

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Water Standards and Facility Regulation

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TITLE: Guidance for Civil Penalty Calculations for Effluent Violations

EFFECTIVE DATE: Upon publication in the *Pennsylvania Bulletin* as final guidance

AUTHORITY: The Pa. Clean Streams Law (CSL), Act of June 22, 1937, P.L. 1987, as amended, and the Department's regulations.

POLICY: To ensure equitable development of penalty assessments to achieve water quality protection when pollution prevention and compliance assistance are inappropriate responses.

PURPOSE: To provide a consistent and equitable procedure for calculating civil penalties for effluent violations.

APPLICABILITY: This policy applies to all facilities which have effluent limitations specified in a valid permit.

DISCLAIMER: The policies and procedures outlined in this guidance are intended to supplement existing requirements. Nothing in the policies or procedures shall affect regulatory requirements.

The policies and procedures herein are not an adjudication or a regulation. There is no intent on the part of DEP to give the rules in these policies that weight or deference. This document establishes the framework within which DEP will exercise its administrative discretion in the future. DEP reserves the discretion to deviate from this policy statement if circumstances warrant.

PAGE LENGTH: 7 pages

LOCATION: Volume 33, Tab 18

I. Introduction

The purpose of this guidance is to provide a method for calculating civil penalties for effluent violations. The permittee's Discharge Monitoring Reports (DMR) and sampling results as part of the Department's inspections will be used as the primary sources of data for this method. This guidance is designed in accordance with the strict liability requirements set forth in Section 605(a) of the PA Clean Streams Law, 35 P.S. 691.605(a); *Civil Penalties Generally* which requires the Department to consider the willfulness of the violation, damage to waters of the Commonwealth, cost of restoration, and other relevant factors.

This method will be applicable to most situations. There may, however, be instances where strict adherence to this guidance will not be appropriate. Flexibility in such situations is proper.

II. Discussion of Method

This guidance sets forth a method for calculating civil penalties using uniform criteria to provide consistency. In every case, the penalty formula initially assigns the statutory maximum of \$10,000 per day per violation. Factors, as listed below, are then applied to the maximum penalty, which act as percentage reductions to the maximum penalty. This guidance method applies a minimum \$1,000 penalty for any Monthly Average (which also includes quarterly, semi-annual or annual average) violations, a minimum \$250 for any Weekly Average violations, and a minimum \$100 for any Daily or Instantaneous Maximum violations.

III. Factors Used in Civil Penalty Calculations

In calculating a civil penalty, this guidance incorporates *Willfulness* (which includes the cause, history, and compliance with other regulatory requirements), and *Magnitude* (which includes the damage assessment, stream classification, a facility sizing factor based on flow, receiving stream impact based on the specific dilution ratio for the facility, and the degree of exceeding the permit limitation). In this guidance, numerical values of one (1.0) or less are used as multipliers to the statutory maximum penalty of \$10,000 per day per violation; the value of "1.0" (one) allows for no reduction in a *worst case* scenario.

A. Willfulness

1. Cause - The cause factor can range from *accidental* to *deliberate*. If the cause of the violation was due to a deliberate act on the part of the permittee, a factor of 1.0 is applied to the statutory maximum, i.e., there will be no reduction of the maximum penalty for this factor. However, if the cause of the violation was due to an unpreventable accident that was not foreseen by the permittee, a factor of 0.1 is applied to the statutory maximum, i.e., there will be a 90% reduction of the maximum penalty for this factor. Degrees of negligence or recklessness fall between the 0.1 (minimum) and the 1.0 (maximum) values and are applied appropriately.
2. History - The permittee's compliance history is taken into account when assessing a civil penalty and is considered a sub-factor of willfulness. A permittee with no recent history of non-compliance will be given a numerical factor of 0.8, which applies a 20% reduction to the statutory maximum penalty. Prior violations allow

a 10% reduction. However, if the permittee has been the subject of enforcement action for similar violations in the recent past, a factor of 1.0 will be assigned and no reduction of the maximum penalty will result.

3. Other Permit or Regulatory Requirements - This factor considers the permittee's past compliance with other permit or regulatory requirements (i.e., Part C schedules in the NPDES permit, timely permit renewal applications, or proper operation of the facility; as such, it is considered a sub-factor of willfulness in the calculations). Note that actual penalty assessments for any *other* violations are not calculated at this point. Only a *willfulness* factor is being determined to calculate the specific effluent violations subject to the case. Reductions to the statutory maximum are not as diverse as those for *cause* as a 0.8 (20% reduction) is given for *Compliance*, and *Non-compliance* receives a 1.0 (no reduction).

B. Magnitude

1. Damage - Like the *cause* factor above, the damage factor is given great weight in this guidance. The damage evaluation can range from *none* to *high*. If damage is high, the factor 1.0 is applied, which does not allow a reduction to the statutory maximum. Likewise, if there is no damage, the 0.1 factor is applied and there is a 90% reduction to the statutory maximum. Department personnel determine damage by observation and analytical sampling. If the Department determines that a particular case requires a more extensive survey of the receiving waters to determine damage, an aquatic biologist or other expert may complete a Natural Resources Damage survey or the like. In the event that a survey is completed, a specific *damage* penalty calculation will be used in lieu of the damage factor in this guidance. The damage factor in this guidance will be assigned as *none* and the penalty determined from the biological survey will then be added to the final penalty determined by this guidance.
2. Stream Classification - Streams are classified at Chapter 93 of the Department's rules and regulations, 25 Pa. Code 93.7 from most to least protected as: exceptional, high quality, trout stocked fishery, cold water fishery, or warm water fishery. There is not much reduction given to the stream class factor, as a violation of effluent limitations is a violation regardless of the receiving stream quality. However, for the purposes of this guidance, a reduction of 15% (.85) may be used where the facilities effluent is discharged to a *less protected* water. As is standard in this guidance, a factor of 1.0 (allowing no reduction to the statutory maximum) is applied to any discharges exceeding permit limits to an exceptional value or high quality water.
3. Sizing Factor using Average Flow - This factor is used to *size* a facility to an appropriate penalty assessment. Using the flow discharged in million gallons per day (MGD) from a facility indicates the size of the case. The sizing factor is always accurate for sewage treatment plants, where the quantity of the discharge is determined by the size of the customer base. In most cases, it is also accurate in industrial wastewater treatment plants. However, in some industrial facilities, the size of the wastewater treatment plant may not coincide with the size of the industry, e.g., a huge industrial complex with a very small industrial wastewater

treatment plant. In this case, the Department must, again, use its discretion to make a sizing determination based on other factors.

4. Receiving Stream Impact using the In-stream Waste Concentration percentage (IWC) - Every treatment facility's discharge has an impact on the receiving waters. This potential impact is determined using a percentage of the effluent discharge volume to the receiving stream flow. The IWC provides a factor based on percentage of the discharge to the receiving stream. This impact portion of the guidance is without any regard to the size of the discharging facility and, therefore, is treated as a separate factor. As in all factors used in this guidance, a minimal impact will produce the most reduction of the statutory maximum penalty. For example, an IWC of 1 % (the effluent makes up 1% of the total stream flow) will allow for a factor assignment of 0.5, a 50% reduction of the maximum penalty, which is the most reduction provided in this factor. An IWC that approaches 100% (almost all stream flow is made up of effluent from a plant) will result in a factor assignment of 0.9 to 1 (90 to 100% of the stream flow is comprised of effluent). Not much of a reduction of the maximum penalty is assigned in these cases.
5. Degree of Exceeding Permit Limitations - A numerical effluent violation that is only slightly above the permit limitation is not assigned the same magnitude factor as one that is greatly exceeding the limit. This factor allows the statutory maximum penalty to be reduced according to the degree of *exceeding the limit*. This calculation provides a means to determine the degree of exceeding each individual effluent violation in a case, rather than providing a factor value that is applied to the entire case itself, i.e., all of the above listed factors, and their values assigned, determine a single multiplier which is then used in the calculation for *each* effluent violation. The degree is determined by dividing the permit limitation by the actual amount of contaminant in the facility's discharge. Slightly exceeding the limit will result in a large fraction and vice-versa. To accommodate the method used in this guidance, which is to apply the lowest reduction percentage to the statutory maximum penalty in more serious violations, the quotient of the *permit limit/actual value* fraction is then subtracted from one. This results in a percentage reduction factor that is appropriate for the degree of exceeding the permit limit. In minimum limitations, such as Dissolved Oxygen, the division of permit limit/actual value is reversed to actual value/permit limit.

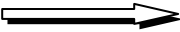

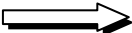





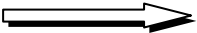

IV. Inclusion of *Other* Civil Penalties

Civil penalties assessed for violations other than effluent violations as well as other costs may be listed on the last page of this guidance document and are added to the total monthly, weekly, and daily/maximum effluent violation penalty. This allows costs, such as economic benefit, restoration, or Departmental costs, and civil penalty assessments for non-effluent violations, such as operation/maintenance or failure to comply with other regulatory or permit requirements, to be added to this guidance's effluent violation assessment. These *other* values are not subject to the multipliers of the *effluent violations formula* and are simply added to the sum of the effluent violations assessment. This allows for all violations in a non-compliant case to be totaled in one penalty action. Separate calculations for the *other* violations may be attached to this guidance document.

V. Summary

This guidance was designed to start each violation case with the statutory maximum penalty of \$10,000 per day per violation (\$70,000 per weekly and \$300,000 per monthly) and allow different factors, as required by the Clean Streams Law, to allow reductions to the maximum via the mathematical formulas herein. Whereas, in serious violation and pollution cases the assigned numerical value to each factor approaches a value of 1.0 (one), allowing little to no percentage reductions to the maximum statutory penalty allowance. The *less serious* each factor value is assigned, based on the Department's evidence and observation, the more the statutory maximum is reduced, as the values assigned are < 1.0 . Each factor is assigned as a decimal value, which acts to reduce the maximum penalty by a percentage. No factors can be assigned values of zero, which would eliminate the entire penalty assessment. The strict liability of the Clean Streams Law provides that penalties may be assessed *whether or not the violation was willful*. Therefore, all factors are assigned a reduction value that does not entirely remove that factor from the formula. As stated above, this guidance will be applicable to most situations. There may be instances where strict adherence to this guidance will not be appropriate and flexibility in such situations is proper.

VI. Formula

Willfulness:	Cause	Accidental → 0.1 Negligent → .2 to .5 Reckless → .6 to .9 Deliberate → 1.0		
	Other Permit or Regulatory Requirements	Compliance → 0.8 Partial Compliance → .9 Non-Compliance → 1.0		
	History	No Prior → 0.8 Prior Viol. → 0.9 Prior Enf. → 1.0		
	Magnitude			
	Damage	None → 0.1 Low → .2 to .5 Moderate → .6 to .9 High → 1.0		
	Stream Class	EV or HQ → 1.0 TSF → 0.95 CWF → 0.9 WWF → 0.85		

Sizing Factor using Average Flow in MGD

Flow in MGD	Factor	Flow in MGD	Factor
< .005	0.1	1 to < 2.5	0.6
.005 to < .01	0.2	2.5 to < 5	0.7
.01 to < .1	0.3	5 to < 7.5	0.8
.1 to < .5	0.4	7.5 to < 10	0.9
.5 to < 1	0.5	> 10	1.0



Receiving Stream Impact using IWC

IWC	Factor	IWC	Factor
>.01	0.5	.6 to < .7	0.85
.01 to < .1	0.55	.7 to < .8	0.9
.1 to < .2	0.6	.8 to < .9	0.95
.2 to < .3	0.65	.9 to 1	1.0
.3 to < .4	0.7	$\frac{(\text{Effluent in mgd X } 1.547)}{(\text{Effluent in mgd X } 1.547) + (\text{Stream flow CFS})}$	= IWC
.4 to < .5	0.75		
.5 to < .6	0.8		



The product of above factor values becomes the multiplier to apply to the maximum penalty and each effluent violation magnitude calculation:

[Each effluent violation degree of magnitude][Statutory Max \$][Multiplier]

Monthly Average Violation: [1-Permit Limit/Actual Effluent][300,000][multiplier] = \$

Weekly Average Violation: [1-Permit Limit/Actual Effluent][70,000][multiplier] = \$

Daily/Max Violation: [1-Permit Limit/Actual Effluent][10,000][multiplier] = \$

Other:

Other civil penalty assessments for non-effluent violations, economic benefit, or cost recovery items are added to the resulting civil penalty assessment calculated above for effluent violations.