Supplemental Guidance to the Interim Clean Water Act Settlement Penalty Policy (March 1, 1995) for Violations of the Construction Storm Water Requirements

February 5, 2008

This supplemental guidance describes the Office of Civil Enforcement's (OCE) recommended approach to exercising its enforcement discretion in the calculation of appropriate settlement penalties for violations of EPA Clean Water Act (CWA) storm water regulations for construction activities under the 1995 Interim Clean Water Act Settlement Penalty Policy (1995 CWA settlement penalty policy) .

This document provides more detailed guidance to Agency staff in calculating a minimum settlement penalty for violations of construction-related CWA storm water requirements, including violations of National Pollutant Discharge Elimination System (NPDES) storm water permits for construction activity. Because EPA developed the 1995 CWA settlement penalty policy to address violations of NPDES permits associated primarily with waste treatment facilities with permits that contain numeric effluent limits, it may not be readily applicable to construction-related storm water cases. This guidance, together with the attached worksheets, will help clarify a preferred method for calculating settlement penalties under EPA's settlement penalty policy guidance in construction storm water cases. Adoption by Agency staff in each of EPA's regional offices of the approaches recommended in this guidance will promote nationwide consistency.

This document is guidance and was developed to assist EPA enforcement staff in their exercise of enforcement discretion in response to violations of NPDES storm water construction permits. EPA's decision whether to employ the approach described here in calculating a settlement penalty for a particular case is within the Agency's discretion. In addition, while this guidance provides evaluative tools for assessing an appropriate settlement penalty, it expresses broad principles and does not take into account the myriad of potential circumstances that an individual violation may present. EPA fully expects that individual site conditions may result in variations from the approaches described here. This guidance has been developed for internal EPA use and is not intended to create rights or obligations, or to limit the discretion of Agency staff. Moreover, it is not intended for use by EPA, defendants, respondents, courts, or administrative law judges at a hearing or trial.

SETTLEMENT PENALTY CALCULATION METHODOLOGY

The 1995 CWA settlement penalty policy uses the following formula to calculate a settlement penalty.

Penalty = (Economic Benefit) + (Gravity) +/- (Gravity Adjustment Factors) - (Litigation Considerations) - (Ability to Pay) - (Supplemental Environmental Projects)

The 1995 settlement penalty policy discusses each component of the settlement calculation. This supplemental guidance discusses economic benefit, gravity, gravity adjustment factors, and litigation considerations specifically for construction storm water cases. OCE recommends however that Agency staff continue to refer to the 1995 CWA settlement penalty policy (*www.epa.gov/compliance/resources/policies/civil/cwa/cwapol.pdf)* for guidance on the basic principles of all the penalty components. Attachment 1 contains a sample worksheet that may be used to calculate the settlement penalty for construction storm water cases.

A. Economic Benefit (BEN)

The standard method in settlement efforts for calculating economic benefit is through the use of the Agency's BEN model. Calculating the economic benefit of non-compliance in construction storm water cases will generally involve an estimation process similar to other CWA penalty cases. Economic benefit results from a number of avoided or delayed costs associated with the failure to undertake each of several types of construction activity requirements. These may include:

1. Failure to obtain NPDES permit coverage (BEN_{Permit});
2. Failure to develop an adequate Storm Water Pollution Prevent Plan or SWPPP (BEN_{SWPPP});
3. Failure to implement storm water controls (Best Management Practices or BMPs) (BEN_{BMPs});
4. Failure to inspect to ensure continuing implementation of required BMPs ($BEN_{Inspect}$); and,
5. Failure to maintain BMPs ($BEN_{Maintenance}$).

Thus, depending upon the available facts associated with a given set of violations, the total estimated economic benefit of non-compliance could be expressed as:

$$\mathbf{BEN_{Total} = BEN_{Permit} + BEN_{SWPPP} + BEN_{BMPs} + BEN_{Inspect} + BEN_{Maintenance}}$$

In order to derive a Total BEN, agency staff should take into account the avoided and delayed costs associated with each of the five construction activities identified above.[1] This may make it desirable to implement several separate runs of the BEN model. However, Agency staff can combine BEN runs for the various avoided or delayed costs where (1) the dates for noncompliance, compliance and penalty payment are the same; (2) the combined expenses in each of the capital, one-time nondepreciable, and annually recurring costs have the same estimate date; and (3) costs lumped into the same cost category (capital, one-time nondepreciable, or annually recurring) are all either delayed or avoided. The avoided and delayed costs associated with each of the five construction activities are discussed in detail below, along with guidance on how to apply the BEN model to each type of violation. Where case-specific cost information (*e.g.*, obtained via CWA §§308 or 309(a) authorities) is available, it should be used as inputs for

[1] It is possible that one or more of the five factors will not be relevant in a specific case.

the BEN model. However, in instances where case-specific cost information is not available, Agency staff should use reasonable estimates of those costs. This guidance provides recommended sources of information for certain estimated costs in Attachment 3. If estimated costs are used and actual cost information becomes available during negotiations, BEN can be revised accordingly.

1. BEN_{Permit}

The cost of obtaining a permit may be treated as either a delayed or avoided one time, nondepreciable cost, depending upon the facts of the specific case. For example, EPA may have evidence that permit coverage was sought after construction had commenced but before it was completed, in which case it is a delayed cost. If permit coverage was never obtained prior to completion of the construction project, then it is an avoided cost and the date when construction was completed and the site stabilized should be used in the BEN model as the final compliance date. When using the BEN model, uncheck the "Delayed, Not Avoided" box on the options screen to indicate avoided costs.

Permit application costs vary from state to state and can range from $0 to $1000. When determining this avoided or delayed cost element, one should use the actual application fee for the state where the construction is occurring. EPA's *Economic Analysis of the Final Phase II Storm Water Rule* (October 1999) estimates the cost of completing the Notice of Intent (NOI) form to be $126.50. If you use an estimated cost for completion of the NOI, and the actual cost later becomes available, this portion of the BEN can be revised accordingly. Note that NOI costs and administrative costs may be included in some average cost estimates for BMP implementation and in such cases a separate BEN calculation for NOI costs should not be done.

2. BEN_{SWPPP}

The cost of developing and maintaining an adequate SWPPP may be treated as either a delayed or avoided one-time nondepreciable cost, depending upon the facts of the specific case. For example, EPA may have evidence that a SWPPP was developed after construction had commenced but before it was completed, in which case it is a delayed cost. If an adequate SWPPP was not developed prior to completion of the construction project, then it should be regarded as an avoided cost and the date when construction was completed and the site stabilized should be used in the BEN model as the final compliance date. When using the BEN model, uncheck the "Delayed, Not Avoided" box on the options screen to indicate avoided costs.

This BEN category also applies to incomplete or inadequate SWPPPs. If a SWPPP was developed but it's incomplete, inadequate or hasn't been revised as required by the applicable permit, then the delayed or avoided costs of completing, amending or updating the SWPPP should be input into the BEN model.

The cost of developing or amending a SWPPP will vary depending upon the scope,

complexity and anticipated duration of construction activities. Actual cost data should be used where it is available. In the absence of actual cost data, refer to Attachment 3 for sources of general cost estimates for SWPPP development.

3. **BEN** $_{\text{BMPs}}$

The avoided or delayed costs of BMPs may be either capital investment costs, one-time nondepreciable costs, or annually recurring costs. The costs of BMPs that are structural controls or involve installation of equipment, such as silt fences and storm drain protection, should generally be entered into the BEN model as capital investment costs. BMP expenditures that need to be made only once and do not involve the purchase of any equipment, such as seeding and mulching for stabilization, should generally be entered into the BEN model as one-time nondepreciable costs.

The costs of avoided nonstructural BMPs that should have been conducted on a regular basis, such as street sweeping and general good housekeeping, are typically input into the BEN model as annually recurring costs. The case developer should calculate the **total annual cost** for input into the BEN model for these avoided annually recurring expenditures. The total annual cost is the cost that would have been incurred during one year assuming the construction project was ongoing throughout the entire year.[2]

Capital costs and one-time nondepreciable costs can be treated as either delayed or avoided, depending upon the facts of the specific case. For example, EPA may have evidence that BMPs were installed after construction had commenced but before it was completed, in which case they are delayed costs. If BMPs that would have been necessary pursuant to the terms of the construction general permit were not installed prior to completion of the construction project, then they are avoided costs, and the date when construction was completed and the site stabilized should be used in the BEN model as the final compliance date. When using the BEN model, uncheck the "Delayed, Not Avoided" box on the options screen to indicate avoided capital investment or one-time costs. All annually recurring costs are treated as avoided costs by the BEN model.

For capital costs, the BEN model uses 15 years as the default value for the useful life of capital equipment. The options screen allows the user to input a more appropriate useful life for the types of BMPs used at construction sites. In addition, for BMPs that will not be replaced, uncheck the "Consider Future Replacement" box.

It is generally preferable to use actual site-specific and BMP-specific cost information because individual developers and contractors will be able to purchase and install BMPs at different costs in different parts of the country. This information can be obtained from invoices,

[2]Thus, if the total avoided cost over 6 months is $20,000, you would need to double the amount to get the annualized avoided cost. The BEN model would then adjust it for the actual length of the violations.

copies of contracts for supplies, etc. In the absence of site-specific information, there are several sources of BMP cost information. If the case developer knows which specific BMPs should have been implemented, refer to the sources listed in Attachment 3 for a good cross section of BMPs and costs. Note that some cost estimates include maintenance costs while others do not. In addition, Appendix B of the *Development Document for Construction and Development Proposed Effluent Guidelines* (June 2002) includes tables that estimate the number of erosion and sediment control items generally needed for different sizes and types of sites.

If the case developer does not have information relating to which specific BMPs should have been employed, he or she can refer to Table 5C-1 in Appendix 5C of EPA's *Economic Analysis of Proposed Effluent Guidelines and Standards for Construction and Development* (May 2002), or Exhibit 4-8 in EPA's *Economic Analysis of the Final Phase II Storm Water Rule* (October 1999) for average costs of erosion and sediment controls.

4. BEN $_{\text{Inspect}}$

Where there is no evidence that any inspections have been performed in accordance with permit requirements,[3] the avoided cost of doing storm water inspections may be input into the BEN model as an annually recurring cost. Note that a **total annual cost** of conducting inspections should be calculated (which assumes that the construction project was ongoing throughout an entire year) and input into the BEN model, along with the initial noncompliance and final compliance dates.[4]

For those cases where some, but not all, required inspections were conducted, the case developer could input the avoided costs for the missed inspections as one-time nondepreciable costs. Where there is more than one missed inspection, the noncompliance date, for purposes of the BEN model, should be the midpoint of the noncompliance period. (Or, alternatively, separate BEN runs could be done for each missed inspection or group of missed inspections.) When using the BEN model, uncheck the "Delayed, Not Avoided" box on the options screen to indicate avoided one-time costs.

When calculating economic benefit based on avoided one-time nondepreciable costs, the cost of an avoided inspection should be based on the hourly wage of inspectors in the area multiplied by the amount of time it would take to do an inspection of the particular site. This cost per inspection is then multiplied by the number of missed inspections and the product is input into the BEN model. When calculating economic benefit based on annually recurring costs, one should multiply the average cost per inspection by the number of inspections required per year, and input this number into the BEN model.

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[3]EPA may gather evidence of the lack of such required inspections through information request letters, records review during site inspections, and/or discovery once the case is filed.

[4]Thus, if the total avoided cost over 6 months is $20,000, you would need to double the amount to get the annualized avoided cost. The BEN model would then adjust it for the actual length of the violations.

5. BEN $_{\text{Maintenance}}$

The avoided costs of maintaining BMPs should generally be input into the BEN model as annually occurring costs. Note that a **total annual cost**[5] associated with maintaining the BMPs (which assumes the construction project is ongoing throughout an entire year) should be calculated and input into the BEN model, along with the initial date of noncompliance and the final compliance date. If required BMPs were installed after construction had commenced but before it was completed, then the operator would have avoided maintenance costs during the period of time prior to installation of the BMPs. If the BMPs were not installed prior to completion of the construction project, then of course they were not maintained and the operator would have avoided maintenance costs during the entire period of construction. In this case, the date when construction was completed and the site stabilized should be used in the BEN model as the final compliance date.

Where BMPs were installed (either on time or late) and have not been maintained, the avoided maintenance costs can be input into the BEN model as either annually recurring costs or avoided one-time nondepreciable costs. A specific avoided maintenance cost may be more like an annually recurring cost or more like a one-time nondepreciable cost, depending on the specific circumstances. The period of noncompliance may be determined by reviewing inspection reports to determine when the deterioration was first noted and how long it continued without repair. If inspection reports or logs are not available or incomplete, one should estimate the period of noncompliance based on best professional judgment.

Actual site-specific annual costs for maintaining a particular BMP should be used where those figures are available through invoices, etc. Where such costs are not available, Agency staff may use estimates from industry sources within the area where the construction is occurring, or use general cost estimates such as those found in the references listed in Attachment 3. If actual costs are obtained during negotiations, these figures can be substituted, as appropriate.

B. Gravity Component

In a majority of construction storm water cases, gravity will be based on Factors B (Health and Environmental Harm) and D (Non-effluent Violations). In general the following formula should be used for calculating the monthly gravity component:

Monthly Gravity Component = (B + D) x $1,000

This formula differs from the gravity formula in the 1995 CWA settlement penalty policy.[6] It does not include a monthly constant of "1" or an A or C factor (Significance of

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[5] Thus, if the total avoided cost over 6 months is $20,000, you would need to double the amount to get the annualized avoided cost. The BEN model would then adjust it for actual length of the violations.

[6] The 1995 CWA Settlement penalty policy contains the following gravity formula: Monthly Gravity Component = (1 + A + B + C + D) x $1000.

Violation and Number of Effluent Limit Violations, respectively). The A and C factors are not included here because most storm water general permits for construction activities do not contain numeric effluent limits, and they are therefore generally inapplicable. Attachment 2 contains a sample worksheet that may be used for calculating gravity.

Please note, however, that for those storm water cases where the applicable permit establishes effluent limits and monitoring requirements, it may be appropriate to perform an analysis of the A and C factors using the tables and guidance in the 1995 CWA settlement penalty policy, in addition to the B and D factor analysis. In those cases, the monthly gravity would be (1 + A + B + C + D) x $1000, as stated in the 1995 CWA settlement penalty policy

1. Factor "B" – Health and Environmental Harm

In assessing the gravity component of the penalty, a B factor value should be established for **each month** in which one or more violations present actual or potential harm to human health or to the environment. The B factor matrix provided below may be used to select a value. To aid Agency staff in determining an appropriate value, the B factor matrix provides a range of values depending on the following three factors: (1) the water quality classification; (2) whether impacts are actual or potential; and (3) whether human health or the environment was impacted.

To use the matrix, Agency staff should first classify the quality of the pertinent receiving water as "high," "medium," or "low" in accordance with this supplemental guidance. The pertinent receiving waters include the receiving waters at the immediate point of discharge from the construction site, but may also include waters farther downstream. Agency staff should use best professional judgment to determine which receiving waters should be considered in the assessment based on the construction site's potential to impact, or contribute to impacts on, the downstream receiving waters. Agency staff should consider, for example, the distance from the discharge point to downstream waters, stream flow (velocity and quantity), and the sensitivity of the downstream waters. If assessing the B factor for both the immediate and downstream receiving waters, one should select the highest Water Body Classification available.

After determining the quality of the pertinent receiving water, then, for **each month** of violation, staff should determine whether there were actual or potential impacts to either human health or the environment. Using the guidance below, select a B value from this range. If there are impacts, or potential impacts, to both human health and the environment, select the higher of the two B factor values for each month.

a. Water Body Classification

The following discussion provides guidance for classifying water bodies when using the B factor matrix.

(1) "High" Classification

For purposes of this matrix, a receiving water should be characterized as a "High" quality water when the designated or actual uses include at least one of the following:

- It is designated or used as a source of public water supply.
- It is used for shellfish harvesting without depuration.
- It provides high quality habitat for fish, other aquatic life and wildlife.
- It provides habitat for endangered species.
- It is used for primary and secondary contact recreation.
- It is designated (1) an Outstanding Natural Resource Water, (2) a Wild and Scenic River, or (3) is otherwise a sensitive water, providing, for example, a critical ecological use such as excellent cold water fish habitat or anadromous fish passage.

In addition, where a receiving water does not meet the criteria for a "High" quality water, but is a 303(d) listed water for the pollutant of concern, or is subject to a TMDL for the pollutant of concern, the receiving water should be treated as a "High" quality water for the purposes of determining the B factor.

(2) "Medium" Classification

The receiving water may be characterized as a "Medium" quality water where the designated or actual uses include at least one of the following:

- It is suitable as a source of public water supply with appropriate treatment.
- It is suitable for shellfish harvesting with depuration.
- It provides less than high-quality habitat for fish, other aquatic life and wildlife.
- It is suitable only for secondary contact recreation.
- It is suitable for irrigation and other agricultural uses and for compatible industrial cooling and process uses.

(3) "Low" Classification

The receiving water may be characterized as a "Low" water quality water in those cases where it does not meet the criteria for either high or medium water quality. A potential example of a "Low" quality receiving water could be a heavily industrialized shipping channel.

b. Impact on Human Health

Impacts to human health could result from construction-related storm water discharges containing sediment, acidic wastewater, oil and grease, or toxics (including fertilizers, pesticides and herbicides, paint and other construction materials). In selecting a B factor value from the range identified in the matrix for actual or potential impacts to human health, Agency staff should

consider the following:

(1) interference with drinking water supplies;
(2) harm or increased risk to subsistence or commercial fishing;
(3) harm or increased risk to shellfish harvesting;
(4) causing or contributing to stream instability, including increased risk of flooding;
(5) interference with primary or secondary contact recreation; and
(6) site-specific or local rainfall data, where available.

Examples of interference with drinking water supplies include the closure of a drinking water intake or the decision to alter the treatment process or add additional treatment as a result of discharges from a construction site. Impacts to subsistence or commercial fishing may result in new fish advisories. Streambed instability could result in localized flooding, for example, that could cause property damage and impact public health due to water borne disease or increased habitat for insect pests. Beach closings are an example of impacts to primary contact recreation.

As discussed above, impacts could be actual or potential. Where there is limited or no information on actual impacts, site-specific or local precipitation data can provide insight into potential impacts during each month of violation. For example, consider the potential risk or impact to public health if a construction site is directly upstream of a drinking water intake or public beach, and BMPs at the site were found to be inadequate to prevent runoff of sediment in the event of heavy rainfall. If local data recorded rainfall during a month where violations occurred, then the more days of rain, and the greater the amount and/or intensity of rainfall, the greater the likelihood of harm to public health and the higher the B factor that should be considered for that month. On the other hand, if the precipitation data indicates that there was no rainfall during the month, and staff can therefore reasonably conclude that there were no storm water discharges, it may be appropriate to assign a 0 value for the B factor for that month.

c. Impact on the Environment

In addition to potential impacts on human health, impacts to the environment could also result from construction-related discharges of storm water containing sediment, acidic wastewater, oil and grease, or toxics. In selecting a B Factor from the range identified in the matrix for actual or potential impacts to the environment, Agency staff should consider the following:

(1) the quantity (*i.e.*, concentration or mass) of sediment, oil, or other pollutant that was discharged, or that could potentially be discharged;

(2) any documented or reasonably presumed impacts or degradation, such as impacts resulting from siltation or the presence of oil sheens, including impacts to life stages of aquatic life and other wildlife dependent on aquatic ecosystems, or on habitat including aquatic vegetation;

(1) whether the stream provides habitat to species sensitive to sediment or turbidity (*e.g.*, trout);

(2) whether the stream is on the CWA §303(d) list as impaired by sediments, turbidity or other pollutants which were or could potentially be discharged from the site;

(3) whether fish or other aquatic life were killed, including the number and species of fish or other aquatic life killed;

(4) whether discharges contributed to or caused streambed instability, such as bank erosion or scouring, which could impact habitat;

(5) exceedances of applicable water quality standards; and

(6) site-specific or local rainfall data, where available.

Where impacts or potential impacts are more significant, selection of the B factor value from the higher end of the range may be warranted. For example, a fish kill would generally result in a larger B factor, especially if the species killed is significant to the ecosystem, commercial fishing or recreation. If BMPs are generally adequate and discharges of pollutants appear minimal, however, a value from the low end of the range should be selected.

Again, where there is limited or no information on actual impacts, site-specific or local precipitation data can provide insight into potential impacts during each month of violation. If the precipitation data indicates that there was no rainfall in any given month in which there were violations, and staff can reasonably conclude that there were no storm water discharges and no potential for harm (for example, no evidence of sediment loading in and around storm drains), it may be appropriate to assign a 0 value for the B factor for that month. If the data indicates that there has been rainfall, then the more days of rain and the greater the amount and/or intensity of rainfall, the greater the likelihood of environmental harm and the higher the B factor that should be considered.

B Factor Matrix[7]						
Water Body Classification	**Low**		**Medium**		**High**	
Potential or Actual Harm	Potential	Actual	Potential	Actual	Potential	Actual
Impact on HumanHealth	0 - 5	1 - 10	0 - 15	1 - 25	0 - 25	1 -50
Impact on Aquatic Environment	0 - 3	1 - 5	0 - 7	1 - 10	0 - 15	1 - 20

2. Factor "D" - Non-Effluent Limit Violations

This guidance also includes a D factor matrix to assist Agency staff in determining an appropriate D factor, an additional element of the gravity component of a penalty. Staff may use the D factor matrix below to calculate a D factor value for **each month** in which there was one or more violations. The vertical axis of the matrix lists the possible types of violations at construction sites. The horizontal axis reflects the number of acres of disturbed soil that is associated with each specific violation. For example, for BMP-related violations, select the column that reflects the acreage of disturbed area that drains to the missing or deficient BMP. Other types of violations may be applicable to the total number of disturbed acres at the site, such as SWPPP-related violations (e.g., failure to develop an adequate SWPPP) and failure to conduct inspections. Each box in the matrix provides a range of possible values for each type of violation.

When using this matrix to develop a D factor value for **each month**, staff should select the applicable boxes in the matrix based on the types of violations and the number of acres of disturbed soil. The violations will generally fall under one of two categories, either "Violation of Applicable Permit," or "Failure to Obtain a Permit." Under the second category, Failure to Obtain a Permit, Agency staff should select a D factor from the appropriate box in the matrix using the guidance below. For those violations that constitute NPDES permit violations, the D factor values for each applicable sub-category of violation should be added together to obtain the total D factor value for **each month** as follows:

[7]The 1995 Interim CWA Settlement Penalty Policy sets a range of 10 to 50 for an impact on human health. This supplemental guidance expands the range from 0 to 50 to account for small construction sites that may have had no or minimal impact.

Monthly D Factor for Violations = (1.a) + (1.b.) + (1.c.i) + (1.c.ii) + (1.c.iii.) + (1.d.)

Where both "Violations of Applicable Permit" and "Failure to Obtain a Permit" have been identified for the same month (*e.g.*, the operator obtained a permit mid-month and subsequently violated permit requirements during the same month), calculate the D factor for both types of violations and select the higher of the two D factors for that month.[8]

Although the range of values in the matrix begins at 0.1 for some types of violations, it is recommended that a value between 0.1 and 1 should only be used for sites with minor violations (e.g., a value of 0.5 may be used to calculate a gravity component of $500 per month if appropriate for the site and the violation). Any D factor value above 1 should be a whole number.

The guidance below addresses various categories of violations and provides assistance in selecting a value within the ranges provided in the matrix.

Violation Type 1 - Violation of Applicable NPDES Permit

a. No SWPPP

Staff should apply a D factor value monthly from the construction start date until the SWPPP is completed. In selecting a specific value from within the range, consider the actual or potential impact that the lack of a SWPPP had, or could have, on the control of and quality of storm water discharges from the site. For example, if the operator developed and implemented a locally-required erosion and sediment control plan that covered most of the SWPPP requirements of the federal or state permit, and exhibited good control of discharges from the site, then a figure from the lower end of the range may be warranted. Conversely, if the operator did not have a strong erosion and sediment control plan, or did not exhibit good control of storm water discharges from the site, then a figure from the middle to higher end of the range may be appropriate. This category of violation assesses the overall impact the lack of SWPPP had on the site. Inadequacies relating to specific BMPs are addressed in the matrix under 1.c.

b. Inadequate SWPPP

Where the facility has a SWPPP, but it's incomplete, inadequate or otherwise does not comply with permit requirements, then, for the purpose of calculating a penalty, Agency staff should treat the violations as either monthly (i.e., continuous) violations or as one-time violations, depending on the particular deficiencies. Staff should generally treat SWPPP deficiencies that don't directly impact site conditions, implementation of BMPs or discharge of

[8]Alternatively, Agency staff could calculate a prorated penalty based on the amount of time during that month that (1) the operator was constructing/discharging without a permit, and (2) after obtaining permit coverage, was operating in violation of a permit.

pollutants as one-time violations.[9] This includes, for example, the failure to sign, date or certify the SWPPP. In these cases, Agency staff should select a D factor value only for the month that the SWPPP should have been signed, dated or certified.

SWPPP deficiencies that could directly impact site conditions, implementation of BMPs or discharge of pollutants should generally be treated as ongoing violations, and a D factor should be applied monthly from the date the permit became effective until the SWPPP is amended to include the necessary elements. Such deficiencies could include failure to include required information on endangered species or historic properties, and failure to identify adequate BMPs (both structural and nonstructural).

c. Inadequate BMPs or Inadequate Implementation of the SWPPP

This category of violation includes the following three subcategories: (i) missing BMPs; (ii) BMPs not properly implemented or maintained; and (iii) any other deficiencies. Agency staff should determine a D Factor value for each of these subcategories, where applicable, and add the values together to get the total D factor value for "Inadequate BMPs" or the "Inadequate Implementation of the SWPPP" for each month of violation.

(i) *Missing BMPs*

Agency staff should apply a D factor value from this violation category for those months where you can reasonably determine (through, for example, inspections or information requests) that certain BMPs should have been, but were not, implemented. In selecting a value from within the range, Agency staff should consider the number and types of missing BMPs in relation to the characteristics of the site. Thus, the value for missing BMPs should generally be higher where the number of missing BMPs is higher, and/or the importance of the missing BMPs is greater. In evaluating the significance of the missing BMPs, Agency staff should consider site-specific factors such as the topography, including slope of the site, erosivity of the soil, and the amount of buffer vegetation left on the site.

In judging the degree to which the lack of BMPs have impacted the control of storm water discharges from the site, one should evaluate the following, where applicable:

- ***Sediment and erosion control practices***
  - Stabilization practices.
  - Structural erosion and sediment control practices.

- ***Offsite vehicle tracking of sediments***

- ***Good housekeeping*** (*e.g.*, debris receptacles, trash pickup, street sweeping)

[9]This rule of thumb applies only to calculating the bottom line penalty for purposes of settlement. It does not apply to alleging violations or calculating the statutory maximum.

- ***Waste disposal***

  Construction wastes.
  Hazardous wastes.
  Equipment maintenance fluids including oil and grease.
  Acidic wastewater.
  Contaminated soils.
  Concrete truck washout.

- ***Materials management***

  Pesticides.
  Petroleum products.
  Fertilizers.
  Detergents.
  Hazardous products.

- ***Other*** (*e.g.*, concrete/asphalt batch area, location and maintenance of port-a-potties, etc.)

(ii) ***BMPs Not Properly Designed, Implemented or Maintained***

Agency staff should apply a D factor value from this violation category for those months where one can reasonably determine (through, for example, inspections or information requests) that BMPs were not properly designed, implemented or maintained. In selecting a value from the ranges in the matrix, consider the number and types of inadequacies, as well as the site-specific factors outlined above (*e.g.*, topography, soil erosivity, and the impact of failing to properly design, implement and maintain BMPs on the control of storm water discharges at the site). The value for improper BMP design, maintenance and implementation should generally be higher where the number of improperly designed, implemented or maintained BMPs is higher, and/or where the improperly implemented or maintained BMPs have greater significance in controlling the discharge of pollutants from the site. Agency staff should evaluate:

· Whether major activities were conducted in sequence.
· Whether BMPs were properly designed.
· Whether BMPs were installed per design specifications.
· Whether BMPs were properly located.
· Whether BMPs were properly maintained.
· The significance of improperly designed, installed or maintained BMPs to control of storm water discharges.

(iii) ***Any Other Deficiencies***

Agency staff should apply a D factor value for this violation category for each month that there are any other deficiencies in the implementation of the SWPPP (*e.g.*, inspections were not conducted, inspections were not documented, the SWPPP was not updated to reflect actual

activities, etc.[10]).

In selecting a value from the range, Agency staff should consider the importance of the deficiencies to the control of the discharge of pollutants from the site. If, for example, inspections were not conducted and documented in a dry month where the permit required only a minimum number of inspections (*e.g.*, every two weeks), a penalty from the low end of the range may be warranted. If it was a wet month with storm events above the permit's 0.5 inch (or other appropriate) threshold for conducting additional inspections, a penalty from the middle or high end of the range may be indicated.

d. Failure to File a Notice of Termination (NOT)

Agency staff should apply a D factor value for this category of violation for the month in which the NOT was due. The penalty for such failure may be nominal if the site was stabilized within the time required by the NPDES permit (usually two weeks) after completion of construction. If construction has ceased, but the site has not been stabilized within the required time period, a D factor for inadequate BMPs would be applied for each month until properly stabilized. In addition, other violations may also apply such as failure to inspect.

Violation Type 2 - Failure To Obtain a Permit / Discharge Without a Permit

For those sites where the owner/operator has an obligation to obtain a permit and has failed to do so, EPA will generally allege two types of violations: (1) the failure to submit a permit application or Notice of Intent (NOI) in order to obtain permit coverage, which is a violation of Section 308 of the Clean Water Act, and (2) discharge without a permit for each instance where there is evidence of a discharge through a point source into a water body of the U.S. The owner/operator has an obligation to obtain a storm water permit prior to commencing construction if there will be a discharge from the site during a rainfall or snowmelt event. Once Agency staff determines that a discharge has occurred,[11] then the obligation to obtain a permit is also established and a D factor value for the failure to obtain a permit should be applied each month from the construction start date until the permit application is submitted and becomes effective.

In selecting a figure from within the range in the matrix, consider whether any discharges without a permit have occurred during the month in question. The value should be higher where EPA has evidence of one or more discharges through a point source into a water of the U.S. in a particular month. In addition, consider the size and sophistication of the operator. The value should generally be higher for those operators that are large, sophisticated and have developed multiple sites; conversely, the value should generally be lower for a small operator, new to

[10]The failure to update the SWPPP could be addressed here or under the inadequate SWPPP category, but should be addressed under only one of these categories for any particular case.

[11]For example, evidence of a discharge could be based on the inspector's observations, either of the discharge itself or other evidence of discharge (*e.g.*, accumulation of sediment), or based on rainfall data in combination with information on site topography and location.

construction, that is developing a single site. Also, if historically there has been extensive outreach in the area regarding the need for permit coverage, a figure from the higher end of the range should generally be selected. Finally, consider any "functional equivalencies" that may exist on the site. For instance, there is likely to be no SWPPP where the owner/operator has no permit; however, there may be a locally-required erosion or sediment control plan that contains many of the SWPPP requirements. Additionally, the owner/operator may have implemented many (if not all) of the erosion and sediment control BMPs that a SWPPP would have required. On the other hand, BMPs may be missing, inadequate, improperly implemented, or inadequately maintained. To help evaluate these "functional equivalencies" and select a D Factor value from within the matrix range, Agency staff may use the ranges offered in the D factor matrix under "Violations of Applicable Permit" as a **tool** to help determine an appropriate value for "Failure to Obtain a Permit."

"D" Factor Matrix[12]					
Types of Violations	**Acres of Disturbed Soil Associated with Violation**				
	1 - 25	**26 - 50**	**51-75**	**76 - 150**	**>150**
1. Violation(s) of Applicable Permit					
a. No SWPPP	0.1 - 3	0.25 - 4	0.25 - 5	0.5 - 7	0.5 - 15
b. Inadequate SWPPP	0.1 - 2	0.1 - 3	0.1 - 4	0.25 - 5	0.5 - 14
c. Inadequate BMPs or implementation of SWPPP					
i. *Missing BMPs, (including failure to stabilize the site.)*	0.1 - 4	0.1 - 7	0.5 - 10	0.5 - 15	0.5 - 20
ii. *BMPs not properly designed, implemented or maintained.*	0.1 - 3	0.1 - 5	0.5 - 7	0.5 - 10	0.5 - 15
iii. *Any Other deficiencies (e.g. inspections not conducted or documented)*	0.1 - 2	0.1 - 4	0.1 - 5	0.5 - 7	0.5 - 15
d. Failure to file an NOT	0.1 - 2	0.1 - 2	0.1 - 2	0.5 - 2	0.5 - 2
2. Failure to Obtain a Permit	0.1 - 10	0.5 - 17	0.5 - 22	1 - 31	1 - 52

3. Gravity Adjustment Factors

The 1995 CWA settlement penalty policy discusses three potential gravity adjustment

[12]D Factor values above one should be whole numbers.

factors: (1) Flow Reduction Factor for Small Facilities, (2) History of Recalcitrance Adjustment Factor, and (3) Quick Settlement Adjustment Factor. In addition, on December 31, 1996, and February 13, 2004, EPA promulgated civil penalty inflation adjustment rules which increased statutory maximum penalties in accordance with the Debt Collection Improvement Act of 1996 (DCIA). Following promulgation of these penalty adjustment rules, the Office of Enforcement and Compliance Assurance (OECA) applied the same adjustments to the gravity component of the bottom line penalty calculation in order to harmonize it with the DCIA.

1995 CWA Settlement Penalty Policy Gravity Adjustment Factors: The Flow Reduction Factor for Small Facilities applies to industrial and municipal treatment facilities and on its face would not be applicable to construction-related storm-water violations. The recalcitrance and quick settlement adjustment factors may apply to a construction-related storm water case. Agency staff should refer to the 1995 CWA settlement penalty policy for guidance on applying these factors (*www.epa.gov/compliance/resources/policies/civil/cwa/cwapol.pdf*).

Civil Monetary Penalty Inflation Adjustment: This supplemental guidance for construction storm water cases is already consistent with the civil penalty inflation adjustments promulgated on December 31, 1996, and February 13, 2004. The first adjustment, which effects all violations occurring on or after January 31, 1997, increased statutory maximum penalties by 10%. The second adjustment, which effects all violations occurring on or after March 15, 2004, increased statutory maximum penalties by an additional 17.23%. On May 9, 1997, and September 21, 2004, the Office of Enforcement and Compliance Assurance issued memorandums modifying all existing civil penalty policies to conform to these final rules.[13] The memorandums apply the same 10% and 17.23% increases to the preliminary gravity component of the bottom line penalty calculated in accordance with the 1995 CWA settlement penalty policy.

Both the 10% and 17.23% adjustments are already reflected in the B and D factor matrices contained in this supplemental guidance for violations of the construction storm water regulations. As a result, no increase needs to be made to the preliminary gravity component in order to comply with the DCIA.

However, any future penalty inflation adjustments should be reflected in subsequent Agency staff assessment of the gravity amount as appropriate.

C. Litigation Considerations

With the exception of the National Municipal Litigation Consideration (NMLC), Agency staff may consider whether any of the litigation considerations discussed in the 1995 CWA settlement penalty policy are appropriate. Refer to the 1995 CWA settlement penalty policy for guidance on applying the litigation considerations (*www.epa.gov/compliance/resources/policies/civil/cwa/cwapol.pdf*).

[13] "*Modifications to EPA Penalty Policies to Implement the Civil Monetary Penalty Inflation Rule (Pursuant to the Debt Collection Improvement Act of 1996),*" dated May 9, 1997, and "*Modifications to EPA Penalty Policies to Implement the Civil Monetary Penalty Inflation Adjustment Rule (Pursuant to the Debt Collection Improvement Act of 1996, Effective October 1, 2004),*" dated September 21, 2004.

It is the Agency's view that the elements described in the NMLC are not pertinent to construction-related storm water cases despite the fact that the owner/operator may be a municipality. Under the 1995 CWA settlement penalty policy, the considerations discussed in the NMLC would apply when a small municipality failed to comply despite its good faith efforts. The NMLC was developed primarily for cases where large capital expenditures were to be made. Because BMPs under the storm water program are relatively inexpensive and easily implemented and maintained, the NMLC considerations are not generally relevant to development of settlement penalties.

D. Ability to Pay

Agency staff should refer to the 1995 CWA settlement penalty policy for guidance on applying the ability to pay adjustment factor. (*www.epa.gov/compliance/resources/policies/civil/cwa/cwapol.pdf*).

E. Supplemental Environmental Projects

Agency staff should refer to the 1995 CWA settlement penalty policy and the Agency's Supplemental Environmental Projects (SEP) Policy for guidance on applying the SEP adjustment factor for construction storm water penalties.

ATTACHMENT 1
SUPPLEMENTAL GUIDANCE TO INTERIM CLEAN WATER ACT SETTLEMENT PENALTY POLICY (MARCH 1, 1995)
FOR VIOLATIONS OF THE CONSTRUCTION STORM WATER REQUIREMENTS

Case Name: **Date:**

Prepared by:

SETTLEMENT PENALTY CALCULATION WORKSHEET

STEP	AMOUNT
1. Calculate Statutory Maximum Penalty (period of violations from _____ through _____)	
2. Economic Benefit (attach BEN printouts, with explanations for inputs/calculations)	
3. Total of Monthly Gravity Amounts (using Attachment 2 for each month of violation)	
4. Economic Benefit + Gravity (lines 2 + 3)	
5. Gravity Adjustments	
a. Recalcitrance Factor _____ (0 to 150%) X line 3	
b. Civil Monetary Penalty Inflation Adjustment (if appropriate)	
c. Quick Settlement Reduction _____ (0 or 10%) X line 3	
d. Total Gravity Adjustments (negative amount if net gravity reduction) (lines 5.a. + 5.b. - 5.c.)	
6. Preliminary Penalty Amount (lines 4 + 5.d.)	
7. Litigation Consideration Reduction (if any)	
8. Ability to Pay Reduction (if any)	
9. Reduction for Supplemental Environmental Projects (if any)	
10. **BOTTOM-LINE CASH SETTLEMENT PENALTY** (line 6 less lines 7, 8 and 9.)	

ATTACHMENT 2: GRAVITY WORKSHEET

Case Name _____
Preparer _____
Date Prepared _____
Number of Acres Disturbed_____

Month	B Factor	D Factor								TOTAL GRAVITY (B+D) x $1000
		1.a.	1.b.	1.c.i.	1.c.ii	1.c. iii.	1.d.	2	D Total	
TOTAL:										

ATTACHMENT 3

LIST OF COST REFERENCES FOR CALCULATING ECONOMIC BENEFIT FOR CONSTRUCTION STORM WATER CASES

1. Costs of developing a SWPPP:

- *Economic Analysis of the Final Phase II Storm Water Rule, Final Report* (October 1999), Exhibit 4-9. (Click on Publications at http://epa.gov/npdes/stormwater)

- *Caltrans Storm Water Quality Handbooks, Project Planning and Design Guide*, September 2002, Appendix F: California Department of Transportation (Caltrans) estimates $2000-$4000 for sites < 5acres and $5000-$10,000 for sites > 5acres. http://www.dot.ca.gov/hq/oppd/stormwtr/PPDG-stormwater-2002.pdf, Appendix F.

2. Implementation of BMPs

- *Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters* (EPA 840-B-92-002, January 1993)

  - Chapter 4 Table of Contents: http://epa.gov/owow/nps/MMGI/Chapter4/

  - Section II.A. New Development: http://www.epa.gov/owow/nps/MMGI/Chapter4/ch4-2a.html

  - Section III.A. Construction Site Erosion and Sediment Control (see Tables 4-15 and 4-16: http://www.epa.gov/owow/nps/MMGI/Chapter4/ch4-ea.html

- R.S. Means, *"Site Work and Landscape Cost Data,"* 19th Edition (2000) (http://www.rsmeans.com)

- BMP Fact Sheets, EPA's Phase II "Menu of BMPs, http://cfpub.epa.gov/npdes/stormwater/menuof bmps/con_site.cfm

- *Development Document for Proposed Effluent Guidelines and Standards for the Construction and Development Category (*June 2002), Section 5.1.5 Technical Assessment and Appendix B. (www.epa.gov/waterscience/guide/construction/devdoc.htm)

- February 17, 1998, EPA NPDES Permit, Table 1 - "Sediment and Erosion Control Costs", Federal Register / Vol. 63, No. 31 / Tuesday, February 17, 1998 / Notices, page 7897.

- General cost estimates for Phase II Erosion and Sediment Control: Table 5C-1 in Appendix 5C, *Economic Analysis of Proposed Effluent Guidelines and Standards for Construction and Development Category* (May 2002)

(www.epa.gov/waterscience/guide/construction/econ.htm)

- General cost estimates for Phase II Erosion and Sediment Control: Exhibit 4-8, Chapter 4, *Economic Analysis of the Final Phase II Storm Water Rule, Final Report* (October 1999). (Click on Publications at http://epa.gov/npdes/stormwater)

- BMP Fact Sheets, Storm Water Management for Construction Activities – Developing Pollution Prevention Plans and Best Management Practices", EPA 832-R-92-005.

- *Caltrans Storm Water Quality Handbooks, Project Planning and Design Guide* (September. 2002), Appendix F - Cost Estimates: (www.dot.ca.gov/hq/oppd/stormwtr/PPDG-stormwater-2002.pdf)

- *California Stormwater BMP Handbook for Construction* (January 2003), (www.cabmphadbooks.com)

3. Maintenance of BMPs

- General cost estimates: *Cost Analysis, Washington Department of Ecology Year 2001 Minimum Requirements for Storm Water Management in Western Washington* (August 2001): The Washington Dept. of Ecology has estimated a range of $8,400-$14,500 for BMP maintenance/repair over a twelve month period, depending upon site conditions (http://www.ecy.wa.gov/programs/wq/stormwater/cost_rpt.pdf).

- *Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters* (EPA 840-B-92-002, January 1993)

  - Chapter 4 Table of Contents (http://epa.gov/owow/nps/MMGI/Chapter4/)

  - Section II.A. New Development (http://www.epa.gov/owow/nps/MMGI/Chapter4/ch4-2a.html

  - Section III.A. Construction Site Erosion and Sediment Control (see Tables 4-15 and 4-16 (http://www.epa.gov/owow/nps/MMGI/Chapter4/ch4-3a.html)

4. Inspections

- *Economic Analysis of the Final Phase II Storm Water Rule, Final Report* (October 1999), Exhibit 4-9. Click on Publications at http://epa.gov/npdes/stormwater