

Cooling Water Intake Structure Rules for Existing Facilities: Clean Water Act § 316(b)

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EPA Administrator McCarthy signed the final version of the rule implementing § 316(b) of the Clean Water Act on May 19, 2014, which will become effective 60 days after it is published in the Federal Register. The rule will affect existing cooling water intake structures at an estimated 544 electrical generating facilities and 509 manufacturing facilities and it made minor changes to the new facility rule that was published in 2001. Existing cooling water intake structures that commenced construction before January 18, 2002, (or July 17, 2006 for an offshore oil and gas extraction facility) that withdraw water from waters of the US, at least 25 percent of the water withdrawn is used exclusively for cooling, and the design intake flow is greater than 2 million gallons per day will be regulated under this rule. Cooling water intake structures not regulated under the rule must be evaluated by the Director using best professional judgment. Section 316(b) of the Clean Water Act addresses impingement of fish and shellfish onto cooling water intake screens and entrainment through the facility of fish and shellfish small enough to pass through the screens and the cooling water system.

Impingement Mortality

EPA established seven technologies, operating procedures, or impingement mortality standards that a cooling water intake structure owner or operator may select as a means of complying with the rule. Significant flexibility is provided to operators with these seven options, but there are caveats to which the operator must pay close attention. The owner or operator of an existing facility must comply with one of the alternatives in (c)(1) through (c)(7) below,:

1. Operate a closed-cycle recirculating system;
2. Operate a cooling water intake structure that has a maximum through-screen *design* intake velocity of 0.5 feet per second;
3. Operate a cooling water intake structure that has an *actual* maximum through-screen intake velocity of 0.5 feet per second;
4. Operate an offshore velocity cap that is installed before the effective date of the rule;
5. Operate an approved modified traveling screen;
6. Operate any other combination of technologies, management practices, and operational measures that the permitting authority determines is the best technology available for impingement reduction; or
7. Achieve the specified impingement mortality performance standard by monitoring fish mortality.

Options 1, 2, or 4 require no or minimal compliance demonstration and options 3, 5, and 6 require regulated entities to submit detailed compliance information to the permitting authority

for approval. Option 7 requires the operator demonstrate that no more than 24 percent of non-fragile species are killed over a 12-month period.

The following measures in 40 CFR § 125.94(c)(8) and (9) may be added to the requirements of compliance options § 125.94(c)(1) through (7):

1. Additional measures for shellfish
2. Additional measures for other species, particularly to protect fragile species, but not limited to just fragile species.

Two provisions of § 125.94(c) allow the operator to request the Director establish a less restrictive best technology available requirements for facilities with *de minimis* impingement rates or for generating units with low capacity utilization rates.

The caveat to all the previous discussion is § 125.94(g), which protects threatened and endangered species and could require substantially more aggressive impingement mortality controls.

Entrainment

Regulated facilities must submit various application materials to the permitting authority to assist in making this determination of best technology available. For those facilities that withdraw more than 125 million gallons per day of cooling water, an Entrainment Characterization Study must be part of the application package. The Director has broad discretion to make the best technology available determination for entrainment.

Key Differences between the Final Rule and the Proposed Rule

Proposed Rule	Final Rule
The proposed rule was prescriptive listing two basic compliance options.	The final rule provides flexibility that may benefit the regulated community or be more restrictive based on how the Director applies the flexibility afforded by the rule.
The proposed rule classified cooling towers and dedicated cooling lakes and ponds as closed-cycle systems, but excluded ponds and lakes that were classified as waters of the US from the closed-cycle cooling system definition.	The rule defines closed-cycle cooling systems more broadly, most especially cooling ponds and lakes even if these water bodies are waters of the US may be determined to be close-cycles systems.
The proposed rule had an implementation schedule for impingement mortality compliance and one for entrainment.	The rule allows the Director to align the impingement and entrainment standards and implementation schedules.
The proposed rule had a fast compliance schedule for facilities with intake flows equal	The initiation of the implementation of the rule is based on whether the facility has fewer or

to or greater than 50 MGD. A slower compliance schedule was proposed for those facilities with less than 50 MGD intake flow.	more than 45 months left on the current water discharge permit.
The proposed rule appeared to limit compliance options to the two listed.	The rule final affords the regulated community pragmatic options for complying with the rule.
The proposed rule did not contain provisions for calculating non-use values.	The rule has provisions for assessing non-use values of fish and shell fish
The proposed rule acknowledged threatened and endangered species needed to be considered in evaluating the level of impingement mortality and entrainment mortality needed at each facility.	The final rule explicitly includes threatened and endangered species protection in the rule language. This provision may have very expensive consequences for cooling water users.

Implications and Possible Outcomes

Cooling water intake owners and operators who have NPDES Permits that expire in 45 to 54 months should begin as soon as practical to implement the rule. Contacting your permit writer would be our recommended first step. The final rule gives your permitting authority considerable latitude in implementation. Knowing how your permit writer will implement the portions of the rule where EPA granted discretion would be helpful to your implementation planning. While it is possible and perhaps probably the final rule will be litigated, the implementation schedule in the rule will remain in effect unless and until a court acts on the rule.