



Questions and Answers About the Technical Assistance Letter to Northern Indiana Public Service Company and Tippecanoe River Mussels

1. What are the U.S. Fish and Wildlife Service’s responsibilities for endangered mussels in the Tippecanoe River?

The Service is the agency responsible for administering the Endangered Species Act. The Act makes it illegal to “take” endangered species. Take is defined as “... to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”

2. How will the Service ensure mussels are not killed?

The Service has provided guidance to Northern Indiana Power Service Company (NIPSCO) through a technical assistance letter, which if adhered to, will avoid take of federally listed species by maintaining natural run-of-the-river minimum flows downstream of Oakdale Dam and eliminating large fluctuations in those flows during times when mussels are most vulnerable.

3. How did the Service and NIPSCO come up with the Abnormal Low Flow Plan?

NIPSCO developed the Abnormal Low Flow or ALF Plan in cooperation with the Service. It represents a series of steps associated with the management of Oakdale Dam that NIPSCO expects to be able to implement and that will provide assurance that federally listed mussels are not being taken.

4. What does “run of the river” mean?

The Merriam Webster on-line dictionary defines run-of-the-river as “operating on the flow of the river without modification by upstream storage.” Generally the term can be thought of as managing without major impacts to the flow of the river. In practice, NIPSCO has used run-of-the-river, as defined by the Federal Energy Regulatory Commission in NIPSCO’s hydroelectric operating license, to maintain very stable levels in lakes Shafer and Freeman. Run-of-the-river, or “natural” run-of-the-river, as used in the technical assistance letter, means that flow downstream of Oakdale Dam must be relative to flow as measured upstream of Freeman and Shafer lakes at the U.S. Geological Survey gauge at Winamac, Indiana.

5. Who decides when to lower water levels in Lake Freeman?

The Service's technical assistance letter does not address how NIPSCO meets the requirement to maintain run-of-the-river. In many cases, we anticipate that the level of both lakes will be able to be maintained. However, in those cases where meeting run-of-the-river requires lowering the level of one or both of the lakes, NIPSCO will determine how best to meet the requirements outlined in the technical assistance letter.

6. What impact do the two reservoirs have on the Tippecanoe River's resources?

We know that the Tippecanoe River, including downstream of the reservoir system has among the best mussel resources in the Midwest. High mussel diversity generally suggests that water quality and fish diversity are also good. Therefore, it would be unreasonable to suggest that the reservoirs have had an entirely negative impact on mussels. Nevertheless, we do know with certainty that low-water events, in part related to the management of the dams, killed large numbers of mussels in the downstream reach of the Tippecanoe below Oakdale Dam in 2012 and 2013. This was documented by both the Service and the Indiana Department of Natural Resources. It is likely that this has happened during other dry periods over the last nearly 100 years. In addition, based on our scientific understanding of mussel ecology, large fluctuations in flow (like those that occur when Oakdale Dam generates power), particularly when flow is moderately low, have the potential to interfere with reproduction and other life history requirements of endangered and threatened mussel species. Data from the U.S. Geological Survey gauges downstream of Oakdale Dam indicate that fluctuations of hundreds or even more than 1,000 cubic feet per second have occurred regularly, sometimes more than once in the same 24-hour period.

7. If I have problems with my lakeshore property, who do I contact?

The Service is responsible for administering the Endangered Species Act, which here includes providing guidance to NIPSCO in the form of a technical assistance letter. We understand that administering the Act has in this case had and may in the future have repercussions for property owners along the lakes. The Service is coordinating closely with NIPSCO, which in turn works closely with the Shafer and Freeman Lakes Environmental Conservation Corporation. The corporation, with its stated goal of "...equitable and fair interaction with its members," would seem the appropriate first contact with issues related to lakeshore property. The Service will, of course, be available to answer specific questions related to the technical assistance letter.

8. Who decides when “take” occurs?

The Service, as administrator of the Endangered Species Act, determines when take occurs.

9. What does the technical assistance letter do? How does it work?

The technical assistance letter is very simply a set of guidelines for management of the Oakdale Hydroelectric dam, that, if implemented, allow NIPSCO to avoid take of federally listed mussels. The basis for the technical assistance letter is the ALF Plan, which NIPSCO and the Service cooperatively developed. It represents the best available science to avoid take of mussels combined with a set of operating procedures that NIPSCO agrees it can implement. The technical assistance letter may not be noticed by lakeshore property owners and local residents most of the time. It will only be implemented, as the name suggests, during periods of “abnormally” low flows (by definition when the U.S. Geological Survey gauge at Winamac falls below 300 cubic feet per second). Generally, NIPSCO will be required to maintain a flow of at least 500 cubic feet per seconds and “natural” run-of-the-river when the Winamac gauge falls below 300 cubic feet per second.

10. What happens if, during a dry period, the water flow coming into the system is low? Does NIPSCO still have to maintain 500 cubic feet per second?

NIPSCO will have to maintain 500 cubic feet per second out of Oakdale Dam except when the water coming into the system (24-hour average at the U.S. Geological Survey’s Winamac gauge) is below 300 cubic feet per second. At that point, NIPSCO would be required to maintain “natural” run-of-the-river out of the Oakdale Dam. Natural run-of-the-river is defined as flow out of Oakdale Dam (as measured at the U.S. Geological Survey’s gauge at Oakdale) that equals 1.9 times the flow measured at the Survey’s Winamac gauge. For example, if the flow at Winamac is 450 cubic feet per second, NIPSCO will be required to maintain a minimum of 500 cubic feet per second out of Oakdale Dam; but if flow as measured at Winamac is 250 cubic feet per second (ALF event), NIPSCO will be required to maintain 475 cubic feet per second (1.9 x Winamac) out of Oakdale. If during an exceptionally dry period, the 24-hour daily average flow at Winamac would drop to 100 cubic feet per second, NIPSCO would only be required under the technical assistance letter to maintain 190 cubic feet per second out of Oakdale. Based on our understanding of the mussel resources downstream of Oakdale, this would almost certainly cause federally listed mussels to die, but there would be no violation of the Endangered Species Act by NIPSCO because they would be releasing “natural” run-of-the-river. The mussel mortality would be considered a natural occurrence with no fault attributed to NIPSCO.

11. How will this technical assistance letter help mussels and area residents?

The technical assistance letter will ensure minimum flows necessary to avoid loss of federally listed mussels except during exceptionally dry periods. It will also eliminate large spikes (rapid and drastic fluctuations) in the discharge out of Oakdale when flows are moderate to low. It is important to understand that the technical assistance letter does not require additional management on the part of NIPSCO to enhance mussel habitat or recover mussel populations. It simply provides NIPSCO a mechanism to avoid being in violation of the Endangered Species Act. The technical assistance letter is expected to provide a more equitable distribution of water to all residents of the Tippecanoe River when those water resources are scarce. Although incidental to the purpose of the technical assistance letter, it is likely that people who are residents or recreate on the Tippecanoe River downstream of Oakdale Dam will see more stable flows, especially during moderately dry periods.

12. What happens if take occurs?

If NIPSCO implements the technical assistance letter, the Service does not expect take to occur.

13. Why should people care about mussels?

Mussels are monitors of aquatic health: the presence of diverse and reproducing populations of mussels indicates a healthy aquatic system which means good fishing, good water quality for waterfowl and other wildlife species, as well as insurance that our water is safe. When mussel populations are at risk, it indicates problems for other fish and wildlife species, and people too.

Mussels perform important ecological functions. They are natural filters, and by feeding on algae, plankton and silts, they help purify the aquatic system. Mussels are also an important food source for many species of wildlife including otters, raccoon, muskrat, herons, egrets, and some fish. Mussels depend on the same waterways that people value, whether as a water source, favorite fishing spot, recreation area, or for their scenic qualities. Maintaining a healthy environment for mussels helps ensure these areas are available to people as well.