



Sustainable Water
Integrated Management (SWIM) -
Support Mechanism



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Water is too precious to waste

**Systems to assess and incorporate proportionate penalties to water violations including a mechanism to assess adequate deterrence.
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OBJECTIVES OF PENALTY ASSESSMENT

- Penalty assessment is to assist regulating authorities define the appropriate penalties for the settlement of civil & administrative actions.
- Penalty assessment should be designed so that violators whose actions, or inactions, result in the harming or threatening water resources would pay the highest penalties.

Information in this presentation are based on US-EPA method of calculating environmental penalties.

KINDS OF PENALTIES

- Cash penalties should be only one element of regulating authorities overall enforcement effort. Regulating authorities might also consider other sanctions, in addition to the cash penalties such as:
 1. Denying or revoking permits.
 2. Partial or full shutdown of operations.
 3. Cutting essential services such as water, electricity or telephone lines.
 4. Imposing additional compliance conditions.
 5. Incarceration.
 6. Publicizing enforcement actions to create deterrence.

PURPOSES OF PENALTIES

Penalty assessment is to serve the following purposes:

1. To **deter** noncompliance.
2. To **insure** that violators do not obtain an economic advantage over their competitors.
3. To **provide** fair & equitable treatment to the regulated community wherever they may operate.
4. To **promote** swift resolution of enforcement actions.

Factors determining penalty

A penalty should include an amount reflecting the gravity of the violation. Factors might include:

1. Actual or possible damage to water resources.
2. Relative impact of a penalty on the violator.
3. Volume of water withdrawn beyond the permit.
4. Amount of wastewater released to water bodies.
5. Degree of toxicity of the discharged wastewater.

3- METHODOLOGY FOR PENALTY CALCULATION:

- Regulating agencies should estimate the statutory maximum penalty in order to determine the potential penalty liability for non compliance.
- The monetary penalty is calculated based on the following formula:

$$\text{PENALTY} = \text{ECONOMIC BENEFIT} + \text{GRAVITY} \pm \text{ADJUSTMENT FACTORS} - \text{ABILITY TO PAY}$$

a) Economic Benefit:

- The main purpose of incorporating economic benefit in calculating the due penalty is to place violators in the same financial position as they would have been if they had complied on time.

b) Gravity Component:

- It is an additional amount included in penalty to ensure that the violator is economically worse off than if he had obeyed the law
- It is usually calculated for a certain period “T”:

$$\mathbf{T \text{ Gravity Component} = (1+A+B+C+D) \times \text{US\$ } 100}$$

Factor A: Significance of Violation (Rate of 0 to 20)

- This factor is based on the degree of exceedance of the most significant effluent limit violation in each time duration **T**
- Values ranging from 0 to 20 are selected from within designated ranges
- Violations of toxic effluent limits are weighed most heavily (for a duration **T**)
- A guideline is proposed for the A factor as follows in Table 1

Gravity Factor A (Significance of Violation)

Percent by which effluent limit was exceeded	Factor A Value Ranges	
	Toxic Pollutants**	Conventional Pollutants*
1-50	1-3	0-2
51-100	1-4	1-3
101-200	3-7	2-5
201-600	5-15	3-6
601- >	10-20	5-15

* Conventional pollutants are pollutants that are not identified as toxic such as BOD, TOC, Total Dissolved Solids etc. in water.

** Toxic pollutants are mercury, Chromium, PCBs, dioxin, etc.

Factor B: Health and/or Environmental Harm (0 to 50)

- A value of this factor is selected for each duration **T** in which one or more violations present an actual or potential harm to human health or the environment
- Values can be selected from the suggested values of **B** in the following table 2

Gravity B

Health & Environmental Harm

Type of Actual or Potential Harm	Factor B Value Ranges
Impact on human health (e.g. damage to water supplies, water quality degradation, etc.)	10-50
Impact on water and/or environment	
Whole effluent toxicity limits were exceeded	1-10
Fish kill, beach closing, restriction of water body, land deprivation, etc.	4-50
Other impacts on aquatic or earth environment.	2-25

Factor C: Number of Effluent Limit Violations (0 to 5)

- This factor is based on the total number of effluent limit violations within time duration T
- Violations of different parameters at the same outfall are counted separately.

Factor D: Significance Of Non-Effluent Limit Violations (0 to 70):

- This factor is based on the severity and number of non-effluent limitations requirements violated each time duration **T**
- The types of non-effluent violations can be:
 - violations of monitoring requirements
 - violations of reporting requirement
 - pretreatment program implementation
 - unauthorized discharges, etc
- The value of **D** for a given duration **T** is the sum of the highest value for each type of non-effluent limit violation

Gravity Factor D - Non-Effluent Limit Violations

The factor value for a given time duration T is the sum of the highest value for each type of non-effluent limit violation	
Type and extent of violations	Factor D value range
Type 1- monitoring & reporting violations	
Failure to conduct or submit adequate pollutant sampling data or 1 or more pollutant parameters (but not all parameters)	1 to 6
Failure to conduct or submit any required pollutant sampling data in a given time duration T but <u>with</u> reasonable belief that the facility was in compliance with applicable limits	2 to 6
Failure to conduct or submit any required pollutant sampling data in a given time duration T but <u>without</u> reasonable belief that the facility was in compliance with applicable limits	6 to 10
Failure to conduct or submit whole effluent toxicity sampling data	4 to 10
Delay in submitting sampling data	0 to 6
Failure to submit a periodic compliance report or to sample again after finding violations	2 to 8
Any other monitoring or reporting violation	0 to 10

c) Gravity Adjustment Factors:

- The total gravity amount may be adjusted by two additional factors:
 1. History of recalcitration (to increase gravity)
 2. Quick settlement reduction factor (to reduce gravity)

History of Recalcitration

- The recalcitrance adjustment factor is used to augment the penalty based on a violator's bad faith, or unjustified delay in preventing or mitigating the violation.
- It is applied by multiplying the total gravity component by a percentage between 0 & 150 %
- A minimum recalcitrance factor of 10 percent is generally appropriate for each instance in which a violator fails to substantially comply in a timely manner with an administrative compliance order or information request.

1- Quick Settlement Adjustment Factor

The regulating agency may reduce the gravity amount by 10 percent in order to provide an extra incentive for violators to negotiate quickly and reasonably, and in recognition of a violator's cooperativeness.

- If the violator demonstrates an inability to pay the entire penalty in one lump sum in 30 days, a payment schedule should be considered.
- If a payment schedule will not resolve the violator's ability-to-pay issue, as a last resource, ERA can reduce the amount it seeks to a more appropriate amount

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Thank you
for your attention

Merci pour
votre attention



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