

## Questions and Answers Section 316(b) Phase II Rule Implementation

### **How should restoration efforts be valued and/or implemented?**

Compensatory restoration plans should be designed to ensure that there is no net loss of existing beneficial uses, water quality functions of the surface waterbody or overall integrity of the water resource as a result of impingement and entrainment mortality. Currently, in situations involving habitat disruptions to stream channels, the Ohio EPA requires that mitigation be conducted at a ratio ranging from 1.5:1 to 3:1 of mitigation:impacts on a linear foot basis (measured as a stream channel length). The ratio selected is based on the quality of the resource being affected. Higher ratios are associated with higher quality streams. A similar approach has been utilized with wetland dredge and fill projects. Disruptions to higher quality wetlands require higher ratios of mitigation. We envision developing a similar framework for projects proposed under this rule. However, due to the wide range of potential restoration projects possible we will need to react to the scenarios proposed.

The Ohio EPA Division of Surface Water encourages restoration that promotes resource biological integrity. For example, power plants situated on inland rivers, rather than focusing on restoring impinged or targeted species, should focus on projects that bring stream segments that currently do not meet Clean Water Act (CWA) goals into full attainment of the goals. Projects therefore would need to address the causes and sources of impairments that were identified either in one of Ohio's watershed specific Technical Support Documents or subsequent TMDL Reports. Restoration proposals that improved stream segments currently attaining existing designated aquatic life uses would also be entertained. Although exact details of a restoration framework have yet to be finalized greater consideration and higher value will be assigned for projects closer to where the impact takes place. The further away a restoration project is from the cooling water intake structure, the lower the amount of credit, all other factors being equal.

Also, restoration would ideally focus on activities in comparable-sized water bodies within the same watershed. Impacts to the Ohio River would require a larger restoration effort if the focus was on significantly smaller sized streams. Given the novelty of this approach, yet the possibility of benefitting overall watershed performance, the magnitude of restoration efforts will be subject to negotiation. There will be the need to adequately document the rationale and the logic behind the selected alternative, proving that the impact has been adequately offset by the project being proposed. (The Phase II rule requires that restoration measures be implemented within the same waterbody or watershed where the impact to fish and/or shellfish is taking place. The boundaries of a waterbody or watershed are to be guided by hydrologic units in accordance with the "Hydrologic Unit Map of the United States", USGS, 1980.)

Similarly, restoration efforts that result from impingement/entrainment impacts from power plant intakes in Lake Erie or Lake Erie lacustraries should target activities that would enhance the

biotic integrity of Lake Erie. A good example of a project that would promote that goal is protection and restoration of Lake Erie coastal wetlands. These areas have all but been eliminated. Since they have served a valuable role as spawning and nursery areas for Lake Erie fish, such restoration projects would directly target replacement of fish lost through entrainment and impingement.

**If the impinged fish is a low value fish such as gizzard shad, should restoration efforts be directed towards this species or a higher value fish?**

It would be difficult to devise a strategy to restore gizzard shad. Although not as highly valued as a game species or an endangered species, they do serve as forage base for games species, and therefore, are not to be disregarded. As described above, the focus in any restoration effort should be towards restoring biotic integrity.

**Is restoration or technology options, etc. needed at all for such a situation as described in the above question?**

Yes.

**Does Ohio EPA have a listing of high-to-low value fish?**

Typically, the role of assigning economic value to fish associated with fish kills falls to the Ohio Department of Natural Resources (ODNR) Division of Wildlife. From an environmental point of view, a ranking based on a tolerance scale would be a more appropriate approach. Ohio EPA has assigned fish species found in Ohio to tolerance categories, with value typically decreasing from the intolerant category to the tolerant as follows:

intolerant → moderately intolerant → intermediate tolerance → moderately tolerant → tolerant

These assignments can either be provided upon request or can be found in an Ohio Environmental Protection Agency 1987 publication entitled, Biological Criteria for the Protection of Aquatic Life: Volume II. Users Manual for Biological Field Assessment of Ohio Surface Waters. This document is available on the Ohio EPA website at:

<http://www.epa.state.oh.us/dsw/bioassess/BioCriteriaProtAqLife.html>

In the realm of highly valued fish is a list of species included on the “Registry of Threatened Species and Declining Fish Species”. These are species that have declined in recent years, reflecting their sensitivity to anthropogenic changes. Although Ohio EPA has devised these ranking schemes, again we prefer the focus to remain on biotic integrity which requires consideration of a wide variety of species.

**The rules include an option of the Director requiring a peer reviewer for restoration projects. How would we choose the peer reviewer?**

That would depend on the type of project being proposed, but would require a professional, regionally recognized expert in the subject area of this particular restoration project, that was mutually agreeable to by both parties. Depending upon the complexity of the project it might require more than one reviewer that is an expert in complementary fields to ensure that the project being proposed adequately replaced fish impacted. Additionally, experts should be chosen that avoid raising the issue of conflict of interest.

**Is it possible for Ohio EPA to maintain confidentiality of a sampling method?**

Yes, it is possible for the Ohio EPA to maintain confidentiality. However, to secure confidentiality an individual or entity must formally request that the agency's Legal Office perform a review of supplied documentation to determine whether or not a particular process, client list, etc. can be classified as a Trade Secret. Trade Secrets are not subject to Freedom of Information Requests and thus would remain confidential. [General information related to this topic can be found in the document referenced on the main webpage of Section 316(b) Rule Implementation.]

**How will we deal with threatened or endangered species?**

Obviously, harming threatened or endangered species should be avoided, if at all possible. More specifically, it is recommended that historical data from the vicinity of a plants' intakes and screens be examined for populations of rare and endangered species. If such species are found, a determination of their exposure to risk should be made to detail any measures proposed to prevent species risk, or address why the likelihood of harm will be minimal. Any harmed or killed endangered species identified during entrainment or impingement studies would need to be reported to ODNR Division of Wildlife and the State of Ohio should be compensated for any loss. Discussions are being initiated with USFWS about any other issues of coordination that may result from requirements of the Endangered Species Act.

**Will we allow sampling plans and impingement/entrainment characterization studies to focus on a limited number of important species identified at a given site rather than the entire universe of species present?**

We reserve judgement on this question until we are able to review proposals that deviate from identification of the complete catch. There is no reason for impingement studies not to identify to the species level. If the catch is too large to identify every individual the method and rationale for subsampling should be specified and the entire subsample identified.

Some flexibility may be allowed for the identification of some of the more commonly entrained fish. For example, since the overwhelming majority of the clupeids entrained are gizzard shad, there would be no need to go beyond the genus level of identification. Additionally, given the difficulty of identifying redhorse and other suckers such as ichthyoplankton, again, genus level taxonomy would be acceptable.

**Should restoration measures focus on all species or only representative species or high value species?**

The objective of the restoration measures as mentioned above should be to maintain or improve the integrity of the fish communities and not target just representative species.

**Can representative or "surrogate" sites for impingement and entrainment data be used instead of collecting data at the facility being studied? If so, under what circumstances or conditions?**

Ohio EPA is willing to consider the option of representative or surrogate sites. However, it would be the responsibility of the applicant to demonstrate exactly why the surrogate site would duplicate the data of the other facility. There are a large number of variables that affect the magnitude of the entrainment and impingement problem. Demonstrating why one plant's data should be usable for another plant would require detailing the similarities in the physical structures of the plants, operational details, hydrology, water resource quality, adjacent instream and riparian habitat, that the fish communities were comparable, etc.

**Are there any materials that the applicant can supply that would assist in the PIC review process?**

Yes. Although the rule doesn't specifically require maps, diagrams, aerial photos, etc. any information that assists the reviewer in understanding the layout of the intake and discharge structures and their relationship to other geographic features would be helpful. Maps of sampling locations, diagrams or photos of the traveling screens and any exclusion devices, wash sluices, etc. would also be helpful in understanding the layout of each plant.

Specific details about the level of taxonomy would also be helpful. Some PICs state that samples will be identified to the lowest practicable taxonomic level, others just that fish will be identified. These statements are too vague and subject to interpretation. Impingement samples should be identified to the species level, entrainment samples should also in most cases be identified to the species level dependant upon the keys currently available.

Many of the PICs we have received cite documents that are not easily available or accessible. In many cases they are previous impingement or entrainment studies that are not part of the peer

reviewed literature and thus not subject to copyright restrictions. Providing copies of these documents along with the PIC will speed the review process, permitting us to understand the context of statements made in the PIC.

**Facilities will need to submit rather extensive studies in order to comply the rules, depending upon the compliance option selected. Will Ohio EPA consider granting extensions to the 3 ½ year compliance schedule provided in the rules for submittal of these studies for facilities whose existing permit expires prior to July 9, 2008? [See Subpart J of Part 125 of the CFR, 125.95(a)(2)].**

Existing facilities will be required to comply with the rules when an NPDES permit containing requirements consistent with the rules is issued. [69FR41631]. This will occur when an existing NPDES permit is either: (1) reissued (renewed), or (2) modified or revoked and reissued. Id.

A facility that is required to comply with the rules, may request that the Director establish a compliance schedule to submit the required information. The information must be submitted as expeditiously as practicable, but not later than January 7, 2008. (Emphasis added.) 40 CFR § 125.95; 69FR41631. Ohio EPA's interpretation is that neither the rule nor the preamble set forth authorization to extend the January 7, 2008 date. U.S. EPA has agreed with this interpretation.

**Suppose the construction of a “new” power generating facility began prior to January 17, 2002. Could this facility be subject to the requirements of the Phase II or Phase III rules?**

Yes. For instance, if a power generating facility began construction in 2001, it is not subject to the Phase I rules, but it may be subject to the Phase II or Phase III rules. Under these circumstances, it is recommended that at least three years prior to the expiration of the facility's current NPDES permit, the permittee determine the applicability of the Phase II rules. If the Phase II rules are applicable to this facility, sampling and/or preparation of the necessary documents should be initiated. (The applicability of the Phase III rules cannot be determined at this time since these rules have not been finalized.)

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