

**DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**Environmental Assessment**

**Permitting and Compliance Division**  
**Water Protection Bureau**

**Name of Project:** Montana Fish Wildlife and Parks Big Spring Creek PCB Cleanup

**Location of Project:** Township 14N, Range 19E, Section 5

**City/Town:** Lewistown

**County:** Fergus

**Description of Project:**

This is the issuance of a new permit for the discharge of treated wastewater from suction dredging activities to remove stream sediments contaminated with polychlorinated biphenyls (PCB) from Big Spring Creek. Sediments will be settled and filtered prior to discharge back to Big Spring Creek.

**Agency Action and Applicable Regulations:** The proposed action of the Department is to issue the MPDES permit for a five-year cycle.

Applicable rules and statute:

ARM Title 17, Chapter 30, Sub-chapter 2 - Water Quality Permit Application and Annual Fees.

ARM Title 17, Chapter 30, Sub-chapter 5 - Mixing Zones in Surface and Ground Water.

ARM Title 17, Chapter 30, Sub-chapter 6 - Surface Water Quality Standards.

ARM Title 17, Chapter 30, Sub-chapter 7 - Nondegradation of Water Quality.

ARM Title 17, Chapter 30, Sub-chapter 12 and 13 - Montana Pollutant Discharge Elimination System Standards.

Montana Water Quality Act, MCA 75-5-101 et. seq.

**Summary of Issues:** PCB may be redistributed in downstream locations if adequate treatment is not employed. The permit contains water quality-based effluent limits on PCB and turbidity to ensure PCB levels in the water column do not exceed water quality standards.

**Affected Environment & Impacts of the Proposed Project:**

*Y = Impacts may occur (explain under Potential Impacts). Include frequency, duration (long or short term), magnitude, and context for any significant impacts identified. Reference other permit analyses when appropriate (ex: statement of basis). Address significant impacts related to substantive issues and concerns. Identify reasonable feasible mitigation measures (before and after) where significant impacts cannot be avoided and note any irreversible or irretrievable impacts. Include background information on affected environment if necessary to discussion.*

N = Not present or No Impact will likely occur. *Use negative declarations where appropriate (wetlands, T&E, Cultural Resources).*

<b>IMPACTS ON THE PHYSICAL ENVIRONMENT</b>	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are soils present which are fragile, erosive, susceptible to compaction, or unstable? Are there unusual or unstable geologic features? Are there special reclamation considerations?	(Y) A minor amount of soil could be eroded from stream bank areas that have become denuded of vegetation due to excavator activity. FWP proposes reseeded immediately after the project to minimize such damage. This suction dredge is designed to lift the cobble armor layer of the streambed and remove silt from beneath this layer. The cobble will remain on the streambed, but after the fines are removed, the cobble will no longer be armored. This may leave the dredged area more prone to erosion. FWP plans to conduct a study to assess the stability of these dredged materials and their resistance to erosion during the spring 2010 runoff or other high water events within the next year. See June 18, 2009 FWP pilot project EA.
2. WATER QUALITY, QUANTITY AND DISTRIBUTION: Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?	(Y) Effluent limits in the permit will be protective of water quality standards for PCB and turbidity; water quality impacts from the discharge are not expected.  Minor impacts from dredging activities may occur. Five or six jersey rails (2.5 ft tall by 10 ft long) will be positioned in the stream to completely circumscribe the area to be dredged and create quiescent zones to control turbidity. Irrigation cloth will be used to line the jersey barriers to prevent entry of water to the work area. There will be a minor level of sediment stirred up during placement or removal of jersey barriers. This will prevent the movement of suspended sediment away from the work site. This barrier will not be removed until the next day, or until all suspended sediment has settled. See June 18, 2009 FWP pilot project EA.
3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?	(Y) There may be incidental diesel and gas fumes during the project. See June 18, 2009 FWP pilot project EA.
4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be significantly impacted? Are any rare plants or cover types present?	(Y) No vegetation will be removed. Some terrestrial vegetation (low-lying shrubs and grasses) may be damaged by the operation of an excavator to deploy jersey barriers, but stream bank stability should be unaffected because it is not expected that the excavator will operate in the stream channel. FWP plans to re-contour disturbed areas afterwards and re-seed bare areas with grass. See June 18, 2009 FWP pilot project EA.
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?	(Y) Some small fish could be killed during the dredge operation, and the stream bottom periphyton and macrophytes will also be removed. The dredging will undoubtedly have a great effect on aquatic insects—killing many of them and dislodging many others from their homes. Re-colonization by drift should occur fairly rapidly. A very small percent of the 30-mile long creek will be impacted by the dredging so there should not be any population level effects. See June 18, 2009 FWP pilot project EA.
6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES: Are any federally listed threatened or endangered species or identified habitat present? Any	(N)

<b>IMPACTS ON THE PHYSICAL ENVIRONMENT</b>	
wetlands? Species of special concern?	
7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?	(N)
8. AESTHETICS: Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?	(N) During project construction there may be limited noise, fumes and congestion in the project area. This disturbance will likely be less than 8 hours duration each day. See June 18, 2009 FWP pilot project EA.
9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY: Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project? Will new or upgraded powerline or other energy source be needed)	(N)
10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other activities nearby that will affect the project?	(N)

<b>IMPACTS ON THE HUMAN ENVIRONMENT</b>	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?	(N) Effluent limits for PCB and turbidity in the water column will be protective of human health.
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	(N) No impacts are expected at this time.
13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.	(N) No impacts are expected at this time.
14. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?	(N) No impacts are expected at this time.
15. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc.) be needed?	(N) See June 18, 2009 FWP pilot project EA.
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	(N) No impacts are expected at this time.
17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES: Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?	(Y) See June 18, 2009 FWP pilot project EA. Access to the area around the upper hatchery will be limited during the pilot project. Access to portions of Big Spring Creek may be limited during the full-scale project.

<b>IMPACTS ON THE HUMAN ENVIRONMENT</b>	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing?	(N) No impacts are expected at this time.
19. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	(N) No impacts are expected at this time.
20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	(N) No impacts are expected at this time.
21. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	(N) No impacts are expected at this time.
22(a). PRIVATE PROPERTY IMPACTS: Are we regulating the use of private property under a regulatory statute adopted pursuant to the police power of the state? (Property management, grants of financial assistance, and the exercise of the power of eminent domain are not within this category.) If not, no further analysis is required.	No
22(b). PRIVATE PROPERTY IMPACTS: Is the agency proposing to deny the application or condition the approval in a way that restricts the use of the regulated person's private property? If not, no further analysis is required.	[ ]
22(c). PRIVATE PROPERTY IMPACTS: If the answer to 21(b) is affirmative, does the agency have legal discretion to impose or not impose the proposed restriction or discretion as to how the restriction will be imposed? If not, no further analysis is required. If so, the agency must determine if there are alternatives that would reduce, minimize or eliminate the restriction on the use of private property, and analyze such alternatives. The agency must disclose the potential costs of identified restrictions.	[ ]

23. Description of and Impacts of other Alternatives Considered: None
24. Summary of Magnitude and Significance of Potential Impacts: The potential impacts are minor in comparison to the benefit from remediation of this segment of Big Spring Creek.
25. Cumulative Effects: None
26. Preferred Action Alternative and Rationale: The preferred action is to issue the MPDES permit. This action is preferred because the permit program provides the regulatory mechanism for protecting water quality by enforcing the terms of the MPDES permit.

**Recommendation for Further Environmental Analysis:**

EIS     More Detailed EA     No Further Analysis

**Rationale for Recommendation:**

- 27. Public Involvement: A 30-day public comment period will be held.
- 28. Persons and agencies consulted in the preparation of this analysis: Trevor Selch, Montana FWP; Don Skaar, Montana FWP.

**EA Checklist Prepared By:** Jeff May

**Date:** July 23, 2009

**Approved By:**

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Jenny Chambers, Chief  
Water Protection Bureau

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Date