Message

From: Hackler, Pam [pam.hackler@dnr.mo.gov]
Sent: 7/2/2020 3:17:24 PM
To: Dunn, John [Dunn.John@epa.gov]
Subject: RE: [EXTERNAL] FW: Labadie 316(a) Final Variance Request

I will be out until the 13th, so that week would be better...have a nice extended weekend!

Pam Hackler

Pam Hackler, Environmental Scientist
Missouri Department of Natural Resources
Water Protection Program; Industrial Wastewater Permitting
Tel: 573-526-3386
Email: pam.hackler@dnr.mo.gov

We'd like your feedback on the service you received from the Missouri Department of Natural Resources. Please consider taking a few minutes to complete the Department's Customer Satisfaction Survey at https://www.surveymonkey.com/r/MoDNRsurvey. Thank you.

From: Dunn, John <Dunn.John@epa.gov>
Sent: Thursday, July 2, 2020 10:15 AM
To: Hackler, Pam <pam.hackler@dnr.mo.gov>
Subject: RE: [EXTERNAL] FW: Labadie 316(a) Final Variance Request

Didn't take notes. We talked about the EPA role and that a technology rule for an intake does not stretch out into the larger river, while 316(a) is WQ-based. Don't know if she got that.

Sent her links to the MDNR permits website. Also told her about EPRI and the research that they do. Gave her links to EPRI research. Explained that EPRI probably provided the study protocols used for 316(a),(b) studies.

I intend to send her a copy of the 316(b) rule and preamble. Want to give her key page #s for key quotes.

I'm out for a long weekend soon. Been meaning to call you. We can talk soon or Tuesday. --JD

From: Hackler, Pam <pam.hackler@dnr.mo.gov>
Sent: Thursday, July 02, 2020 10:08 AM
To: Dunn, John <Dunn.John@epa.gov>
Subject: RE: [EXTERNAL] FW: Labadie 316(a) Final Variance Request

Hi John,

Do you have a summary of the meeting you had with USFWS last(?) week?

Thanks,
Pam

Pam Hackler

Pam Hackler, Environmental Scientist

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We'd like your feedback on the service you received from the Missouri Department of Natural Resources. Please consider taking a few minutes to complete the Department's Customer Satisfaction Survey at https://www.surveymonkey.com/r/MoDNRsurvey. Thank you.

From: Dunn, John <Dunn.John@epa.gov>
Sent: Friday, June 12, 2020 12:18 PM
To: Hackler, Pam <pam.hackler@dnr.mo.gov>
Subject: RE: [EXTERNAL] FW: Labadie 316(a) Final Variance Request

Thanks for sharing this. One of the things that gets overlooked, is that the 316(b) rule is built around protecting fish populations and is not specifically tuned to focus on individual species. --JD

From: Hackler, Pam <pam.hackler@dnr.mo.gov>
Sent: Thursday, June 11, 2020 1:00 PM
To: 'Hentges, Valerie A' <valerie_hentges@fws.gov>
Cc: john_s_weber@fws.gov; Herrington, Karen <karen_herrington@fws.gov>; Dunn, John <Dunn.John@epa.gov>
Subject: RE: [EXTERNAL] FW: Labadie 316(a) Final Variance Request

Good afternoon Valerie,

Thank you for your response and I will be including the additional sampling into the permit. I'd like to point out one more citation, then I think this can conclude our discussion of what is allowed take under the Biological Opinion.

Pursuant to 40 CFR 125.98(j) "Nothing in this subpart authorizes the take, as defined at 16 U.S.C. 1532(19), of threatened or endangered species of fish or wildlife. Such take is prohibited under the Endangered Species Act unless it is exempted pursuant to 16 U.S.C. 1536(o) or permitted pursuant to 16 U.S.C. 1539(a). Absent such exemption or permit, any facility operating under the authority of this regulation must not take threatened or endangered wildlife."

I interpret the above statement to mean that any additional sampling requirements imposed in the permit cannot allow for take without an ESA exemption, which the NPDES permit cannot authorize. I also interpret the biological opinion to only cover take for the basic sampling required under the application requirements per 40 CFR 122.21(r) et seq. and therefore does not apply to additional sampling requirements or take as requested below.

Also, I have a different spin on the highlighted section. Here is the sentence in the entirety: "In addition, any take incidental to the operation of a CWIS permitted under the Rule through the implementation process described in this Opinion will be exempt from Section 9 and Section 4(d) prohibitions if the owner/operator implements enforceable control measures, monitoring, and reporting as agreed upon by the owner/operator and the Services, and as reflected in the permit." Because the section indicates that the CWIS (the structure itself) is maintained and sampled, I believe this applies to the facility itself, to the actual cooling intake, and to the requirements laid out in 40 CFR 122.21(r)and 40 CFR 125 Subpart J, not any additional sampling which may occur.

I know we have had this conversation before, and I understand we are both of differing opinions. In the interest of moving things along, I believe I will put a synopsis of our conversation in the fact sheet in the hope that the take is covered by USFWS view, and ultimately the biological opinion, and hopefully remove any further scrutiny of these conditions.

Thanks,
Pam

Pam Hackler

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We'd like your feedback on the service you received from the Missouri Department of Natural Resources. Please consider taking a few minutes to complete the Department's Customer Satisfaction Survey at https://www.surveymonkey.com/r/MoDNRsurvey. Thank you.

From: Hentges, Valerie A <valerie_hentges@fws.gov>
Sent: Tuesday, June 2, 2020 6:13 PM
To: Hackler, Pam <pam.hackler@dnr.mo.gov>
Cc: john_s_weber@fws.gov; Herrington, Karen <karen_herrington@fws.gov>
Subject: Re: [EXTERNAL] FW: Labadie 316(a) Final Variance Request

Hi Pam,

I have received further information from the Missouri River Recovery Program (MRRP) biologists from both the Service and the Corps. The Corps, through the MRRP, conducted fish sampling in 2019, a year with high discharge and water levels at flood stage during the sampling period, i.e., not the ideal conditions for sampling. The Corps has not sampled specifically at Labadie Energy Center's (LEC) Missouri River Bend (at River Mile 57.5), within the Missouri River Segment 14. Although, they sampled two nearby bends: River Mile 58.8 – 60.4 = Upper Hinkle's Bend in 2019 and River Mile 54.4 – 56.6 = St. Albans Bend during 2017, 2018, and 2019. During these three years of sampling, for two different studies/needs, a total of 445 shovelnose sturgeons were captured and one pallid sturgeon captured in the Upper Hinkle's Bend, River Mile 58.8 – 60.4, closest to LEC. Within all of the Missouri River Segment 14, one particular aspect of the MRRP studies resulted in the capture of 30 adult pallid sturgeons during the 2019 mark/recapture sampling. In addition, this same sampling effort captured 13 pallid sturgeon x shovelnose sturgeon hybrids that were genetically confirmed and 2,677 shovelnose sturgeons. Through multiple pallid sturgeons studies that the Corps are conducting/overseeing on the Missouri River, their data demonstrate pallid sturgeons are present near LEC when using more appropriate benthic sampling gear.

The Service previously recommended genetic testing for confirmation if the sturgeon was a pallid sturgeon, shovelnose sturgeon, or pallid sturgeon X shovelnose sturgeon hybrid. We noted in our 316(b) response to use 95% non-denatured ethanol to preserve the genetic sample for testing. The Corps collects their tissue sample from the caudal fin and preserves the sample in 100% non-denatured ethyl alcohol. Ameren should confirm the correct procedure with the appropriate lab conducting the genetic analysis. Additionally, some of the pallid sturgeon stocked from the hatcheries contain PIT tags. If the consultant has the correct skills, knowledge, and equipment, they may be able to use the PIT tag information to determine if a particular sturgeon is a pallid sturgeon without taking a genetic sample.

I also worked with multiple Service and Corps biologists to provide detailed information about the fish sampling gear for benthic species like sturgeons. Provided in the attachment are specifications for several different sampling gear depending on the target age class of the sampling effort. Typically, adult pallid sturgeons have been sampled using trotlines baited with worms during the winter months (e.g., October – April). Younger pallid sturgeons, i.e., free embryos/juveniles, sampling typically starts in late May/early June through September, dependent on water temperatures and field observations. This is particularly important to determine early life history entrainment. Additional information that will be useful are the species catch rates as well as the volume of water sampled.

Also, I coordinated with my Regional Section 7 Coordinator and he confirmed with his counterparts in different regions to ensure our interpretation of the incidental take statement follows the intent specified within the National Biological Opinion for CWA 316(b). To be covered under this take statement, the "owner/operator implements enforceable control measures, monitoring, and reporting as agreed upon by the owner/operator and the Services, and as reflected in the permit." We feel the in-stream fish sampling and genetic sampling would be part of the monitoring and reporting in the operation of the CWIS as specified in their permit. Therefore, if this action is part of the permit reissuance, it will be covered under the incidental take statement within the current CWA 316(b) National Biological Opinion provided to the Environmental Protection Agency on May 19, 2014.

Thank you for your patience as I coordinated with other biologists to ensure I am providing the best available science to you as you complete the permit renewal request for Ameren's Labadie Energy Center. If you have any additional follow-up question or need clarification, please do not hesitate to reach out to me.

Attachment: MissouriRiver_CorpsSOP_FishSamplingGearSOPExcerpt_2016.pdf

Valerie

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Valerie Hentges
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(573) 234-2132 ext. 173

From: Hackler, Pam <pam.hackler@dnr.mo.gov>
Sent: Tuesday, May 19, 2020 8:40 AM
To: Hentges, Valerie A <valerie_hentges@fws.gov>
Subject: RE: [EXTERNAL] FW: Labadie 316(a) Final Variance Request

Hi Valerie,

What size board and net do you want them to use; do these things have specific names? How long or what timeframe do you want them to complete these additional studies? (Every month? Once?) Do they need to analyze the data in any manner; what kind of information would be the most helpful to the Services when they are done? Please be specific, I am unfamiliar with this type of sampling so the words you use I will be including directly in the permit. Will this method of sampling allow for the species to be returned to the waterbody without harm? If not, will the services be issuing a permit to allow for endangered species take under 40 CFR 125.95(c) and 40 CFR 125.98(j) pursuant to 16 USC 1536(o) or 16 USC 1539(a)?

Thanks,
Pam

Pam Hackler

Pam Hackler, Environmental Scientist
Missouri Department of Natural Resources
Water Protection Program; Industrial Wastewater Unit; NPDES Permitting
Tel: 573-526-3386
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We'd like your feedback on the service you received from the Missouri Department of Natural Resources. Please consider taking a few minutes to complete the Department's Customer Satisfaction Survey at https://www.surveymonkey.com/r/MoDNRsurvey. Thank you.

From: Hentges, Valerie A <valerie_hentges@fws.gov>
Sent: Monday, May 18, 2020 5:34 PM
To: Hackler, Pam <pam.hackler@dnr.mo.gov>
Subject: Re: [EXTERNAL] FW: Labadie 316(a) Final Variance Request

Hi Pam,

In coordination with the Service's Fisheries staff, their sampling experience on the Missouri River guides them for the response that the Asian carp data is lower than what they would expect. Based on the habitat and/or size of the boards utilized as part of the Missouri Trawl sampling gear/method, the gear used for the Labadie study may not have been set up the same way as the Mississippi River study/data describes in the papers Ameren referenced. The Service's Fisheries staff does not use the "Missouri Trawl" method for their sampling due to more effective gear for their sampling. They also provided this example: benthic nets can vary in mesh size which will (or should) also vary the size of the boards used in the trawling sampling event, e.g., 30-inch boards can provide more effective fishing with a larger mesh 16-foot net and 36-inch boards are better for a 16-foot smaller mesh net depending on the target species. The size of the netting, paired with the size of the boards, and the depth and velocity will change how the sampling gear will contact the river bottom; therefore, the success of fishing for benthic species. Knowing both the average depth and habitat type of a project's trawling sampling efforts will help determine the likelihood of the various species captured.

I have requested reports or data from a couple of Missouri River projects based on pallid sturgeon studies in the recent years. I will send you further information in this regard based on the information provided in supporting reports once I receive them. I didn't want to delay my initial response any longer.

Hope all is well!
Valerie
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Valerie Hentges
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(573) 234-2132 ext. 173

From: Hackler, Pam <pam.hackler@dnr.mo.gov>
Sent: Monday, May 11, 2020 2:06 PM
To: Hentges, Valerie A <valerie_hentges@fws.gov>
Subject: RE: [EXTERNAL] FW: Labadie 316(a) Final Variance Request

Hello Valerie,

Regarding the highlighted sentence below, what would the expected proportions of Asian carp be in the river if the sampling was performed differently or with better gear? Is there a paper or other analysis we should be comparing this to?

Thanks,
Pam

Pam Hackler

Pam Hackler, Environmental Scientist
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We'd like your feedback on the service you received from the Missouri Department of Natural Resources. Please consider taking a few minutes to complete the Department's Customer Satisfaction Survey at https://www.surveymonkey.com/r/MoDNRsurvey. Thank you.

From: Hentges, Valerie A <valerie_hentges@fws.gov>
Sent: Wednesday, May 6, 2020 5:33 PM
To: Hackler, Pam <pam.hackler@dnr.mo.gov>; Meyers, Leasue <leasue.meyers@dnr.mo.gov>; Hoke, John <john.hoke@dnr.mo.gov>; Falls, Angela <Angela.Falls@dnr.mo.gov>; Kruse, Michael <michael.kruse@dnr.mo.gov>; Michaelson, Dave <dave.michaelson@dnr.mo.gov>; Campbell, Jennifer <Jennifer.Campbell@mdc.mo.gov>; 'dunn.john@epa.gov' <dunn.john@epa.gov>; Herrington, Karen <karen_herrington@fws.gov>; Voss, Robert <robert.voss@dnr.mo.gov>; Peters, Heather <heather.peters@dnr.mo.gov>; john_s_weber@fws.gov
Subject: Re: [EXTERNAL] FW: Labadie 316(a) Final Variance Request

Dear Ms. Hackler,

The U.S. Fish and Wildlife Service (Service) has reviewed the information provided in your April 9, 2020, emails regarding the Clean Water Act (CWA) Section 316(a) variance request for Ameren Missouri Labadie Energy Center's (LEC) permit in Franklin County, Missouri. Based on the information provided within the CWA Section 316(a) Final Demonstration and supplemental information, the Service offers the following comments pursuant to the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1544).

The Service is concerned about the impacts of the LEC operations on the federally endangered pallid sturgeon (*Scaphirhynchus albus*). Ameren Missouri's contractor, ASA, collected data for the biological monitoring program during 2017 and 2018. The Service continues to have concerns regarding the effectiveness of the sampling gear used by ASA to detect benthic species such as sturgeon, as described in our comments provided in March and April of 2020 on the draft CWA 316(a) variance request and the CWA 316(b) permit renewal for LEC. For example, LEC's response to agency preliminary comments of the draft 316(a) report stated, "Overall, Asian carp species accounted for only 2.2% of numerical abundance in the 2017-2019 sampling, and 16.3% of the biomass in the combined collection.". While the Service supports the removal of Asian carp from the analysis as part of the Representative Important Species (RIS) list, we would suggest that the relatively low abundance and biomass percentages accounted for by Asian carp reflect limitations in the effectiveness of the sampling gear utilized. Therefore, we recommend continued and enhanced benthic species monitoring to properly sample the ESA listed species in targeted areas of concern and habitat for pallid sturgeons.

As discussed in the Service's comment letter for the LEC CWA Section 316(b) permit renewal, the proper identification of shovelnose sturgeon (*Scaphirhynchus platorynchus*) is a concern for the Service. The shovelnose sturgeon is commonly mistaken for the pallid sturgeon and is often used as a surrogate for pallid sturgeon due to their use of similar habitat and life history characteristics. As in our previous comments to Ameren, the Service continues to recommend the use of genetic analysis in future studies allowing for confident determinations among the two sturgeon species.

The Service appreciates the thermal plume modeling effort conducted by Ameren. To enhance and refine this modeled information, the Service recommends that Ameren conduct an extensive thermal mapping study at LEC. A properly vetted and designed thermal mapping study could be sited in the discharge canal, plume, mixing zone, zone of passage, and thalweg during various seasons to capture temperature effects during all river conditions, especially during low flows and/or naturally high temperatures. In-river thermal mapping will show how the water is mixing stratigraphically, as well as from riverbank to riverbank, allowing a more accurate determination of the thermal effects to the river ecology, especially on the species of concern for federal and state agencies.

The Service appreciates the ability to review Ameren Missouri LEC studies and findings for their upcoming permit variance request under CWA Section 316(a). We hope these comments will assist the Ameren Missouri in their operations while also protecting the pallid sturgeon. If you have questions regarding our comments, please contact me at (573) 234-2132, ext. 173 or by email at Valerie_Hentges@fws.gov.

Sincerely,

Valerie

~*~*~*~*~*~*~*~*~*~*~*~*~*~*~*~*~*~

Valerie Hentges
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Missouri Ecological Services Field Office
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Columbia, Missouri 65203
(573) 234-2132 ext. 173

From: Hackler, Pam <pam.hackler@dnr.mo.gov>
Sent: Thursday, April 9, 2020 7:10 AM
To: Meyers, Leasue <leasue.meyers@dnr.mo.gov>; Hoke, John <john.hoke@dnr.mo.gov>; Falls, Angela <Angela.Falls@dnr.mo.gov>; Kruse, Michael <michael.kruse@dnr.mo.gov>; Michaelson, Dave <dave.michaelson@dnr.mo.gov>; Campbell, Jennifer <Jennifer.Campbell@mdc.mo.gov>; 'dunn.john@epa.gov' <dunn.john@epa.gov>; Hentges, Valerie A <valerie_hentges@fws.gov>; Herrington, Karen <karen_herrington@fws.gov>; robert.voss@dnr.mo.gov <robert.voss@dnr.mo.gov>; Peters, Heather <heather.peters@dnr.mo.gov>
Cc: Wieberg, Chris <chris.wieberg@dnr.mo.gov>; Abbott, Michael <michael.abbott@dnr.mo.gov>
Subject: [EXTERNAL] FW: Labadie 316(a) Final Variance Request

Good morning,

Email 1 of 2 for the final Labadie 316(a) variance request.

Thanks,
Pam

Pam Hackler

Pam Hackler, Environmental Scientist
Missouri Department of Natural Resources
Water Protection Program; Industrial Wastewater Unit; NPDES Permitting
Tel: 573-526-3386
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The Department's preferred method of videoconferencing is WebEx. My telework hours are variable. Please schedule any metings at your convienence.

We'd like your feedback on the service you received from the Missouri Department of Natural Resources. Please consider taking a few minutes to complete the Department's Customer Satisfaction Survey at https://www.surveymonkey.com/r/MoDNRsurvey. Thank you.

From: Kohlbusch, Meghan <MKohlbusch2@ameren.com>
Sent: Wednesday, April 8, 2020 5:41 PM
To: Wieberg, Chris <chris.wieberg@dnr.mo.gov>
Cc: Abbott, Michael <michael.abbott@dnr.mo.gov>; Johnson, Heather <Heather.Johnson@dnr.mo.gov>; Hackler, Pam <pam.hackler@dnr.mo.gov>; Giesmann, Craig J <CGiesmann@ameren.com>; Miraflores, Ramon B <RMiraflores@ameren.com>
Subject: Labadie 316(a) Final Variance Request

Good afternoon Mr. Wieberg,

I have attached the Labadie Energy Center 316(a) Final Variance Request and supporting documents.

Please review these documents at your convenience and let myself or Craig Giesmann know if there are any questions you may have.

I will be immediately sending 1 more email containing the Demonstration Report Appendices that exceeded the file size of this email. Also, as a reminder, I sent Pam a link to each separate Reference on 3/11/2020 and 3/12/2020 but would be more than glad to send the links again, if needed.

Thank you,

Meghan Kohlbusch
Career Environmental Scientist, Environmental Services
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C 314.309.8187
Ameren Missouri
One Ameren Plaza, 1901 Chouteau Avenue, MC602 : : St. Louis MO 63103

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