

Final 316(b) Cooling Water Intake Structure Rule

Definitions

- **Cooling Water** – water used for contact or noncontact cooling, including equipment cooling, tower makeup and dilution of effluent heat content
- **Impingement**- occurs when organisms are trapped against the outer part of the screening device of the intake structure
- **Entrainment** - organisms pass through the screening system and the intake structure and travel through the entire cooling system
- **Design Intake Flow** – Maximum volume facility is capable of withdrawing *except as noted*
- **Actual Intake Flow** – for the first permit cycle, average volume of water withdrawn on an annual basis over last 3 years. In subsequent permits, AFI is based on last 5 years

Exhibit I-2. Applicability by phase of the 316(b) rules

Facility characteristic	Applicable rule
New power-generating or manufacturing facility	Phase I rule
New offshore oil and gas facility	Phase III rule
New unit at an existing power-generating or manufacturing facility	This rule
Existing power-generating or manufacturing facility	This rule
Existing offshore oil and gas facility and offshore seafood processing facilities	This rule (site-specific, BPJ)

Exhibit I-3. Applicable requirements of today's rule for existing facilities

Facility characteristic	Applicable requirements
Existing facility with a DIF greater than 2 mgd and an AIF (actual intake flow) greater than 125 mgd	Impingement mortality standards at § 125.94(c) and site-specific entrainment requirements under the entrainment standards at § 125.94(d) (Additional study requirements at § 122.21(r)(1)(ii)(B))
Existing facility with a DIF greater than 2 mgd but AIF not greater than 125 mgd	Impingement mortality standards at § 125.94(c) and site-specific entrainment requirements under the entrainment standards at § 125.94(d)
New unit at an existing facility where the facility has a DIF greater than 2 mgd	Impingement mortality and entrainment standards for new units at § 125.94(e)

Design intake flow (DIF)

- ...means the value assigned during the cooling water intake structure design to the maximum instantaneous rate of flow of water the cooling water intake system is capable of withdrawing from a source waterbody. The facility's DIF **may be adjusted** to reflect permanent changes to the maximum capabilities of the cooling water intake system to withdraw cooling water, including **pumps permanently removed** from service, **flow limit** devices, and **physical limitations** of the piping. **DIF does not include values associated with emergency and fire suppression capacity or redundant pumps (i.e., back-up pumps).**

Timing of Requirements

- For NPDES permits that expire > 45 months after the effective date of the rule must submit the permit application information with next renewal permit
- For NPDES permits that expire < 45 months after the effective date, may develop a compliance schedule for submittal
- In the queue on effective date: allow to proceed

Exhibit VIII-1. EPA's projections of how facilities will choose to comply with the IM Requirements

IM Compliance Alternative	Intake Count ^a	Percent of Total Intakes
Closed-cycle recirculating system ^c	307	18%
Design velocity	362	21%
Actual velocity	226	13%
Existing offshore velocity cap ^c	10	1%
Modified traveling screens	488	29%
System of technologies	278	17%
Impingement Mortality Performance Standard	12	0.7%
De minimis	** ^b	** ^b
Total	1682	100%

a. EPA's compliance costs for each facility are based on the sum of the facility's intake level compliance costs. Some facilities have more than one intake. See IX.B.2 for more information on the use of the survey data.

b. EPA has not estimated which facilities will be determined to be "de minimis" under § 125.94(c)(11) by the Director. For purposes of this analysis, EPA has assumed no facilities fall under the "de minimis" provision.

c. EPA is not projecting facilities will install closed-cycle recirculating systems or offshore velocity caps to comply with the IM requirements, rather these facilities already have these technologies installed.

ESA Consultation

- The state drafts a 316(b) permit for a facility's cooling-water intake structure.
- Prior to finalizing the permit the state will send a copy of the draft 316(b) permit to the Services.
- The Services may then provide “recommendations” on the permit. If they do, the state must include those recommendations in the permit and the facility receiving the permit must implement them. If not, the facility is in violation of 316(b).

Courtesy Lowell Rothschild, Bracewell & Giuliani

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