Montana Fish, Wildlife & Parks
1400 South 19th Avenue
Bozeman, MT 59718

July 5, 2005

To: Governor's Office, Mike Volesky, State Capitol, Room 204, P.O. Box 200801, Helena, MT 59620-0801
Environmental Quality Council, State Capitol, Room 106, P.O. Box 201704, Helena, MT 59620-1704
Dept. of Environmental Quality, Metcalf Building, P.O. Box 200901, Helena, MT 59620-0901
Dept. of Natural Resources & Conservation, P.O. Box 201601, Helena, MT 59620-1601
Montana Fish, Wildlife & Parks:

Director's Office	Parks Division	Lands Section	FWP Commissioners
Fisheries Division	Legal Unit	Wildlife Division	Design & Construction

MT Historical Society, State Historic Preservation Office, P.O. Box 201202, Helena, MT 59620-1202
MT State Parks Association, P.O. Box 699, Billings, MT 59103
MT State Library, 1515 E. Sixth Ave., P.O. Box 201800, Helena, MT 59620
James Jensen, Montana Environmental Information Center, P.O. Box 1184, Helena, MT 59624
Janet Ellis, Montana Audubon Council, P.O. Box 595, Helena, MT 59624
George Ochenski, P.O. Box 689, Helena, MT 59624
Jerry DiMarco, P.O. Box 1571, Bozeman, MT 59771
Montana Wildlife Federation, P.O. Box 1175, Helena, MT 59624
Wayne Hurst, P.O. Box 728, Libby, MT 59923

Ladies and Gentlemen:

The enclosed Environmental Assessment (EA) has been prepared by Montana Fish, Wildlife & Parks (FWP) for the proposed installation of a fish passage barrier in Randall Creek east of Manhattan, Montana. The fish passage barrier is designed to prevent the expansion of Northern Pike beyond the upper end of Randall Creek, where pike are already established as the result of an earlier unauthorized introduction.

This Draft EA is available for review in Helena at FWP's Headquarters, the State Library, and the Environmental Quality Council. It also may be obtained from FWP at the address provided above, or viewed on FWP's Internet website: http://www.fwp.mt.gov/publicnotices.

Montana Fish, Wildlife & Parks invites you to comment on the attached proposal. Public comment will be accepted July 5, 2005 until 5:00 pm on August 3, 2005. Comments should be sent to the following:

Montana Fish, Wildlife & Parks
c/o Randall Creek EA
1400 South 19th Avenue
Bozeman, MT 59718

Or e-mailed to: jtohtz@mt.gov

RECEIVED
JUL 07 2005
LEGISLATIVE ENVIRONMENTAL POLICY OFFICE

Sincerely,

Patrick J. Flowers
Region Three Supervisor

Attachment

Draft
Environmental Assessment

RANDALL CREEK FISH BARRIER SCREEN PROJECT

July 2005

Montana Fish, Wildlife & Parks

Randall Creek Fish Barrier Screen Project
Draft Environmental Assessment
MEPA, NEPA, MCA 23-1-110 CHECKLIST

PART I. PROPOSED ACTION DESCRIPTION

1. Type of Proposed State Action: A fish passage barrier to be installed in a perennially flowing stream.

2. Agency Authority for the Proposed Action: Montana Fish, Wildlife and Parks (FWP) proposes this action by authority of 87-1-201 MCA defining FWP powers and duties regarding wildlife resources.

3. Name of Project: Randall Creek Fish Barrier

4. Name, Address and Phone Number of Project Sponsor (if other than the agency): FWP is the Project Sponsor

5. Estimated Construction/Commencement Date: approximately August 4, 2005
Estimated Completion Date: approximately August 6, 2005
Current Status of Project Design (% complete): Barrier design is 100% complete

6. Location Affected by Proposed Action (county, range and township):

Gallatin County: Township 1 North, Range 3 East, Section 12

7. Project Size: Estimate the number of acres that would be directly affected that are currently:

	Acres		Acres
(a) Developed:		**(d) Floodplain**	<0.1
Residential	0		
Industrial	0	**(e) Productive:**	
		Irrigated cropland	0
(b) Open	0	Dry cropland	0
		Forestry	0
(c) Wetlands/Riparian Areas	<0.1	Rangeland	0
		Other	0

8. Map/site plan

The proposed fish screen would be installed in Randall Creek off West Dry Creek Road approximately one mile east of Manhattan, Montana (Township 1N, Range 3E, Section 12).

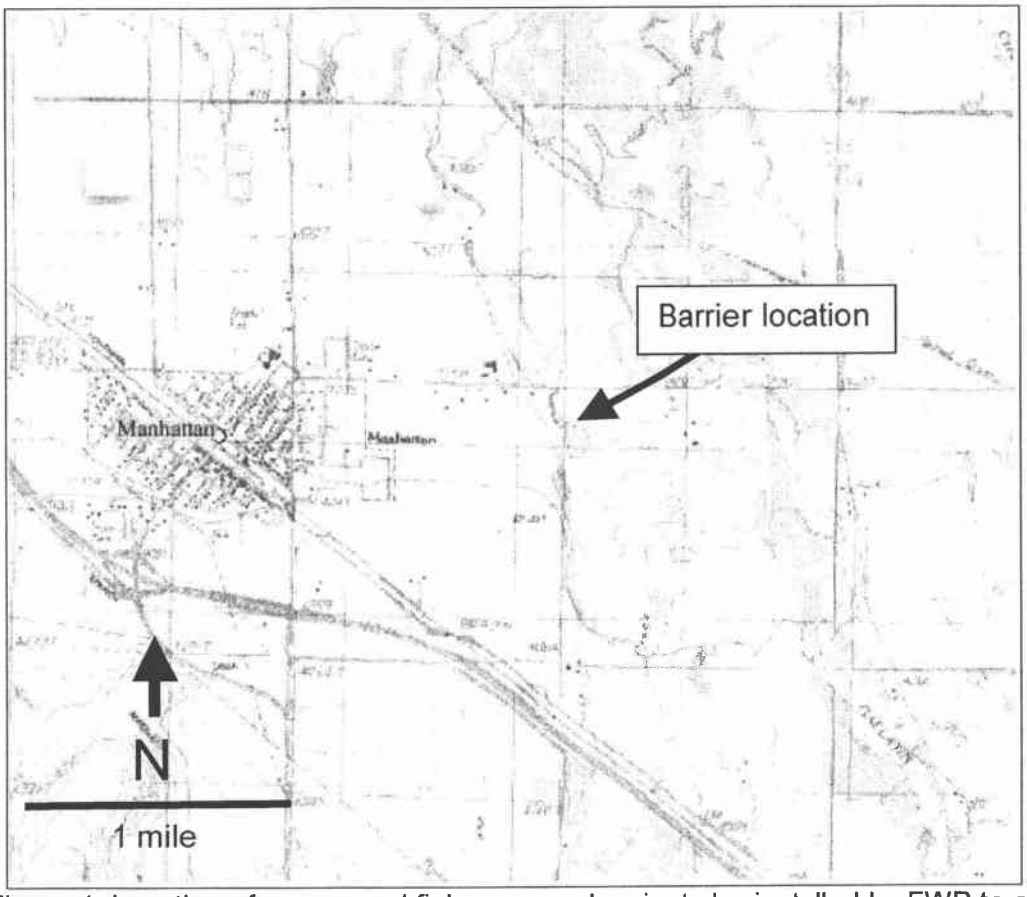

Figure 1. Location of a proposed fish passage barrier to be installed by FWP to stop northern pike movement in Randall Creek, a tributary of the Gallatin River.

9. Other Local, State or Federal agencies that have overlapping or additional jurisdiction:

(a) Permits: US Army Corps of Engineers Federal Clean Water Act 404 Permit

(b) Funding: Existing FWP budgets

(c) Other Overlapping or Additional Jurisdictional Responsibilities:

MT Historic & Land Preservation Office	Preservation of historic and archeological features
Gallatin Conservation District	Administer Natural Streambed and Land Preservation Act
MT Dept.of Environmental Quality	Enforce state water quality standards
U.S. Corps of Engineers	Administer Clean Water Act

10. Narrative summary of the proposed action or project including the benefits and purpose of the proposed action:

FWP proposes to install a cross-channel screen in Randall Creek, a tributary of the Gallatin River located near Manhattan, Montana to block fish movement past the point of installation. This screen will be sized, positioned, and intentionally designed to physically prevent fish movement in both upstream and downstream directions. This screen is necessary to prevent the expansion of Northern Pike (*Esox lucius*) into areas beyond the upper end of Randall Creek, where pike are already established as the result of an earlier unauthorized introduction. Pike are voracious fish-eaters. If their population spreads, they threaten existing fish populations throughout much of the larger drainage, including trout in the Gallatin River and many of its tributaries. At this time the pike can not be easily eliminated by mechanical or chemical means. Although mechanical attempts to eliminate pike will continue after its installation, the barrier is still deemed necessary to prevent pike from occupying larger portions of the drainage.

Total cost of the screen, including installation, is about $2000.00. These relatively small costs would be paid from existing FWP program budgets.

A summary assessment of anticipated environmental impacts of this project and two alternative proposals are presented below. Placing a barrier in Randall Creek is our preferred alternative for reasons discussed below.

11. List of agencies consulted during preparation of the EA:

No other agencies were involved in the preparation of this Environmental Assessment.

12. Environmental Review: Physical Environment

Table 1. Land Resource Considerations

Consideration: Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment
	Unknown	None	Minor	Potentially Significant		
Soil instability or changes in geologic substructure?		X				None
Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil, which would reduce productivity or fertility?		X				None
Destruction, covering or modification of any unique geologic or physical features?		X				None
Changes in siltation, deposition or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake?			X		Yes	See below
Exposure of people or property to earthquakes, landslides, ground failure, or other natural hazard?		X				None
Other concerns:		X				None

Comments Table 1: Concrete abutments supporting the proposed screen barrier will prevent lateral movements of the stream at the point of installation. The screen itself might also accumulate debris that could temporarily impound waters upstream of the point of installation. Depending on flow, both factors have the potential to change siltation, deposition, or erosion patterns in ways that could modify the stream channel. These possibilities are substantially mitigated by the fact that the screen will be installed in a straight reach of stream that has a stable configuration over time, the fact that existing undisturbed vegetation remains to resist erosion, and the fact that normal site maintenance should be adequate to prevent debris accumulations and to identify new problems as they develop. Function of the screen will be monitored continuously over time as part of existing routine management of the private property on which the screen is to be located.

Table 2. Air Quality Considerations

Consideration: Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment
	Unknown	None	Minor	Potentially Significant		
Emission of air pollutants or deterioration of ambient air quality?			X		Yes	See below
Creation of objectionable odors?			X		Yes	See below
Adverse effects on vegetation, including crops, due to increased emissions of pollutants?		X				None
Alteration of air movement, moisture, or temperature patterns or any change in climate, either locally or regionally?		X				None
Other concerns:		X				None

Comments Table 2: Air quality should not be adversely affected beyond the usual exhaust emissions and dust associated with small-scale construction activities. Exhaust emissions and the creation of objectionable odors would be limited to the short period of actual construction and would be substantially mitigated by the use of properly maintained equipment.

Table 3. Water Resource Considerations

Consideration: Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment
	Unknown	None	Minor	Potentially Significant		
Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen or turbidity?			X		Yes	See below
Changes in drainage patterns or the rate and amount of surface runoff?		X				None

Table 3 continued on page 6

Table 3. Water Resource Considerations (continued from page 5)

Consideration: Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment
	Unknown	None	Minor	Potentially Significant		
Alteration of the course or magnitude of floodwater or other flows?			X		Yes	See below
Changes in the amount of surface water in any water body or creation of a new water body?		X				None
Exposure of people or property to water related hazards such as flooding?		X				None
Changes in the quality of groundwater?		X				None
Changes in the quantity of groundwater?		X				None
Increased risk of contamination of surface or groundwater?		X				None
Effects on any existing water right or reservation?		X				None
Effects on other water users as a result of any alteration in surface or groundwater quality?		X				None
Effects on other users as a result of any alteration in surface or groundwater quantity?		X				None
Other concerns:		X				None

Comments Table 3: The proposed screen could accumulate debris that might impound water, potentially altering the course (but not magnitude) of floodwater or other flows. In some circumstances, accumulated debris might cause highly localized flooding that would not have otherwise occurred. Even in extreme circumstances this effect would likely be very minor, and under no circumstance would the barrier be allowed to disrupt flow to downstream users. The proposed barrier is to be located at a site surrounded by undeveloped lands that already function primarily as floodplain for the stream. In this situation, risks to people and property are minimized, even during floods. Existing undisturbed vegetation remains to resist erosion. Normal site maintenance should be adequate to prevent debris accumulations and to identify new problems as they develop. Function of the screen will be monitored continuously over time as part of existing routine management of the property on which the screen is to be located.

Comments Table 3 (continued from page 6): Oil and gas spills are possible from equipment during construction of the barrier. Serious problems can be avoided by normal equipment maintenance and routine construction oversight. Substantial natural vegetation exists to filter and prevent adverse impacts to the local drainage should an oil or gas spill occur. Many opportunities exist to identify problems during construction should they develop. Early detection would allow for appropriate early clean up, if necessary.

Table 4. Local Vegetation Considerations

Consideration: Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment
	Unknown	None	Minor	Potentially Significant		
Changes in the diversity, productivity or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)?		X				None
Alteration of a plant community?			X		Yes	See below
Adverse effects on any unique, rare, threatened, or endangered species?		X				None
Reduction in acreage or productivity of any agricultural land?		X				None
Establishment or spread of noxious weeds?			X		Yes	See below
Other concerns:		X				None

Comments Table 4: Noxious weeds are a concern anytime soil is disturbed. In this situation, risk from weeds is reduced because the total area to be disturbed is small (less than one-tenth of an acre). Substantial vegetation exists to resist the establishment of weeds. Normal site maintenance will allow identification of any developing problems in time for appropriate remedial actions to prevent serious harm.

Table 5. Fish and Wildlife Considerations

Consideration: Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment
	Unknown	None	Minor	Potentially Significant		
Deterioration of critical fish or wildlife habitat?		X				None
Changes in the diversity or abundance of game animals or bird species?		X				None
Changes in the diversity or abundance of non-game species?		X				None
Introduction of new species into an area?		X				None
Creation of a barrier to the migration or movement of animals?			X		Yes	See below
Adverse effects on any unique, rare, threatened, or endangered species?		X				None
Adverse effects on any unique, rare, threatened, or endangered species?		X				None
Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest or other human activity)?		X				None
Other concerns:		X				None

Comments Table 5: A barrier to fish movement is the intention of this project and it will prevent both upstream and downstream migration of all fish species past this location in the stream. Fish movement can be critical to certain life history stages of different species. To mitigate these effects, the barrier is located to minimize the amount of stream affected by the passage barrier where the stream naturally supports only a low number of a few species of fish, including mountain whitefish (*Prosopium williamsoni*), rainbow trout (*Oncorhynchus mykiss*), and brown trout (*Salmo trutta)*. Potential loss of fish production in upstream areas is small and compensated by the protections afforded to the surrounding drainage. If problems develop, the barrier could easily be removed.

13. Environmental Review: Human Environment

Table 6. Noise and Electrical Considerations

Consideration: Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment
	Unknown	None	Minor	Potentially Significant		
Increases in existing noise levels?			X		Yes	See below
Exposure of people to severe or nuisance noise levels?			X		Yes	See below
Creation of electrostatic or electromagnetic effects that could be detrimental to human health or property?		X				None
Interference with radio or television reception and operation?		X				None
Other concerns:		X				None

Comments Table 6: Nuisance noise levels should not exceed those expected from normal equipment uses during similar construction activities and will end when the barrier installation is completed. Use of properly maintained equipment will mitigate this effect. No electrical risk or problem with electrical interference is expected.

Table 7. Current Land Use Considerations

Consideration: Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment
	Unknown	None	Minor	Potentially Significant		
Alteration of or interference with the productivity or profitability of the existing land use of an area?		X				None
Conflicted with a designated natural area or area of unusual scientific or educational importance?		X				None
Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?		X				None
Adverse effects on or relocation of residences?		X				None
Other concerns:		X				None

Comments Table 7: No land use conflicts are expected

Table 8. Human Health Risk Considerations

Consideration: Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment
	Unknown	None	Minor	Potentially Significant		
Risk of an explosion or release of hazardous substances (including, but not limited to oil, pesticides, chemicals, or radiation) in the event of an accident or other forms of disruption?		X				None
Affect an existing emergency response or emergency evacuation plan or create a need for a new plan?		X				None
Creation of any human health hazard or potential hazard?		X				None
Other concerns:		X				None

Comments Table 8: No human health risks are anticipated.

Table 9. Community Impact Considerations

Consideration: Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment
	Unknown	None	Minor	Potentially Significant		
Alteration of the location, distribution, density, or growth rate of the human population of an area?		X				None
Alteration of the social structure of a community?		X				None
Alteration of the level or distribution of employment or community or personal income?		X				None
Changes in industrial or commercial activity?		X				None
Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?		X				None
Other concerns:		X				None

Comments Table 9: No adverse community impacts are expected.

Table 10. Public Services, Taxes, and Utilities Considerations

Consideration: Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment
	Unknown	None	Minor	Potentially Significant		
Required changes in governmental services?			X		Yes	See below
An effect upon the local or state tax base and revenues?		X				None
A need for new facilities or substantial alterations of any of the following utilities?		X				None
Increased use of any energy source?		X				None
Other concerns:		X				None

Comments Table 10: No adverse effect on local taxes is anticipated. The landowner will be responsible for maintaining the structure in good condition and proper function, however site administration may require some additional public services for maintenance of the barrier and possibly enforcement to prevent the potential but unlikely possibility of vandalism. These additional services, should they be required, would be provided from existing FWP budgets and programs.

Table 11. Aesthetics and Recreational Considerations

Consideration: Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment
	Unknown	None	Minor	Potentially Significant		
Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?		X				None
Alteration of the aesthetic character of a community or neighborhood?		X				None
Alteration of the quality or quantity of recreational/tourism opportunities and settings?		X				None
Other concerns:		X				None

Comments Table 11: The project will be visually discreet when completed. No meaningful effect on local aesthetics or recreation is anticipated.

Table 12. Cultural and Historic Resource Considerations.

Consideration: Will the proposed action result in:	IMPACT				Can Impact Be Mitigated	Comment
	Unknown	None	Minor	Potentially Significant		
Destruction or alteration of any site, structure or object of prehistoric, historic, or paleontological importance?		X				None
Physical change that would affect unique cultural values?		X				None
Effects on existing religious or sacred uses of a site or area?		X				None
Other concerns:		X				None

Comments Table 12: Normal consultations with other experts should identify and help avoid any potential adverse effects to cultural or historic resources if they exist at the project site. No adverse impacts are anticipated.

Table 13. Summary Evaluation of the Randall Creek Fish Passage Barrier project

Consideration: Will the proposed action:	IMPACT				Can Impact Be Mitigated	Comment
	Unknown	None	Minor	Potentially Significant		
Have impacts that are individually limited, but cumulatively considerable?		X				None
Involve potential risks or adverse effects which are uncertain but extremely hazardous if they were to occur?		X				None
Potentially conflict with the substantive requirements of any local, state, or federal law, regulation, standard or formal plan?		X				None
Establish a precedent or likelihood that future actions with significant environmental impacts will be proposed?		X				None
Generate substantial debate or controversy about the nature of the impacts that would be created?		X				None

Comments Table 13: Installation of this fish passage barrier will provide significant protections to fisheries in the surrounding area. The barrier would be designed and well located to reduce or mitigate all potentially adverse environmental effects associated with these types of projects. No substantial controversy concerning this project is anticipated now, or in the future.

PART II. ENVIRONMENTAL REVIEW, CONTINUED

1. Description and analysis of reasonable alternatives (including the no action alternative) to the proposed action whenever alternatives are reasonably available and prudent to consider and a discussion of how the alternatives would be implemented:

Alternative1, No Action: FWP does not install a fish passage barrier

Recent sampling in the upper end of Randall Creek confirmed that northern pike are well established in the stream and in a private pond that has surface water connections to this stream. Pike caught in gillnets included mature fish and younger year classes, confirming successful reproduction (Photo 1).

Photo 1. Northern Pike from the Randall Creek drainage showing different age classes of fish.

An existing head gate in Randall Creek stops fish from moving further upstream, however nothing prevents fish from moving downstream from the area where pike are reproducing. At this time we have some information that pike are moving to other areas in the drainage. In 2003, a northern pike was captured by FWP in the Gallatin River just below its confluence with the East Gallatin River (Photo 2). We have also received a few anecdotal reports over time of northern pike captured in smaller streams of the drainage, including one highly credible report from an angler who kept the fish. Under these circumstances and taking no other action, pike are likely to continue to expand their abundance throughout a much greater portion of the drainage.

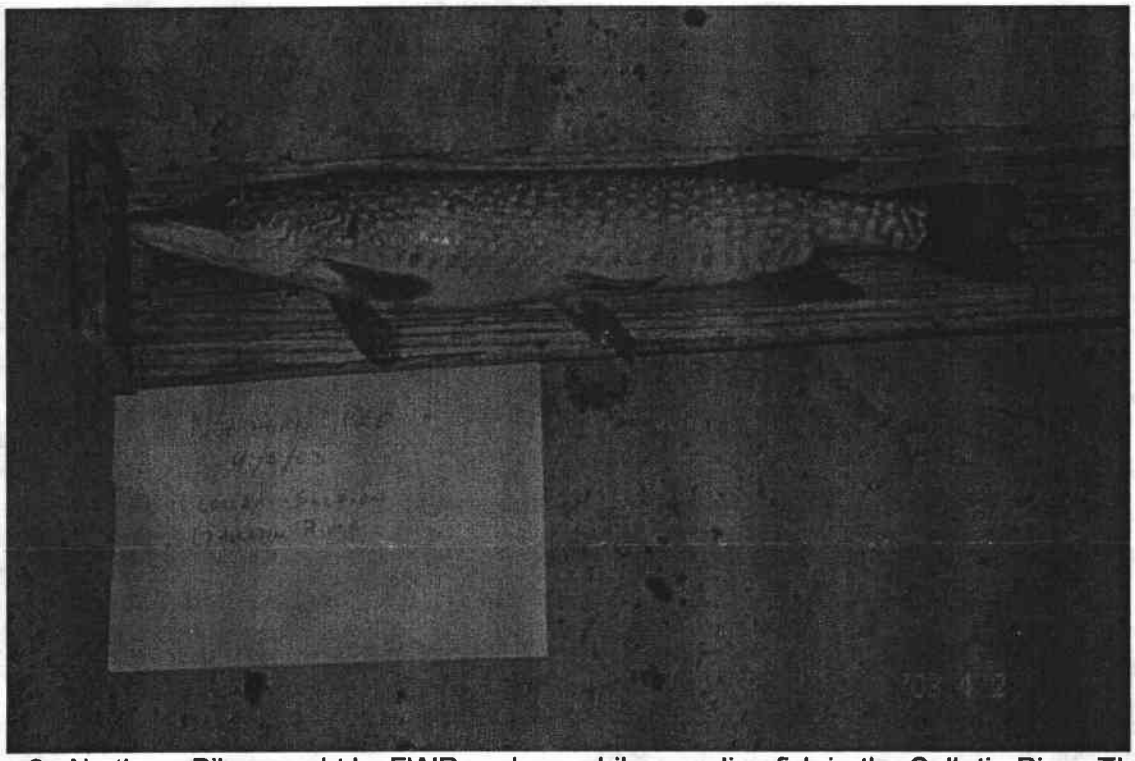

Photo 2. Northern Pike caught by FWP workers while sampling fish in the Gallatin River. This fish was caught just below the confluence of the East Gallatin River.

Alternative 2, Eradicate Pike: FWP attempts to eliminate the pike using mechanical or chemical treatments

Whenever exotic fish are illegally introduced to state waters we consider the possibility of killing the fish or otherwise removing them before they create a bigger problem. Physical removal using traps, nets, and electrofishing techniques, and the use of toxicants to kill these fish, were all considered in developing the preferred alternative to install a fish barrier.

Discussion of Alternatives

Alternative 1. Taking no action requires no monetary investment by FWP and eliminates a very minimal construction-related disturbance to stream banks at the site where a fish screen might be installed. However, taking no action leaves much of the local drainage at risk to the potential harmful consequences of a pike population that is likely to expand. Taking no action abrogates our responsibility to protect wild fisheries whenever possible, especially since alternatives to act are likely to be effective in limiting the potential geographic distribution of these fish.

Alternative 2. Sampling in 2004 confirmed that the northern pike are reproducing in several areas; they are established in portions of the Randall Creek stream system, including an in-stream pond and another private pond with surface water connections to the surrounding areas. The water table throughout this area is very high. Many springs emerge to influence the drainage in this area. Under these circumstances and considering that pike are already established and reproducing, it is not likely that an eradication effort using mechanical or chemical treatments alone would completely eliminate the pike. Without further protections, reducing pike numbers would simply delay the rate at which these animals might make their way into new areas of the drainage.

Preferred Action. Installing a barrier to fish movement as proposed will confine the known population of naturally reproducing pike to approximately one-third mile of stream and a couple of associated ponds. Although mechanical efforts to reduce or eliminate pike within this confined area would continue after the barrier is installed, protecting the lower drainage from the further establishment of pike would not depend on complete success in removing pike which may not be possible at this time. On the other hand, a fish screen can also be easily removed thereby re-opening this portion of the drainage to fish movement if and when pike can be eliminated.

PART III. NARRATIVE EVALUATION, CONCLUSION AND COMMENT

1. Based on the significance criteria evaluated in this Environmental Assessment (EA), is an Environmental Impact Statement (EIS) required? If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action.

No EIS is required: This EA checklist is adequate to identify all major issues concerning this fish barrier project. Based on this evaluation, installing this fish screen poses virtually no risk to the local environment. It provides the most efficient and secure means to ensure that pike will not expand into other areas of the drainage. The barrier can be easily removed at a later time if and when northern pike can be eliminated from their confined area in the stream. In addition, the EA process protects and provides public opportunity for further review and comment on the proposed project (see below).

2. Describe the level of public involvement for this project if any and, given the complexity and the seriousness of the environmental issues associated with the proposed action, is the level of public involvement appropriate under the circumstances?

The continuing EA process will provide a 30-day opportunity for public comment on this proposed project. Public notice of the project will be provided by publication of this EA on the FWP website, www.fwp.mt.gov/publicnotices, and by legal notice of the proposed action in two local newspapers: The Belgrade News and The Bozeman Chronicle.

This level of public involvement is appropriate, considering the small scale of the project, its low environmental risks, and the small likelihood of conflict or controversy now or in the future.

3. Duration of comment period, if any.

The 30-day public comment period will be from July 5, 2005 to 5:00 pm August 3, 2005. All comments may be sent to the address or e-mail provided below:

4.Name, title, address and phone number of the person(s) responsible for preparing the EA:

Joel Tohtz, Fisheries Biologist
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