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VIA ELECTRONIC MAIL AND FIRST-CLASS MAIL

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Re: Comments on proposed General Permit MTG370000, 2009 renewal

Dear Ms. Sharpe:

The following comments are submitted on behalf of Trout Unlimited, Earthworks, the Montana Council of Trout Unlimited, and the Clark Fork Coalition on the proposed renewal of General Permit MTG370000, which covers discharges from portable recreational suction dredge mining operations. As detailed below, these organizations have serious concerns with DEQ's proposed removal of the current permit conditions allowing DEQ to deny or seasonally restrict proposed operations on streams where sediment discharged from dredge mining could seriously disrupt the reproductive success of spawning fish. We believe the removal of these conditions would violate the requirements of the Montana Water Quality Act ("WQA") and federal Clean Water Act ("CWA"). More, specifically, they would violate the requirement that all MPDES permits include conditions ensuring compliance with all applicable water quality standards. In addition, we believe the proposed permit raises concerns under Montana's nondegradation policy.

Background

The Impacts of Recreational Suction Dredge Mining

Suction dredging is a mining practice in which miners use a mechanized floating dredge to suck up streambed material in a pipe, pass it over a sluice box to sort out gold, and discard the spent material as tailings over another area of the streambed. The tailings discharged from suction dredges are defined as "waste" under the CWA and WQA, and therefore may not be discharged into state waters except pursuant to a valid MPDES permit. The primary pollutant contained in suction dredge discharges is sediment.

Sediment discharged from suction dredge mining is known to affect beneficial uses in at least two significant ways. First, if dredging is conducted during a season when incubating fish eggs are present in stream gravels, discharged sediment can smother the eggs when it settles in the gravels downstream of the dredge. *See, e.g.* 61 F.R. 3410 (January 31, 1996) (EPA notice of proposed NPDES general permit for suction dredge mining in Alaska). Second, deposited tailings interfere with fish reproduction by mimicking suitable spawning sites and thus attracting fish – particularly salmonid fish – to lay their eggs within them; however, they are generally not suitable spawning sites because they are much less stable than naturally-deposited gravels, and often erode away before eggs can successfully hatch. *See* Harvey, B., and Lisle, T., "Effects of Suction Dredging on Streams: a Review and an Evaluation Strategy," *Fisheries* **23**(8) (1998), at 11-12.

In addition to the harm resulting from the actual discharge of sediments, suction dredging can destroy fish eggs by mechanically sucking them out of spawning gravels. *Id.* at 8-9 Both the discharge-related and direct mechanical effects can be reduced by restricting dredging to seasons where eggs are not in spawning gravels, and where spring runoff will have a chance to sort and re-deposit disturbed tailings in a more natural manner prior to the next spawning season for fish present in a particular drainage. *Id.* at 14-15. Where threatened or sensitive fish species are present, and in stream reaches that are particularly important for spawning, it may be necessary to prohibit dredging altogether to avoid harm. *Id.*

The Requirements of the WQA and CWA

Both state and federal law require all MPDES permits – including general permits – to include all conditions necessary to assure compliance with all applicable water quality standards. 40 CFR §122.43; ARM §17.30.1344(2)(a). This requirement extends to all discharges that have a "reasonable potential" to violate any water quality standard. 40 CFR §122.44(d); ARM §17.30.1344(2)(b); ARM ¶17.30 .637(2). Water quality standards include both designated beneficial uses, and criteria that specify the level of water quality necessary to sustain those uses. *Cite*. "Water quality" refers not only to substances dissolved or suspended in the water column, but more broadly to all "physical, chemical, and biological conditions" of the receiving water. ARM 17.30.702; MCA §75-5-301(26). Water quality criteria may be either numerical or narrative.

General Permit MTG 370000 applies to all waters statewide. This includes the vast majority of waters in western Montana that are classified as B-1, which according to the state's beneficial use regulations, must "be maintained suitable for . . . growth and propagation of salmonid fishes and associated aquatic life." The B-1 water quality criterion for sediment states:

> No increases are allowed above naturally occurring conditions of sediment or suspended sediment . . . [or] settleable solids . . . which . . . are likely to . . . render the waters harmful, detrimental, or injurious to . . . fish."

ARM §17.30.623(f). As described above, sediment and other settleable solids discharged from suction dredges can harm salmonid fish in at least two significant ways: (1) by

covering salmonid eggs with sediment and smothering them, and (2) by settling in unstable deposits that interfere with salmonid propagation by inducing fish to lay eggs in gravels that are likely to wash away. In both cases, the tailings create conditions in the waters that are "harmful, detrimental, or injurious" to the propagation of salmonid fish. Likewise, in both cases the harm results from "increases . . . above naturally occurring conditions of sediment" at the sites where the tailings are deposited. Therefore, such harm from suction dredge mining would be in direct violation of the B-1standard.[1]

It cannot reasonably be argued that the standards set forth in ARM §17.30.623(f) extend only to sediments suspended within the water column, and not to sediment deposited in the stream. The plain language of the standard prohibits harmful levels of "sediment *or* suspended sediment," expressly recognizing that sediment can be harmful when not suspended. Interpreting the standard to apply only to suspended sediment, and not to deposited sediment, would create a redundancy in its language, a result that is not only grammatically awkward, but legally untenable. *Formicove, Inc. v. Burlington Northern*, 207 Mont. 189, 193; 673 P.2d 469, 471 (1983) ("In constructing a statute, we are required to consider it as a whole and, if possible, give meaning to every word contained therein"); *see also* MCA §1-2-101. A much more rational interpretation is that the reference to "sediment *or* suspended sediment" recognizes the well-established scientific fact that both suspended sediment and deposited sediment can be harmful to aquatic life, and must be limited to protect beneficial uses. This reading is reinforced by the reference in the standard to "settleable solids." If the standard were intended to prevent only harmful levels of solids suspended in the water column, then it would be irrational for its language to focus solely on "settleable" solids; again, the rational interpretation is that the regulation is intended to prevent levels of solids – including sediment – that will be harmful once they settle on the bed of the stream. This interpretation is further supported by well over a decade of DEQ practice. In preparing its bi-annual 303(d) list of impaired waters, DEQ has repeatedly concluded that hundreds of waterbodies are not meeting water quality standards for sediment. DEQ has based these determinations not on data for suspended sediment, but rather on measures of deposited streambed sediment such as cobble embeddednes and percent fines. Moreover, DEQ has prepared numerous pollutant-based Total Maximum Daily Loads for these waterbodies, setting forth estimates of the maximum amount of sediment that can be discharged to them without violating water quality standards. None of these determinations would make any sense if those standards were somehow read to apply only to suspended sediment, and not deposited sediment.

In sum, DEQ has both the authority and the affirmative obligation to include conditions in General Permit 370000 to ensure that suction dredge operations will not discharge

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[1] Any such harm from suction dredge mining would also violate ARM §17.30.637, which prohibits the discharge of materials that "create concentrations or combinations of materials which are . . . harmful to . . . aquatic life." The mix of sand, silt, gravel, and clay that emerges from suction dredges constitutes an unnatural combination of materials that can be quite harmful to the fertilized eggs of salmonid fish in the two ways described above.

sediment that will settle to form conditions that are harmful to salmonid fish or other aquatic life.

Specific Comments on the Proposed Renewal of MTR 370000

1. Failure to retain the closures recommended by FWP as binding MPDES permit conditions would place the permit in violation of the CWA and WQA

The existing 1997 General Permit contains specific conditions designed to ensure that all covered mining operations avoid harm to fish and associated aquatic life, and thereby comply with water quality standards. These conditions provide that DEQ will deny or seasonally restrict individual permit authorizations on streams where discharged sediment could be harmful to spawning fish, based on the substantive fishery information provided by the Department of Fish, Wildlife and Parks ("FWP"). This information consists of a spreadsheet listing several hundred streams and stream segments, and a determination of the season (if any) when, in FWP's professional judgment, recreational suction dredging can take place with minimal harm to resident fish on each particular stream. This system represents a highly appropriate example of the two agencies working together to use their respective expertise and authority to protect the state's natural resources. FWP – which has extensive knowledge of state fisheries, but relatively little regulatory authority – provides the substantive input. Based on this input, DEQ – which is charged by law with regulating discharges to protect fisheries, but lacks its own staff of professional fish biologists – sets reasonable restrictions on suction dredge operations, backed up by the full enforcement provisions of the WQA and CWA.

In the 2009 renewal, DEQ is proposing to delete these conditions from the general permit, on the grounds that "the 310 permitting activity currently undertaken by the Local Conservation Districts . . . adequately protects the fishery habitats." Under this proposal, violations of seasonal restrictions by suction dredge miners would no longer be considered violations of the WQA or CWA; instead, they would be enforced, if at all, by local volunteer Conservation Districts under the 310 Law. We strongly urge DEQ to reconsider this proposal.

First of all, the proposed change would violate both the WQA and CWA. As the agency charged with administering the WQA, DEQ has the exclusive responsibility to enforce the requirement that all discharges to state waters comply with water quality standards. *See* MCA 75-5-211. Nothing in the WQA authorizes DEQ to delegate the enforcement of this or any other provision of the WQA to FWP or local conservation districts. DEQ's proposal to rely solely on these entities to ensure that dredging does not harm the state's crucial fisheries, and thus violate water quality standards, is in direct violation of 40 CFR §122.43, and ARM §17.30.1344(2)(a), which require all necessary measures to be included in the MPDES permit as binding conditions.

Second, as a practical matter, the proposed change would significantly restrict the remedies available to the state and public for enforcing violations by suction dredge operations. Under the WQA, violations can be prosecuted administratively by DEQ, and violators are subject to civil penalties of up to $25,000 per day of violation, as well as criminal penalties of up to $50,000 per day for repeat offenders. *See* MCA §§75-5-601 et seq. In the event that the state lacks the resources to diligently prosecute violations, the public may enforce permit terms through citizen suits. *See* 33 USC §1365. In contrast, the penalties available for violation of a 310 permit are limited to criminal penalties of $500 per day, and civil penalties of $7,000 per day in total, regardless of the number of days of violation. *See* MCA §75-7-123. Enforcement must be undertaken by either the conservation districts – which have no professional enforcement staff – or else by local county attorneys. *Id.* Citizen suits are not available.

Given the serious nature of an MPDES permit violation, the current practice of stating seasonal restrictions on dredge mining as enforceable MPDES permit conditions sends a powerful message to dredge operators that their activities can harm public resources if not conducted properly, and likely has a strong deterrent effect on potential violations. In contrast, removing these restrictions would send the message that the state does not take the restrictions as seriously, and could invite dredge miners to violate the restrictions run the risk of paying penalties as a normal cost of their activities. This is the wrong message to send.

2. Maintaining the FWP restrictions is further necessary to meet nondegradation standards

Under the CWA and WQA, General Permit MTG370000 must contain provisions to ensure compliance with Montana's nondegradation standards, which prohibit any degradation of the existing quality of high-quality waters without undergoing a rigorous review process. The WQA defines "existing water quality" as "the quality of the receiving water, including chemical *physical*, and biological conditions immediately prior to commencement of the proposed activity." ARM 17.30.702(4) (emphasis added); MCA §75-5-301(26). "Degradation" is defined as any lowering of the quality of the parameters that make up those chemical, physical, or biological conditions. MCA §75-5-301(7). The condition of the stream substrate, including the degree of sedimentation, is recognized as a "physical parameters" of a waterbody. *See* EPA Water Quality Standards Handbook, 2d Ed. at §2.9.2.[2]

Read together, these nondegradation provisions prohibit General Permit MTG370000 from authorizing any suction dredge activities that will significantly degrade the existing physical integrity of the substrate of Montana streams without a nondegradation review. Moreover, unlike the water quality criteria discussed above, this prohibition applies not only to degradation caused by the discharge of pollutants from dredges, but more broadly to any "activity" that degrades the physical or biological characteristics of the stream, including the physical damage to stream substrate and fish eggs caused by the mechanical

[2] http://www.epa.gov/waterscience/standards/handbook/chapter02.html

action of the dredge. *See* ARM 17.30.705(1) (nondegradation requirements apply to any "activity of man.").

In the fact sheet, DEQ suggests that the degradation from dredging activities allowed by the permit is "nonsignificant," and therefore exempt from nondegradation review, in part because "there is low potential for harm to . . . the environment." Fact Sheet at 10 (citing 75-5-317(1). But as we have already noted, the potential for harm is low only if the site-specific closures and seasonal restrictions recommended by FWP are followed. If they are not, the potential for dredging to affect aquatic life is quite high. *See* Harvey and Lisle, *supra*. Again, the law requires that DEQ, not FWP or the conservation districts, impose MPDES permit conditions to ensure that significant degradation does not occur.

The fact sheet further suggests that degradation will be "nonsignificant" because "the quantity and strength of the pollutant (turbidity and suspended sediment) is low and controlled in the authorization letter and permit." This rationale ignores the fact that the primary threat of degradation does not come from turbidity or suspended sediment. Instead, it comes from deposited sediment, and from the physical destruction that dredges cause to the stream substrate. Again, unless the closures and restrictions are followed, the potential for degradation is high.

3. The TSS monitoring procedures in the permit should include a margin of safety to allow corrective action before a violation of standards has likely already taken place.

The proposed permit calls for dredge operators to self-monitor their emissions of turbidity and suspended solids by visually looking for signs of turbidity at the end of the longest legally-available mixing zone, 10 stream widths downstream from the location of the dredge. Fact sheet at 9; *see* ARM §17.30.516(4). But the fact sheet acknowledges that this rather crude monitoring method is unlikely to detect violations of standards until *after* they have occurred: "If a visual increase in turbidity (any cloudiness or muddiness) is observed at the end of the mixing zone, a violation of the turbidity limit has likely occurred and the operation must cease immediately." *Id.* at 7-10. This is contrary to both the sprit and letter of the NPDES regulations, which require that monitoring and other conditions in the permit be designed to allow corrective action *before* violations occur. *See* 40 CFR §1343. Obviously, monitoring methods in the case of activities like suction dredging will necessarily be imprecise, and will involve some degree of judgment and estimation. However, the proper response to this situation is not to abandon the preventative approach required by the rules. Instead, DEQ should introduce a margin of safety into the permit. Instead of allowing monitoring to take place at the end of the longest possible mixing zone, DEQ should require monitoring at a shorter distance downstream – for example, 5 stream widths. The mixing zone rules do not require that mixing zones always be set at the longest possible length – 10 stream widths or half the mixing distance – rather, these are stated as *maximum* lengths. ARM §17.30.516(4). Moreover, the WQA requires that mixing zones be set at lengths that represent "the smallest practicable size" and have "a minimum practical effect on water uses." MCA 75-5-501(4)(a)&(b). This provisions provide ample authority to reduce the mixing zone to a length that will allow monitoring and corrective action before, not after, a violation of standards has likely occurred.

4. The upper Clark Fork River should be closed to dredging to avoid violations of water quality standards for toxic metals.

In the case of some streams whose beds contain high levels of contaminated sediment, activities that disturb bottom sediments are known to cause violations of WQB-7 standards for total recoverable metals in the water column. One such stream is the upper Clark Fork River, which contains high levels of copper, zinc, lead, cadmium, mercury, and other heavy metals from the outlet of the Warm Springs Ponds to the confluence with the Blackfoot River. Metals levels are lower, but still above background, for some distance below that point. Activities disturbing these sediments have been known to violate standards for toxic metals. For example, turbidity from a pipeline crossing in 2001 near Turah, just upstream of the Blackfoot confluence, was found to violate acute aquatic life standards for copper and zinc. Activities upstream of this point, where metals levels grow progressively higher, would be even more likely to violate standards.

Permit MTR370000 should categorically close the upper Clark Fork River to suction dredge mining. This condition is necessary to ensure compliance with water quality standards for metals and arsenic.

5. The permit should advise permitees of the danger of illegal take of bull trout in violation of Section 9 of the ESA.

Section III(B) of the permit advises suction dredge operators that they must obtain various additional permits before mining, and provides a list of the state and federal agencies whose approval they may need to obtain. This list contains a serious omission. A large portion of the streams in western Montana contain bull trout, which are protected as a threatened species under the federal Endangered Species Act ("ESA"). Any dredge mining activity that harms bull trout eggs, juveniles, or adult fish would be a direct violation of Section 9 of the ESA. Because bull trout eggs are present in stream gravels for a period of many months – including the early fall period when mining is likely to take place – the possibility of take is comparatively high. The permit should advise permitees of this danger, and refer them to the appropriate agencies that can ensure compliance with the law.

Thank you for your consideration of the above comments, which we hope will be reflected in the final version of General Permit MTG 370000.

Sincerely,

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