

1 Amend **Section 239 – Water Pollution Control** to read as follows:

2
3 **"SECTION 209 - TEMPORARY WATER POLLUTION, DUST, AND EROSION**
4 **CONTROL**

5
6 **209.01 Description.** This section describes the following:

7
8 (A) Including detailed plans, diagrams, and written site-specific best
9 management practices (BMP); constructing, maintaining, and repairing
10 temporary water pollution, dust, and erosion control measures at the project
11 site, including local material sources, work areas and haul roads; removing
12 and disposing hazardous wastes; control of fugitive dust (defined as
13 uncontrolled emission of solid airborne particulate matter from any source
14 other than combustion); and complying with applicable State and Federal
15 permit conditions.

16
17 (B) Work associated with dewatering activities and complying with
18 conditions of the National Pollutant Discharge Elimination System (NPDES)
19 general permit coverage authorizing discharges associated with construction
20 activity dewatering.

21
22 Requirements of this section also apply to borrow pit operations, haul
23 roads and Contractor's storage sites located outside State Right-of-Way.

24
25 **209.02 Materials.** Materials shall conform to the following:

26
27 (A) **Slope Drains.** Slope drains may be constructed of pipe, fiber,
28 mats, erosion control fabric, geotextiles, rubble, portland cement concrete,
29 bituminous concrete, plastic sheets, or other materials acceptable to
30 Engineer.

31
32 (B) **Mulches.** Mulches shall be recycled materials include bagasse,
33 hay, straw, wood cellulose, bark, wood chips, or other materials
34 acceptable to Engineer. Mulches shall be clean and free of noxious weeds
35 and deleterious materials.

36
37 (C) **Grass.** Grass shall be a quick growing species such as rye grass,
38 Italian rye grass, or cereal grasses. Grass shall be suitable to the area
39 and provide a temporary cover that will not compete later with permanent
40 cover. Alternative grasses are allowable if acceptable to Engineer.

41
42 (D) **Fertilizer and Soil Conditioners.** Fertilizer and soil conditioners
43 shall be a standard commercial grade acceptable to the Engineer.
44 Fertilizer shall conform to Subsection 712.18(A) - Commercial Fertilizer.

48 **(E) Hydro-mulching.** Hydro-mulching used as a BMP shall consist of
49 materials in Subsections 209.02(B) - Mulches, 209.02(C) - Grass, and
50 209.02(D) - Fertilizer and Soil conditioners, with potable water meeting the
51 requirements of Subsection 712.01 - Water. Installation and other
52 requirements shall in accordance with portions of Section 641- Hydro-Mulch
53 Seeding.
54

55 **(F) Silt Fences.** Silt fences shall be synthetic filter fabric mounted on
56 posts and embedded in compacted ground in accordance with contract
57 documents, and shall be in compliance with ASTM D6462, Standard
58 Practice for Silt Fence Installation.
59

60 **(G) Berms.** Berms shall be gravel or sand wrapped with geotextile
61 material. Alternate materials are allowable if acceptable to Engineer.
62

63 Alternative materials or methods to control, prevent, remove and dispose
64 pollution are allowable if acceptable to Engineer.
65

66 **209.03 Construction.**

67 **(A) Preconstruction Requirements.**

68 **(1) Water Pollution, Dust, and Erosion Control Meeting.**
69 Submit site specific BMP to Engineer. Schedule a water pollution,
70 dust, and erosion control meeting with Engineer after site specific
71 BMP is accepted in writing by Engineer. Meeting shall be
72 scheduled 14 days before start of construction work. Discuss
73 sequence of work, plans and proposals for water pollution, dust, and
74 erosion control.
75
76
77

78 **(2) Water Pollution, Dust, and Erosion Control Submittals.**
79 Submit the following:
80

81 **(a)** Written site-specific BMP describing activities to
82 minimize water pollution and soil erosion into State waters,
83 drainage or sewer systems. BMP shall include the following:
84

85 1. An identification of potential pollutants and their
86 sources.
87

88 2. A list of all materials and heavy equipment to be
89 used during construction.
90

91 3. Descriptions of the methods and devices used to
92 minimize the discharge of pollutants into State waters,
93 drainage or sewer systems.
94

95 4. Details of the procedures used for the
96 maintenance and subsequent removal of any erosion or
97 siltation control devices.
98

99 5. Methods of removing and disposing hazardous
100 wastes encountered or generated during construction.
101

102 6. Methods of removing and disposing concrete and
103 asphalt pavement cutting slurry, concrete curing water,
104 and hydrodemolition water.
105

106 7. Spill control.
107

108 8. Fugitive dust control, including dust from grinding
109 operations.
110

111 9. Methods of storing and handling of oils, paints
112 and other products used for the project.
113

114 10. Material storage and handling areas, and other
115 staging areas.
116

117 11. Concrete truck washouts.
118

119 12. Concrete waste control.
120

121 13. Fueling and maintenance of vehicles and other
122 equipment.
123

124 14. Tracking of sediment offsite from project entries
125 and exits.
126

127 15. Litter management.
128

129 16. Toilet facilities.
130

131 17. Other factors that may cause water pollution,
132 dust and erosion control.
133

134 (b) Provide plans indicating location of water pollution, dust
135 and erosion control devices; provide plans and details of
136 BMPs to be installed or utilized; show areas of soil disturbance
137 in cut and fill, indicate areas used for storage of aggregate
138 (indicate type of aggregate), asphalt cold mix, soil or waste,
139 and show areas where vegetative practices are to be
140 implemented. Indicate intended drainage pattern on plans.
141 Include separate drawing for each phase of construction that

142 alters drainage patterns. Indicate approximate date when
143 device will be installed and removed.

144
145 (c) Construction schedule.

146
147 (d) Name(s) of specific individual(s) designated responsible
148 for water pollution, dust, and erosion controls on the project
149 site. Include home and business telephone numbers, fax
150 numbers, and e-mail addresses.

151
152 (e) Description of fill material to be used.

153
154 Date and sign BMP. Keep accepted copy on site
155 throughout duration of the project. Revisions to the BMP shall
156 be included with original BMP. Modify contract documents to
157 conform to revisions. Include actual date of installation and
158 removal of BMP. Obtain written acceptance by Engineer
159 before revising BMP.

160
161 Follow guidelines in the "Best Management Practices
162 Manual for Construction Sites in Honolulu", in developing,
163 installing, and maintaining BMPs for all projects. Follow
164 Honolulu's City and County "Rules for Soil Erosion Standards
165 and Guidelines" for all projects on Oahu. Use respective Soil
166 Erosion Guidelines for Maui, Kauai, and Hawaii projects.

167
168 **(B) Construction Requirements.** Do not begin work until submittals
169 detailed in Subsection 209.03(A)(2) - Water Pollution, Dust, and Erosion
170 Control Submittals are completed and accepted in writing by Engineer.

171
172 Install, maintain, monitor, repair and replace site-specific BMP
173 measures, such as for water pollution, dust and erosion control;
174 installation, monitoring, and operation of hydrotesting activities; removal
175 and disposal of hazardous waste indicated on plans, concrete cutting slurry,
176 concrete curing water; or hydrodemolition water.

177
178 Furnish, install rain gage in a secure location for projects that require
179 NPDES permit from the Department of Health prior to field work including
180 installation of site-specific BMP. Provide rain gage with a tolerance of at
181 least 0.05 inches of rainfall, and an opening of at least 1-inch diameter.
182 Install rain gage on project site in an area that will not deter rainfall from
183 entering the gate opening. Maintain rain gage and replace rain gage that is
184 stolen, does not function properly or accurately, is worn out, or needs to be
185 relocated. Do not begin field work until rain gauge is installed and site
186 specific BMPs are in place. Do not begin field work until rain gauge is
187 installed and site specific BMPs are in place.

189 Address all comments received from Engineer.
190

191 Modify and resubmit plans and construction schedules to correct
192 conditions that develop during construction which were unforeseen during
193 the design and pre-construction stages.
194

195 Coordinate temporary control provisions with permanent control
196 features throughout the construction and post-construction period.
197

198 Limit maximum surface area of earth material exposed at any time to
199 300,000 square feet. Do not expose or disturb surface area of earth
200 material (including clearing and grubbing) until BMP measures are installed
201 and accepted in writing by Engineer. Protect temporarily or permanently
202 disturbed soil surface from rainfall impact, runoff and wind before end of
203 workday.
204

205 Protect exposed or disturbed surface area with mulches, grass seeds
206 or hydromulch. Spray mulches at a rate of 2,000 pounds per acre. Add
207 tackifier to mix at a rate of 85 pounds per acre. Apply grass seeds at a rate
208 of 125 pounds per acre. For hydromulch use the ingredients and rates
209 required for mulches and grass seeds.
210

211 Apply fertilizer to mulches, grass seed or hydromulch at a rate of 450
212 pounds per acre. Apply an additional 250 pounds per acre every 90
213 calendar days.
214

215 Install velocity dissipation measures when exposing erodible surfaces
216 greater than 15 feet in height.
217

218 BMP measures shall be in place and operational (such as shaping the
219 earthwork to control and directing the runoff) at the end of workday.
220 Shaping earthwork may include constructing earth berms along the top
221 edges of embankments if acceptable to Engineer.
222

223 Install and maintain either or both stabilized construction entrances
224 and wheel washes to minimize tracking of dirt and mud onto roadways.
225 Restrict traffic to stabilized construction areas only. Clean dirt, mud, or other
226 material tracked onto the road immediately. Modify stabilized construction
227 entrances to prevent mud from being tracked onto road. Stabilize entire
228 access roads if necessary.
229

230 Chemicals may be used as soil stabilizers for either or both erosion
231 and dust control if acceptable to Engineer.
232

233 Provide temporary slope drains of rigid or flexible conduits to carry
234 runoff from cuts and embankments. Provide portable flume at the entrance.
235 Shorten or extend temporary slope drains to ensure proper function.

236 Protect ditches, channels, and other drainageways leading away
237 from cuts and fills at all times by either:

238
239 (1) Hydro-mulching the lower region of embankments in the
240 immediate area.

241
242 (2) Placing an 8- to 15-inch layer of excavated rock, if available
243 on-site, without reducing the cross section of the drainageway.
244 Rocks shall be less than 4 inches in diameter.

245
246 (3) Installing check dams and salutation control devices.

247
248 (4) Other methods acceptable to Engineer.

249
250 Provide for controlled discharge of waters impounded, directed, or
251 controlled by project activities or erosion control measures.

252
253 Cover exposed surface of materials completely with tarpaulin or
254 similar device when transporting aggregate, soil, excavated material or
255 material that may be source of fugitive dust.

256
257 Cleanup and remove any pollutant that can be attributed to
258 Contractor.

259
260 Install or modify BMP measures due to change in Contractor's means
261 and methods, or for omitted condition that should have been allowed for in
262 the accepted site specific BMP or a BMP that replaces an accepted site
263 specific BMP that is not satisfactorily performing.

264
265 Properly maintain all BMP features. Inspect, prepare a written
266 report, and make repairs to BMP measures at following intervals:

267
268 (1) Weekly during dry periods.

269
270 (2) Within 24 hours of any rainfall of 0.5 inch or greater which
271 occurs in a 24-hour period.

272
273 (3) Daily during periods of prolonged rainfall.

274
275 (4) When existing erosion control measures are damaged or not
276 operating properly as required by site specific BMP.

277
278 Remove, destroy, replace or relocate any BMP that must be removed,
279 destroyed, replaced or relocated due to potential or actual flooding, or
280 potential danger or damage to project or public.

283 Maintain records of inspections of BMP work. Keep continuous
284 records for duration of the project. Submit weekly copy of records to
285 Engineer.
286

287 In addition to weekly reports, submit to Engineer all amounts spent
288 initializing and maintaining BMP during previous week. Amount spent
289 includes, but is not limited to: purchases of erosion control material,
290 construction of storage areas, and installation of water pollution, erosion and
291 dust control measures. Submit report weekly along with site inspection
292 report.
293

294 Protect finished and previously seeded areas from damage and from
295 spillover materials placed in upper lifts of embankment.
296

297 The Contractor's designated representative specified in Subsection
298 209.03(A)(2)(d) shall address any BMP concerns brought up by Engineer
299 within 24 hours of notification, including weekends and holidays. Failure to
300 satisfactorily address these concerns, Engineer reserves the right to employ
301 outside assistance or use Engineer's own labor forces to provide necessary
302 corrective measures. Engineer will charge Contractor such incurred costs
303 plus any associated project engineering costs. Engineer will make
304 appropriate deductions from Contractor's monthly progress estimate.
305 Failure to apply BMP measures shall result in either or both the
306 establishment and increase in the amount of retainage due to unsatisfactory
307 progress or withholding of monthly progress payment. Continued failure to
308 apply BMP measures may result in one or more of the following:
309 assessment of liquidated damages, suspension, or cancellation of contract
310 with Contractor being fully responsible for all additional costs incurred by
311 State.
312

313 **(C) Hydrotesting Activities.** If work includes removing, relocation or
314 installing waterlines, and Contractor elects to flush waterline or discharge
315 hydrotesting effluent into State waters or drainage systems, obtain an
316 NPDES Hydrotesting Waters Permit from Department of Health, Clean
317 Water Branch (DOH-CWB).
318

319 Do not begin hydrotesting activities until the DOH-CWB has issued a
320 Notice of General Permit Coverage (NGPC). Hydrotesting operations shall
321 be in accordance with conditions in NGPC. Submit a copy of the NPDES
322 Hydrotesting Waters Application and Permit to Engineer.
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329

(D) **Dewatering Activities.** If excavation of backfilling operations require dewatering, and Contractor elects to discharge dewatering effluent into State waters or existing drainage systems, obtain NPDES General Permit Coverage authorizing discharges associated with construction activity dewatering from Department of Health, Clean Water Branch (DOH-CWB). If permit is required, prepare and submit permit application (CWB-NOI Form G) to DOH-CWB.

Do not begin dewatering activities until DOH-CWB has issued Notice of General Permit Coverage (NGPC). Conduct dewatering operations in accordance with conditions in NGPC. Submit copy of NPDES Hydrotesting Waters Application and Permit to Engineer.

209.04 Measurement.

(A) Installation, maintenance, monitoring, and removal of BMP will be paid on a lump sum basis. Measurement for payment will not apply.

(B) Engineer will only measure additional water pollution, dust and erosion control required and requested by Engineer on a force account basis in accordance with Subsection 109.04 – Payment for Additional and Force Account Work.

209.05 Payment. Engineer will pay for accepted pay items listed below at contract price per pay unit, as shown in the proposal schedule. Payment will be full compensation for work prescribed in this section and contract documents.

Engineer will pay for each of the following pay items when included in proposal schedule:

Pay Item	Pay Unit
Installation, Maintenance, Monitoring, and Removal of BMP	Lump Sum
Additional Water Pollution, Dust, and Erosion Control	Force Account

An estimated amount for force account is allocated in proposal schedule under 'Additional Water Pollution, Dust, and Erosion Control', but actual amount to be paid will be the sum shown on accepted force account records, whether this sum be more or less than estimated amount allocated in proposal schedule. Engineer will pay for BMP measures requested by Engineer that are beyond scope of accepted site specific BMP and for litter management due to rubbish created by the public on a force account basis.

No progress payment will be authorized until Engineer accepts in writing site-specific BMP or when Contractor fails to maintain project site in accordance with accepted BMP.

377 For all citations or fines received by the Department for non-compliance with
378 Notice of General Permit Coverage (NGPC), the Contractor shall reimburse State
379 within 30 days for full amount of outstanding cost State has incurred, or Engineer
380 will deduct cost from progress payment.

381
382 Engineer will assess liquidated damages up to \$27,500 per day for non-
383 compliance of each BMP requirement and all other requirements in this section."
384
385

386 **END OF SECTION 209**