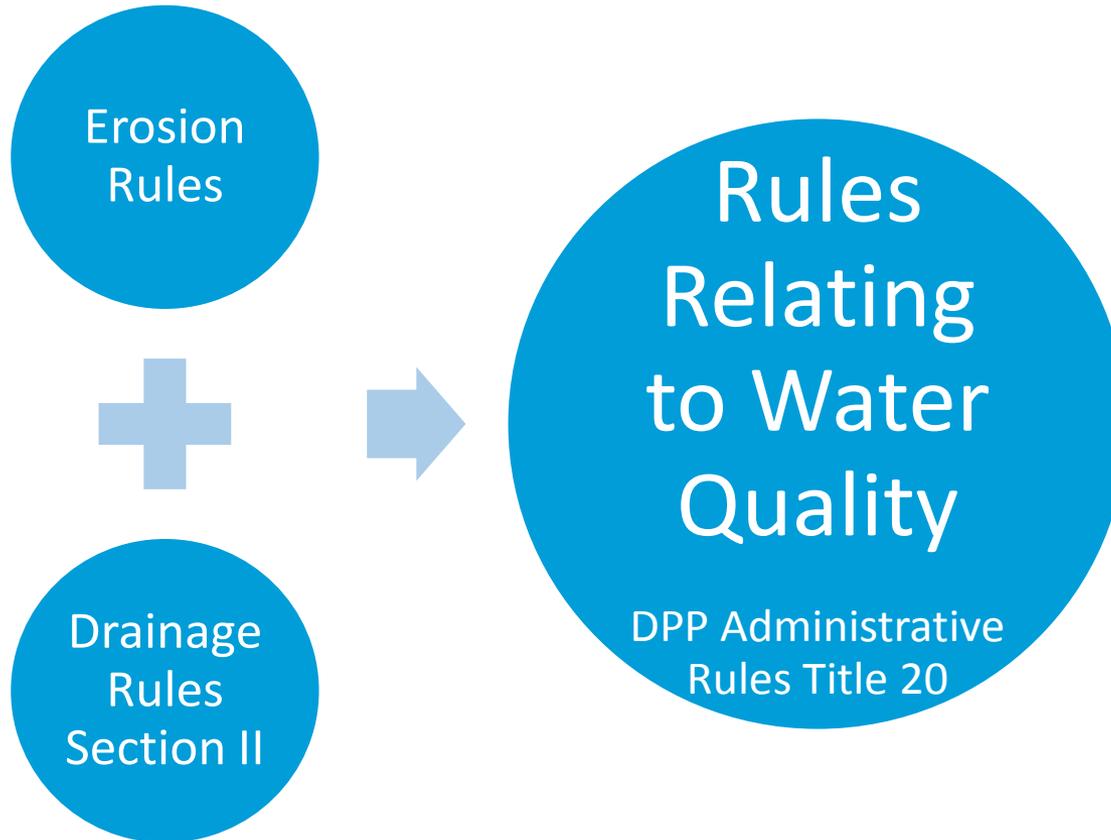
Department of Planning and Permitting



June 2017



# One DPP Rule for Water Quality



Flood control requirements will remain separate



# Definitions Revised (§20-3-3)

## Key Definitions:

- “Development”
- “Redevelopment”
- “ESCP Coordinator”
- “Certified Water Pollution Plan Preparer”
- “Disturbed Area”
- “Land Disturbing Activity”
- “Director”
- “Maximum Extent Practicable”



## Development

“Development” means the sum of any and all actions that are undertaken to alter the natural or existing condition of real property or improvements on real property if a building, electric, grading, grubbing, plumbing, stockpiling, or trenching permit is required for the Project. Development also includes Redevelopment and changes in land use that may result in different or increased Pollutant discharges to the MS4 or Receiving Waters. **Development does not include work that does not involve any Land Disturbing Activity, the installation of signs and traffic control devices, the construction of individual bus shelters, the installation of temporary BMPs, emergency work necessary to repair surfaces that are in immediate need of stabilization, the marking of improved surfaces with striping or signage, residential fence post installation, and minor and ordinary repairs to existing improvements, provided that the work will not increase the impervious surface area of the Project Site or involve replacing 50 percent or more of the on-Site impervious surfaces area.**



## Redevelopment

“Redevelopment” means the **creation, addition, and/or replacement** of impervious surface on improved real property. Redevelopment does not include trenching and resurfacing associated with utility work, resurfacing and reconfiguring existing impervious surfaces, the repair of sidewalks or pedestrian ramps, pothole repair, ordinary road maintenance, or the marking of vehicular or pedestrian lanes on existing roads.



## Erosion and Sediment Control Plan Coordinator

- “ESCP Coordinator” means the designee **responsible for the implementation of an ESCP who has a current ESCP coordinator certificate from the Department.** The designation of an ESCP Coordinator does not relieve the property owner or other responsible parties from compliance with these Rules or liability for violations of the same.
- Requires a training, test, and certification from DPP.
- No professional credentials required.
- Responsible for implementation of BMPs and inspections.



## Certified Water Pollution Plan Preparer

- “Certified Water Pollution Plan Preparer” means an **Architect, Engineer, Land Surveyor, or Landscape Architect licensed in the State of Hawaii** who has a current **Water Pollution Plan Preparer Certificate** from the Department.
- Requires a training, test, and certification from DPP.
- Required to prepare Storm Water Quality Report/Checklist.
- Required to certify that post-construction BMPs are installed properly.



## Disturbed Area

“Disturbed Area” means any and all portions of Project Site affected by Land Disturbing Activities. Disturbed Areas include, but are not limited to, soils and surface areas affected by excavation, areas that are graded, grubbed, or clearing by uprooting vegetation, areas affected by the demolition of foundations, **areas used for equipment staging, materials, or staging, and areas affected by heavy pedestrian or vehicular traffic that disrupts ground covers or surface soil conditions.**



## Land Disturbing Activity

“Land disturbing activity” or “land disturbance” means any action, activity, or land use that alters the integrity, structure, texture, density, permeability, contents, or stress conditions of soil or ground surfaces if a building, electric, grading, grubbing, plumbing, stockpiling, or trenching permit is required for the Project. Land disturbing activities include, but are not limited to actions that result in the turning, penetration, or moving of soil, the resurfacing of pavement that involves the **exposure of the base course or subsurface soils, and the use of portions of a Project Site as staging areas or base yards.**



## Director

“Director” means the director of the City and County of Honolulu Department of Planning and Permitting or the Director’s authorized agent or representative.



## Maximum Extent Practicable

“Maximum Extent Practicable” or "MEP" means economically **achievable measures** that prevent or reduce the addition of Pollutants to the environment to the greatest degree achievable through the application of the best available pollution control practices, technologies, processes, siting criteria, operating methods, and other alternatives.



# Variations (§20-3-64)

- For deviations from the Rules, applicants must submit a petition for variance to the Director and may be authorized if all of the following are true:
  - The variance is necessary to **prevent a hardship** caused by unique Site conditions on the property that are not ordinarily found in other areas within the City;
  - The **unique conditions** on the property are **not the result of petitioner's own actions** or the actions of his/her agents, contractors, consultants, or tenants;
  - Granting a variance **will not adversely affect the rights of abutting property owners**;
  - The variance requested **will not result in an unreasonable threat of Pollutant discharges** to the MS4 or State Waters; and
  - The variance requested is the **minimum accommodation needed** to overcome the hardship caused by naturally occurring conditions on the property.



# **EROSION AND SEDIMENT CONTROL PLAN REQUIREMENTS**

Plan Review and Implementation of BMPs before and during Construction



# Major Revisions from *1999 Rules Relating to Soil Erosion Standards*

- Revisions to Definitions and Project Categories
- Removed Soil Loss Calculations requirements
- No minimum BMP checklists
- Updated minimum BMPs
- Updated BMP standards
- ALL categories must submit Erosion and Sediment Control Plan (ESCP)
  - ESCP templates for small projects
- Applicants must designate an ESCP coordinator to implement the ESCP and perform inspections
- New requirements for Self-Inspection



# Project Categories (§20-3-14 and 17)

## Trenching Permits

### New Category

#### Trenching Permit

Development that requires a trenching permit but **does not** require a grading, grubbing, or stockpiling permit.

- ESCP shall be incorporated into trenching plan and notes (§20-3-17).

#### Minimum BMPs required:

- Project Scheduling;
- Storm Drain Inlet Protection for storm drains that may receive runoff from the Disturbed Area;
- Stockpile Management BMPs;
- Perimeter Controls;
- Dewatering Operations BMPs; and
- Good Housekeeping Practices for work area and staging areas.



# Project Categories (§20-3-14) Building Permits

**Category 1: Development that requires a building permit but does not require a grading, grubbing, or stockpiling permit.**

## **Category 1A**

Must meet ALL of the following criteria:

1. Residential single-family or two-family detached residential Development;
2. The total Disturbed Area for the Project is less than 1,000 square feet; and
3. Land Disturbing activities will not occur on slopes equal to or greater than 15 percent at the Site.

## **Category 1B**

Must meet ANY of the following criteria:

1. Commercial Development with less than one acre of Disturbed Area;
2. Residential single-family and two-family detached Development between 1,000 square feet and less than one acre of Disturbed Area; or
3. Residential single-family and two-family detached Development less than 1,000 square feet of Disturbed Area if work will be performed on slopes equal to or greater than 15 percent at the Site.

## **Category 1C**

Development that involves a Disturbed Area of one acre or more or requires a NPDES General/Individual Permit Authorizing Discharges of Storm Water Associated with Construction Activity, issued by the DOH.



# ESCP Requirements for SMALL PROJECTS

## Category 1A and 1B (§20-3-18 and 19)

- Submit Small Project ESCP Template (Appendix A or B)
  - Submit additional information if needed
- ESCP must include:
  - BMP Site Plan
    - Outline of buildings and structures
    - Clear delineation of disturbed areas
    - Proximate location of proposed BMPs and drainage structures
    - Receiving waters located within 50 feet of the project site
- Minimum BMPs, checklist format

Appendix A

 City and County of Honolulu

Erosion and Sediment Control Plan  
Category 1A Template

Construction Site Project Name: \_\_\_\_\_

Physical Site Address: \_\_\_\_\_

Erosion and Sediment Control Coordinator: \_\_\_\_\_ Phone Number: \_\_\_\_\_

Building Permit Number: \_\_\_\_\_

**Instructions:**

This completed template is to be used as the Erosion and Sediment Control Plan (ESCP) for projects which fall under the City and County of Honolulu, Department of Planning and Permitting (DPP) Category 1A: Single-family or Two-family detached residential building projects that disturb less than 1,000 square feet of land and where there will not be land disturbing activities on slopes greater than 15%.

This ESCP must be submitted as part of the Building Permit application and made available on the job site at all times. This ESCP may be prepared by the owner of the project or an authorized representative designated by the owner. Both individuals must certify this ESCP below.

Read through the instructions for each of the three (3) sections on the next pages: I. Erosion Prevention, II. Sediment Control, and III. Good Housekeeping. Any best management practices (BMP) boxes that are checked are mandatory during construction. For more information on each type of BMP, this template lists applicable fact sheet numbers from the City's Construction BMP Manual that may help you decide on which BMP type to use and how to use them. The manual is available on the DPP website ([www.honolulu.gov](http://www.honolulu.gov)). For any conflicting information between the Rules Relating to Water Quality and the Construction BMP Manual, the requirements of the Rules shall be followed. If other BMPs not listed are used to achieve the same or similar results, attach additional documentation.

I. EROSION PREVENTION: practices that prevent erosion from occurring		
BMP	Check Appropriate Box	Reference Factsheet
<b>1. Project Scheduling</b> Notify the DPP two (2) weeks prior to starting work. Attach a Project Schedule to this ESCP including dates when BMPs will be installed, when land disturbing activities will begin and end, and dates when BMPs will be removed.	<input type="checkbox"/> Applicable <input type="checkbox"/> Not Applicable	EC-3
<b>2. Permanent Stabilization</b> Prior to final approval and closing of the permit for work on the project site, permanent stabilization must be in place.	<input type="checkbox"/> Applicable <input type="checkbox"/> Not Applicable	N/A

II. SEDIMENT CONTROL: practices to prevent soil and sediment from leaving the project site and entering storm drains during rain events		
BMP	Check Appropriate Box	Reference Factsheet
<b>1. Perimeter Controls</b> Sediment fences or barriers shall be used at the perimeter of all disturbed areas if there is the potential for runoff to flow off the project site, and around the base of all material stockpiles. These may include gravel bags, sand bags, silt rolls, silt fences, or compost socks that intercept runoff.	<input type="checkbox"/> Applicable <input type="checkbox"/> Not Applicable	SE-1, SE-5, SE-6, SE-8, SE-16
<b>2. Storm Drain Inlet Protection</b> Inlet protection is required over storm drains within 50 feet of your project site unless those inlets drain to a sediment basin or trap.	<input type="checkbox"/> Applicable <input type="checkbox"/> Not Applicable	SE-10

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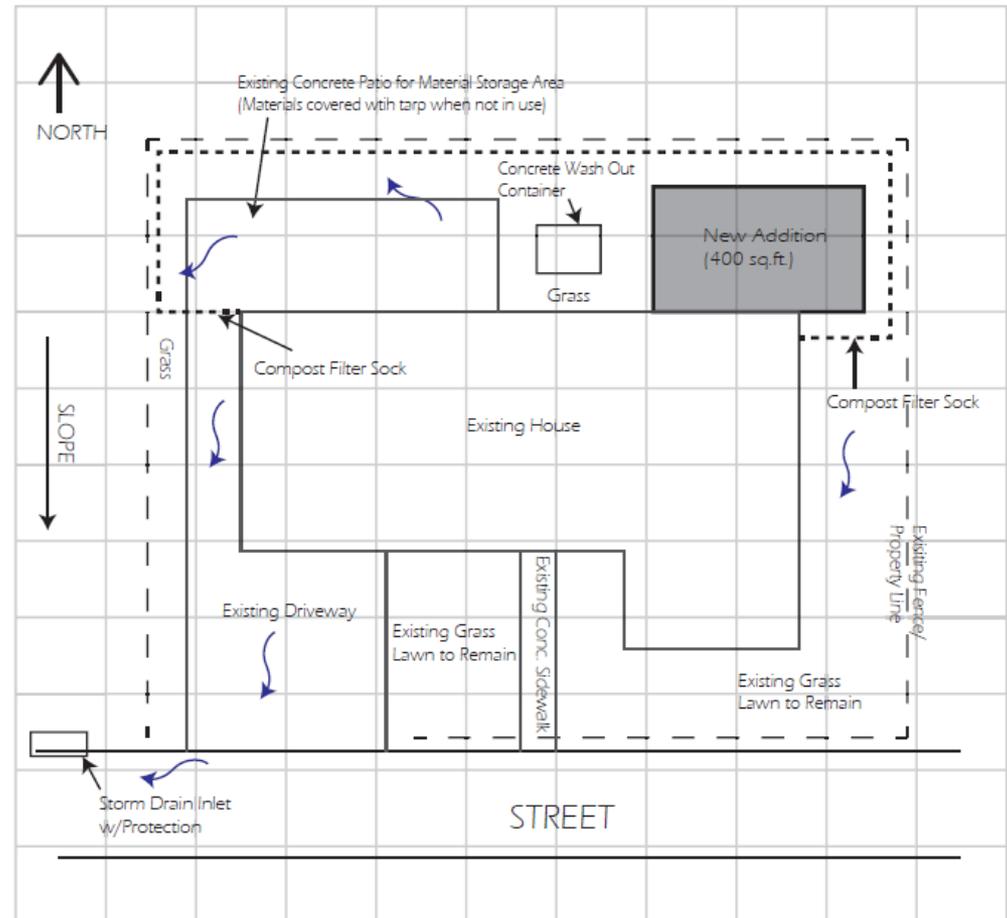


# Example of a small project ESCP plan

Small single family residence adding a new 400 sq-ft addition.

Include:

- Outline of buildings and structures
  - Existing home, fence line
  - New addition
- Flow paths
- Disturbed areas including staging areas
- BMPs
  - Compost filter sock
  - Concrete washout location
  - Material storage areas
  - Drain inlet protection
  - Existing grass to remain
- Drainages structures and receiving waters within 50 feet of project site



# Example of a small project ESCP plan

On the form:

## Check BMPs that are applicable:

- Scheduling
- Permanent Stabilization
- Perimeter Controls
- Drain Inlet Protection
- BMP and Site Maintenance
- Dust Control
- Material Delivery, Storage, and Control
- Spill Prevention and Control
- Solid Waste Management
- Hazardous Waste Management
- Concrete Waste Management
- Vehicle Tracking Control

## Not applicable:

- Stockpile management
- Contaminated Soil Management
- Sanitary/Septic Waste management
- Liquid Waste Management

## USE CCH Construction BMP manual factsheets as a reference

**III. GOOD HOUSEKEEPING:** practices prevent pollution by limiting or reducing potential pollutants at their source. This involves keeping a clean, orderly construction site and preventing tracking of soil off your project site by equipment.

BMP	Check Appropriate Box	Reference Factsheets
1. <b>BMP and Site Maintenance</b> Regularly inspect and maintain required erosion and sediment controls to ensure continued performance.	<input checked="" type="checkbox"/> Applicable <input type="checkbox"/> Not Applicable	N/A
2. <b>Dust Control</b> Use one of the following to control dust (please specify): a. Mulching to a depth of one inch or more; b. Sprinkling exposed soils with water to maintain moistness during working hours and not to generate any runoff; c. Other: (please specify)	<input type="checkbox"/> Applicable, following BMP will be used: <input type="checkbox"/> Mulch, or <input checked="" type="checkbox"/> Sprinkling exposed soils. <input type="checkbox"/> Other <input type="checkbox"/> Not Applicable	WE-1
3. <b>Material Delivery, Storage and Control</b> Minimize the storage of hazardous materials onsite, store materials in a designated area, and install secondary containment. Do not store materials in buffer areas, near areas of concentrated flow, or areas abutting the MS4, Receiving Waters, or drainage improvements that discharge off-site.	<input checked="" type="checkbox"/> Applicable <input type="checkbox"/> Not Applicable	WM-1
4. <b>Stockpile Management</b> Locate stockpiles away from drainage ways or other areas of concentrated flows. Use a barrier around stockpiles and cover if they will not be actively used within seven (7) days.	<input type="checkbox"/> Applicable <input checked="" type="checkbox"/> Not Applicable	WM-3
5. <b>Spill Prevention and Control</b> Keep ample supply of cleanup materials on project site. Clean up spills immediately, using dry clean-up methods where possible, and dispose of used materials properly.	<input checked="" type="checkbox"/> Applicable <input type="checkbox"/> Not Applicable	WM-4
6. <b>Solid Waste Management</b> Provide designated waste collection areas for solid waste or construction and demolition waste, collect trash daily, and dispose at authorized disposal areas.	<input checked="" type="checkbox"/> Applicable <input type="checkbox"/> Not Applicable	WM-5
7. <b>Hazardous Waste Management</b> Prevent or reduce the discharge of pollutants to storm water from hazardous waste through proper material use and waste disposal.	<input checked="" type="checkbox"/> Applicable <input type="checkbox"/> Not Applicable	WM-6
8. <b>Contaminated Soil Management</b> Contain contaminated material soil by surrounding with impermeable lined berms or cover exposed contaminated material with plastic sheets. Contaminated soil should be disposed of properly in accordance with all applicable regulations.	<input type="checkbox"/> Applicable <input checked="" type="checkbox"/> Not Applicable	WM-7
9. <b>Concrete Waste Management</b> Conduct washout offsite or performing onsite in a designated area, away from water bodies, channels, or storm drains. Construct and maintain washout to contain all liquid and concrete waste generated.	<input checked="" type="checkbox"/> Applicable <input type="checkbox"/> Not Applicable	WM-8
10. <b>Sanitary/ Septic Waste Management</b> Temporary and portable sanitary and septic waste systems shall be mounted or staked in, well-maintained and scheduled for regular waste disposal and servicing.	<input type="checkbox"/> Applicable <input checked="" type="checkbox"/> Not Applicable	WM-9
11. <b>Liquid Waste Management BMPs</b> Contain liquid wastes in a holding pit, sediment basin, roll-off bin, or portable tank of sufficient volume and to contain the liquid wastes generated.	<input type="checkbox"/> Applicable <input checked="" type="checkbox"/> Not Applicable	WM-10
12. <b>Vehicle Tracking Control</b> Restrict vehicle traffic to properly designated areas and using additional controls to remove sediment from vehicle tires prior to exiting the project site.	<input checked="" type="checkbox"/> Applicable <input type="checkbox"/> Not Applicable	TR-1, TR-2



# Project Categories (§20-3-14)

## Grading, Grubbing, and Stockpiling Permits

<b>Category 2</b>	Area of the zoning lot or portion thereof subject to the permit is less than 15,000 square feet for single-family or two-family dwelling uses and less than 7,500 square feet for other uses.
<b>Category 3</b>	Area of the zoning lot or portion thereof subject to the permit is 15,000 square feet or more for single-family or two-family dwelling uses, or 7,500 square feet or more for other uses, but where the total area graded or stockpiled upon is less than 15,000 square feet for single-family or two-family dwellings uses and less than 7,500 square feet for other uses.
<b>Category 4</b>	Total area including any areas developed incrementally that is to be graded, grubbed, or stockpiled upon is 15,000 square feet or more for single-family or two-family dwelling uses, or 7,500 square feet or more for other uses, or in the event a proposed cut or fill is greater than 15 feet in height for single-family or two-family dwelling uses, or 7.5 feet in height for other uses.
<b>Category 5</b>	Development that involves a Disturbed Area of one acre or more or requires a NPDES General/Individual Permit Authorizing Discharges of Storm Water Associated with Construction Activity, issued by the DOH.



# ESCP Requirements for Category 2 and 3 (§20-3-21 and 22)

- ESCP must include:
  - A BMP Site Plan, drawn to scale, which depicts:
    - Outline of buildings and structures,
    - Clear delineation of Disturbed Areas, and
    - Proximate location of proposed BMPs.
  - Construction notes with a narrative description of any BMPs that cannot be shown on a Site plan; and
  - A vicinity map showing any drainage structures and Receiving Waters located within 50 feet of the Project Site.



# ESCP Requirements For Category 1C, 4, and 5 (§20-3-20, 23, and 24)

- The ESCP must include:
  - A location map showing the name, coordinate, and RW classification.
  - A vicinity map showing the location of, within 100 ft of the project:
    - Streams, channels, and drainage structures.
  - The location of the 100-year flood plain.
  - Topo maps of the existing/finished contours.
  - Existing/final drainage patterns and discharge points.
  - Proposed structures, impervious areas, existing vegetation, final landscaping conditions, and appurtenant improvements.
  - Erosion Control construction notes include BMPs that cannot be shown on a Site Plan.
  - A BMP Site Plan, drawn to scale, showing:
    - Outline of buildings and structures,
    - Delineation of Disturbed Areas, and
    - Proximate location of proposed BMPs.
  - BMP design details and notes identifying:
    - Temporary and Permanent BMPs,
    - Schedule for BMP implementation, and
    - BMP maintenance activities.
  - A list or table of:
    - Preconstruction, during construction, and post-construction BMPs;
  - A statement in construction notes that the contractor/developer/ owner shall obtain written approval from DPP at each stage of Development before proceeding to the next step in Development described in the ESCP.



# ESCP Submittal Requirements for Plan Approval (Subchapter 4)

ESCP must be prepared by:	Project Category					
	1A	1B	2	3	4	1C+ 5
Licensed Civil Engineer				X	X	X
Owner or Agent	X	X	X			

- ESCPs must be submitted with the first set of plans.
- All ESCPs must indicate a ESCP Coordinator:
  - Name, phone number, mailing address, and email address of ESCP coordinator must be provided to DPP 2 weeks prior to commencing any work.



# Minimize Erosion Control BMPs (§20-3-18 through 24)

Minimum BMP	Project Category					
	1A	1B	2	3	4	1C + 5
Project Planning and Design	X	X	X	X	X	X
Project Scheduling	X	X	X	X	X	X
Slope Management and Protection		X	X	X	X	X
Temporary Stabilization		X	X	X	X	X
Permanent Stabilization	X	X	X	X	X	X
Velocity Dissipation Devices				X	X	X
Diversion BMPs					X	X
Preserve Existing Vegetation						X
Minimize Soil Compaction						X



# Minimum Sediment Control BMPs (§20-3-18 through 24)

Minimum BMP	Project Category						
	1A	1B	2	3	4	1C	5
Storm Drain Inlet Protection	X	X	X	X	X	X	X
Perimeter Controls	X	X	X	X	X	X	X
Buffer Zones						X	X
Sediment Traps (between 1 to 5 acres)							X
Sediment Basins (5 acres and greater)							X



# Minimum Good Housekeeping BMPs (§20-3-18 through 24)

Minimum BMP	Project Category					
	1A	1B	2	3	4	1C + 5
BMP and Site Maintenance	X	X	X	X	X	X
Dust Control	X	X	X	X	X	X
Material Delivery, Storage, and Use BMPs	X	X	X	X	X	X
Stockpile Management BMPs	X	X	X	X	X	X
Spill Prevention and Control BMPs	X	X	X	X	X	X
Solid Waste Management BMPs	X	X	X	X	X	X
Hazardous Waste Management BMPs	X	X	X	X	X	X
Contaminated Soil Management BMPs	X	X	X	X	X	X
Concrete Waste Management BMPs	X	X	X	X	X	X
Sanitary/ Septic Waste Management BMPs	X	X	X	X	X	X
Liquid Waste Management BMPs	X	X	X	X	X	X
Vehicle and Equipment Cleaning BMPs	X	X	X	X	X	X
Vehicle and Equipment Fueling BMPs	X	X	X	X	X	X
Tracking Control	X	X	X	X	X	X
Stabilized Construction Entrance and Exit				X	X	X
Dewatering Operations				X	X	X





# Example of ESCP

## Include:

- Project Sequence and Rain Response Plan
- Narrative description of BMPs that cannot be shown on Site Plan (Good Housekeeping & maintenance requirements)
- List BMPs that are not applicable

**TABLE A. OUTSIDE REQUIREMENTS**

ITEM	REQUIREMENT
1. Silt Fence	6' High, 12" Spacing
2. Sediment Filter	12" High, 12" Spacing
3. Composite Filter Sock	12" High, 12" Spacing
4. Erosion Control Blanket	12" High, 12" Spacing
5. Stormwater Management	12" High, 12" Spacing
6. Good Housekeeping	12" High, 12" Spacing
7. Erosion Control	12" High, 12" Spacing
8. Stormwater Management	12" High, 12" Spacing
9. Good Housekeeping	12" High, 12" Spacing
10. Erosion Control	12" High, 12" Spacing
11. Stormwater Management	12" High, 12" Spacing
12. Good Housekeeping	12" High, 12" Spacing
13. Erosion Control	12" High, 12" Spacing
14. Stormwater Management	12" High, 12" Spacing
15. Good Housekeeping	12" High, 12" Spacing
16. Erosion Control	12" High, 12" Spacing
17. Stormwater Management	12" High, 12" Spacing
18. Good Housekeeping	12" High, 12" Spacing
19. Erosion Control	12" High, 12" Spacing
20. Stormwater Management	12" High, 12" Spacing
21. Good Housekeeping	12" High, 12" Spacing
22. Erosion Control	12" High, 12" Spacing
23. Stormwater Management	12" High, 12" Spacing
24. Good Housekeeping	12" High, 12" Spacing
25. Erosion Control	12" High, 12" Spacing
26. Stormwater Management	12" High, 12" Spacing
27. Good Housekeeping	12" High, 12" Spacing
28. Erosion Control	12" High, 12" Spacing
29. Stormwater Management	12" High, 12" Spacing
30. Good Housekeeping	12" High, 12" Spacing

**CONSTRUCTION INGRESS/EGRESS DETAILS**

**SEDIMENT FILTER FOR CATCH BASINS**

**SEDIMENT FILTER FOR DRAIN INLETS**

**GOOD HOUSEKEEPING BMPs:**

**ESCP SCHEDULE AND RAIN RESPONSE PLAN:**

**EROSION CONTROL DETAILS (EXHIBIT 2 PROLOG)**



# Project Scheduling

- Project schedules must establish:
  - A sequence of all planned actions and activities including, but not limited to:
    - All land disturbing activities,
    - Implementation of the BMPs,
    - Scheduled inspections and maintenance of BMPs, and
    - Removal of temporary BMPs.
  - Deadlines for the implementation/removal of BMPs shall be provided as specific dates or Project milestones.
  - A rain response plan
    - Identifies work that will not be performed during defined rain conditions and/or events.
- Submit scheduled start date to the Director in writing two (2) weeks prior to commencing work
- Project schedules must be revised if delays or disruptions to the Project necessitate changes to the sequence of work or BMPs.
  - Revisions must be submitted to DPP and approved by the Director before work may be performed pursuant to the revised schedule.
- A copy of the original Project schedule and all revised schedules must be kept in the Project Log in chronological order.



# Additional Requirements for Development Projects (§20-3-25)

- Projects may also need NPDES permits from the Department of Health
  - Form C: Construction > 1 acre
  - Form F: Hydrotesting
  - Form G: Dewatering



# BMP STANDARDS



# Changes to ESCP during Construction

- Minor Changes
  - Changes must be noted on the Site copy and initialed by City inspector
- Major Changes
  - Changes must be proposed to DPP Director in writing and approved before work resumes



# Slope Management and Protection (§20-3-29)

- If grade is  $\geq 15\%$  you must:
  - Phase the work: no more than 5 acres open at one time
  - Stabilize slope immediately unless it is being actively worked
    - Rolled erosion control products
    - Hydraulic mulch or hydroseeding
    - Hydraulic or bonded fiber matrix
    - Planting/ vegetation
  - Provide 10 foot buffer at toe of slope
  - Use upstream diversion around disturbed slopes



# Temporary Stabilization (§20-3-30)

Stabilize all disturbed areas when at final grade OR when active work not scheduled within 14 calendar days.

- Rolled erosion control products
- Hydraulic mulch or hydroseeding
- Hydraulic or bonded fiber matrix
- Planting/ vegetation



# Permanent Stabilization (§20-3-31)

Sites must be stabilized prior to permit closure.

- Vegetation and pavement, or equivalent.
- All drainage structures installed, functioning, and clean.



# Drain Inlet Protection (§20-3-39)

- Required unless inlets drain to a sediment basin or trap.
- Must be maintained/replaced when sediment exceeds 1/3 of the height.



# Vegetated Buffers (§20-3-40)

- Category 1C and 5 (NPDES permitted projects)
  - If the project is within 50 feet of state waters, must leave a 50 foot undisturbed buffer zone.
  - If that is not feasible, install double perimeter controls minimum of 5 feet apart.
- Must be protected with temporary fencing during all clearing and grubbing work.



# Sediment Basins (§20-3-41) and Sediment Traps (§20-3-42)

- Sediment Basin: mandatory for category 5 with  $\geq 5$  acres or more
- Sediment Traps: mandatory for category 5 with less than 5 acres
- Design for 2-year, 24-hour storm or 3,600 cubic feet per acre.
- Sediment shall be removed to maintain least 50% of the design capacity at all times.



# Tracking Control (§20-3-43) and Stabilized Construction Entrances (§20-3-44)

- Remove sediment from tires prior to exiting site
- Restrict vehicle paths to designated areas
  - Use flags or boundary fencing
- Off-site streets must be cleaned immediately using dry methods.
  - Sediment may be washed only if inlets are directed to sediment basin or trap
- Stabilized construction entrances required for Categories 1C, 3, 4, and 5



# Good Housekeeping (§20-3-46)

BMP	BMP Manual Fact Sheet
Material Delivery, Storage and Control	WM-1
Stockpile Management	WM-3
Spill Prevention and Control	WM-4
Solid Waste Management	WM-5
Hazardous Waste Management	WM-6
Contaminated Soil Management	WM-7
Concrete Waste Management	WM-8
Sanitary/ Septic Waste Management	WM-9
Liquid Waste Management BMPs	WM-10
Vehicle Tracking Control/ sweeping/ vacuuming	TR-1, TR-2

\*Recommended to review CCH Construction BMP Manual



# Discharge Notifications (§20-3-46)

- Discharge of Hazardous Materials to the MS4:
  - Property owner or ESCP Coordinator shall immediately notify the DFM, HFD, and HPD of the discharge by telephone.
  - Submit written report to DPP 3 days after notification by phone
- Discharge of Nonhazardous Materials to the MS4:
  - Notify DFM within one day
  - Submit written report to DPP 3 days after notification by phone



# INSPECTIONS



# BMP Inspections (§20-3-26)

- Inspections must be performed by the ESCP Coordinator
- Pre-construction inspection required for all projects
- Regular Inspections:

Project Category	Frequency of Inspection	Checklist
Category 1A, 1B, & 2	Once every 30 days*	Appendix C
Category 3, 4, & Trenching	Once every 7 days	Appendix C
Category 1C & 5	Once Every 7 days	Appendix D

\* if the Project will be completed in less than 30 days, inspection shall occur midway through the Project



# Appendix C (Category 1A, 1B, 2,3,4, and Trenching)

Appendix C



City and County of Honolulu

**Construction Site BMPs Inspection Checklist**  
For CCH Category 1A, 1B, 2, 3, and 4 and Trenching Projects

General Information			
Project Name: _____		Date: _____	
Location: _____		TMK: _____	
Project Manager: _____		Phone #: _____	Email: _____
Contractor: _____			
Authorized Representative: _____		Title: _____	
Phone #: _____		Email: _____	
1. City Permit	<input type="checkbox"/> Building # _____	Exp. Date: _____	<input type="checkbox"/> Grading # _____
(check all that apply)	<input type="checkbox"/> Grubbing # _____	Exp. Date: _____	<input type="checkbox"/> Stockpiling # _____
	<input type="checkbox"/> Trenching # _____	Exp. Date: _____	
2. Other Permits (list all): _____			
Inspection Type			
<input type="checkbox"/> Regular Weekly Inspection <input type="checkbox"/> Re-Inspection			
Project Phase (check all that apply)			
<input type="checkbox"/> Mobilization / Demolition		<input type="checkbox"/> Grubbing / Clearing	
<input type="checkbox"/> Building Construction		<input type="checkbox"/> Final Grading	
		<input type="checkbox"/> Rough Grading	
		<input type="checkbox"/> Infrastructure / Utilities	
Records Review (If "No" is checked for any of the following columns, complete Deficiencies / Corrective Action Report on page 3.)			
		Available at Site	Complete, Signed, and Current
Pre-Construction Inspection		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Weekly or Monthly Construction Inspections		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Erosion and Sediment Control Plan (ESCP)		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

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# Appendix D (Category 1C and 5) NPDES Permitted Projects

Appendix D



City and County of Honolulu

**Construction Site BMPs Inspection Checklist**  
**For NPDES Permitted Construction Projects**  
 Projects subject to both DPP and State NPDES permit requirements

General Information					
Project Name: _____		Date: _____			
Inspector's Name: _____		Title: _____			
Location: _____		TMK: _____			
Project Manager: _____		Phone #: _____		Email: _____	
Authorized Representative: _____		Title: _____			
Contractor: _____		Phone #: _____		Email: _____	
Authorized Representative: _____		Title: _____			
1. City Permit (check all that apply)		<input type="checkbox"/> Building # _____	Exp. Date: _____	<input type="checkbox"/> Grading # _____	Exp. Date: _____
		<input type="checkbox"/> Grubbing # _____	Exp. Date: _____	<input type="checkbox"/> Stockpiling # _____	Exp. Date: _____
2. NPDES General / Individual Permit (check all that apply)		<input type="checkbox"/> Construction # _____	Exp. Date: _____	Authorized Rep: _____	Title: _____
		<input type="checkbox"/> Hydroseeding # _____	Exp. Date: _____	Authorized Rep: _____	Title: _____
		<input type="checkbox"/> Denaturing # _____	Exp. Date: _____	Authorized Rep: _____	Title: _____
		<input type="checkbox"/> Individual # _____	Exp. Date: _____	Authorized Rep: _____	Title: _____
3. Other Permits (list all): _____					
Inspection Type					
<input type="checkbox"/> Regular Weekly Inspection		<input type="checkbox"/> Re-Inspection			
<input type="checkbox"/> Storm Event Report <sup>1</sup>		Weather Station Address / Location of Onsite Rain Gauge: _____		Inches of Rain in the last 24 hrs: _____	

<sup>1</sup> Add additional rows on stack sheets with additional TMK's.  
<sup>2</sup> NPDES General Construction Permit: required when project discharges to an impaired water and when > 0.25 inch rainfall event occurs, or NPDES Individual Permit: check your specific permit but typically required when > 0.5 inch rainfall event occurs.

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# BMP Inspections (§20-3-26)

- All photographs and inspection reports must be compiled in a 3 ring folder or binder or kept electronically, which shall be the Project Log.
  - Project Log shall be kept on Site or electronically accessible from the Site at all times
- At the conclusion of the Project, the property owner or ESCP Coordinator shall:
  - Inspect the Site and confirm that all Disturbed Areas have been stabilized and all temporary BMPs have been removed.
  - Submit an electronic copy of the final Project Log and a letter confirming compliance with this subsection to the Director within 5 business days of completing work on the Project.
- Permits for work on the Project Site will not be closed until compliance with this subsection is achieved.



# Third Party Oversight Inspection

NPDES Permit Part D.1.5.(iii) 3<sup>rd</sup> Party Oversight Inspections:

“Develop and implement an effective inspection oversight program for both public and private construction projects throughout the entire construction process until final completion of the project. Due to a high degree of variability among site conditions and oversight by the City, the Permittee shall use **dedicated erosion and sediment control or storm water inspectors who is independent** (i.e., not involved in the day-to-day planning, design, or implementation) of the construction projects to be inspected to **conduct, at a minimum, monthly oversight inspections of all applicable construction projects** within the City’s jurisdiction.”



# Third Party Oversight Inspection

- Purpose: to assess the adequacy and effectiveness of the compliance inspection program implemented by the City inspectors and third party Construction Managers at ensuring compliance with the Permit.
- Projects evaluated using the following risk-ranking criteria:
  - Total disturbed area
  - Distance to watercourse
  - Slope



# Certifications

- CWPPP
  - Must be a licensed Professional Engineer, Architect, Landscape Architect, Land Surveyor
  - Required to prepare SWQR/ SWQC
  - Required to certify that post-construction BMPs are installed properly
- ESCP Coordinator
  - Anyone acting as an ESCP coordinator on site (no other credentials required)



# ENFORCEMENT RESPONSE PLAN FOR CCH CIP PROJECTS

NPDES Permit (HI S000002, Part D.1.d.(6))



# Deficiency Severity

Severity	Description	Time Frame to Correct	Time Frame to Implement New/ Additional BMPs
Minor	Deficiencies that do not pose a threat of discharging untreated storm water or pollutants to the MS4, surface waters, or State waters, but are not in strict conformance with an approved ESCP or Minimum Erosion and Sediment Control BMP Checklist.	Immediately	Within 7 business days or before the next forecasted rain event, whichever is sooner.
Major	Non-critical deficiencies that indicate a lack of good-faith efforts to comply with the requirements of these rules and those deficiencies that may reasonably be expected to result in the discharge of pollutants to the MS4 or State waters under any rain conditions.	Immediately	Within 5 business days or before the next forecasted rain event, whichever is sooner.
Critical	Any BMP deficiencies that result in or pose an immediate threat of pollutant discharges to the MS4 or state waters.	Immediately	Before the close of business on the day it was identified.



# Minor Deficiencies

**Deficiencies that do not pose a threat of discharging untreated storm water or pollutants to the MS4, surface waters, or State waters, but are not in strict conformance with an approved ESCP or Minimum BMP Checklist. Minor deficiencies include, but are not limited to:**

- ESCP does not reflect current operations and an amendment is needed.
- BMPs are not deficient, but are not consistent with the ESCP or Minimum BMP Checklist.
- Site inspections by project staff are not being conducted at the required frequencies.
- Oil, fuel, or brake or transmission fluid spills that have not entered the MS4 but covers less than one (1) square yard.
- Evidence of active wind erosion on un-stabilized slopes/ stock piles.
- BMPs that need minor repair or maintenance.





**Inlet protection needs maintenance**



**Needs more gravel**



**Compost sock needs to be replaced**

**Compost socks should be overlapped.**



**Fuel spill less than 1 square yard, stayed on site**





**Insert protection  
needs maintenance.**

# Major Deficiencies

Deficiencies that indicate a lack of good-faith efforts and may reasonably be expected to result in the discharge of pollutants to the MS4 or State waters under any rain conditions. Major deficiencies include, but are not limited to:

- Failure to obtain an approved/ accepted ESCP or Minimum BMP Checklist before land disturbing activities.
- Missing, significantly damaged, improperly installed or not functional or effective BMPs.
- Oil, fuel, or brake or transmission fluid spills that has not entered the MS4 but covers more than one (1) square yard.
- Discharge or evidence of discharge, of untreated storm water or non-storm water that has entered the MS4.
- Sediment tracking from the project ingress/ egress in any direction.
- Hazardous materials or waste stored within the project area without proper containment or in improper locations.
- Dust from project site visibly blowing off the site.





**BMPs needs  
maintenance/not  
properly installed**

**Evidence of  
tracking**



**Improperly  
installed/not  
effective on  
impervious areas**

06/03/2011 14:51

**Concrete washout more than 75% full**

**Concrete washout overflowed**

**Sediment entering storm drain**





**No BMPs**



**Spilled polymer  
washout/ clean out**

# Critical Deficiencies

Any deficiencies are any BMP deficiencies that result in or pose an immediate threat of pollutant discharges to the MS4 or state waters. Critical deficiencies include, but are not limited to (examples provided in next two slides):

- 1. Reportable Critical Discharges (HAR Chapter 11-55 Appendix C Part 5.3.1)** – Notify and provide report to DOH and SWQ. Keep a copy onsite or in an easily accessible location.
- 2. Non-Reportable Critical Discharges** – Notify SWQ. Submit report if requested. Keep a report onsite or in easily accessible location.



# Reportable Critical Discharges

- Any of the following discharges that enters a State water:
  - Wastewater from washout of concrete;
  - Wastewater from washout/cleanout of stucco, paint, form release oils, curing compounds and other construction materials;
  - Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;
  - Soaps, solvents, or detergents used in vehicle and equipment washing; and
  - Toxic or hazardous substances from a spill or other release.



# Non-Reportable Critical Discharges

- Any reportable critical discharge that enters the MS4 but did not reach State waters.
- Work in an active stream channel or other surface water body without proper implementation of required BMPs.
- Main or lateral break of potable waters that reaches State waters.
- Sediment discharges that enter the MS4 or State waters



**Hydraulic fluid**





**No erosion or  
sediment control  
BMPs**

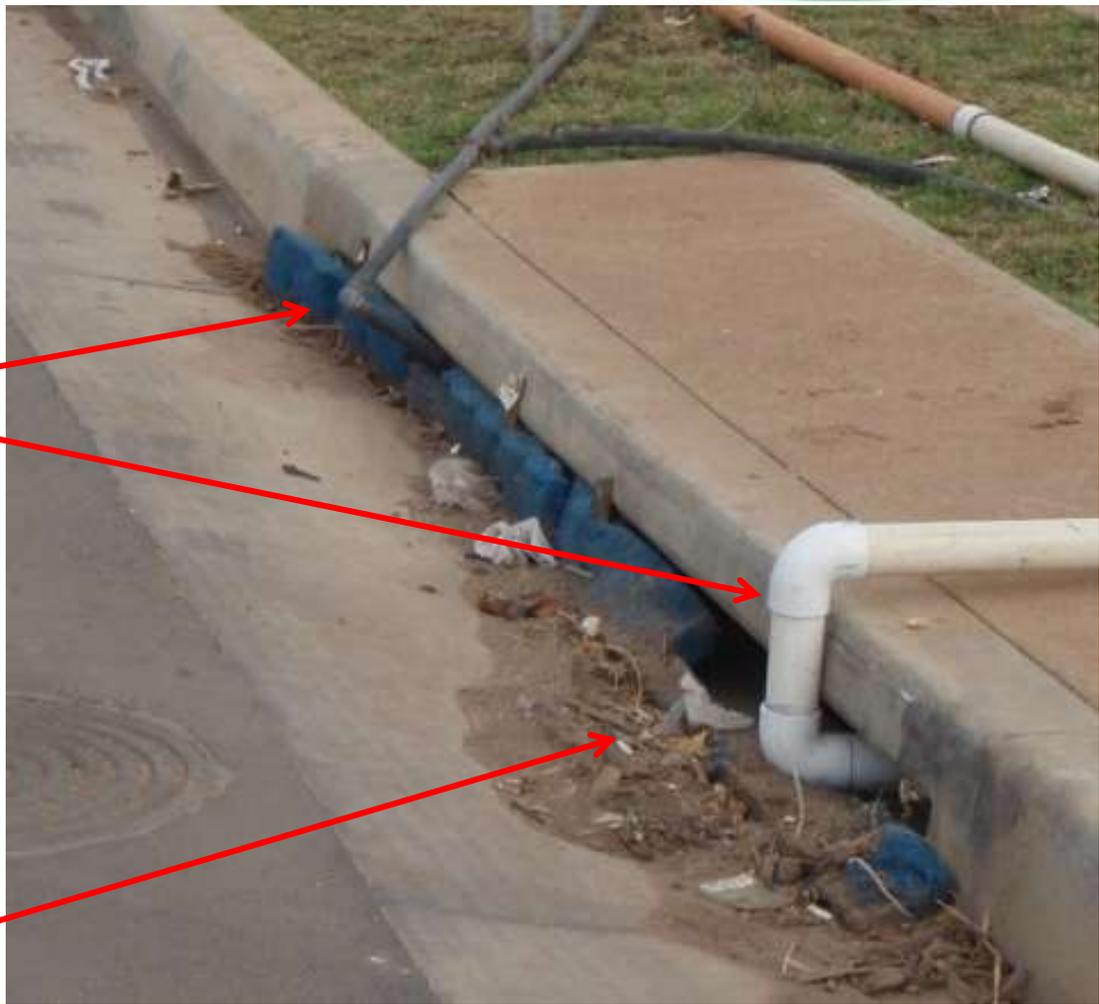
**High turbidity/muddy water**

**Improperly stored chemicals**



**Possible discharge  
to MS4 and State  
waters**

**Illicit  
connection**



**Inlet protection  
needs maintenance**



**Active  
Work in a  
stream and  
no BMPs**



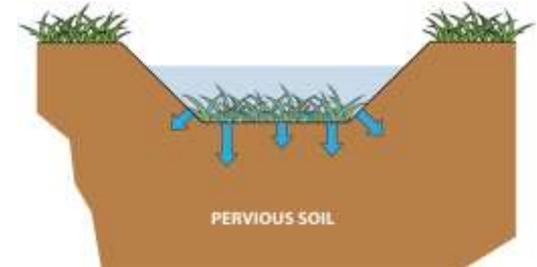
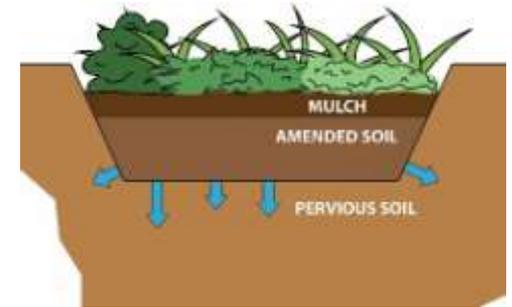
# POST-CONSTRUCTION: INFILTRATION BMP INSTALLATION

Protecting existing vegetation, future infiltration facilities, and minimizing soil compaction



# Infiltration BMP Installation Recommendations

- Protect future infiltration areas from compaction prior to installation. Clearly mark the existing vegetated areas to be preserved and future infiltration facilities with flags or temporary fencing.
- Stabilize the entire area draining to the infiltration facility before construction of the infiltration facility begins. Or, construct a diversion berm around the perimeter of the infiltration site to prevent sediment transport during construction.
- Excavate Structural Infiltration facilities to a uniform, level, uncompacted subgrade, free from rocks and debris. Excavation should be performed with the lightest practical equipment and should be placed outside the limits of the infiltration facility. If the use of heavy equipment on the base of the facility cannot be avoided, the infiltrative capacity must be restored by soil amendments or aerating prior to placing the infiltrative bed.



# Infiltration BMP Installation Recommendations

- Complete final grading to achieve proposed design elevations, leaving space for upper layer of compost, mulch or topsoil as specified on plans.
- Plant vegetation according to landscaping plan. Erosion and sediment control measures, such as temporary seeding and erosion control mats, should be used on vegetated slopes if appropriate.
- Where pervious pavement is to be installed, installation of the pavement shall be scheduled as the last installation at a development site. Vehicular traffic should be prohibited for at least 2 days following installation. Site materials should not be stored on pervious pavement.
- Continue to use erosion and sediment control BMPs such as inlet protection and perimeter control to protect permanent BMPs until they are ready to be brought online. Once the drainage area is completely and permanently stabilized, the system can be brought online.



# CCH RESOURCES

BMP Plan Templates

Construction BMP Manual

Plan Review Checklist



# CCH Online Resources

## [www.cleanwaterhonolulu.com](http://www.cleanwaterhonolulu.com)

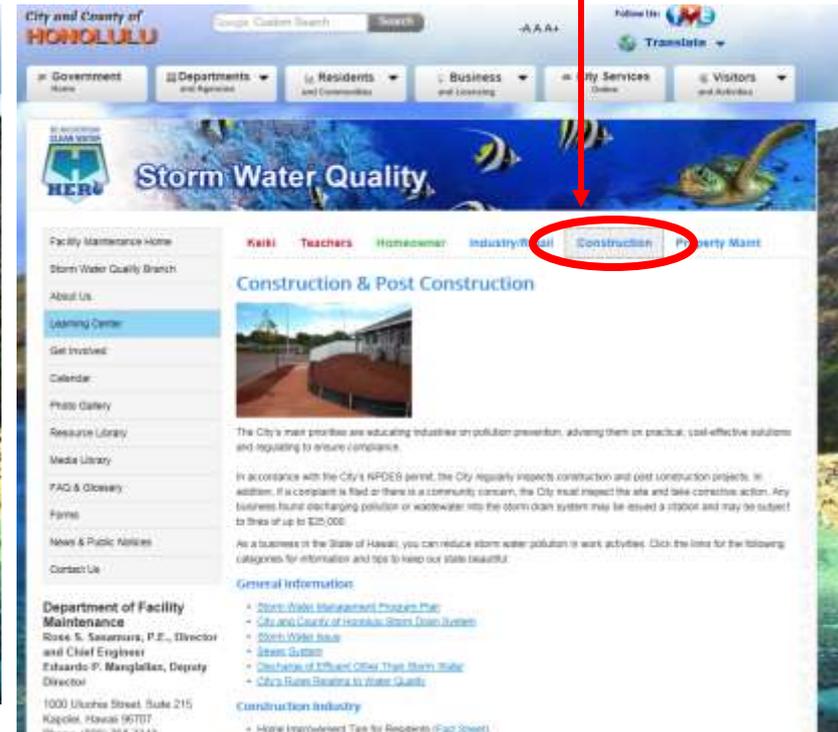
• Step 1

• Step 2

Click on  
Construction Tab



Click on  
Learning  
Center



# Storm Water Pollution Prevention Plan (SWPPP) Template for Public Projects

- For NPDES permitted projects to comply with HAR 11-55 Appendix C and applicable CCH requirements
- Attachments and BMPs should be edited as needed.
- Goal is a City-wide template for contractor compliance & Streamlined review for CCH



**STORM WATER POLLUTION PREVENTION PLAN  
(SWPPP) TEMPLATE**

Project Title: \_\_\_\_\_  
Project No.: \_\_\_\_\_  
Department/ Division: \_\_\_\_\_



Prepared by: \_\_\_\_\_  
SWPPP Preparation Date: \_\_\_\_\_  
Revision Date: \_\_\_\_\_



# Site-Specific Construction BMP (SSCBMP) Plan Template for Public Projects

For smaller projects that do not require an NPDES permit from the State

Contents:

1. Project Information
2. Description of Construction Activities
3. Required Permits
4. Identification of Prime Contractor and Other Site Contractors
5. Sequence and Estimated Dates of Construction Activities
6. BMP Site Plan (Drawing and Notes)
7. Storm Water Management Practices
8. Inspections and Corrective Actions



**SITE-SPECIFIC CONSTRUCTION BEST  
MANAGEMENT PRACTICES PLAN (SSCBMP)  
TEMPLATE**

Project Title: \_\_\_\_\_  
Project No.: \_\_\_\_\_  
Department/ Division: \_\_\_\_\_



Prepared by: \_\_\_\_\_  
Date: \_\_\_\_\_



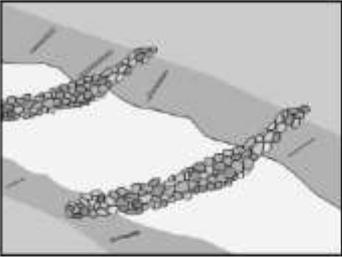
# CCH Construction BMP Manual

- Information on selection, proper installation and maintenance of BMPs
- Useful fact sheets that can be included in the SWPPP
- Most recent version will always be available on the DFM-SWQ website:

[http://www.honolulu.gov/rep/site/dfm\\_swq/library/BMP\\_manual\\_2011-11.pdf](http://www.honolulu.gov/rep/site/dfm_swq/library/BMP_manual_2011-11.pdf)

## Check Dams

SE-4



**Objectives**

EC – Erosion Control	▲
SE – Sediment Control	✓
TR – Tracking Control	
WE – Wind Erosion Control	
NS – Non-Storm Water Management Control	
WM – Waste Management & Material Pollution Control	

**Legend:**  
✓ Primary Objective  
▲ Secondary Objective

**Targeted Constituents**

Sediment	✓
Nutrients	
Toxic	
Metals	
Bacteria	
Oil and Grease	
Organics	

**Potential Alternative**

SE-5 Filter Rolls
SE-6 Gravel Bag Beam
SE-8 Sandbag Barrier

**Description and Purpose**  
A check dam is a small barrier constructed of rock, gravel bags, sandbags, fiber rolls, or reusable products, placed across a constructed swale or drainage ditch. Check dams reduce the effective slope of the channel, thereby reducing the velocity of flowing water, allowing sediment to settle and reducing erosion.

**Suitable Applications**  
Check dams may be appropriate in the following situations:

- To promote sedimentation behind the dam;
- To prevent erosion by reducing the velocity of channel flow in small intermittent channels and temporary swales;
- In small open channels that drain 10 acres or less;
- In steep channels where storm water runoff velocities exceed 5 ft/s;
- During the establishment of grass linings in drainage ditches or channels; and
- In temporary ditches where the short length of service does not warrant establishment of erosion-resistant linings.

**Limitations**

- Not to be used in live streams or in channels with extended base flows.
- Not appropriate in channels that drain areas greater than 10 acres.

November 2011      - SE-27 -      CCH Construction BMP



# CIP Plan Review Checklist

- Requirement of MS4 permit.
- To aid review projects for CCH erosion and sediment control requirements including additional permits that are required.
- Documents compliance with permit verification requirements.

**EROSION AND SEDIMENT CONTROL PLAN (ESCP) REVIEW CHECKLIST**  
Public Projects

The applicant should submit this checklist with Construction Plans. The City will use this checklist to review the ESCP. Not all items are necessary and the size/scope of each project should be considered when using this checklist and applying BMPs. However, an ESCP must identify the activities and measures to be undertaken to eliminate, minimize, or mitigate pollutants that are reasonably expected to be present during the course of each project.

Project Name: \_\_\_\_\_  
 Project No.: \_\_\_\_\_ Contractor: \_\_\_\_\_  
 Prepared By: \_\_\_\_\_ Submitted By: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Project Category:  1-Exempt (Minimum BMP Checklist)  1-Non-Exempt (ESCP)  2 (ESCP)  
 3 (ESCP)  4(ESCP)  5 (ESCP)

1.0 MINIMUM BMP CHECKLIST				
A Minimum BMP Checklist shall be prepared for Category 1-Exempt Projects.				
	Yes	No	NA	City Verified?
1.1 Minimum BMP Checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.0 PERMITS				
The following permits may apply to Category 1-Non-Exempt, 2, 3, 4 and 5 projects and may affect the ESCP. Please indicate which permits apply to the project and fill out the date that the permit was acquired. If multiple permits are required for the project, ensure that BMPs are consistent for all permits.				
	Permit Applicable?	Date Acquired		
2.1 NGPC for Storm Water Associated with Construction Activities (NPDES Form C)?	<input type="checkbox"/>			
2.2 NGPC for Discharge of Hydrotesting Waters (NPDES Form F)?	<input type="checkbox"/>			
2.3 NGPC for Construction Activity Dewatering Effluent (NPDES Form G)?	<input type="checkbox"/>			
2.4 Individual NPDES Permit?	<input type="checkbox"/>			
2.5 Section 401 Water Quality Certification (WQC)?	<input type="checkbox"/>			
2.6 Section 404 Department of the Army (DA) Permit?	<input type="checkbox"/>			
2.7 Coastal Zone Management (CZM) Permit?	<input type="checkbox"/>			
2.8 Special Management Area (SMA) Permit?	<input type="checkbox"/>			
2.9 Stream Channel Alteration Permit (SCAP)?	<input type="checkbox"/>			
2.10 City and County Grading Permit?	<input type="checkbox"/>			
2.11 City and County Clearing and Grading Permit?	<input type="checkbox"/>			
2.12 (DCAB)	<input type="checkbox"/>			
2.13 (SHHD)	<input type="checkbox"/>			
3.0 EROSION AND SEDIMENT CONTROL PLAN (ESCP)				
An ESCP shall be prepared for all Category 1-Non-Exempt, 2, 3, 4, and 5 projects. The size, scope, and type of project should be taken into account when using this checklist. The following sections are guidelines for the preparation and review of BMP plans for any type of project.				
3.1 Existing and Proposed Site Features				
The following site features should be included on the plans, if deemed necessary based on project type, size, and scope:				
	Yes	No	NA	City Verified?
3.1.1 Existing and proposed topography and features	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.2 Limits of disturbance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1.3 Location of existing and proposed roads, curbs, gutters, storm drains.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ESCP Review Checklist – CCH rev. 10/26/15 Page 1 of 3



Thank you!

