

ENVIRONMENTAL ANALYSIS AND DECISION ON THE NEED
FOR AN ENVIRONMENTAL IMPACT STATEMENT (EIS)

Form 1600-8 Rev. 6-2001

Department of Natural Resources (DNR)

Region or Bureau
Northeast Region

Type List Designation
Type II

NOTE TO REVIEWERS: This document is a DNR environmental analysis that evaluates probable environmental effects and decides on the need for an EIS. The attached analysis includes a description of the proposal and the affected environment. The DNR has reviewed the attachments and, upon certification, accepts responsibility for their scope and content to fulfill requirements in s. NR 150.22, Wis. Adm. Code. Your comments should address completeness, accuracy or the EIS decision. For your comments to be considered, they must be received by the contact person before 4:30 p.m., July 23, 2009.

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Applicant: City of Algoma

Address: 416 Fremont Street, Algoma, WI 54201

Title of Proposal: Enclosure of a waterway

Location: County: Kewaunee City/Town/Village: City of Algoma

Township Range Section(s): in the NW1/4 of the SE1/4 of Section 27, Township 25 North, Range 25 East

PROJECT SUMMARY

1. Brief overview of the proposal including the DNR action

The City of Algoma is proposing to extend an existing 120 foot long 66 inch culvert by 60 feet to the south of State Street for the purpose of avoiding the failure of adjacent retaining walls. The east side retaining wall is directly adjacent to a residential home that could be damaged if the wall collapses. The project is estimated to cost less than \$40,000.

The waterway is an unnamed tributary to Silver Creek, locally referred to as Shopicks Creek, and is designated as a Quality Wetland Stream and an Area of Special Natural Resource Interest. The waterway is navigable for approximately 1 mile, originating from a large wetland complex on the south edge of the city. It enters Silver Creek approximately 2500 feet from the Ahnapee River near the northern end of the project. The waterway is enclosed at four additional locations throughout the residential area of Algoma.

An extension of the culvert would result in a 75 foot gap between the Steele and State St. enclosures. An application for an enclosure extending the Steele Street culvert to the north was approved in 2004. The 84 foot long road culvert was extended by 75 feet because the retaining walls on either side of the waterway were failing. The retaining walls in that location were 8 feet apart and functioning like a culvert and that is why it met state standards and was approved.

The enclosure is proposed to extend to the end of the east side retaining wall and will be capped off by an apron end wall.

Once the enclosure is constructed, it is proposed that backfill will be placed around and over the enclosure to create a gently sloping area. A railing will be placed at the entrance end of the enclosure to notify people that there is a drop in grade. Riprap will be placed at the exit end of the enclosure to limit the possibility of scour. Accommodations are also proposed to allow existing sump pump drainage pipes from the adjacent homes to drain into the structure.

The banks are not significantly eroded and are mostly vegetated with a few large trees, shrubs, and an herbaceous layer. The west bank closest to State St. has rock riprap at the base and no retaining wall. The banks upstream of the proposed enclosure are actually eroded more than at the project location.

2. List the documents, plans, studies or memos on which this DNR review is based

Application for enclosure – Robert E. Lee & Associates
Wisconsin State Statutes Chapter 30
Memo from Steve Hogler, DNR Fisheries

DNR EVALUATION OF PROJECT SIGNIFICANCE

3. Environmental Effects and Their Significance

a. Discuss which of the primary and secondary environmental effects listed in the supporting documents are long-term or short-term.

Long term impacts of enclosures:

- Permanent loss of stream and riparian habitat – losses to spawning, rearing, and feeding habitat for fish and other aquatic organisms caused by the loss of complex habitat such as bends, runs, riffles, and pools.
- Loss of stream ecological connectivity (movement of aquatic species)
- Blockage of fish passage caused by high internal water velocity, shallow water depth, turbulence within the culvert, unnatural darkness, and/or debris accumulation. This blockage can impact fish populations by reducing individual fitness and survival.
- Calculations indicate that upstream and downstream of the culvert, stream velocity could be a barrier to northern pike movement. The sustained swimming speed of northern pike is approximately 2.5 to 3 feet per second for up to 60 feet. The higher velocity for a longer stretch could impede the movement of northern pike since in natural streams pike are able to navigate through higher velocities by utilizing instream habitat such as rocks, woody debris, and overhanging vegetation as current breaks.
- Since the analysis indicates that hydraulic efficiency would improve with the enclosure, it may cause water to drain out of the tributary faster. For successful northern pike spawning, water is critical so the pike can reach flooded vegetation, find a mate, and deposit eggs. The eggs hatch in 12 to 14 days and newly hatched fry remain attached to the vegetation for another 4 to 15 days before floating downstream, so it is critical for water to remain in the spawning area for the entire process.
- The section between enclosures could be prone to increased erosion.

Short term impacts:

- Operation of the construction equipment will result in noise pollution and exhaust emissions. The increased noise and exhaust may be irritating to nearby residents.
- The excavation during construction may contribute sediment downstream into Silver Creek if proper erosion control methods are not used.
- Stream flow may be temporarily interrupted or diverted during construction.

b. Discuss which of the primary and secondary environmental effects listed in the supporting documents are effects on geographically scarce resources (e.g. historic or cultural resources, scenic and recreational resources, prime agricultural lands, threatened or endangered resources, or ecologically sensitive areas).

This tributary to Silver Creek is not a geographically scarce resource, but is listed as a Quality Wetland Stream. It is located in a highly developed residential area with no listed threatened and endangered species, and no historical or archaeological sites.

c. Discuss the extent to which the primary and secondary environmental effects listed in the supporting documents are reversible.

The effects are reversible since the structure could be removed, but such work would come at the City's expense, and

there would be the potential for environmental impacts (i.e. erosion) associated with the removal. Erosion could change the characteristics of the stream by increased silt being deposited, resulting in a wider, shallower stream that fish would no longer use.

4. Significance of Cumulative Effects

Discuss the significance of reasonably anticipated cumulative effects on the environment (and energy usage, if applicable). Consider cumulative effects from repeated projects of the same type. Would the cumulative effects be more severe or substantially change the quality of the environment? Include other activities planned or proposed in the area that would compound effects on the environment.

There is a possibility for cumulative effects of repeated projects of the same type along this waterway. There are at least 3 other buildings that are extremely close to the waterway that would benefit from an enclosure by protecting the structures from erosion. There is also the possibility that the 75 foot stretch between State and Steele Streets that would remain open would cause additional erosion resulting in the City applying for a permit to enclose it in the near future.

These enclosures have cumulative effects on navigable waterways by removing habitat, decreasing water quality, and removing those areas from the public for recreating.

5. Significance of Risk

a. Explain the significance of any unknowns that create substantial uncertainty in predicting effects on the quality of the environment. What additional studies or analysis would eliminate or reduce these unknowns?

There is a continued risk that fish will no longer use the waterway for spawning. There is a risk for adverse impacts during construction. With the proper installation of erosion controls this risk is minimized. The overall project has a minimal risk for failure. A study of the effects of enclosures on fish populations would be beneficial.

b. Explain the environmental significance of reasonably anticipated operating problems such as malfunctions, spills, fires or other hazards (particularly those relating to health or safety). Consider reasonable detection and emergency response, and discuss the potential for these hazards.

There will be a potential for fuel spills and other operating malfunctions. Machinery should be checked daily for leaks and removed from the site if any leaks are detected. If a spill occurs, the WDNR and local fire department will be notified immediately.

6. Significance of Precedent

Would a decision on this proposal influence future decisions or foreclose options that may additionally affect the quality of the environment? Describe any conflicts the proposal has with plans or policy of local, state or federal agencies. Explain the significance of each.

The Department's decision to approve or deny this proposal will not influence future decisions for this type of project application. Projects are reviewed on a case-by-case basis with each project having a unique set of circumstances that must be considered in the review process. However, the Department does take into consideration the cumulative impacts as part of the review process. Several similar projects could be considered detrimental to the public interest.

7. Significance of Controversy over Environmental Effects

Discuss the effects on the quality of the environment, including socio-economic effects, that are (or are likely to be) highly controversial, and summarize the controversy.

There is no expected controversy for the environmental effects of the project. A notice for the project will be sent directly to the adjacent property owners. In addition, a public notice will be published in the local paper.

ALTERNATIVES

8. Briefly describe the impacts of no action and of alternatives that would decrease or eliminate adverse environmental effects. (Refer to any appropriate alternatives from the applicant or anyone else.)

No action alternative – the condition of the adjacent structures will continue to deteriorate, eventually resulting in failure of the retaining wall and potential property damage with temporary impacts to the waterway. The no action alternative will eliminate permanent impacts to the waterway.

A new retaining wall– In this alternative the failing retaining wall on the east side of the waterway would be placed one or two feet from the existing wall, then backfilled. Only temporary impacts would occur to the waterway, but the cost is estimated from \$65,000 to \$80,000.

Slope grading – For this alternative, the east side retaining wall could be removed and the slope graded. At a minimum 1:0.05 slope, the grading would impede the channel slightly and require other erosion control methods. For this method to work properly for the long term, the home would likely have to be removed to allow a 1:1 slope.

Purchase and remove adjacent buildings – This alternative would remove an encroaching home and deck on the east side of the waterway and/or the adjacent garage on the west side and restore the waterway. The home on the east side would cost approximately \$96,100 to purchase, in addition to demolition costs. This would eliminate short and long term impacts to the waterway.

Replace culvert under State St. – The existing culvert is perched, backing up flood waters and causing additional erosion to the banks. If this culvert was set properly, it could reduce erosion.

SUMMARY OF ISSUE IDENTIFICATION ACTIVITIES

9. List agencies, citizen groups and individuals contacted regarding the project (include DNR personnel and title) and summarize public contacts, completed or proposed.

<u>Date</u>	<u>Contact</u>	<u>Comment Summary</u>
2/6/2009	Miles Winkler	Comments on engineering
2/16/2009	Steve Hogler	Comments on fisheries

10. On-site inspection or past experience with site by evaluator.

DECISION (This decision is not final until certified by the appropriate authority)

In accordance with s. 1.11, Stats., and Ch. NR 150, Adm. Code, the Department is authorized and required to determine whether it has complied with s.1.11, Stats., and Ch. NR 150, Wis. Adm. Code.

Complete either A or B below:

A. EIS Process Not Required



The attached analysis of the expected impacts of this proposal is of sufficient scope and detail to conclude that this is not a major action which would significantly affect the quality of the human environment. In my opinion, therefore, an environmental impact statement is not required prior to final action by the Department.

B. Major Action Requiring the Full EIS Process



The proposal is of such magnitude and complexity with such considerable and important impacts on the quality of the human environment that it constitutes a major action significantly affecting the quality of the human environment.

Signature of Evaluator	Date Signed

Number of responses to news release or other notice:

Certified to be in compliance with WEPA	
Environmental Analysis and Liaison Program Staff	Date Signed

NOTICE OF APPEAL RIGHTS

If you believe that you have a right to challenge this decision, you should know that Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed.

For judicial review of a decision pursuant to sections 227.52 and 227.53, Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review shall name the Department of Natural Resources as the respondent.

To request a contested case hearing pursuant to section 227.42, Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. The filing of a request for a contested case hearing is not a prerequisite for judicial review and does not extend the 30-day period for filing a petition for judicial review.

Note: Not all Department decisions respecting environmental impact, such as those involving solid waste or hazardous waste facilities under sections 144.43 to 144.47 and 144.60 to 144.74, Stats., are subject to the contested case hearing provisions of section 227.42, Stats.

This notice is provided pursuant to section 227.48(2), Stats.