Onstot, Kristi [TOS]

From: Moss, Michael J. [DOT] <Michael.Moss@iowadot.us>
Sent: Thursday, July 18, 2024 3:37 PM
To: Newton, Victoria [TOS]
Cc: Schmitz, Nathan [DNR]
Subject: FW: Chapter 18 Lease 124-R Cargill, Inc
Attachments: 124-R Cargill - Lease - 2023 - Tenant + Director Signed.pdf

Ms. Newton,

This is to advise that I have reviewed and hereby recommend Executive Council approval of the attached Chapter 17 lease forwarded to me for review by Nathan Schmitz at the DNR's Land and Water Bureau.

By way of background, this a commercial lease which involves Mississippi River frontage at river mile 486.50 in Section 33, Township 78 North, Range 4 East of the 5th PM, Scott County, Iowa. The lessee, Cargill Incorporated, intends to use the property for bulk barge loading and unloading purposes, and it has agreed to pay an annual fee of $9,460.50 for this privilege. The term of the lease is for less than four (4) years. The DNR has determined that a lease subject to the conditions of this agreement will preserve the State's title and not adversely affect public use of the real estate.

If you or the Executive Council members need me to provide anything further, please do not hesitate to let me know. Thank you.

Sincerely,

Michael J. Moss

Michael J. Moss
Assistant Attorney General
Office of the Attorney General of Iowa
Transportation Division
800 Lincoln Way
Ames, Iowa 50010
Main: (515) 239-1521 | Direct: (515) 239-1524
Email: Michael.moss@iowadot.us | www.iowaattorneygeneral.gov

From: Schmitz, Nathan <nathan.schmitz@dnr.iowa.gov>
Sent: Wednesday, July 17, 2024 12:40 PM

To: Moss, Michael J. [DOT] <Michael.Moss@iowadot.us>; Kristi Onstot <kristi.onstot@tos.iowa.gov>
Subject: Chapter 18 Lease 124-R Cargill, Inc

Mike,

Please find attached the Chapter 18 Lease 124-R for Cargill, Inc. for your review. If you approve please forward the same to Ms. Onstot.

Thank you,

Nathan Schmitz
Right of Way Agent 2
Land and Waters Bureau
Department of Natural Resources
6200 Park Ave Ste 200 Des Moines IA 50321 *NEW ADDRESS*
515-371-2062
Nathan.schmitz@dnr.iowa.gov
www.iowadnr.gov

EXECUTIVE COUNCIL OF IOWA LEASE
[IOWA DEPARTMENT OF NATURAL RESOURCES]

The Executive Council of Iowa (Council), upon recommendation of the Iowa Department of Natural Resources (DNR), is authorized by Iowa Code Section 461A.25, to lease public real estate in accordance with a rental fee schedule established in 571 Iowa Administrative Code, Chapter 17.

Whereas Cargill, Incorporated (Tenant), a corporation organized under the laws of Delaware, 2655 Depot Street, Bettendorf, Iowa 52722, has made a proper application for a renewal lease of real estate described as state-owned land. The Tenant's request has been reviewed by the DNR and it has determined that a lease subject to the conditions of this agreement will preserve the state's title and not adversely affect public use of the real estate.

Therefore, the Council leases to the Tenant the following described premises (referred to in these lease terms as "Leased Premises"):

A portion of the bed of the Mississippi River approximately 595 feet in frontage and 265 feet in depth, at Mississippi River Mile 486.5, located in the NE 1/4 of Section 33, Township 78 North, Range 4 East of the 5th P.M., Scott County, Iowa. A map of the Leased Premises is attached as Exhibit A, which is incorporated by this reference. The Tenant, in consideration of the agreements below, leases from the State of Iowa the Leased Premises, according to the following conditions:

1. **TERM OF LEASE.** The term of this lease shall be from May 1, 2023 to December 31, 2027.

2. **RENTAL.** The DNR has determined the proposed use to be commercial. The Tenant shall pay rent annually for the term of this lease to the DNR at its offices at the 6200 Park Ave., Ste 200, Des Moines, Iowa 50321 or at such place as it may direct, as follows: The first annual lease payment shall be payable on the date this lease is executed with subsequent annual lease payments due before **December 31st** in each succeeding year for the term of the lease. The first annual payment shall be **$879.05 (Prorated amount of $6,307.00 (8/12*$9,460.50) less prior payment of $5,427.95) for 2023 and $9,460.50 for 2024**, with annual payments thereafter adjusted on a cumulative basis based on the percentage of the consumer price index for the Midwest Urban Region, published by the U.S. Department of Labor, Bureau of Labor Statistics, for the previous one-year period ending December 31st. If the IAC571-Chapter 17 Fee Schedule is amended during the term of this lease, the fee shall be adjusted to meet the revised schedule.

3. **TENANT'S USE OF THE PREMISES.** Consistent with the limitations described herein, the Tenant agrees during the term of this lease to use and occupy the leased premises only for bulk barge loading and unloading corn, soybeans, grains, DDGs, feed and food products through an enclosed conveyor system. Tenant may also stage barges of corn, soybeans, grains, DDGs, feed and food products, which are not loaded or unloaded at the Leased Premises, at the site dock. Other uses are prohibited unless authorized by a written amendment to this lease.

4. STRUCTURES.

a) Only those structures or fills existing on the Leased Premises at the time of execution of this lease are authorized under this lease. The following structures and fills exist on the premises at the time of execution of this lease:

i) Eight 30" diameter barge anchor piles with casing embedded 10 feet into the riverbed.

ii) Eight 24" diameter piles for two conveyor support towers embedded 10 feet into the river bed. Each tower is approximately 16' x 16'.

iii) Three anchored dock barges each 195' long x 35' wide. (20,475 Sq. Ft.)

iv) Overhead conveyor/walkway from bank line to middle of dock barge, measuring approximately 250' long by approximately 9' wide by approximately 55' high, with approximations being within one foot, plus or minus.

b) The Tenant shall not materially modify, alter or add to those structures or fills identified herein without first obtaining permission from the DNR, which may require the issuance of a Sovereign Lands construction permit pursuant to Iowa Code section 461A.4 and 571 IAC chapter 13 depending on the extent of such modification or addition. The Tenant also agrees to obtain all necessary permits from other governmental agencies prior to performing any construction on the Leased Premises and to comply with any zoning requirements that may apply to their shoreline operations.

c) If the structures described herein deteriorate beyond repair or are otherwise destroyed, regardless of cause, the Tenant must reconstruct, repair, or remove such structures, but only after consultation with and written approval by DNR, which may require the issuance of a Sovereign Lands construction permit pursuant to Iowa Code section 461A.4 and 571 IAC chapter 13 depending on the extent of such modification or addition.

d) General maintenance described in paragraph five (5) below does not constitute a material modification, alteration, or addition for purposes of subparagraphs b and c of this section. DNR specifically agrees that installation, maintenance, repair or replacement of fall protection and installation, maintenance, repair or replacement of winches to secure barges at the leased Premises do not constitute material modifications, alterations, or additions for purposes of subparagraph b and c of this section.

5. MAINTENANCE. The structure(s) described above shall be maintained by the Tenant to keep in good working order. The Tenant shall be responsible to make repairs and adjustments to such structures, if required, to avoid any harm or injury to the public**.**

6. **TITLE TO PREMISES.** The Tenant agrees that title of the state of Iowa to the Leased Premises will not be affected by Tenant's occupancy. Any accretion to the Tenant's land resulting from fills, jetties or other structures placed and kept on state-owned real property under the authority of an appropriate permit and this lease shall be the property of the state of Iowa and that the Tenant shall have no accretion rights thereto.

7. **DEPARTMENT'S USE OF THE PREMISES.** Representatives of the DNR may enter upon the Leased Premises for the purposes of viewing alteration thereof by the Tenant, to inspect compliance with the terms of this lease, or to perform any duties of the DNR.

8. **PUBLIC USE OF THE PREMISES.** This lease shall not be construed to give the Tenant exclusive use of the Leased Premises. The right to enter upon the Leased Premises for any lawful purpose is hereby specifically reserved to the public of the state of Iowa. However, this lease is not intended to deny the Tenant the right to exclude the public from using the Leased Premises, or portions thereof, in a manner that poses risk to the public health, safety or welfare by virtue of the Tenant's authorized use or that unreasonably interferes with the Tenant's authorized use.

9. **SURRENDER OF PREMISES AT END OF TERM.** At the expiration of the term of this lease and any renewal periods, the Tenant will yield possession of the Leased Premises to the DNR and will, within 90 days after the expiration of the term of this lease, remove all fill, equipment or structures and restore the affected area to an undisturbed condition.

10. **AMENDMENT, TRANSFER, ASSIGNMENT, AND SUBLEASE.** This lease may be amended only by written mutual consent of the parties. The Tenant shall not transfer or assign this lease and shall not sublet the Leased Premises or any part thereof except with prior written consent of the DNR.

11. **INDEMNIFICATION.** The Tenant agrees to jointly and severally indemnify and hold the State, its agencies, officials and employees harmless from all costs, expenses, losses, claims, damages, liabilities, settlements and judgments, including reasonable value of the time spent by the Attorney General's Office, and the costs and expenses and reasonable attorneys' fees of other counsel required to defend the State of Iowa or the DNR, related to or arising from its acts under this Lease. The Tenant shall be solely responsible and liable for any and all of its actions or inactions, as well of the actions or inactions of its subcontractors, employees, agents, licensees, and invitees, and results thereof, of any nature, which may occur within or upon the Leased Premises or in connection with this Lease.

12. **TERMINATION AND DEFAULT OF TENANT.** This lease shall terminate automatically, without notice, on the date specified in numbered Paragraph 1 above. However, the DNR may terminate this lease for material violation of any condition of this lease, including but not limited to any violation of those provisions contained in Paragraph 19 below. Notice of such termination by the DNR shall be given in writing, and the Tenant shall have 45 days after service thereof to remove themselves from the Leased Premises unless a longer period is specified in the notice. If the Tenant, after termination, fails to remove any structure or fill placed on state land under authority of a DNR permit or this lease, the DNR, with

assistance from the Attorney General, may bring an action for a court order compelling removal at the Tenant's expense.

13. NOTICES. All notices provided to be given, or which may be given, by either party to the other shall be deemed to have been fully given when made in writing and deposited in the United States mail, postage prepaid, addressed to the parties as provided above. The address to which the notices shall be mailed to either party may be changed by written notice given by either party to the other. Nothing in this paragraph shall preclude the giving of any notice by personal service.

14. CONSTRUCTION. Words and phrases in this document shall be construed as in the singular or plural number and as masculine, feminine or neuter gender according to the context.

15. RENEWAL. This lease may be renewed if it does not adversely affect a public interest. In the event renewal is desired, the Tenant agrees to apply for renewal of this lease at least 60 days prior to the expiration date.

16. SEVERABILITY. If any provision of this lease is determined by a court of competent jurisdiction to be invalid or unenforceable, such determination shall not affect the validity or enforceability of any other part or provision of this lease.

17. COMPLIANCE WITH LAWS. The Tenant shall comply with all applicable federal, state, and local laws, rules, ordinances, regulations and orders in its utilization of the Leased Premises.

18. CHOICE OF LAW AND FORUM. The parties agree this lease shall be construed solely in accordance with the laws of the State of Iowa, and the parties further agree and acknowledge in the event there are any court proceedings arising out of or in any manner related to this lease such proceedings shall be brought exclusively in the Iowa District Court in and for Polk County with respect to which the parties fully consent to that court's jurisdiction and waive any objections of any sort to such proceedings going forth in that forum. This provision shall not be construed as waiving any immunity to suit or liability including without limitation sovereign immunity in State or Federal Court, which may be available to the DNR or the State of Iowa.

19. ADDITIONAL PROVISIONS. In addition to the provisions above, the Tenant shall be responsible to meet the following DNR terms and conditions, which shall have priority over those provisions above in the event of a conflict between them.

a) Monitoring. Tenant shall comply with an approved mussel bed monitoring plan for Tenant's dock and other over water and in water structures (referred to in these lease

terms as the "Facility"), the construction and operation of which were the subject of Sovereign Lands construction permit No. SL10-064 and prior lease No. 114-N issued to the Tenant's predecessor. The purpose of this monitoring is to provide for adaptive management of the area, which is known to be a rich mussel bed containing both state and federally listed threatened and endangered species. To this end:

i) The Tenant shall secure the services of a qualified and experienced malacologist to conduct any surveys or oversee any mitigation plans described herein.

ii) The Tenant shall maintain the established control site, which has been previously identified by the mussel contractor and approved by the United State Fish and Wildlife Service (“USFWS”) and DNR.

iii) The Tenant shall conduct monitoring surveys in the area identified for such survey as part of the Sovereign Lands construction permit no. SL10-064 (referred to in these lease terms as the "Survey Area"). The Tenant has conducted a monitoring survey in 2023. Monitoring shall take place at 7-year intervals in subsequent years while operations persist at the site (e.g., 2030, 2037). In the event that this lease is renewed in 2027, monitoring will be required in 2030. Based on the results of the future monitoring surveys, the DNR, at its sole discretion, shall require the terms of the future lease to revert to a two-year survey rotation if the survey indicates a negative impact to the mussel population.

iv) The Tenant shall conduct the monitoring surveying using methods identical to those used for the preliminary or pre-construction mussel survey(s) performed for the Facility's construction (referred to in the lease provisions as "Initial Survey"), with the following exceptions: (1) relocated mussels have been sampled in 2023 to assess survival; (2) sites surveyed upstream of the deck barges portion of the Facility in the Initial Survey shall be re-sampled as fixed sites during subsequent surveys; (3) transects on the mussel bed shall be placed every 50 feet, in lieu of every 100 feet as was in the Initial Survey; and (4) an Identical number of samples shall be collected from the control site.

v) The Tenant shall submit five copies of all monitoring reports to DNR (with an Attention: Lease Program Manager) for its review and records by December 31 of each year in which the surveys occur. The DNR shall forward one copy of all reports to the regional USFWS office.

b) Mussel Decline. The Tenant shall take the following actions if mussel populations decline in the Leased Premises, as follows:

i) In the event of declines of the mussel population in the Survey Area, not including the control area, of greater than 20% over that in the control area, based on the 2023 survey, the Tenant shall conduct the monitoring surveys annually, notwithstanding the

schedule described in subparagraph 19(a)(iii) above.

ii) In the event of declines of the mussel population in the Survey area, not including the control area, of greater than 40% over that in the control area, based on the 2023 survey, the Tenant shall conduct annual monitoring as described in subparagraph i of this paragraph b and shall within 90 days after such survey report either: (1) demonstrate to DNR's satisfaction that the decline in mussel bed density has been caused by factors other than Tenant's Facility operations, in which case there shall be no adverse effect on the Lease; or (2) if the decline has been caused by the Tenant's Facility operations, as determined by the DNR, Tenant shall submit a plan to mitigate the decline based on the Habitat Equivalency Analysis, including without limitation restitution for lost animals, for DNR's approval and implementation of such approved plan. The DNR may approve said plan in its sole discretion and, in event that said plan is not approved, the DNR may terminate this lease immediately and/or seek all other remedies available to it. Any payments that may be required under any mitigation plan required herein shall be deposited into the State Fish and Game Protection Fund and spent by the State of Iowa consistent with its purposes.

iii) Records. Tenant shall maintain records of all traffic into and out of the Facility and amounts and types of corn, soybeans, or other grains loaded for a period of at least three years. The record shall include river stage and condition relative to traffic into and out of the Facility. This information shall be reported to the DNR (ATTN: Lease Program Manager) on an annual basis.

iv) USFWS Biological Opinion. The Tenant shall operate the Facility and otherwise comply with the requirements described in the USFWS' Biological Opinion dated April 27, 2010 (“BO”), which is attached and incorporated by this reference as such operation or use relates to Tenant's use of the Leased Premises. The parties to this agreement acknowledge that the USFWS may have separate authority to enforce such terms or may require additional requirements, with which the Tenant may be legally bound to comply, as part of an amendment to the BO or as a new biological opinion. The requirements and obligations of that BO shall have priority over those requirements and obligations in these lease terms should there be a conflict between them.

c) Use of the Leased Premises.

i) Tenant shall use only an enclosed conveyor system to minimize spillage of material authorized to be loaded and unloaded according to the terms of this lease during the loading/unloading process. If any spillage of grains, fuel, oil, or any other chemical occurs, the Tenant shall report such spillage to the DNR and USFWS immediately; shall conduct an immediate mussel survey if such spillage poses a sufficient threat to the health of the mussel bed, as reasonably determined by the DNR; and submit the report

of findings of such survey within 15 days of DNR determining the survey must be performed. Such survey shall conform to the requirements for monitoring surveys required under this lease as described in subparagraphs i, ii, iv, and v of paragraph 19(a) above.

ii) The area between a line extending parallel to Tenant's property up- and downstream of the deck barges and the Iowa shoreline (i.e., from the shore side dock face to the shoreline) shall be considered a mussel sanctuary and shall not be disturbed under any circumstances without the written approval of the DNR. Tenant shall conduct its activities in and around the Leased Premises to protect the sanctuary from harm.

iii) To ensure compliance with the terms of this lease, the Tenant shall utilize techniques and conduct operations in a manner to minimize disturbance to the mussel beds in and around the Leased Premises. To that end, the Tenant shall comply with the following requirements:

(1) Tow operators shall move product barges into and out of the loading facility in a manner that does not directly prop wash in the direction of the mussel bed, maneuvering near shore only with the minimum throttle needed and using river current to the extent possible.

(2) Product barges shall at all times be operated in a manner so that the barges will not contact the river bottom in the Leased Premises.

(3) The Tenant shall provide adequate supervision and training to its agents, employees, and subcontractors working in and around the Leased Premises. Specifically, the Tenant shall distribute information concerning the threatened and endangered mussel species known to be on the Leased Premises to all persons working in and around the Leased Premises, including but not limited to guidelines for avoiding spills, containing runoff from the shoreline, avoiding barge grounding, and avoiding unnecessary tow idling. The Tenant shall maintain a training log onsite and make it available to the DNR upon request.

(4) As stated in paragraph 19(c) above, comply with the requirements and obligations described in the BO, specifically and without limitation, the Conservation Measures outlined on Page 4 of the document.

iv) This lease is not to be construed to limit DNR’s legal authority to ensure compliance with the state’s environmental laws, nor does the lease limit the type of relief DNR may seek for violations of Iowa law.

20. ENTIRE AGREEMENT. This lease constitutes the entire agreement between DNR and the Tenant with respect to the use of the Leased Premises as described here, and the Tenant acknowledges that it is entering into the lease solely on the basis of the terms and

conditions herein contained and not in reliance upon any representation, statement, inducement, or promise, whether oral or written, not contained herein. This lease supersedes all prior contracts and agreements between DNR and the Tenant for the use of the Leased Premises.

TENANT:

DocuSigned by:
Jason Meyer
Jason A. Meyer, Vice President of Cargill Agricultural Supply Chain, N.A of Cargill Incorporated

STATE OF MINNESOTA, HENNEPIN COUNTY:
This instrument was acknowledged before me on July 10, 2024 by Jason A. Meyer, Vice President, Cargill Agricultural Supply Chain, N.A. of Cargill Incorporated,

DocuSigned by:
Natalie Pettit
NOTARY PUBLIC FOR THE STATE OF Minnesota

NATALIE STORM PETTIT
Notary Public
My Commission Expires 1/31/2027

IOWA DEPARTMENT OF NATURAL RESOURCES:

Recommended for approval by majority vote of the Iowa Natural Resource Commission at its meeting on November 9, 2023, as reflected by the minutes.

Kayla Lyon
Digitally signed by Kayla Lyon
Date: 2024.07.12 11:09:43 -05'00'
Kayla Lyon, Director

EXECUTIVE COUNCIL OF IOWA:

This lease is approved under the authority of a resolution adopted at an official meeting of the Executive Council of Iowa on _____, 2024, as reflected by the minutes.

Victoria Newton
Executive Secretary

Exhibit A
Chapter 18 Lease 124-R
Cargill Inc

Attachment A – Biological Opinion

Introduction

River Gulf Grain Company (RGG) is proposing to construct a grain handling facility on, and near, the right bank of the Mississippi River at River Mile 486.5. The project is required because the City of Davenport declined to renew RGG's lease for their existing facility on the Davenport riverfront at River Mile 483.3. The U.S. Army Corps of Engineers, Rock Island District (Corps) published a Public Notice (CEMVR-OD-P-2009-1317) dated November 12, 2009 for an application by RGG to construct a barge loading facility at Mississippi River Mile 486.5 right bank in Scott County, Iowa.

In conjunction with the proposed project, the applicant conducted a freshwater mussel survey to determine the presence of any State or Federally listed species in the project area. Results of the survey (Helms & Assoc. 2009) documented the presence of the federally listed Higgins eye pearlymussel (*Lampsilis higginsii*) in the project vicinity.

Summary of Findings

Species Covered in this Consultation

This Biological Opinion (BO) covers the Higgins eye. Other species potentially located in the project area (Table 1) are either not present or will not be adversely affected.

Table 1. Species evaluated and which the Service concurs with a "Not likely to adversely affect" determination.

Species & status	Present in Action Area?	Likely to be adversely affected?
Cumberlandia monodonta - candidate	no	no
Plethabysus cyphius – candidate	no	no
Haliaetus leucocephalus – Federally Protected	yes	no

Consultation History

The Rock Island Field Office (RIFO) began informal consultation with the Corps of Engineers in November 2009 following publication of Public Notice CEMVR-OD-P-2009-1317. Prior to that date, RIFO also provided technical assistance to RGG and its contractor Stanley Consultants, Inc. RIFO received the Biological Assessment (BA) for the permit on March 1, 2010 and responded by letter dated March 9, 2010 concurring with the Corps' request to initiate Formal Consultation.

Description of Project

Action Area-The project is located in Bettendorf, Scott County, Iowa on the right bank of the Mississippi River at river mile 486.5 in the NE ¼ of Section 33, Township 78N, and Range 4E. The action area consists of all RGG shore based facilities and water dependent structures for barge loading and unloading. The action area extends riverward

to the 9-foot navigation channel, and arbitrarily upstream and downstream from the facility for a distance of ¼ mile.

Proposed Facilities –A number of potential sites were evaluated before selecting property owned by Alter Barge Line, Inc. The BA describes Alternative 6 (BA Figure 3) as the recommended plan. The selected site is located in Bettendorf, Iowa on the Mississippi riverfront a short distance upstream of the Isle of Capri Casino at river mile 486.5 (BA Figure 1A). RGG intends to build the facility with the capability of handling 30% more volume than the existing facility at Davenport. The new facility will continue to handle grain and trans-load barges as is currently done at the Davenport site. Typically two barges per day will be loaded and it's expected that 175-250 barges will be loaded annually. It's anticipated that the facility will never load anything but grain. No liquid loading is planned for now or in the future.

The riverside facilities will include a string of three (3) permanently anchored "dock" barges, eight (8) barge anchor piles, and two (2) conveyor support structures. A small, 1,000 HP harbor boat will bring empty product (hopper) barges to the "dock", where they will be loaded with grain and taken away by the harbor boat.

The 1st and 3rd "dock" barges will be standard hopper barges but the middle barge will be a deck barge (See BA Figure 4). The deck barge will support a short conveyor and loading apparatus for discharging grain into the product barges. The deck barge will only "draft" about 18" but the taller hopper barges will likely be ballasted to draft 18"-24" deeper to "line up" the tops of the three dock barges. The dock barges will likely be removed each winter and taken downstream for maintenance. No grain will be loaded during extreme high water because the Mississippi River locks will be closed, but the anchoring system will be designed to allow the barges to remain even during a 500-year flood event.

The dock barges will be moored to a string of eight (8) 30" diameter pipe piles each approximately 42' long. The piles will be drilled 10' into the rock, river bottom and extend up to elevation 582.0. The piling will be set into the drilled holes and filled with concrete. Capture frames will be attached to the sides of the three barges at each piling to allow the barges to rise and fall with water level. A detail of a typical capture frame is shown on (BA Figure 5) and their location on (BA Figure 4) which also illustrates the middle deck barge at flat pool and at extreme high water.

A totally-enclosed conveyor will extend from the on-shore elevator to the middle deck barge as shown on BA Figures 1B, 2 and 3, and on the conveyor profile (BA Figure 6) The conveyor will also include a pedestrian walkway for operating and maintenance personnel. The height of the conveyor will exceed the minimum clearance of 16' over the levee by a considerable margin. Two (2) 4-legged conveyor supports will be located in the river where shown on BA Figures 1B, 2 and 3. A detail of the supports is included as BA Figure 7. Each of the four (4) legs will be 24" diameter pipe piles drilled 10' into the rock, installed in the same manner as the anchor piles and also filled with concrete.

There will be no dredging or filling required in the river. If the concrete-filled piling are considered fill, a total of 11.5 cubic yards of fill will be installed below the "ordinary high water" level for the eight (8) conveyor support piles and another 19.5 cubic yards for the eight (8) anchor piles.

Project Operation - The new facility will continue to handle grain and trans-load barges as is currently done at the Davenport site. Typically two barges per day will be loaded and it's expected that 175-250 barges will be loaded annually. RGG has stated that it does not intend to load any materials other than grain. No liquid loading is planned for now or in the future. This site and the landside facilities will be protected by a levee. The proposed site showing planned facilities on both the landside and riverside is shown on BA Figure 1B.

Conservation Measures – The following measures are proposed as part of the project construction and operation:

1. Mussels will be relocated from the footprint of all dock/conveyor pilings.
2. The three (3) "dock barges" will be anchored riverward (toward the navigation channel) of the mussel concentrations.
3. The "product barges" will operate riverward of the dock barges.
4. The conveyor over the river has been re-configured to move the supports out of the primary mussel concentration.
5. The dock barges will only draft 2-3'.
6. The product barges will be brought in and removed by a relatively small harbor boat at low throttle with minimal prop or wave wash.
7. Prop wash will not be directed toward the primary mussel concentration except during departure at low throttle. The current will provide the primary impetus during this maneuver.
8. No dredging is proposed during construction or for maintenance in the future.
9. Installation of the piling will be confined to the inside of the casing pipe and no spill-over or leakage into the water column is anticipated. The drill tailings will be removed from the inside of the casing and disposed of off-site.
10. The conveyor to the barges will be totally enclosed and grain spillage can only occur at the extreme load-out end of the conveyor and is expected to be minor.

Status of species

Background and Status -Higgins eye pearlymussel (*Lampsilis higginsii*) is the federally-listed species in or near the proposed action area that may be affected by the project. The Higgins eye was listed as an endangered species by the Service on June 14, 1976 (Federal Register, 41 FR 24064). According to the Higgins eye Pearlymussel Recovery Plan: First Revision (U.S. Fish and Wildlife Service (USFWS) 2004), Higgins eye was listed

as an endangered species because of: (1) former and ongoing direct harvest and incidental harm during commercial harvest of other mussel species, (2) alteration of the Upper Mississippi River (UMR) riverine environment by the Federal navigation dams, (3) channel dredging to create and maintain navigation channels and dredging for other projects, (4) other habitat impacts following dredging, such as sedimentation, smothering, reduction in glochidial host fish, and possibly by (5) disease and (6) competition by the Asian clam (*Corbicula fluminea*).

The historical range of Higgins eye is not known with certainty. Although nowhere abundant, it is believed to have been widely distributed, inhabiting the Mississippi River from just north of St. Louis, Missouri to Minneapolis-St. Paul, Minnesota (USFWS 2000a). It was also found in several UMR tributaries including the Ohio, Illinois, Sangamon, Iowa, Cedar, Wapsipinicon, Rock, Wisconsin, Black, Minnesota, and St. Croix Rivers (USFWS 2004). The range of Higgins eye has been reduced approximately 53 percent from its historic distribution to a 302-mile reach of the Mississippi River (Havlik 1980, Havlik 1987) and is now found only in the UMR upstream of Canton, Missouri, in the St. Croix River between Wisconsin and Minnesota, the Wisconsin River, and in the lower Rock River in Illinois (USFWS 2004).

Higgins eye occurs most frequently in medium to large rivers with current velocities of 0.49 to 1.51 ft/sec, in depths of one to six meters (m). Higgins eye appears to prefer water with dissolved oxygen greater than 5 ppm and calcium carbonate levels greater than 50 ppm. The species' distribution is significantly correlated with firm, coarse sand substrates (Hornbach et al. 1995). It is usually found in large, stable mussel beds with relatively high species and age diversity in main channel border or open, flowing side channel habitats. When present, it is typical for Higgins eye to comprise only a small percentage (often as low as 0.1%) of the mussel community.

The U.S. Fish and Wildlife Service (Service) has designated fourteen areas as being "essential habitat" for the Higgins eye (USFWS 2008). Essential habitat is believed to currently contain viable reproducing Higgins eye populations. These essential habitats and other sites that qualify as essential habitat are critical to the recovery of the species. Guidelines in the Higgins eye Recovery Plan recommend that EHAs have the following characteristics: 1) more than 15 other species of mussels present at densities greater than $.01/m^2$, 2) total density of native mussels is greater than $10/m^2$, 3) Higgins eye is present at densities greater than 0.25% of the native mussel community, or if zebra mussels density is less than $0.5/m^2$ if Higgins eye is less than 0.25% of the community.

Since 2000, the Service, the Corps, State agencies, and other partners have cooperated in a propagation program to reestablish reproducing Higgins eye populations throughout its historic range. This program resulted from the BO for the 9-foot Channel Navigation Project (USFWS 2000a). The BO concluded that commercial navigation traffic using the Corps of Engineers 9-foot Channel Navigation Project transported exotic zebra mussels into the UMR system which in turn jeopardized the continued existence of Higgins eye populations. Biologists are working to establish Higgins eye populations in locations

where they were historically found. If successful, it will likely be decades before there is any appreciably significant increase in Higgins eye populations.

The current range-wide population trend of Higgins eye is unknown but may be declining. A reported decline in UMR fingernail clams (*Musculium transversum*) may reflect a general decline in Upper Mississippi mussels (Wilson et al. 1995). The causes of the decline are unknown at present but fingernail clams are good leading indicators of environmental conditions. The conditions that caused this sensitive species to decline may also threaten Higgins eye populations. In 1993, Miller (1993) reported that populations of Higgins eye were stable because wherever it was found, it remained at approximately the same relative abundance since the early 1980's. Hornbach et al. 1995 stated that the recent invasion of the Mississippi River and probably subsequent invasion of the St. Croix River with zebra mussels has cast the survival of Higgins eye in doubt. With the continuing expansion of zebra mussels and the limited locations of Higgins eye populations within the UMR system, it is clear that the Higgins eye is under severe threat from the zebra mussel.

Status of the Species in Project Area – The Higgins eye has been documented at locations in the project vicinity. The most significant location is the Essential Habitat Area (EHA) for Higgins eye located on the Illinois shoreline in Sylvan Slough from RM 485.5 to 486.0 (FWS 2004). The Illinois Department of Natural Resources has also designated the Sylvan Slough as a sanctuary. Higgins eye has also been found in at least three other nearby locations: Campbell's Island side channel (RM 490.0 LB), along the Moline, Illinois shoreline (RM 486.0-488.2 LB), East Moline, Illinois shoreline RM 488.3-489.2, Hampton, Illinois shoreline (RM 491.0 - 493.0 LB). Helms and Associates (2003) conducted a survey just downstream (RM 486) of the current project location and collected thirteen species including Higgins eye. The mussel bed inventoried in that survey is almost certainly contiguous with the mussel bed located in the action area.

Previous Biological Opinions - In 2000, the Service issued its *Final Biological Opinion for the Operation and Maintenance of the 9-foot Navigation Channel on the Upper Mississippi River System* (USFWS 2000a). The Service concluded that the continued operation and maintenance of the 9-foot Navigation Channel Project on the UMR System would likely jeopardize the continued existence of the Higgins eye. To avoid jeopardy, the Corps agreed to develop a Higgins eye Relocation Action Plan and to conduct a reconnaissance study to control zebra mussels in the UMR.

Two other recent BOs in Mississippi River Pools 10 and 11 addressed impacts to Higgins eye. One BO addressed impacts to Higgins eye from construction of a Marina (RM 615.0) in Guttenberg, Iowa; the other BO addressed a marina in Harpers Slough (RM 645.0) Harper's Ferry, Iowa. Neither BO found that Higgins eye would be jeopardized by the proposed actions; however, they would result in incidental take.

The most recently completed BO concluded that a habitat restoration project planned for Capoli Slough in Mississippi River Pool 9 will have adverse effect on Higgins eye. However, that action will not jeopardize the continued existence of the species. The

Capoli Slough project will result in the incidental take of 254 Higgins eye. Of these 254, 217 will be harassed and an estimated 37 will be killed.

Environmental Baseline in project area

Prior to impoundment in the 1930's, Mississippi River Pool 15 was predominantly a rock rapids; a relatively uncommon habitat type on the UMR main stem. The rapids were "tamed" for commercial navigation by blasting a channel through bedrock and impoundment. Pool 15 receives significant runoff from adjacent urban neighborhoods and industrial sites. There are several hazardous waste sites and industrial wastewater discharges upstream of the proposed site (USEPA 2010). These sites historically or currently discharge or release a variety of hazardous substances into the Mississippi River including hydrocarbon chemicals, organic chemicals, and metals. Exposure to hazardous substances, at sufficient concentrations, can cause adverse effects in mussels (Keller 1993, and Naimo 1995). A human health fish consumption advisory was in effect for Pool 15 of the UMR between 1983 and 1999. The advisory was based on elevated concentrations of PCBs in fish tissues. Mussels may have also been exposed to the PCBs in the river sediments, surface water, or through the glochidia life stage while attached to contaminated fish.

The mussel bed affected by the proposed project was inventoried and described by Helms and Associates from July 23, 2009 to July 30, 2009 (Helms & Associates, 2009). The sampling area comprised a zone 1,000 foot long parallel to the shore and a distance of 250 feet toward the navigation channel. Approximately 1,290 individuals representing 23 species were recovered including; one (1) federally-endangered Higgins eye, eighteen (18) State-threatened butterfly, and one (1) State-endangered pistolgrip. Mussel data was collected by means of both timed searches and quantitative sampling. Quantitative sampling estimated an overall density of 15.6 mussels per square meter (+/- 5.36 at a 95% confidence interval). Densities tended to be greater at the downstream end of the sampling area. Substrate is dominated by bedrock overlain by varying depths of silt and sand which probably accounts for the patchy distribution of mussels.

The upstream and downstream limits of the bed were not determined in the Helms' survey. Based on other surveys that were recently performed, it is likely that mussels are present along much the Iowa shoreline in this river reach.

Effects of the Proposed Action

The Service's impact analysis for the proposed action will focus on how the survival and reproduction of the Higgins eye population could be affected in the action area. Table 2 identifies activities related to the proposed project that could potentially impact Higgins eye.

Table 2 – Matrix of Potential Impacts to Freshwater Mussels Affected by Construction and Operation of River Gulf Grain Terminal in Bettendorf, Iowa

Potential Stressor \ Affected Resource	Mussel bed/substrate	Adult mussel	Juvenile mussel	Glochidial production	Zebra mussel infestation	Water quality	Fish host availability	Mussel growth and metabolism
Construction								
1. Pile installation	X	X	X		X	X		X
2. conveyor	X							
3. shore development						X		
4. work boat/barge	X	X	X		X			
Terminal Operation & Maintenance								
1.barge loading					X			
2. spillage	X	X	X				X	X
3.Noise				X			X	
Navigation Traffic								
1. Turbulence	X	X	X		X	X	X	X
2. Abrasion	X	X	X					
3. Travel lanes	X	X	X	X				X

Construction Impacts – Construction related impacts could stem from shore based facility development and/or river dependent structures. Impacts to Higgins eye caused by construction of shore based facilities are likely limited to any storm runoff events that could carry sediments and other debris from the construction site to the river. These impacts can be avoided if silt curtains, retention ponds, or other common measures are used to retain sediments on site.

The highest potential for direct impacts to adult and juvenile Higgins eye mussels is the installation of 16 pilings into the river bottom. Eight 30" piles and eight 24" piles will be installed to support the conveyor and to anchor commodity barges. In calculating the potential impact zone, each piling was arbitrarily assigned a 3 meter diameter circle. This zone would account for all drilling, spillage, and other possible substrate disturbance caused by construction. For the 16 pilings this amounts to 7.0 square meters per piling, and a total impact zone of 113.0 square meters. Given an average density of 15.6 mussels per square meter (Helms 2009), the number of potentially affected mussels is 1,763. Where Higgins eye is present, it typically comprises less than 1% of the individuals. For this location, Helms (2009) calculated its occurrence at 0.1 % of the total mussels collected. At this density, two Higgins eye (0.1% of 1763 mussels) could be anticipated to occur in the piling foot print.

Prior to construction, mussels will be relocated from the footprint of the proposed pilings to a site approved by the Service and in consultation with the Iowa Department of Natural Resources (IDNR). The survival of relocated mussels is usually between 90-100% (Cope et al 2003). Conservatively, if 5% (88 individuals) of the 1,763 mussels estimated for relocation die, less than one individual Higgins eye would be killed.

Work boats will be required to move crane barges, drilling rigs, etc. around the piling construction zone. At flat pool (elevation 560.3) water depth is approximately 10.5 feet deep. The most significant impacts from boat operation are related to turbulence, sediment suspension, and shear forces. The most recent investigations regarding traffic effects on mussels were conducted by the US Army Corps of Engineers (USACOE 2003, 2000). The study sought to determine what levels of turbulence and sediment have a deleterious effect on mussel growth and reproduction. A laboratory study simulated turbulence and suspended sediment conditions that occur when a commercial tow passes near a native mussel bed. Three species of native mussels (*Amblema plicata, Quadrula pustulosa, and Plectomerus dombeyanus*) were exposed to different suspended sediment and turbulence regimes and measured for changes in filtration rate, respiration rate, nitrogen excretion, and tissue condition. These effects were only significant at intensities comparable to traffic levels much higher than that anticipated in the action area.

There is likely to be some dislodgement of mussels caused by boats maneuvering in the construction zone and some sediment resuspension. Since the impacts associated with boats used for construction will be short term, they are most likely negligible. Navigation effects related to daily operation of tows using the terminal are discussed in the following section.

Terminal Operation/Maintenance – A Corps study (USACE 2004) indicated that 2.2 tow events per day could result in: "… (1) a 3.98% decrease in total dry weight, (2) a 3.39% decrease in shell dry weight, (3) a 3.4% decrease in total dry weight, and (4) an 8.79% decrease in reproductive effort." There are a couple of key differences between the Corps' traffic analysis and the conditions at RGG. One difference is that tow boats servicing the RGG dock are likely to be maneuvering over mussels somewhat longer (hence prolonging mussel exposure to suspended sediment and turbulence), than tows assessed in the Corps' study. The length of time mussels are exposed to traffic effects could be somewhat longer at RGG than was modeled in the Corps' investigation. However, factors that will minimize adverse effects are: (1) smaller towboats (e.g. horsepower), hence less turbulence and sediment resuspension, and (2) substrates in the action area have a lower percentage of fine sediments (i.e. silt) and a significant amount of bedrock. The concentration of suspended sediments in the water column is the principle source of stress to filter feeding mussels. When compared to RGG, the Corps' model probably overestimates the amount of suspended sediment.

The most significant potential impact from boat operation in the action area is the dislodgement of mussels from the river bottom caused by towboat generated turbulence and abrasion between the barge hull and substrate. According to the BA, the average water depth is approximately 10.5 feet at flat pool (elevation 560.30). With a fully loaded barge (9 ft.), there would be a minimum 1.5 ft. of clearance between the barge hull and the river bottom. Clearance would be greater than 1.5 ft. the majority of time along the lower (downstream segment) 2/3 of the deck barge (See Figure 3 of BA). Along the upstream 1/3 of the deck barge, depth increases rapidly up to 14 – 15 ft.

Impacts to mussels channel ward of the deck barge are not likely. Although the Helms Survey (2009) did not sample the entire area between the proposed deck barge location and the navigation channel, the most channel ward samples indicate that mussel presence declines rapidly beyond 250 feet from shore. From the Helms Survey (2009), it appears the anchor pilings will be located along the limit of known mussel occurrence. The deck barges (approximately 40 ft. wide) will shift tow boat activity another 40 feet away from the known limit of mussel occurrence.

When tows are operating, dislodgement could occur from boats approaching and leaving the dock. Given the patchy nature of the substrate (bedrock, sand, silt) this effect will vary significantly. Mussels that are lying on the bedrock surface are almost certain to be dislodged and moved downstream. Although long term denial of bedrock habitat used by mussels is likely, this effect may not be very significant. During high river stages, any mussels lying on the bedrock surface (or in thin mud or sand lenses) are likely to be flushed downstream and replaced by mussels from upstream. Therefore, it is possible that a percentage of the mussels observed by Helms (2009) could have been transients.

Mussels that are located in crevices and cracks may not be affected, and comprise the resident portion of the population. Currently, there is minimal navigation traffic over the mussel bed where the loading will occur. Other recent surveys (Helms & Associates 2003, Ecological Specialists, 2007) indicate that the mussel bed in the action area extends upstream and downstream. Therefore, it is likely that any mussels immediately adjacent to the proposed loading dock/barge location could also be dislodged. Ongoing barge/tow activity will diminish long term mussel use of these areas as well as the dock footprint.

The proposed dock is located approximately 100 meters from the navigation channel. Tows approaching the dock will most likely approach from downstream. From the surveys provided, water depth varies around 11-12 feet for some distance downstream of the dock. Upstream however, depth increases rapidly up to 17 feet. Impacts from approaching barges is most likely to occur downstream of the dock. Depending upon river conditions, towboat size, barge loading, and pilot experience, the travel corridor (and resulting impact zone) from the navigation channel to the dock might be anywhere from 200 – 400 meters long. Based on a review of the other recent surveys upstream (Ecological Specialists, 2007) and downstream (Helms and Associates, 2003), there are most likely some mussels in or immediately adjacent to the travel lane.

Extrapolating from the Corps investigations (USACOE 2003, 2000), minimal adverse effects are likely to occur from turbulence/sediment resuspension. However, mussel dislodgement caused by increased water velocities generated by vessels and barges moving over the substrate is a threat. Because of the highly variable nature of the substrate and uncertain mussel densities there is a high degree of uncertainty in calculating the number of Higgins eye that may be located in the travel corridor. For this reason an incidental take of two individuals is estimated to occur from tow related impacts using the dock.

Impacts to Higgins eye Fish Hosts - Freshwater mussels require an intermediate host for part of their life cycle. Juvenile Higgins eye must attach themselves to the gills of walleye or sauger immediately after ejection from the female mussel. Any stressor which would cause walleye or sauger to avoid frequenting mussel beds would negatively affect Higgins eye reproduction. Recent studies (Gutreuter et al 2006) indicate that fish will avoid locations that have frequent navigation traffic. An unpublished report (Keevin, personal communication) indicates that fish will avoid an approaching tow, but will return to the area within 25 minutes. Based on this information, there will be a maximum period of approximately 12.5 minutes per day (0.5 tows per day increase) for which suitable host fish may be denied use of the mussel bed habitat. This minimal adverse effect will be limited to the traffic lanes used by the tows/barges approaching and leaving the RGG dock.

Operation and Maintenance Activities (dredging, spillage) - According to the BA, the conveyor /unloader will prevent all spillage and the need for periodic dredging. The water depth and exposed bedrock indicates that this location tends to maintain sediment movement along the river bottom and hence should be no need for periodic maintenance dredging. However, piling installation can alter flow and sediment movement through the area. The net effect is very difficult to predict. Increase flows could scour some mussels, but some sediment accumulation could promote mussel establishment in locations that are currently bare bedrock.

Indirect Effects - In the 1990's the exotic zebra mussel (*Dreissena polymorpha*) was accidentally introduced to the UMR by commercial barge traffic entering the Illinois River from Lake Michigan. Barges moving up the Mississippi River likely served as a source population for the introduction of zebra mussels to the UMR System. The resulting establishment of zebra mussels caused a significant decline in the abundance of native mussels at numerous locations along the UMR. At the end of their larval stage, zebra mussels prefer to attach themselves to solid substrates for the remainder of their life cycle. Unfortunately, this includes the shells of native mussels. Zebra mussels on native mussel shells frequently increase to such numbers that they impede the native mussel's ability to respire, filter food, and move; resulting in death and population declines for several species. The continued existence of the Higgins eye was found to be jeopardized by zebra mussels transported by commercial barge traffic (USFWS 2000a).

Zebra mussels are now well established throughout the UMR. In any given location zebra mussels can fluctuate widely from year to year. The Helms survey (2009) found very few zebra mussels in the action area. However, the zebra mussel population in a given location can fluctuate widely from year to year and is dependent upon multiple factors. Estimating the potential increase of zebra mussel infestation upon Higgins eye due to increased barge activity near the action area is nearly impossible. Given the highly variable nature of zebra mussel populations, and the small amount of barge traffic (of which only a portion are likely to have attached zebra mussels) the effect of increased zebra mussel infestation on Higgins eye will be negligible.

Cumulative Effects

Cumulative effects are effects of future State, local, or private actions, not involving Federal action that are reasonably certain to occur in the action area. Since the proposed action is a relocation of an ongoing activity, there is no anticipation of any additional effects.

Conclusion

After reviewing the current status of Higgins eye, the environmental baseline conditions for the action area, and the effects of the proposed action, it is the Service's biological opinion that the proposed action is not likely to jeopardize the continued existence of the species.

Incidental Take

Section 9 of the Act and Federal regulation pursuant to Section 4(d) of the Act prohibits the take of endangered and threatened species without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such activity. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, and sheltering. Incidental take is defined as take incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of Section 7(b)(4) and Section 7(o)(2), take incidental to and not an intended part of the agency action is not considered prohibited taking under the Act, provided such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary and must be undertaken by the Corps for the exemption in Section 7(o)(2) to apply. The Corps has a continuing duty to regulate the activity covered by this incidental take statement. If the Corps fails to assume and implement the terms and conditions, the protective coverage of Section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the Corps must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement (50 CFR, 402.14(I)(3)).

Level of Take

Incidental take will be difficult to detect because: (1) the exact location of individuals is not known, and (2) the time of "taking" cannot be anticipated or observed. Taking could occur from: (1) dislodgement, during construction, (2) stress from wheel wash of tows, (3) abrasion from barge/tow groundings on the river bottom, or (4) stress from relocation. The Service anticipates that the proposed action will result in the take of approximately

four individuals. Three will be harmed by relocation, barge traffic using the dock, and habitat denial from the piling footprint. One individual is likely to die from relocation. The Service has determined that this level of take is not likely to jeopardize the continued existence of Higgins eye.

Reasonable and Prudent Measures

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize the incidental take of Higgins eye:

1. All Higgins eye mussels found within a 3 meter diameter footprint of each mooring pile shall be relocated to a nearby mussel bed outside the action area. All other species of mussels brought to the surface should also be relocated. The relocation site shall be chosen after consultation with the Service and IDNR. Personnel conducting the relocation shall adhere to all handling precautions outlined in their Federal Fish and Wildlife Permit designed to minimize harm to Higgins eye.

Monitoring of the affected mussel bed is required to ensure the anticipated level of incidental take is not exceeded. A monitoring plan, approved by the Service and IDNR, shall be developed in consultation with the Corps and RGG. Monitoring shall begin immediately following construction.

Terms and Conditions

To be exempt from prohibitions of Section 9 of the Act, the applicant must comply with the following terms and conditions for implementation and reporting of the reasonable and prudent measures described above. These terms and conditions are non-discretionary.

1. A qualified/experienced malacologist must conduct the mussel relocation and monitoring. The Service will be provided the results of monitoring investigations within 60 days of each sampling event conclusion. The Service will be notified immediately of any construction or fleeting related accidents (e.g., spills) that impact the mussel bed. The monitoring report shall include copies (or summary) of dock activity and incidents (e.g. spill or grounding) potentially affecting the mussel bed.

2. The mussel monitoring contractor shall obtain all necessary permits from the Service and IDNR and comply with their conditions.

3. The applicant will distribute information concerning the Higgins eye to all persons working in the RGG terminal. This information should include guidelines for avoiding actions (e.g. spills, contaminant runoff from shoreline, barge grounding, unnecessary tow idling, etc.) which could impact the nearby mussel bed. The applicant will provide evidence that the all applicable workers/contractors understand the guidelines.

4. The Service will be notified immediately of any construction or fleeting related accidents (e.g. spills) that could impact the mussel bed. The monitoring report shall include an annual log, for incidental take tracking purposes, of barge activity (towboat description/vessel name, number of barges and draft, material delivered or removed, length of time at dock, river stage) using the dock and a documentation of any incidents (e.g. spill or grounding) potentially affecting the mussel bed.

Conservation Recommendations

1. In addition to the take of four Higgins eye mussels, several hundred individuals of other species are also likely to be killed or negatively affected. To offset this loss, IDNR has recommended RGG contribute resources toward the conservation and preservation of freshwater mussels. We support this recommendation.

Reinitiation and Closing Statement

The Service believes approximately four Higgins eye individuals will be incidentally taken as a result of the proposed action. The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the impact of incidental take that might otherwise result from the proposed action. If, during the course of the action, this level of incidental take is exceeded, such incidental take represents new information requiring reinitiation of consultation and review of the reasonable and prudent measures provided. The Federal agency must immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measures.

This concludes formal consultation on the action outlined in the request. As provided in 50 CFR 402.16, reinitiating formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded, (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion, (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion, or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

Literature Cited

Cawley, E.T. 1989. A survey of the Unionid mussel populations of the Sylvan Slough Mussel Sanctuary, Pool 15, Upper Mississippi River. Final Report. Research Project 3-427-R. Illinois Department of Conservation. Springfield, Illinois. 32 pp.

Cope, W.G., M.C. Hove, D.L. Waller, D.J. Hornbach, M.R. Bartsch, L.A. Cunningham, H.L. Dunn, and A.R. Kapuscinski. 2003. Evaluation of relocation of Unionid mussels to *in situ* refugia. Journal of Molluscan Studies 69:27-34.

Ecological Analysts, Inc. April 1981. "Survey of Freshwater Mussels (Pelecypoda: Unionacea) at Selected Sites in Pools 11 Through 24 of the Mississippi River."

Ecological Specialists. 2007. Unionid Survey Mississippi River Mile 487.7 to 488.0. Prepared for: Flint Hills Resources, LP Bettendorf Terminal Bettendorf, Iowa

Gutreuter, S., J.M. Vallaza, and B.C. Knights. 2006. Persistent disturbance by commercial navigation alters the relative abundance of channel-dwelling fishes in a large river. Canadian Journal of Fishery Aquatic Science. Vol 63: 2418-2433.

Havlik, M.E. 1980. The historic and present distribution of the endangered Naiad mollusk *Lampsilis higginsii* (Lea, 1857). Bulletin of the American Malacological Union for 1980:9-22.

Havlik, M.E. 1987. Naiad mollusks (Mollusca: Bivalvia: Native mussels) of the St. Croix River at seven proposed bridge/tunnel sites, Stillwater, Minnesota. Minnesota Department of Transportation, St. Paul, Minnesota.

Helms & Associates. 2009. "Mussel Survey for a Proposed Grain Handling facility located Mississippi River Pool 15 (River Mile 4865), Bettendorf, Iowa." Prepared for River/Gulf Grain, Bettendorf, Iowa.

Helms & Associates. 2003. Results of a second mussel survey at the Lady Luck/Isle of Capris Bettendorf site Mississippi River pool 15 near Bettendorf, Iowa. Prepared for Stanley Consultants, Inc. 14 pp. + app.

Hornbach, D.J., J.G. March, and T. Deneka. 1995. The potential factors influencing the distribution of freshwater mussel communities within the St. Croix and Upper Mississippi Rivers and the examination of factors influencing the distribution of *Quadrula fragosa* (Conrad) and *Lampsilis higginsii* (Lea). U.S. Fish and Wildlife Service, Ft. Snelling, Minnesota.

Keevin, T.M. et al., Avoidance of Commericial Navigation Traffic by Fishes in the Upper Mississippi River System. Unpublished manuscript. 13 pp.

Keller, A.E. 1993. Acute toxicity of several pesticides, organic compounds, and a wastewater effluent to the freshwater mussel, *Anodonta imbecilis, Ceriodaphnia dubia,* and *Pimephales promelas*. Bulletin of Environmental Contamination and Toxicology, 51:696-702

Miller, A. 1993. Qualitative versus quantitative sampling to evaluate population and community characteristics at a large-river mussel bed. The American Midland Naturalist 130:133-145.

Naimo, T.J. 1995. A review of the effects of heavy metals on freshwater mussels. Ecotoxicology, 4(6):1573-3017

Stanley Consultants Inc. 2010. Biological Assessment for Corps of Engineers Public Notice CEMVR-OD-P-2009-1317, River/Gulf Grain Company Grain Handling Facility Bettendorf, Scott County, Iowa. Prepared for US Army Corps of Engineers District Rock Island.

Stanley Consultants, Inc. 1993. Mussel survey, Sylvan Slough, Mississippi River, river miles 485.3-485.8. Final Report. 19 pp. + appendix.

U.S. Army Corps of Engineers. 2004. Integrated Feasibility Report and Programmatic Environmental Impact Statement for the UMR-IWW System Navigation Feasibility Study. 652 pp. + app.

U.S. Army Corps of Engineers. 2003. Ecological Risk Assessment of the Effects of the Incremental Increase of Commercial Navigation Traffic (Improvement Scenarios 2 and 3) on Freshwater Mussels in the Main Channel and Main Channel Borders. ENV 39. Prepared for the Army Corps of Engineers by The Cadmus Group, Inc. Authors Steven E. Bartell, Erin M. Miller, and Kym Rouse Campbell.

U.S. Army Corps of Engineers 2000. Physiological Effects on Freshwater Mussels (Family: Unionidae) of Intermittent Exposure to Physical Effects of Navigation Traffic. Environmental Report 31. 55pp.

U.S. Army Corps of Engineers 2000. Physiological Effects on Freshwater Mussels (Family: Unionidae) of Intermittent Exposure to Physical Effects of Navigation Traffic. Environmental Report 31. 55pp.

USEPA. 2010. ENVIROFACTS web page by the U.S. Enviornmental Protection Agency for zip code 52722. Accessed on February 24, 2010.

U.S. Fish and Wildlife Service. 2008. Higgins' eye (*Lampsilis higginsii*) Essential Habitat Areas 2008 Review and Addition of New EHAs. Twin Cities Ecological Services Field Office. Bloomington, MN 9 p.

U.S. Fish and Wildlife Service. 2004. Higgins' eye Pearlymussel (*Lampsilis higginsii*) Recovery Plan: First Revision. Ft. Snelling, Minnesota. 126 p.

U.S. Fish and Wildlife Service. 2000a. Final biological opinion for the operation and maintenance of the 9-foot navigation channel on the Upper Mississippi River System. U.S. Fish and Wildlife Service, Region 3, Fort Snelling, Minnesota.

U.S. Fish and Wildlife Service. 2000b. Natural resources inventory for the Upper Mississippi River: Coon Rapids, Minnesota to Cairo, Illinois. Prepared by the U.S. Geological Survey, Upper Midwest Environmental Science Center, LaCrosse, Wisconsin for the U.S. Fish and Wildlife Service, Rock Island, Illinois.

Wilson, D.M., T.J. Naimo, J.G. Wiener, R.V. Anderson, M.B. Sandheinrich, and R.E. Sparks. 1995. Declining populations of the fingernail clam *Musculium transversum* in the Upper Mississippi River. Hydrobiologia 304:209-220.

DocuSign

Certificate Of Completion

Envelope Id: 49E39B0369894AE9BD83AF534CDC0A2E
Status: Completed
Subject: Complete with Docusign: 124-R Cargill - Lease - 2023 - FOR SIGNATURE.pdf
Source Envelope:
Document Pages: 25
Signatures: 2
Certificate Pages: 5
Initials: 0
AutoNav: Enabled
EnvelopeId Stamping: Enabled
Time Zone: (UTC-08:00) Pacific Time (US & Canada)

Envelope Originator:
Natalie Pettit
PO Box 6034 Attn: 16905-50268752-905621
Fargo, ND 58108
Natalie_Pettit@cargill.com
IP Address: 161.69.90.14

Record Tracking

Status: Original
7/10/2024 7:54:48 AM
Holder: Natalie Pettit
Natalie_Pettit@cargill.com
Location: DocuSign

Signer Events	Signature	Timestamp
Jason Meyer Jason_Meyer@cargill.com Security Level: Notarized Signing (Notary: Natalie Pettit), Account Authentication (None)	DocuSigned by: Jason Meyer 65BF7700C16C4E7... Signature Adoption: Pre-selected Style Using IP Address: 161.69.90.14	Sent: 7/10/2024 7:56:59 AM Viewed: 7/10/2024 7:57:18 AM Signed: 7/10/2024 7:57:45 AM

Electronic Record and Signature Disclosure:
Accepted: 7/10/2024 7:57:18 AM
ID: ed06ae2d-c63d-4a93-90ca-6af4dc2ac4b1

In Person Signer Events	Signature	Timestamp

Editor Delivery Events	Status	Timestamp

Agent Delivery Events	Status	Timestamp

Intermediary Delivery Events	Status	Timestamp

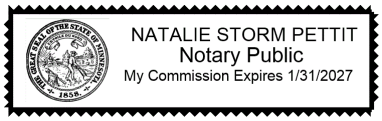
Certified Delivery Events	Status	Timestamp

Carbon Copy Events	Status	Timestamp
Jennifer Hance Jennifer_Hance@cargill.com Cargill Legal Security Level: Email, Account Authentication (None)	COPIED	Sent: 7/10/2024 7:56:58 AM Viewed: 7/10/2024 8:00:20 AM

Electronic Record and Signature Disclosure:
Not Offered via DocuSign

Witness Events	Signature	Timestamp

Notary Events	Signature	Timestamp

Notary Events	Signature	Timestamp
Notary Name: Natalie Pettit Notary Email: Natalie_Pettit@cargill.com Notary Address: Notary Signer: Jason Meyer Notary Designated By: Natalie Pettit Security Level: Email, Account Authentication (None)	 DocuSigned by: Natalie Pettit 1EF3ACC34E08421... Using IP Address: 161.69.90.14	Sent: 7/10/2024 7:56:59 AM Viewed: 7/10/2024 7:58:43 AM Signed: 7/10/2024 7:59:13 AM Freeform Signing

Electronic Record and Signature Disclosure:
Not Offered via DocuSign

Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	7/10/2024 7:56:59 AM
Certified Delivered	Security Checked	7/10/2024 7:58:43 AM
Signing Complete	Security Checked	7/10/2024 7:59:13 AM
Completed	Security Checked	7/10/2024 7:59:13 AM

Payment Events	Status	Timestamps

Electronic Record and Signature Disclosure

ELECTRONIC RECORD AND SIGNATURE DISCLOSURE

From time to time, Cargill (we, us or Company) may be required by law to provide to you certain written notices or disclosures. Described below are the terms and conditions for providing to you such notices and disclosures electronically through the DocuSign system. Please read the information below carefully and thoroughly, and if you can access this information electronically to your satisfaction and agree to this Electronic Record and Signature Disclosure (ERSD), please confirm your agreement by selecting the check-box next to 'I agree to use electronic records and signatures' before clicking 'CONTINUE' within the DocuSign system.

Getting paper copies

At any time, you may request from Company a paper copy of any record provided or made available electronically to you by us. You can download and print documents we send to you through the DocuSign system during and immediately after the signing session and, if you elect to create a DocuSign account, you may access the documents for a limited period of time (usually 30 days) after such documents are first sent to you. After such time, if you wish for Company to send you paper copies of any such documents you may request delivery by following the procedure described below.

Withdrawing your consent

If you decide to receive notices and disclosures from Company electronically, you may at any time change your mind and tell Company that thereafter you want to receive required notices and disclosures only in paper format. How you must inform Company of your decision to receive future notices and disclosure in paper format and withdraw your consent to receive notices and disclosures electronically is described below.

Consequences of changing your mind

If you elect to receive required notices and disclosures only in paper format, it will slow the speed at which we can complete certain steps in transactions with you and delivering services to you because we will need first to send the required notices or disclosures to you in paper format, and then wait until we receive back from you your acknowledgment of your receipt of such paper notices or disclosures. Further, you will no longer be able to use the DocuSign system to receive required notices and consents electronically from Company or to sign electronically documents from Company.

All notices and disclosures will be sent to you electronically

Unless you tell Company otherwise in accordance with the procedures described herein, we will provide electronically to you through the DocuSign system all required notices, disclosures, authorizations, acknowledgements, and other documents that are required to be provided or made available to you during the course of our relationship with you. To reduce the chance of you inadvertently not receiving any notice or disclosure, we prefer to provide all of the required notices and disclosures to you by the same method and to the same address that you have given Company. Thus, you can receive all the disclosures and notices electronically or in paper format through the paper mail delivery system. If you do not agree with this process, please let us know as described below. Please also see the paragraph immediately above that describes the consequences of your electing not to receive delivery of the notices and disclosures electronically from Company.

How to contact Company
You may contact Company to let us know of your changes as to how we may contact you electronically, to request paper copies of certain information from us, and to withdraw your prior consent to receive notices and disclosures electronically as follows:

To contact Company by email, send messages to: digital_signature@cargill.com

To advise Company of your new email address
To let Company know of a change in your email address where we should send notices and disclosures electronically to you, you must send an email message to Company at digital_signature@cargill.com and in the body of such request you must state: your previous email address, your new email address. We require no other information from you to change your email address.

If you created a DocuSign account, you may update it with your new email address through your account preferences.

To request paper copies from Company
To request delivery from Company of paper copies of the notices and disclosures previously provided by us to you electronically, you must send Company an email to digital_signature@cargill.com and in the body of such request you must state your email address, full name, mailing address, and telephone number. We will bill you for any fees at that time, if any.

To withdraw your consent with Company
To inform Company that you no longer wish to receive future notices and disclosures in electronic format you may:

- decline to sign a document from within your signing session, and on the subsequent page, select the check-box indicating you wish to withdraw your consent, or you may;
- send Company an email to digital_signature@cargill.com and in the body of such request you must state your email, full name, mailing address, and telephone number. We do not need any other information from you to withdraw consent.. The consequences of your withdrawing consent for online documents will be that transactions may take a longer time to process.

Required hardware and software
The minimum system requirements for using the DocuSign system may change over time. The current system requirements are found here: https://support.docusign.com/guides/signer-guide-signing-system-requirements.

Acknowledging your access and consent to receive and sign documents electronically
To confirm to Company that you can access this information electronically, which will be similar to other electronic notices and disclosures that we will provide to you, please confirm that you have read this ERSD, and (i) that you are able to print on paper or electronically save this ERSD for your future reference and access; or (ii) that you are able to email this ERSD to an email

address where you will be able to print on paper or save it for your future reference and access. Further, if you consent to receiving notices and disclosures exclusively in electronic format as described herein, then select the check-box next to ‘I agree to use electronic records and signatures’ before clicking ‘CONTINUE’ within the DocuSign system.

By selecting the check-box next to ‘I agree to use electronic records and signatures’, you confirm that:

- You can access and read this Electronic Record and Signature Disclosure; and
- You can print on paper this Electronic Record and Signature Disclosure, or save or send this Electronic Record and Disclosure to a location where you can print it, for future reference and access; and
- Until or unless you notify Company as described above, you consent to receive exclusively through electronic means all notices, disclosures, authorizations, acknowledgements, and other documents that are required to be provided or made available to you by Company during the course of your relationship with us.