



People and Nature: Our Future is in the Balance

NATIONAL WILDLIFE FEDERATION

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January 21, 2009

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street N.E., Room 1A
Washington, DC 20426

RE: Toledo Bend Hydroelectric Project
Project No. 2305-020
Comments on Pre-Application Document, Study Requests

Dear Secretary Bose:

On behalf of the National Wildlife Federation, I am submitting the following comments on the pre-application document and requests for additional studies in the above-referenced matter.

COMMENTS

Section 6.2.6 – The conclusions about the absence of effects on water quality appear to be somewhat questionable. Although the conclusions may ultimately prove to be true when fully analyzed, relying on data from monitoring station 10399, which is located miles downstream of the project at State Highway 63, as an indication that reservoir releases do not affect temperature in the river is questionable. As indicated by the data discussed in Section 6.2.7, data collected a significant distance downstream for parameters such as temperature and dissolved oxygen do not provide particularly useful insights about conditions closer to the dam. Particularly with respect to temperature and dissolved oxygen levels, which can change dramatically over a fairly short distance, scrutiny of data more reflective of conditions in the reach just downstream of the dam is needed.

Section 6.2.7 – The data reflected in Figure 6.2-39 cover a very short period of time, arguably not sufficient to support conclusions about recovery of dissolved oxygen levels. Those limited data show that dissolved oxygen levels at this downstream location are lower than those at the spillway, as shown in Figure 6.2-36. Because the time period reflected in Figure 6.2-39 corresponds only to the early portion of the period reflected in Figure 6.2-36 and because that early portion of the period corresponds to the highest dissolved oxygen levels at the spillway location, there is reason to suspect that dissolved

oxygen levels at the downstream location do not consistently meet applicable standards. Dissolved oxygen levels in Figure 6.2-39 appear to be about 1.5 to 2.0 mg/l lower than those in Figure 6.2-36 for comparable dates. That would suggest that during the period around mid-September, when DO levels presented in Figure 6.2-36 were lower than 6.5 mg/l, that DO levels at the downstream location may have been below 5.0 mg/l, which is the applicable standard. Unfortunately, no data are presented for the downstream location for the period after September 9, 2007. Additional data should be presented to provide a more complete picture of dissolved oxygen conditions.

Section 6.3.2.3 – The description of essential fish habitat should be extended to include Sabine Lake. An April, 2006 report by Turner Collie & Braden and Dr. George Ward for the Sabine River Authority and the Lower Neches Valley Authority indicates that monthly flow distributions into Sabine Lake have changed since pre-project periods. Figure 3, on page 4 of that report, compares monthly mean flows for the period 1925-65 with the period 1966-2001. It is not clear if the changes reflected there are beneficial, detrimental, or neutral. However, because changes are indicated, the scope of the PAD should be expanded to consider those changes and the implications for aquatic resources.

Section 6.3.3.3 – The cursory discussion about historical occurrence of the American Eel suggests that it has disappeared from the area upstream of the project. Some discussion should be included about the potential, if any, to undertake measures that might provide the potential for the American Eel to repopulate areas upstream of the project.

STUDY REQUESTS

Hydrologic Analyses – As indicated in the Pre-Application Document, water use from Toledo Bend Reservoir in the future is likely to be significantly different from water use during the historic period. Accordingly, sampling data about fish populations during the historic period do not provide sufficient information to reach informed conclusions about potential impacts from the project in the future when project impacts are combined with impacts from increased water use. That combination may result in reservoir elevations and downstream flows that are significantly different from those experienced under historical conditions. By using hydrological models, and, as an initial starting point, an assumed repetition of historical climate conditions, projections of reservoir elevations and of future flow conditions downstream of the project can be produced. Such projections, addressing flows for the river system all the way down to Sabine Lake, are needed in order to have an informed analysis of potential impacts to aquatic life in the reservoir, river, and in Sabine Lake. Because the State of Texas already has a widely accepted water availability model that could be used in these analyses, such analyses would not be unduly expensive or time-consuming.

Climate Change Impacts – Although precise projections of likely changes in precipitation patterns as a result of global warming during the permit period are not currently

available, reasonable projections of a range of likely temperature changes are available. Because increased average temperatures would affect evaporation and transpiration rates and, in turn, future reservoir levels and river flows, hydrologic analyses should also include a reasonable spectrum of likely climate change impacts. Such analyses are needed in order to reach informed judgments about likely project impacts on aquatic resources downstream of the project and on recreational resources in and around the reservoir. Such assumptions could be used as additional inputs into the water availability model used for the hydrological analyses requested above with a reasonable level of effort.

Additional Fish Collections – Figure 6.3-6 appears, on its face, to illustrate a major drop in species diversity downstream of the project for the period following project commencement. As noted in the accompanying text, this drop in diversity may be a product of the smaller sample set available for the shorter, post-project time period. However, before a decision is made about project conditions for a new authorization period, additional sampling should be undertaken in the River between the project and downstream to the confluence with Big Cow Creek to determine if the lower numbers of species can be explained simply by the reduced number of samples or if something more significant is indicated. The sampling should supplement the currently proposed effort to collect more data on fish populations in the upper 15 miles of the Sabine River to Toledo Bend Dam (RM 132 to 147), a reach described in the PAD as being poorly represented in historic fish collection data.

Additional Mussel Collections – The PAD references ongoing mussel collection efforts, but provides almost no information about the scope or extent of those efforts. Mussel collections are not described in any of the proposed studies. Additional effort, beyond that described in the PAD, is needed to characterize mussel populations in the river downstream of the project. In addition, additional information and analyses are needed regarding water depths at which mussels are found in order to better understand the potential for project impacts on the relatively sessile mussels in the reservoir and in the Sabine River downstream of the project.

Instream Flow Modeling – Although the National Wildlife Federation acknowledges the value of direct sampling in evaluating past impacts from the project on downstream aquatic resources, instream flow modeling also is needed for informing the development of appropriate conditions to address those impacts and to prevent unacceptable future impacts. Instream flow modeling is widely accepted in the scientific community. Such modeling is needed to inform the development of conditions necessary to protect publicly-owned aquatic resources in the river downstream of the project.

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Additional Water Quality Monitoring – Additional monitoring, particularly of temperature and dissolved oxygen levels, in the spillway, tailrace, and reaches of the river just downstream of the project is needed in order to get a better understanding of water quality impacts from the project.

Please contact me if you need additional information.

Sincerely,

A handwritten signature in cursive script that reads "Myron J. Hess". The signature is written in black ink and is positioned above the typed name.

Myron J. Hess

Manager, Texas Water Programs/Counsel

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