

**FINAL DECISION NOTICE:
SECURE WATER SUPPLY PROJECT
BIG SPRINGS TROUT HATCHERY**

**Montana Fish, Wildlife & Parks
Fisheries Division
1420 East Sixth Avenue, P.O. Box 200701
Helena, MT 59620-0701**

PROPOSAL

The proposed action published in the Draft Environmental Assessment (EA) on May 20, 1998, is to improve the existing infrastructure and install new components at the Big Springs Trout Hatchery near Lewistown, Montana to protect the water supply and fish from becoming exposed to the whirling disease parasite. Specifically, the proposal calls for installing buried water lines to replace open channels; constructing water collection facilities in Big Springs island pond; installing aeration facilities on new buried water lines; modifying raceway head canals; rehabilitating the existing concrete cover over Middle Big Spring; and installing underground piping to bypass a pond adjacent to the Big Springs collection dome.

The proposed action is needed because the water sources and distribution system at Big Springs Trout Hatchery are at risk to infection by whirling disease. Any water source with a natural bottom is considered potential habitat for the tubifex worm, a known host for the whirling disease parasite. The bottoms of open creek channels which convey water between hatchery facilities offer habitat for the tubifex worm. The whirling disease pathogen can also be transported from the mud of someone's shoes or through the digestive tracts of ducks or shore birds to other ponds and creek channels on the hatchery grounds.

The benefits of this proposal are clear. Implementing the proposed project will preserve and enhance the considerable investment of time and money in the facility previously made by the State of Montana and will ensure that the Big Springs Trout Hatchery remains a productive component of the State's hatchery system. Without the proposed improvements, the hatchery remains at risk to whirling disease infection. An infection at the hatchery would be difficult to remove.

Fish Wildlife & Parks considered four alternatives including the proposed action (described above), the use of ultraviolet or ozone disinfection, filtration, and the no action alternative.

The proposal described in the Draft EA stated that the use of water from Lehman's Spring will be discontinued in favor of collecting water from a new enclosed concrete bunker sized to capture approximately 10,000 gallons per minute from the Big Spring island pond. Fish, Wildlife & Parks and the consulting engineers designing the proposed improvements have revised this element of the proposed action since the release of the Draft EA. As now proposed, a lateral well-screen collector system would be installed some three to four feet beneath the bottom of Big Spring island pond instead of a bunker. The proposed system would intercept and collect Big Spring water as it flows from its subsurface source into the Big Spring island pond prior to entering Big Spring Creek. Testing indicates this method of collecting water should be able to capture approximately the same amount of ground water as with an

Ferguson

enclosed bunker. Unlike with the originally proposed bunker, the appearance of the pond and the adjacent hatchery grounds would not be changed since the collector system would lie beneath the pond. This subsurface water collection system would not affect the City of Lewistown's ability to withdraw its full water right from the Big Spring collection dome.

PUBLIC PROCESS AND COMMENT

A public comment period began May 20, 1998 and extended to June 19, 1998 to allow participation by the public, concerned organizations and government agencies. On May 20, 1998, legal notices advertising the availability of the EA and requesting comments on the proposed project were published in the *Lewistown News-Argus* and *Helena's Independent Record*. The notices also advised the public and other interested parties that informational tours of the hatchery to discuss the proposed improvements would be offered by Montana Fish, Wildlife & Parks personnel on three occasions (May 27, June 3, and June 10) during the public comment period.

Copies of the draft EA were also made available for public review at the Region 4 Headquarters office in Great Falls, at the Carnegie Library in Lewistown, and at the Big Springs Trout Hatchery. There were no requests for copies of the document received during the public comment period. No individual written comments were received. No requests for informational tours were received.

DECISION

A final decision was delayed pending evaluation of additional engineering and design alternatives at big springs island pond. Based on the analysis in the Environmental Assessment (EA) and the lack of public comment on the proposal, I have determined that the process has satisfactorily complied with the Montana Environmental Policy Act. The proposed action poses no significant effect to the natural or human environment. Therefore, an Environmental Impact Statement will not be prepared.

It is my decision to implement the proposed action. The Draft EA will be accepted (with the following modifications and/or additions) as the Final EA. Deleted text is shown in ~~strikeout~~ font and new text is shown in redline font.

On page 3-4, the last item listed under Priority One is modified to read:

- Construct a subsurface lateral water collection system beneath ~~new bunker to collect water from the Big Springs island pond~~

On page 4-2, the first sentence in the partial paragraph at the bottom of the page was changed to read:

The improvements associated with this alternative would install pipes to replace open channels; either cover and continue the use Lehman's Spring or install a new subsurface water collection bunker system in the Big Springs island pond; installto a natural stream setting.

On page 4-5, modify item #3 on FIGURE 4-1 to read:

New ~~Subsurface Lateral Water Collection System~~ ~~Collection Bunker~~ in Big Springs Island Pond and 36" HDPE to New Drop Structure

On page 4-6, change the title of the fourth full paragraph to read **New Big Spring Island Pond Collection Bunker System** and the first sentence of the paragraph to say:

The proposed action will discontinue the use of water from Lehman's Spring in favor of collecting water from a new ~~bunker lateral well-screen collector~~ system sized to capture approximately 10,000 gallons per minute (gpm) from ~~beneath~~ the island pond.

On page 4-6, revise the last sentence of the second paragraph under **New Big Spring Island Pond Collection Bunker System** as follows:

Another advantage of collecting water from ~~beneath~~ the Big Springs island pond is that it can be passed through ~~two~~ complete degassing columns to remove nitrogen and increase its oxygen content before being delivered to the lower raceways.

On page 4-9, revise Table 4-1 and its estimated costs to read:

Table 4-1 Construction Cost Estimate for Recommended Improvements	
Proposed Improvement	Estimated Cost
Upper Station Supply Piping and Head Canal Modifications	-\$78,600 \$74,996
Upper Station Central Aeration Facility	\$65,800 \$91,414
Runoff Drain (18") at Upper Station	\$35,200 \$20,205
New Lateral Collection Bunker in System beneath Island Pond including Piping and New Drop Structure	-\$262,500 \$297,043 \$424,159
Supply Piping (44") to Lower Station cover existing canal	\$336,200 \$174,473
Lower Station First Pass Central Aeration Facility near Lehman's Spring	\$228,200 \$239,582
Lower Station Piped Header (44"), & Raceway Extensions	\$293,400 \$269,503
Rehabilitate Middle Spring Collection Structure with Spray-On Mortar	\$46,900 \$38,580
Improvements to Bypass Pond	\$6,000 \$6,985
TOTAL:	\$1,352,800 \$1,222,000

On page 5-6, the text of the second paragraph under **b) Ground Water Resources, Impacts of the Proposed Action** was revised as shown below:

The proposed action would include facilities to allow the collection of the Lehman's Spring (water right) portion of water for hatchery operations at Big Springs. A new ~~intake bunker horizontal well-screen water collection system~~ would be installed ~~beneath~~ in the Big Springs island pond at the Upper Station which would enable the hatchery to collect the Lehman's Spring water right from the Big Springs. This will ensure that the hatchery has the capability of withdrawing its full water right at one central location with adequate protection against whirling disease contamination. ~~The proposed system would intercept and collect Big Spring water as it flows from its subsurface source into the Big Springs island pond prior to entering Big Spring Creek. The water would be collected from an open and unused portion of the Big Springs island pond which currently flows into Big Spring Creek.~~ This ~~intake structure~~ collection system would not affect the City of Lewistown's ability to withdraw its full water right from the Big Spring collection dome.

On pages 5-6 and 5-7, the text of the third paragraph under **b) Ground Water Resources, Impacts of the Proposed Action** was revised to read:

The diversion of additional ground water from ~~beneath~~ the Big Springs Island Pond as proposed would intermittently reduce stream flows in Big Spring Creek between the pond and Lehman's Spring, a distance of about 1,500 feet. ~~The effects on this section of Big Spring Creek would vary depending on the quantity of water withdrawn from this source at a given time. Since the hatchery operations are a non-consumptive use, all diverted water would be returned to Big Spring Creek at the discharge point for the Lower Station. The reduced flow in the section of Big Spring Creek between the island pond and Lehman's Spring will be evaluated. Flow changes in the upper section of Big Spring Creek between Island Pond Spring and Lehman Springs (1,500 feet) will be offset by a comparable increase in flow from Lehman springs down stream to the lower raceway discharge point (1,200 feet). Presently water chemistry in the water from Island Pond Spring is low in dissolved oxygen and supersaturated (118% - 135%+) with dissolved Nitrogen. The 1,500 feet of stream below Island Pond Spring maintains supersaturated conditions of nitrogen. Dissolved oxygen increases throughout this stretch of stream. Use of the water from Big springs Island Pond spring may minimize any detrimental impacts that supersaturated nitrogen and low dissolved oxygen levels may be currently having on aquatic life. A reduction of flow may also cause riffles, resulting in oxygenation and decreasing dissolved nitrogen levels in this stretch of stream. reduce stream flows but not which would adversely affect the aesthetics or aquatic life in this reach of Big Spring Creek.~~ Mitigation will be addressed if detrimental impacts occur to aquatic life resulting from decreased flow in the 1,500 feet of Big Spring Creek between Lehman springs and the new lateral collection structure. Test are being done to determine the levels of dissolved nitrogen and oxygen and analysis of potential impacts that may result from those changes. All pertinent permits will be obtained before any physical work is done as part of the mitigation process.

On pages 5-17, a new second paragraph was added to the text of **Water Quality** under **5.3.13 Construction Impacts, Impacts of the Proposed Action** which reads as follows:

Water Quality

..... to construct the project.

Construction of the water collection system beneath Big Spring Island Pond would require excavating trenches in the bottom of the pond for placement of the well-screen collector pipes. Sheet piling would be driven to enclose work areas in a coffer dam and contain sediments generated during construction activities. Water-related permits for the project will specify the measures necessary to ensure surface water quality during construction.

Action on this decision will begin in ~~July, 1998~~ ~~March 1999~~ with the application for required permits and the advertisement for bids on the proposed construction. Bids will be opened during ~~August, 1998~~ ~~March or 1999~~ and construction ~~is expected~~ ~~will to~~ begin during the ~~fall of 1998.~~ ~~spring of 1999~~ and continue through fall of 1999.

The Final EA and this Decision Notice may be viewed or obtained from the Montana Fish, Wildlife & Parks, Fisheries Division Office, P.O. Box 200701, Helena, MT 59620-0701.

Larry Peterman

Fisheries Division Administrator
Fisheries Division