CITY OF STERLING
OUTFALL DIFFUSER PROJECT

CONSERVATION PLAN FOR

STATE-LISTED THREATENED OR ENDANGERED MUSSELS

October 20, 2003

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CITY OF STERLING OUTFALL DIFFUSER PROJECT

CONSERVATION PLAN FOR

STATE-LISTED THREATENED OR ENDANGERED MUSSELS

1. INTRODUCTION

The City of Sterling (Applicant) proposes to construct a new wastewater outfall and multiport diffuser that will extend into the Rock River to comply with the State of Illinois's new ammonia standards. The proposed project will be located near Sterling, Illinois and will have an in-stream construction zone of approximately 25 feet by 250 feet.

The City of Sterling has been coordinating this project through its consultants, Willett, Hofmann & Associates, Inc of Dixon, Illinois. The existing wastewater treatment plant outfall is located at Site 3 (Figure 1). Two additional alternative sites were considered for the outfall diffuser project. Ecological Specialists, Inc. conducted a survey for mussels at all three locations in 2001 (Appendix A). Site 2 was found to have a less established mussel population. Although live state protected species were not found at Site 2, weathered shells of the State Threatened black sandshell (*Ligumia recta*) and spike (*Elliptio dilatata*) were found at Site 2. Sites 1 and 3 contained more diverse mussel populations including live specimens of the black sandshell. Additionally, weathered and/or fresh dead shells of the State Threatened purple wartyback (*Cyclonaias tuberculata*) were found at Sites 1 and 3.

Based on the results of the 2001 mussel surveys, Ecological Specialists Inc. indicated that construction at Site 2 would be least detrimental to the mussel populations in the Rock River. The Illinois Department of Natural Resources (IDNR) also recommended Site 2 in a May 9, 2003 letter to the Applicant (Appendix B). The IDNR also recommended a thorough resampling of Site 2 take place before construction and that live mussels found be relocated.

The Applicant has chosen to move the existing outfall to Site 2 for the proposed project as recommended by the IDNR and Ecological Specialists, Inc. Preconstruction surveys will be undertaken and live mussels encountered will be relocated to appropriate nearby sites. State protected mussels are not expected to be found at Site 2. However, the applicant is applying for an Incidental Take Permit (ITA) from the Illinois Department of Conservation for threatened and endangered mussels that may be encountered during the mussel relocation in order to avoid project delays. Consequently, the Applicant is submitting this Conservation Plan (pursuant to the Illinois Administrative Code, Title 17, Part 1080.10) in application for authorization for the incidental take of endangered or threatened mussels encountered during the preconstruction surveys and mussel relocation.

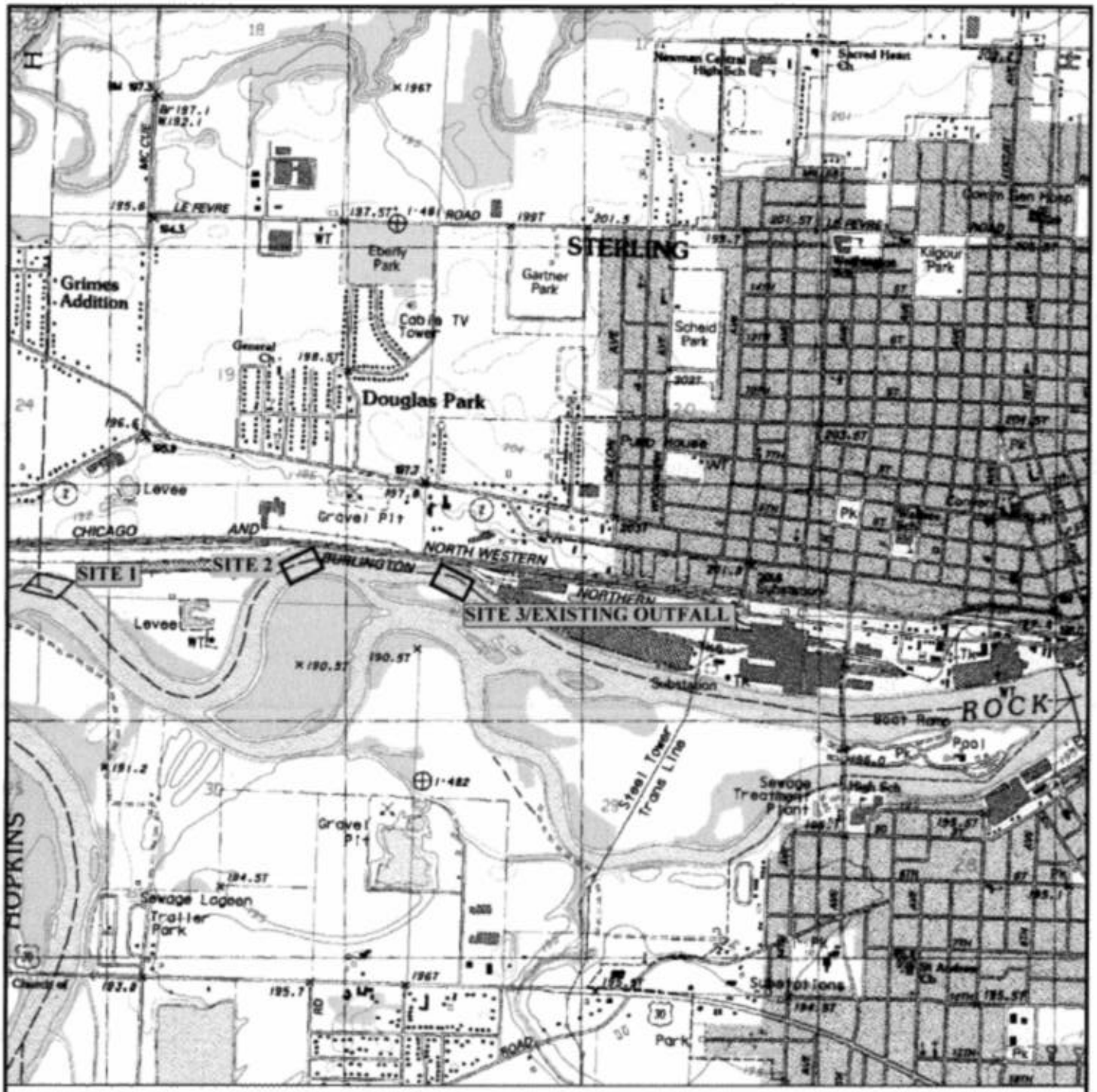


FIGURE 1
SAMPLING SITES FOR THE
ALTERNATIVE OUTFALL/DIFFUSER SITES
STERLING, ILLINOIS

2000' 0 2000'

SOURCE: UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY
STERLING, ILLINOIS QUADRANGLE

CADFILE: WHA STERLING TOPO

2. DESCRIPTION OF POTENTIAL IMPACT

Three state protected species of mussels were found in the Rock River during surveys at the three alternative project sites (Sites 1-3) (Appendix A). The State Threatened black sandshell was found live at Sites 1 and 3 (existing outfall). The black sandshell is known to inhabit medium to large rivers in gravel or mixed gravel/sand substrate. A weathered shell of the black sandshell was found at Site 2, the preferred project site. Weathered shells of the State Threatened spike were found at Sites 2 and 3. The spike mussel is known from small to large streams in Illinois. Fresh dead shells of the purple wartyback were found at Site 3; weathered shells of this species were found at site 1 and 3. The purple wartyback inhabits medium to large rivers with gravel and gravel/sand substrates. All three of these species are considered Threatened in the State of Illinois.

Project related effects to state-listed mussel species are expected to be minimal if any. Live protected species were not identified during mussel surveys at the preferred project location, Site 2. However, if the mitigation measures described in "Conservation Measures" are not employed, any state-listed species present could be impacted directly by construction on the river bottom (750 sq. feet) or by the resulting downstream water turbidity. During outfall and diffuser construction, construction equipment could cause mussels to be subjected to direct physical damage or mortality. Replacement of excavated materials during backfilling may cause direct harm to mussels if not relocated. Temporary changes in water quality that may occur from turbidity could affect mussels in close proximity to the construction area.

3. CONSERVATION MEASURES

The Illinois Department of Conservation has requested that a thorough sampling of the preferred site, Site 2, for mussels prior to construction. The IDNR also requested that all live mussels identified be relocated.

The Applicant's consultants will survey the construction area in the spring/summer of the construction year prior to the initiation of construction. The surveys will be conducted using standard methodology including wading in shallow water and Scuba in deeper water. All mussels (listed and non-listed species) found will be identified to species. The surveys will be conducted by a team of professionals from Huff & Huff and Ecological Specialists, Inc. The cost of this relocation has not yet been determined but will be funded by the Applicant. The Applicant has adequate funding to cover the mitigation measures proposed.

A set of relocation protocols will be developed for the site-specific conditions. The relocation team has extensive experience in developing protocols for successful relocations. Mussels in the construction area will be relocated to areas of suitable habitat. The relocation site will be located in the Rock River, relatively close to the project site and contain similar or better water quality and substrate. Site 3 is located upstream of the proposed project site and is known to contain a relatively good mussel population

including live specimens of the black sandshell. Site 3 will be considered for the relocation site.

Upon completion of the survey, the Applicant will prepare a report detailing the methods and results of the mussel relocations. This report will include details on the number and species of mussels relocated. The report will also identify if state-listed species are relocated. No long-term monitoring of the relocation sites is planned.

To minimize the extent and duration of project-related disturbance to the Rock River and any potential for indirect impacts on mussels or mussel habitat, the Applicant will implement sediment control and construction management measures during construction. These measures may include use of coffer damns, silt fencing or other sediment control measures to limit downstream sedimentation during construction. The Illinois Environmental Protection Agency (IEPA) has issued the project a 401 water quality certification for this project with conditions requiring strict sedimentation control measures be followed (Appendix C). The in-stream construction will take approximately 30 days and any potential short-term affects will be limited to this time period. All mussels will be relocated from the outfall mixing zone limiting long-term operational effects.

4. ALTERNATIVES ANALYSIS

The Applicant considered several alternative methods to meet the new ammonia standards. The proposed solution, a multiport diffuser, was accepted by the IEPA as the best alternative. The No Action alternative would consist of no changes to the existing City of Sterling wastewater outfall. This alternative would not allow the City to comply with existing state and federal ammonia standards.

The Applicant considered three alternatives for the site of the proposed project:

- Outfall and diffuser construction at Site 1
- Outfall and diffuser construction at Site 2
- Diffuser construction at Site 3 (existing outfall)

The Applicant has chosen Site 2 for project construction to avoid impacts to sensitive mussel populations identified during the preliminary studies. Site 2 has the least amount of suitable mussel habitat and did not contain live specimens of state-listed species. The IDNR and Ecological Specialists, Inc. identified Site 2 as the preferred site.

5. SPECIES SURVIVAL

Construction and operation of the proposed project will not reduce the likelihood of survival of state endangered or threatened mussels in Illinois. The project location (Site 2) was surveyed for mussels and live state-listed species were not found. Weathered shells of the state threatened spike and black sandshell were found at this location. If state-listed mussels are present at Site 2, they will be relocated to appropriate habitat

along with any other mussels found during the preconstruction survey. The use of strict sedimentation control measures will limit any short-term construction related impacts.

6. IMPLEMENTING AGREEMENT

The Applicant will contract with Huff & Huff and Ecological Specialists, Inc. to conduct the preconstruction survey and mussel relocations. The survey will occur in the spring/summer of 2004 prior to initiation of in-stream construction. Huff & Huff and Ecological Specialists Inc. are working together on several similar projects and have extensive experience with midwestern mussels. The field personnel from Ecological Specialists, Inc. hold authorization under Section 5/3.22 Chapter 20 and Section 5/20-100, Chapter 515 of the Illinois Complied Statutes to collect aquatic invertebrates (Illinois T&E species permit no. 03-05S, collecting permit A03.0312). The field personnel from Huff & Huff hold a permit under the same statutes (collecting permit number A03.2037).

The Applicant will provide a report detailing the results of the preconstruction mussel surveys and subsequent relocations to the IDNR, Division of Natural Heritage, within 45 days of the surveys. The surveys and relocations will occur prior to the initiation of construction activities when water and air temperatures are in compliance with acceptable protocols and standards for mussel relocations.

Ecological Specialists, Inc.
114 Algana Court • St. Peters, MO 63376
Phone (636)447-5355 • FAX (636)447-4101 • Email: Ecologists@aol.com

8 August, 2001

Mr. Bob Gasper
Willett, Hofmann & Associates, Inc.
809 East Second St.
Dixon, IL 61021-0367

Dear Mr. Gasper:

The qualitative mussel survey is completed as proposed. Each of the three possible construction locations for the outfall diffuser was sampled 25m upstream, 75m downstream, and 100m riverward of each proposed site (Figure 1). Sufficient samples were taken upstream, downstream, and at each proposed diffuser location to estimate if significant mussel populations exist at each site. For each sample a diver using SCUBA searched the bottom of the river for ten minutes. The collected live mussels and shells were then identified and recorded. Live mussels were aged and measured; shells were designated as fresh dead or weathered dead.

At Site 1 the substrate consisted of rocks and gravel embedded in silt and clay. A loose gravel bar with shifty sand characterized the mid channel substrate. The flow and depth (>1.5m) increased approaching the channel. At Site 2 the depth was 0.5 to 1.0m deep within 25m of the bank and increased to 1.2 to 1.8m from 25 to 100m from the bank. The substrate was mostly cobble and boulder. The depth at Site 3 was 0.3 to 1m. within 25m and 1 to 1.2m from 25 to 100m from the bank. The substrate at Site 3 was mostly gravel and some sand.

A total of 138 live mussels were collected during the survey (Table 1). Sixty-three (63) were from Site 1 (Table 2), 9 were from Site 2 (Table 3), and 66 were from Site 3 (Table 4). Of the live mussels, 15 different species of unionids were collected (Table 5). One of the species collected live, *Ligumia recta*, is an Illinois State threatened species. Four live specimens of *L. recta* were collected, three at Site 1 and

AUG 13 2001

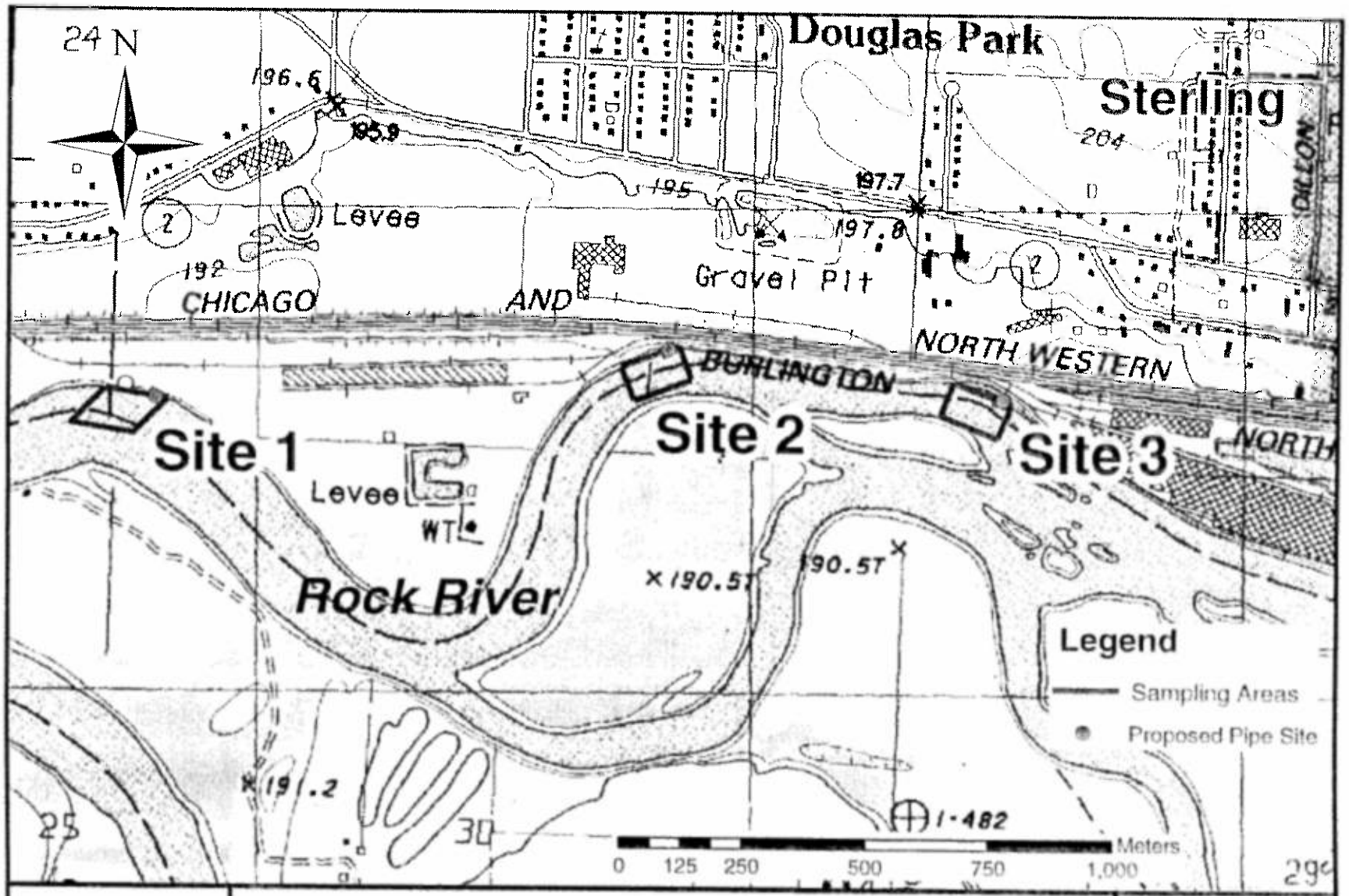
one at Site 3. The majority of live mussels were found within 25m of the bank. Two other state threatened species (*Elliptio dilatata and Cyclonaias tuberculata*) were collected as shells.

Considerably more live unionids were collected at Sites 1 and 3 compared to Site 2. However, the low numbers of live unionids collected at Site 2 may be due to adverse sampling conditions. At Site 2 the depth was greater and flow was higher towards the channel. Sampling was more difficult and therefore the samples collected at that site may not be representative of the population. Nevertheless, it is likely that the unionid population at Site 2 is less established considering the high flow. Construction at Site 1 or Site 3 may adversely affect the established mussel populations. According to the data collected, construction at Site 2 would be the least detrimental to the mussel fauna of the Rock River. If Site 2 is chosen as the construction location, however, a thorough sampling of the area should be conducted and live animals should be relocated to suitable habitat away from the diffuser.

If you have any questions or require further information, please feel free to contact me at 636-447-5355 or ebelt@ecologicalspecialists.com.
It was a pleasure working with you and we hope we can have the opportunity to do so again in the future. An invoice is included with this letter.

Sincerely,

Eric J. Belt



ECOLOGICAL SPECIALISTS, INC.

Figure 1. Sampling sites for each of the three proposed construction areas, Rock River, IL. July 2001.

ESI

Table 1. Live and fresh dead unionids collected at the three proposed pipe construction sites in the Rock River, IL, July 2001.

	Approximate distance from right descending bank (m)	
Sample Location	≤ 25	≥ 50
Site 1		
Upstream	2/0[1]	14/1
Proposed Pipe	9/3	0/0
Downstream	33/2	5/0
Site 2		
Upstream	0/0	0/0
Proposed Pipe	1/0	0/0
Downstream	8/0	0/0
Site 3		
Upstream	0/16	15/6
Proposed Pipe	14/23	9/2
Downstream	8/16	20/18

[1]Number live/ Number fresh dead

Table 2. Unionid species collected at Site 1, Rock River, IL; July 2001.

Species	Live	Fresh Dead	Weathered Dead	Age structure (yr)				Length structure (mm)			
				n	mean	min.	max.	n	mean	min.	max.
Actinonais ligamentina	1		1	1	8.0	8	8	1	104.0	104	104
Amblema p. plicata	1			1	14.0	14	14	1	133.0	133	133
Cyclonaias tuberculata [1]			1								
Lampsilis cardium	6	1		6	9.2	5	13	6	119.2	86	134
Lasmigona c. complanata	5		1	5	13.8	13	15	5	153.2	140	165
Leptodea fragilis	5	1	1	5	6.4	5	7	5	95.0	79	102
Ligumia recta [1]	3		1	3	16.3	16	17	3	161.7	155	171
Obliquaria reflexa	6			5	9.4	6	12	6	54.5	50	61
Potamilus alatus	4			4	11.3	9	14	4	134.5	115	158
Pyganodon grandis			1								
Quadrula nodulata	1			1	12.0	12	12	1	63.0	63	63
Quadrula p. pustulosa	14	1	1	14	10.3	5	13	14	64.6	41	79
Quadrula quadrula	5			5	11.6	9	15	5	86.2	77	110
Truncilla truncata	12	2		12	7.3	3	12	12	51.8	36	63
Total	63	5	7	62	10.0	3	17				

Total no. of species = 14
Total no. of live species = 12

[1] Illinois Threatened Species

Table 3. Unionid species collected at Site 2, Rock River, IL; July 2001.

Species	Live	Fresh Dead	Weathered Dead	Age structure (yr) n	Age structure (yr) mean	Age structure (yr) min.	Age structure (yr) max.	Length structure (mm) n	Length structure (mm) mean	Length structure (mm) min.	Length structure (mm) max.
Actinonais ligamentina			2								
Amblema p. plicata	1			1	15.0	15	15	1	130.0	130	130
Elliptio dilatata [1]			1								
Lampsilis cardium	1			1	10.0	10	10	1	120.0	120	120
Lampsilis siliquoidea	1		1	1	10.0	10	10	1	97.0	97	97
Leptodea fragilis			1								
Ligumia recta [1]			1								
Pleurobema coccineum			1								
Potamilus alatus	3			3	13.7	12	16	3	141.3	121	152
Quadrula p. pustulosa	1		5	1	10.0	10	10	1	68.0	68	68
Quadrula quadrula	1		1	1	9.0	9	9	1	90.0	90	90
Strophitus undulatus		1									
Truncilla truncata	1		1	1	4.0	4	4	1	55.0	55	55
Total	9	1	14	9	11.0	4	16				

Total no. of species = 13
Total no. of live species = 7

[1] Illinois Threatened Species

Table 4. Unionid species collected at Site 3, Rock River, IL; July 2001.

Species	Live	Fresh Dead	Weathered Dead	Age structure (yr) n	Age structure (yr) mean	Age structure (yr) min.	Age structure (yr) max.	Length structure (mm) n	Length structure (mm) mean	Length structure (mm) min.	Length structure (mm) max.
Actinonais ligamentina			3								
Amblema p. plicata		6									
Cyclonaias tuberculata [1]		1	2								
Elliptio dilatata [1]			1								
Fusconaia flava			1								
Lampsilis cardium		1	2								
Lasmigona c. complanata	15	1		6	13.2	10	15	15	150.4	116	175
Lasmigona costata			1								
Leptodea fragilis	2	18	2					2	112.0	108	116
Ligumia recta [1]	1	6						1	150.0	150	150
Obliquaria reflexa	2	2		1	6.0	6	6	2	52.5	51	54
Obovaria olivaria	1		1					1	89.0	89	89
Potamilus alatus	8	1	1	5	12.6	11	14	8	143.4	126	169
Pyganodon grandis	1	1		1	13.0	13	13	1	148.0	148	148
Quadrula metanevra		1									
Quadrula p. pustulosa	16	21	2	2	8.5	7	10	16	63.3	54	72
Quadrula quadrula	14	14	1	1	8.0	8	8	14	79.5	6	112
Strophitus undulatus			1								
Tritogonia verrucosa		2	1								
Truncilla truncata	6	6	1	1	7.0	7	7	6	52.2	44	61
Total	66	81	20	17	11.4	6	15				

Total no. of species = 20
Total no. of live species = 10

[1] Illinois Threatened Species

Table 5. Unionid species collected at all sites combined, Rock River, IL; July 2001.

Species	Live	Fresh Dead	Weathered Dead	Age structure (yr) n	Age structure (yr) mean	Age structure (yr) min.	Age structure (yr) max.	Length structure (mm) n	Length structure (mm) mean	Length structure (mm) min.	Length structure (mm) max.
Actinonais ligamentina	1		6	1	8.0	8	8	1	104.0	104	104
Amblema p. plicata	2	6		2	14.5	14	15	2	131.5	130	133
Cyclonaias tuberculata [1]		1	3								
Elliptio dilatata [1]			2								
Fusconaia flava			1								
Lampsilis cardium	7	2	2	7	9.3	5	13	7	119.3	86	134
Lampsilis siliquoidea	1		1	1	10.0	10	10	1	97.0	97	97
Lasmigona c. complanata	20	1	1	11	13.5	10	15	20	151.1	116	175
Lasmigona costata			1								
Leptodea fragilis	7	19	4	5	6.4	5	7	7	99.9	79	116
Ligumia recta [1]	4	6	2	3	16.3	16	17	4	158.8	150	171
Obliquaria reflexa	8	2		6	8.8	6	12	8	54.0	50	61
Obovaria olivaria	1		1					1	89.0	89	89
Pleurobema coccineum			1								
Potamilus alatus	15	1	1	12	12.4	9	16	15	140.6	115	169
Pyganodon grandis	1	1	1	1	13.0	13	13	1	148.0	148	148
Quadrula metanevra		1									
Quadrula nodulata	1			1	12.0	12	12	1	63.0	63	63
Quadrula p. pustulosa	31	22	8	17	10.1	5	13	31	64.1	41	79
Quadrula quadrula	20	14	2	7	10.7	8	15	20	81.7	6	112
Strophitus undulatus		1	1								
Tritogonia verrucosa		2	1								
Truncilla truncata	19	8	2	14	7.1	3	12	19	52.1	36	63
Total	138	87	41	88	10.4	3	17				

Total no. of species = 23
Total no. of live species = 15

[1] Illinois Threatened Species

Illinois Department of
Natural Resources
One Natural Resources Way • Springfield, Illinois 62702-1271
http://dnr.state.il.us

Rod R. Blagojevich, Governor
Joel Brunsvold, Director

Consultation Process
Protective Restrictions or Agreements

IDNR Project Code: 0301369

Program Manager Michael R. Branham **Date** 5-9-03
OREP/Division of Resource Review and Coordination

A review of the Natural Heritage Database indicates the presence of Threatened or Endangered Species, Illinois Natural Area Inventory Sites, or Nature Preserves within the vicinity of the project. In accordance with 17 IL Adm. Code Part 1075, "the proposed action shall not commence until the completion of the consultation process." Please indicate by letter your agreement or disagreement to the conditions mentioned below to facilitate the continuance of the Consultation Process. If you have any questions, please do not hesitate to contact Michael R. Branham at (217) 785-5500.

This project is in the vicinity of occcurences of listed mussels. A mussel survey, conducted by Ecological Specialists, investigated three potential locations for a proposed high-rate diffuser to improve mixing. Fifteen live species of mussels were collected as a result of the survey. The Black Sandshell (*Ligumia recta*) was one of the live species collected and is listed as Threatened in Illinois. Although not currently identified as a Natural Area, due to the high mussel diversity found as a result of this survey, this reach of the Rock River would qualify for listing as a Natural Area. The potential for adverse impacts to listed species appears to be lowest at Site 2. Therefore, the Department recommends Site 2 for the construction of the high-rate diffuser. Ecological Specialist recommends that if Site 2 is selected, a thorough sampling of the Site 2 area should be conducted, and that live mussels collected should be relocated. The Department concurs with this recommendation. Non-listed mussels found as a result of the sampling should be moved to suitable habitat away from the diffuser. **An incidental take authorization (ITA), from the Department, is required to move listed mussel species.** The applicant may wish to consider seeking an ITA for all listed mussels prior to conducting the mussel survey. An approved ITA would allow any listed mussel species to be moved to suitable habitat away from the diffuser, and thus avoid unnecessary project delays.

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ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276, 217-782-3397
JAMES R. THOMPSON CENTER, 100 WEST RANDOLPH, SUITE 11-300, CHICAGO, IL 60601, 312-814-6026

ROD R. BLAGOJEVICH, GOVERNOR RENEE CIPRIANO, DIRECTOR

217/782-3362

AUG 1 2 2003

Rock Island District
Corps of Engineers
Clock Tower Building
P.O. Box 2004
Rock Island, Illinois 61204-2004

RE: City of Sterling (Whiteside County)
Construct multiport concrete encased diffuser - Rock River
Log # C-1129-02 [CoE appl. # 436450]

Gentlemen:

This Agency received a request on October 2, 2002 from the City of Sterling requesting necessary comments concerning the constructon of a multiport concrete encased diffuser. We offer the following comments.

Based on the information included in this submittal, it is our engineering judgment that the proposed project may be completed without causing water pollution as defined in the Illinois Environmental Protection Act, provided the project is carefully planned and supervised.

These comments are directed at the effect on water quality of the construction procedures involved in the above described project and are not an approval of any discharge resulting from the completed facility, nor an approval of the design of the facility. These comments do not supplant any permit responsibilities of the applicant toward the Agency.

This Agency hereby issues certification under Section 401 of the Clean Water Act (PL 95-217), subject to the applicant's compliance with the following conditions:

1. The applicant shall not cause:

   a. violation of applicable water quality standards of the Illinois Pollution Control Board, Title 35, Subtitle C: Water Pollution Rules and Regulation;

   b. water pollution defined and prohibited by the Illinois Environmental Protection Act; or

   c. interference with water use practices near public recreation areas or water supply intakes.

2. The applicant shall provide adequate planning and supervision during the project construction period for implementing construction methods, processes and cleanup procedures necessary to prevent water pollution and control erosion.

3. Any spoil material excavated, dredged or otherwise produced must not be returned to the waterway but must be deposited in a self-contained area in compliance with all state statutes, regulations and permit requirements with no discharge to waters of the State unless a permit has been issued by this Agency. Any backfilling must be done with clean material and placed in a manner to prevent violation of applicable water quality standards.

(iii) Discharges of dredged or fill material, including excavation, into all waters of the US for activities associated with the restoration of upland areas damaged by a storm, flood, or other discrete event, including the construction, placement, or installation of upland protection structures and minor dredging to remove obstructions in a water of the US. (Uplands lost as a result of a storm, flood, or other discrete event can be replaced without a Section 404 permit provided the uplands are restored to their original pre-event location. This NWP is for the activities in waters of the US associated with the replacement of the uplands.) The permittee must notify the District Engineer, in accordance with General Condition 13, within 12-months of the date of the damage and the work must commence, or be under contract to commence, within two years of the date of the damage. The permittee should provide evidence, such as a recent topographic survey or photographs, to justify the extent of the proposed restoration. The restoration of the damaged areas cannot exceed the contours, or ordinary high water mark, that existed before the damage. The District Engineer retains the right to determine the extent of the pre-existing conditions and the extent of any restoration work authorized by this permit. Minor dredging to remove obstructions from the adjacent waterbody is limited to 50 cubic yards below the plane of the ordinary high water mark, and is limited to the amount necessary to restore the pre-existing bottom contours of the waterbody. The dredging may not be done primarily to obtain fill for any restoration activities. The discharge of dredged or fill material and all related work needed to restore the upland must be part of a single and complete project. This permit cannot be used in conjunction with NWP 18 or NWP 19 to restore damaged upland areas. This permit cannot be used to reclaim historic lands lost, over an extended period, to normal erosion processes.

This permit does not authorize maintenance dredging for the primary purpose of navigation and beach restoration. This permit does not authorize new stream channelization or stream relocation projects. Any work authorized by this permit must not cause more than minimal degradation of water quality, more than minimal changes to the flow characteristics of the stream, or increase flooding (See General Conditions 9 and 21). (Sections 10 and 404)

Note: This NWP authorizes the repair, rehabilitation, or replacement of any previously authorized structure or fill that does not qualify for the Section 404(f) exemption for maintenance.

4. Fish and Wildlife Harvesting, Enhancement, and Attraction Devices and Activities. Fish and wildlife harvesting devices and activities such as pound nets, crab traps, crab dredging, eel pots, lobster traps, duck blinds, clam and oyster digging; and small fish attraction devices such as open water fish concentrators (sea kites, etc.). This NWP authorizes shellfish seeding provided this activity does not occur in wetlands or sites that support submerged aquatic vegetation (including sites where submerged aquatic vegetation is documented to exist, but may not be present in a given year.). This NWP does not authorize artificial reefs or impoundments and semi-impoundments of waters of the US for the culture or holding of motile species such as lobster or the use of covered oyster trays or clam racks. (Sections 10 and 404)

5. Scientific Measurement Devices. Devices, whose purpose is to measure and record scientific data such as staff gages, tide gages, water recording devices, water quality testing and improvement devices and similar structures. Small weirs and flumes constructed primarily to record water quantity and velocity are also authorized provided the discharge is limited to 25 cubic yards and further for discharges of 10 to 25 cubic yards provided the permittee notifies the District Engineer in accordance with the "Notification" General Condition. (Sections 10 and 404)

6. Survey Activities. Survey activities including core sampling, seismic exploratory operations, plugging of seismic shot holes and other exploratory-type bore holes, soil survey, sampling, and historic resources surveys. Discharges and structures associated with the recovery of historic resources are not authorized by this NWP. Drilling and the discharge of excavated material from test wells for oil and gas exploration is not authorized by this NWP; the plugging of such wells is authorized. Fill placed for roads, pads and other similar activities is not authorized by this NWP. The NWP does not authorize any permanent structures. The discharge of drilling mud and cuttings may require a permit under section 402 of the CWA. (Sections 10 and 404)

7. Outfall Structures and Maintenance. Activities related to:

(i) Construction of outfall structures and associated intake structures where the effluent from the outfall is authorized, conditionally authorized, or specifically exempted, or are otherwise in compliance with regulations issued under the National Pollutant Discharge Elimination System Program (Section 402 of the CWA), and

(ii) Maintenance excavation, including dredging, to remove accumulated sediments blocking or restricting outfall and intake structures, accumulated sediments from small impoundments associated with outfall and intake structures, and accumulated sediments from canals associated with outfall and intake structures, provided that the activity meets all of the following criteria:

a. The permittee notifies the District Engineer in accordance with General Condition 13;

b. The amount of excavated or dredged material must be the minimum necessary to restore the outfalls, intakes, small impoundments, and canals to original design capacities and design configurations (i.e., depth and width);

c. The excavated or dredged material is deposited and retained at an upland site, unless otherwise approved by the District Engineer under separate authorization; and

d. Proper soil erosion and sediment control measures are used to minimize reentry of sediments into waters of the US.

The construction of intake structures is not authorized by this NWP, unless they are directly associated with an authorized outfall structure. For maintenance excavation and dredging to remove accumulated sediments, the notification must include information regarding the original design capacities and configurations of the facility and the presence of special aquatic sites (e.g., vegetated shallows) in the vicinity of the proposed work. (Sections 10 and 404)

8. **Oil and Gas Structures.** Structures for the exploration, production, and transportation of oil, gas, and minerals on the outer continental shelf within areas leased for such purposes by the DOI, Minerals Management Service (MMS). Such structures shall not be placed within the limits of any designated shipping safety fairway or traffic separation scheme, except temporary anchors that comply with the fairway regulations in 33 CFR 322.5(l). (Where such limits have not been designated, or where changes are anticipated, District Engineers will consider asserting discretionary authority in accordance with 33 CFR 330.4(e) and will also review such proposals to ensure they comply with the provisions of the fairway regulations in 33 CFR 322.5(l). Any Corps review under this permit will be limited to the effects on navigation and national security in accordance with 33 CFR 322.5(f)). Such structures will not be placed in established danger zones or restricted areas as designated in 33 CFR part 334; nor will such structures be permitted in EPA or Corps designated dredged material disposal areas. (Section 10)

9. **Structures in Fleeting and Anchorage Areas.** Structures, buoys, floats and other devices placed within anchorage or fleeting areas to facilitate moorage of vessels where the USCG has established such areas for that purpose. (Section 10)

10. **Mooring Buoys.** Non-commercial, single-boat, mooring buoys. (Section 10)

11. **Temporary Recreational Structures.** Temporary buoys, markers, small floating docks, and similar structures placed for recreational use during specific events such as water skiing competitions and boat races or seasonal use provided that such structures are removed within 30 days after use has been discontinued. At Corps of Engineers reservoirs, the reservoir manager must approve each buoy or marker individually. (Section 10)

12. **Utility Line Activities.** Activities required for the construction, maintenance and repair of utility lines and associated facilities in waters of the US as follows:

(i) Utility lines: The construction, maintenance, or repair of utility lines, including outfall and intake structures and the associated excavation, backfill, or bedding for the utility lines, in all waters of the US, provided there is no change in preconstruction contours. A "utility line" is defined as any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose, and any cable, line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and radio and television communication (see Note 1, below). Material resulting from trench excavation may be temporarily sidecast (up to three months) into waters of the US, provided that the material is not placed in such a manner that it is dispersed by currents or other forces. The District Engineer may extend the period of temporary side casting not to exceed a total of 180 days, where appropriate. In wetlands, the top 6" to 12" of the trench should normally be backfilled with topsoil from the trench. Furthermore, the trench cannot be constructed in such a manner as to drain waters of the US (e.g., backfilling with extensive gravel layers, creating a french drain effect). For example, utility line trenches can be backfilled with clay blocks to ensure that the trench does not drain the waters of the US through which the utility line is installed. Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossing of each waterbody.

(ii) Utility line substations: The construction, maintenance, or expansion of a substation facility associated with a power line or utility line in non-tidal waters of the US, excluding non-tidal wetlands adjacent to tidal waters, provided the activity does not result in the loss of greater than 1/2-acre of non-tidal waters of the US.

(iii) Foundations for overhead utility line towers, poles, and anchors: The construction or maintenance of foundations for overhead utility line towers, poles, and anchors in all waters of the US, provided the foundations are the minimum size necessary and separate footings for each tower leg (rather than a larger single pad) are used where feasible.

(iv) Access roads: The construction of access roads for the construction and maintenance of utility lines, including overhead power lines and utility line substations, in non-tidal waters of the US, excluding non-tidal wetlands adjacent to tidal waters, provided the discharges do not cause the loss of greater than 1/2-acre of non-tidal waters of the US. Access roads shall be the minimum width necessary (see Note 2, below). Access roads must be constructed so that the length of the road minimizes the adverse effects on waters of the US and as near as possible to preconstruction contours and elevations (e.g., at grade corduroy roads or geotextile/gravel roads). Access roads constructed above preconstruction contours and elevations in waters of the US must be properly bridged or culverted to maintain surface flows.

The term "utility line" does not include activities which drain a water of the US, such as drainage tile, or french drains; however, it does apply to pipes conveying drainage from another area. For the purposes of this NWP, the loss of waters of the US includes the filled area plus waters of the US that are adversely affected by flooding, excavation, or drainage as a result of the project. Activities authorized by paragraph (i) through (iv) may not exceed a total of 1/2-acre loss of waters of the US. Waters of the US temporarily affected by filling, flooding, excavation, or drainage, where the project area is restored to preconstruction contours and elevation, is not included in the calculation of permanent loss of waters of the US. This

COMPLETED WORK CERTIFICATION

Permit Number: CEMVR-OD-P-

Name of Permittee:

Date of Issuance:

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

U.S. Army Engineer District, Rock Island
ATTN: Regulatory Branch
Clock Tower Building
Post Office Box 2004
Rock Island, Illinois 61204-2004

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above reference permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit conditions.

Signature of Permittee

Date

JS

Illinois
Department of
Natural Resources

http://dnr.state.il.us

One Natural Resources Way • Springfield, Illinois 62702-1271 George H. Ryan, Governor • Brent Manning, Director

October 23, 2002

Mr. Jeff Sniadach
Regulatory Branch
Rock Island District, Corps of Engineers
Clock Tower Building, P.O. Box 2004
Rock Island, Illinois 61204-2004

Dear Mr. Sniadach:

Reference is made to the application by the City of Sterling, Illinois, for authorization to construct a multi-port outfall diffuser and temporary cofferdams in the Rock River in Section 19, Township 21 North, Range 7 East, Whiteside County.

We have reviewed the mussel survey report appended to the Nationwide Permit Notification, which indicates that three alternative locations were surveyed for mussels in July 2001. The proposed diffuser is apparently to be installed at Site 2, which exhibited the lowest numbers and diversity of mussels of the three sites surveyed. Live individuals of seven mussel species were collected at Site 2, along with dead/weathered individuals of six other species. Two of the latter, the spike *Elliptio dilatata*) and black sandshell (*Ligumia recta*), are state endangered/threatened species.

We recommend that an effort be made prior to construction to relocate any mussels inhabiting the construction footprint and mixing zone to an area of suitable habitat outside the project limits. Please note that the relocation of state listed species requires an Incidental Take Authorization from this Department pursuant to the Illinois Endangered Species Protection Act. Therefore, if any state listed mussels are encountered, they must be returned immediately to the substrate at the location from which they were collected and an ITA must be secured before they are moved.

Please contact me at 217-785-4863 if you have questions or if I can be of any other assistance.

Sincerely,

Robert W. Schanzle
Permit Program Manager
Office of Realty and Environmental Planning

RWS:rs 10-18(02)

cc: IDNR/OWR (Dalton), IEPA (Yurdin), USFWS (Fisher), USEPA (Pierard)

RECEIVED
OCT 30 2002
CEMVR-OD-P

This recommendation regarding the issuance/denial of the U.S. Army Corps of Engineers permit by the IDNR, Office of Realty and Environmental Planning does not supersede permit decisions made by the IDNR, Office of Water Resources under the Illinois Rivers, Lakes and Streams Act.