Fact Sheet

NPDES Permit Number: AKG-37-5000
Date: December 19, 2001
Contact: Cindi Godsey
Alaska Operations Office/Anchorage
(907) 271-6561 or (800) 781-0983 (in Alaska only)
godsey.cindi@epa.gov

The U.S. Environmental Protection Agency (EPA) Plans To Issue A General Wastewater Discharge Permit To:

Alaskan Small Suction Dredge Miners

and

NOTICE OF STATE CERTIFICATION,

and

provide information on
DETERMINATION OF CONSISTENCY
WITH THE
ALASKA COASTAL MANAGEMENT PROGRAM

EPA Proposes NPDES Permit Issuance.
EPA proposes to reissue a National Pollutant Discharge Elimination System (NPDES) General Permit to Alaskan Small Suction Dredge Miners for gold placer mining operations in Alaska. The proposed permit sets conditions on the discharge - or release - of pollutants from the operation into waters of the United States.

This Fact Sheet includes:
- information on public comment, public hearing, and appeal procedures
- a description of the industry
- a description of proposed permit conditions.

The State of Alaska certification.

EPA has requested that the Alaska Department of Environmental Conservation

(ADEC) certify the NPDES permit under section 401 of the Clean Water Act (CWA).

Consistency Determination

The State of Alaska, Office of Management and Budget, Division of Governmental Coordination (DGC), intends to review this action for consistency with the approved Alaska Coastal Management Program (ACMP). For more information concerning this review, please contact Mr. Rex Blazer at (907) 465-8791.

EPA invites comments on the proposed permit.

EPA will consider all substantive comments before issuing a final permit. Those wishing to comment on the proposed permit may do so in writing by the end of the public comment period.

Persons wishing to comment on State Certification should submit written comments by the public notice expiration date to the Alaska Department of Environmental Conservation, 610 University Avenue, Fairbanks, Alaska 99709.

For more information on the ACMP consistency review process and the comment deadline, or to submit comments, please contact Mr. Rex Blazer at DGC, P.O. Box 110030, Juneau, AK, 99811-0030 or at (907) 465-8791.

The general permit (GP) will become effective 30 days after publication of the final GP in the Federal Register according to Section 553(d) of the APA.

Documents are available for review.

The proposed NPDES permit and fact sheet can be reviewed at EPA's Regional Office in Seattle between 8:30 a.m. and 4:00 p.m., Monday through Friday. This material is also available for inspection and copying at the following places in Alaska:

USEPA Alaska Operations Office
Federal Building, Room 537
222 West 7th Avenue
Anchorage, Alaska 99513-7588
Telephone: (800) 781-0983 (Within Alaska)

USEPA Alaska Operations Office
709 W. 9th Street, Room 223A, Box 20370
Juneau, Alaska 99802
Telephone: (907) 586-7619

ADEC Watershed Development Program
Air and Water Quality Division
610 University Avenue
Fairbanks, AK 99709

Telephone: (907) 451-2142

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LIST OF ACRONYMS

AAC	Alaska Administrative Code
ACMP	Alaska Coastal Management Program
ADEC	Alaska Department of Environmental Conservation
ADF&G	Alaska Department of Fish and Game
AMA	Alaska Miners Association
APA	Administrative Procedures Act
AWQS	Alaska Water Quality Standard
BMP	Best Management Practices
CFR	Code of Federal Regulations
CSU	Conservation System Unit
CWA	Clean Water Act
DGC	Division of Governmental Coordination
EFH	Essential Fish Habitat
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FR	Federal Register
GP	General Permit
NMFS	National Marine Fisheries Service
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
USFWS	United States Fish & Wildlife Service
USGS	United States Geological Survey

I. GENERAL PERMITS

A. Permit Coverage

1. Section 301(a) of the CWA provides that the discharge of pollutants is unlawful except in accordance with an NPDES permit. Although such permits are usually issued to individual dischargers, EPA's regulations also authorize the issuance of "general permits" to categories of discharges [40 CFR 122.28] when a number of point sources are:

   a. Located within the same geographic area and warrant similar pollution control measures;

   b. Involve the same or substantially similar types of operations;

   c. Discharge the same types of wastes;

   d. Require the same effluent limitations or operating conditions;

   e. Require the same or similar monitoring requirements; and

   f. In the opinion of the Director, are more appropriately controlled under a general permit than under individual permits.

2. Like individual permits, a violation of a condition contained in a general permit constitutes a violation of the Act and subjects the owner or operator of the permitted facility to the penalties specified in Section 309 of the Act as amended by the debt collection Improvement Act (31 U.S.C. § 3701 note).

3. A Notice of Intent (NOI) to be covered under this General Permit (GP) is required [40 CFR 122.28(b)(2)(i)]. An NOI may be submitted to either EPA (Appendix B of the permit, NOI Information Sheet) or ADF&G (an NOI or an ADF&G application form).

   ADF&G accepts applications for area permits. These areas are listed in Appendix A of the proposed general permit. EPA is proposing to issue one permit for these areas rather than requiring a separate permit for each creek in the area as was required by the previous general permit.

4. This permit will expire five (5) years from the date of effective date. 40 CFR 122.28(b)(1) allows a GP to be administered according to the individual permit regulations found in 40 CFR 124 so the GP will continue in force and effect until a new GP is issued. Only those facilities authorized to discharge under the expiring GP that submit an NOI 90 days prior to the expiration of this GP are covered by the continued permit.

5. EPA is proposing that all facilities covered by the 1997 GP be eligible for coverage under this GP. EPA intends to contact those facilities covered by the 1997 GP to determine whether continued coverage is necessary.

B. Limitations on Coverage

1. Many streams and stream reaches in Alaska have been designated as part of the federal wild and scenic rivers system or as a Conservation System Unit (CSU). Because this permit does not relieve a permittee of the requirements of other applicable federal, state or local laws, permittees should contact the district offices of the agencies that administer these systems for additional restrictions that may apply to operations on claims within these designated areas.

2. Many streams in Alaska where suction dredging occurs have been designated by ADF&G as needing a permit with additional restrictions. Because this permit does not relieve a permittee of the requirements of other applicable federal, state or local laws, the proposed permit requires permittees to contact the ADF&G.

C. Prohibitions

1. This GP does not apply to facilities that are proposed to be located in National Parks System Units (i.e., Parks and Preserves), National Monuments, National Sanctuaries, National Wildlife Refuges, National Conservation Areas, National Wilderness Areas, National Critical Habitat Areas, or waters adjacent to the boundaries of areas designated as wild under the Wild & Scenic Rivers Act.

2. This permit does not apply to wetlands designated in the 1995 Anchorage Wetlands Management Plan.

D. Individual Permits

1. Owners or operators covered by a GP may be excepted from coverage by applying to the Director of the NPDES program for an individual permit. This request must be made by submitting an NPDES permit application, together with supporting documentation within 90 days of publication by EPA of the final GP in the Federal Register, or 180 days prior to the commencement of operation of a new source or new discharger.

2. The Director may require any person authorized by a GP to apply for and obtain an individual permit, or any interested person may petition the Director to take this action. The Director may consider the issuance of an individual permit when:

a. The single discharge or the cumulative number of discharges is/are a significant contributor of pollution;

b. The discharger is not in compliance with the terms and conditions of the GP;

c. A change has occurred in the availability of demonstrated technology or practices for the control or abatement of pollutants applicable to the point source;

d. Effluent limitations guidelines are subsequently promulgated for the point sources covered by the GP;

e. A Water Quality Management Plan containing requirements applicable to such point sources is approved.

f. Circumstances have changed since the time of the request to be covered so that the discharger is no longer appropriately controlled under the GP, or either a temporary or permanent reduction or elimination of the authorized discharge is necessary

II. BACKGROUND ON SUCTION DREDGE PERMITTING

On June 30, 1992, EPA received a notice of citizen suit, that alleged that EPA failed to perform a non-discretionary duty to regulate suction dredge gold placer mining operations in Alaska. At that time, EPA decided it would issue individual permits for mechanical placer mining operations (for the 1993 mining season) and propose a GP for suction dredge operations. On January 14, 1994, EPA proposed a GP that extended coverage to mechanical as well as suction dredge operations [59 FR 2504, January 14, 1994]. After responding to public comment, EPA issued the final GP on May 13, 1994 [59 FR 28079, May 31, 1994]. On September 28, 1994, two environmental groups filed a petition for review of the GP in the Ninth Circuit Court of Appeals.

On November 18, 1996, EPA and the two environmental groups entered into a settlement agreement to resolve the challenge to the GP. Pursuant to the agreement, EPA agreed to issue three separate GPs to modify and supersede the original GP challenged by the environmental groups in 1994. The settlement agreement also required EPA to complete two studies related to the impact of placer mining on the natural environment in Alaska. One study was to address the discharge of metals by placer mining operations and the other was to address the impact of suction dredge mining.

EPA issued three modified GPs on December 6, 1996, one for mechanical operations, one for medium-size suction dredge operations, and one for small suction dredges [61 FR 64796, December 6, 1996]. On April 4, 1997, three environmental groups challenged these permits. No. 97-70365 (9th Cir). In a

separate action, the Alaska Miners Association (AMA) also challenged the GPs. No. 97-70379 (9th Cir.). These cases were consolidated on May 5, 1997.The challenge by the AMA was dismissed on January 21, 1999.

During the summers of 1997 and 1998 EPA staff and EPA contractors collected data at 31 placer mine sites and several suction dredge sites. These data were analyzed and presented in two final reports, one entitled “Alaska Placer Mining Metals Study” and the other entitled “Impact of suction dredging on water quality, benthic habitat, and biota in the Fortymile River, Resurrection Creek, and Chatanika River, Alaska.” The environmental groups believed that the suction dredge report did not address all of the required elements as set out in the 1996 settlement agreement.

To avoid further litigation over the GPs, EPA and the environmental groups entered into another settlement agreement. Pursuant to the agreement, EPA agreed that further study was necessary to quantify the full impact of suction dredge mining on the natural environment and that further research should be conducted before conclusions are reached about the impact of suction dredge mining on Alaska streams. As a result, the environmental groups’ petition to review the three GPs was dismissed on August 31, 2000.

III. INDUSTRY DESCRIPTION

Placer mining involves the mining and extraction of gold or other heavy metals and minerals primarily from alluvial deposits. These deposits may be in existing stream beds or ancient, often buried, stream deposits, i.e. paleo or fossil placers. Many Alaskan placer deposits consist of unconsolidated clay, sand, gravel, cobble and boulders that contain very small amounts of native gold or other precious metals. Most are stream deposits that occur along present stream valleys or on benches or terraces above existing streams. Beach placer deposits have been and continue to be important producers in Alaska. These deposits, most notable near Nome, include both submerged and elevated beach placer deposits.

Dredging systems are classified as hydraulic or mechanical (including bucket dredging), depending on the methods of digging. Suction dredges, the most common hydraulic dredging system, are quite popular in Alaska with the small and recreational gold placer miner. Like all floating dredges, suction dredges consist of a supporting hull with a mining control system, excavating and lifting mechanism, gold recovery circuits, and waste disposal system. All floating dredges are designed to work as a unit to dig, classify, beneficiate ores and dispose of waste. Because suction dredges work the stream bed rather than stream banks, the discharge from suction dredges consists totally of stream water and bed material.

In the 1997 permit, EPA defined a small suction dredge as those with nozzles less than or equal to four inches. EPA is proposing to redefine the small suction

dredge range as less than or equal to six inches. Information provided in EPA's suction dredge study and the United States Geological Survey (USGS) study support the conclusion that there are local but short term effects on both water quality and macroinvertebrate communities in the mining areas. On the Fortymile River, dredges larger than those proposed under this GP showed that turbidity was reduced to background levels within 250 feet. It is expected that small dredges would have even less impact on the downstream receiving water quality. The results from Resurrection Creek indicated that there was no difference in the macroinvertebrate community between the mining area and the locations downstream of the mining area in terms of macroinvertebrate density and taxa richness. The sampling was done 35 days after mining had been completed for the season and shows a rapid recovery of the mined areas.

III. RECEIVING WATER

The receiving waters are the waters of United States and the State of Alaska, most of which are classified in the Alaska Water Quality Standards (AWQS) [18 AAC 70] as Classes (1)(A), (B), (C), and (D) for use in drinking, culinary and food processing, agriculture, aquaculture, and industrial water supply; contact and secondary recreation; and growth and propagation of fish, shellfish, other aquatic life, and wildlife.

Some of the receiving waters are marine waters that are classified in 18 AAC 70 as Classes (2)(A), (B), (C), and (D) for use in aquaculture, seafood processing, and industrial water supply; contact and secondary recreation; growth and propagation of fish, shellfish, other aquatic life, and wildlife; and harvesting for consumption of raw mollusks or other raw aquatic life.

IV. PERMIT REQUIREMENTS

In establishing permit limits, EPA first determines which technology-based limits must be incorporated into the permit. EPA then evaluates the effluent quality expected to result from these controls, to see if it could result in any exceedences of the water quality standards in the receiving water. If exceedences could occur, EPA must include water quality-based limits in the permit. The proposed permit limits will reflect whichever requirements (technology-based or water quality-based) are more stringent.

A. Technology-based Effluent Limitations

Pursuant to Section 402(a)(2) of the Act and 40 CFR 122.44(k)(2), Best Management Practices (BMPs) are being proposed in the permit.

Suction dredging's unique method of intake and displacement present unusual permitting issues. As discussed above, a suction dredge is a mechanical device that floats on the stream surface and pumps stream water and stream bed material through a suction intake conduit to a sluice box

from which gold or other minerals may be recovered. The discharge from suction dredges consists totally of stream water and bed material immediately released back into the receiving water.

The BMPs in Permit Part II.C. are being proposed because technology-based numeric effluent limitations are infeasible.

B. Water quality-based Effluent Limitations

Section 301(b)(1) of the Act requires the establishment of limitations in permits necessary to meet water quality standards by July 1, 1977. All discharges to state waters must comply with state and local coastal management plans as well as with state water quality standards, including the state's antidegradation policy. Discharges to state waters must also comply with limitations imposed by the state as part of its coastal management program consistency determination and of its certification of NPDES permits under section 401 of the Act.

The NPDES regulations at 40 CFR 122.44(d)(1) require that permits include water quality-based limits that "Achieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality."

EPA has determined that turbidity is a pollutant of concern and it is expected that the proposed BMPs, when implemented properly, will be protective of Water Quality Standards.

V. BEST MANAGEMENT PRACTICES (BMPs)

BMPs are measures that are intended to prevent or minimize the generation and the potential for the release of pollutants from industrial facilities to the waters of the United States through normal operations and ancillary activities.

Pursuant to Section 402(a)(1) of the Clean Water Act, development and implementation of BMP Plans may be included as a condition in NPDES permits. Section 402(a)(1) authorizes EPA to include miscellaneous requirements that are deemed necessary to carry out the provision of the Act in permits on a case-by-case basis . BMPs are required to control or abate the discharge of pollutants in accordance with 40 CFR § 122.44(k).

The proposed permit requires compliance with the following BMPs:

A. Streambanks shall not be mined or otherwise disturbed. Dredging is only permitted within the existing wetted perimeter (waterline) in the active stream channel.

This practice will ensure that erosion does not occur and that the

finer sediments that may be found in these areas do not cause turbidity problems in the receiving waters.

B. Dredging and discharging are prohibited in locations where fish are spawning or where fish eggs or alevins are known to exist at the time dredging occurs.

Under Section 101 of the Clean Water Act, EPA is required to restore and maintain the chemical, physical and biological integrity of waters of the United States. Protection of the physical integrity of waterbodies includes protection of habitat.

C. Motorized winches or other motorized equipment shall not be used to move boulders, logs, or other natural obstructions.

This practice should ensure that important habitat which includes large organic debris and large boulders in these areas will not be destroyed.

D. No wheeled or tracked equipment may be used instream while dredging is in progress.

This practice should minimize turbidity from sources other than the suction dredge.

E. No damming or diversions are authorized.

EPA cannot authorized dams or diversions under Section 402 of the CWA. These are generally authorized under Section 404 of the CWA which is administered by the U.S. Army Corps of Engineers.

F. Dredging of concentrated silt and clay should be avoided. The permittee shall use reasonable care to avoid dredging silt and clay materials that would result in a significant increase in turbidity. Reasonable care includes moving the dredge to a new location or reducing the volume of effluent discharge by limiting operation speed of the suction dredge.

This practice will decrease the amount of fine material that will be released into the water that could cause excessive turbidity plumes.

G. Care shall be taken by the operator during refueling of equipment to prevent spillage into surface waters or to groundwater.

This practice will decrease the potential for contamination of surface water by petroleum products.

VI. OTHER PERMIT CONDITIONS

Endangered Species Act

The Endangered Species Act (ESA) requires federal agencies to consult with the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS) if their actions could beneficially or adversely affect any threatened or endangered species. EPA sent a letter to the USFWS and to the NMFS on October 17, 2001, requesting a species list for the coverage area of the GP. EPA sent a second letter to USFWS on October 25, 2001. If necessary, EPA will enter into informal or formal consultation with USFWS and NMFS to ensure that the GP will not result in unacceptable impacts to any of the species identified on these lists.

Essential Fish Habitat (EFH)

The 1996 amendments to the Magnuson-Stevens Fishery Management and Conservation Act set forth a number of new mandates for NMFS, regional fishery management councils and other federal agencies to identify and protect important marine and anadromous fish habitat. The action agency needs to make a determination Federal actions that may adversely impact EFH.

In streams where suction dredging occurs, the most critical life stage for salmon is the egg stage. The GP prohibits suction dredging in locations where fish are spawning or where fish eggs or alevins are known to exist. The Alaska Department of Fish and Games issues permits for mining in anadromous streams that limit or prohibit mining while the eggs are in the gravel. In freshwaters, the GP is unlikely to be used during the critical phase. EPA has determined that no adverse impact to EFH in freshwaters would result from the issuance of this permit.

Most marine waters surrounding the state of Alaska have been designated as essential fish habitat. In marine waters, most suction dredging activity takes place in the State's recreational area offshore of Nome with most occurring within the surf zone. It is not expected that mining would occur in waters deeper than 20 feet. Mining at these shallower depths is probably less disruptive to natural biological communities that tend to adapt to natural disturbances than to communities in deeper water with less natural disturbance. EPA does not expect there to be any adverse impacts to EFH due to activities conducted in marine waters that would result from the issuance of this permit.

State Certification

Section 401 of the Clean Water Act requires EPA to seek certification from the State that the permit is adequate to meet State water quality standards before issuing a final permit. The regulations allow for the State to stipulate more stringent conditions in the permit, if the certification cites the Clean Water Act or State law references upon which that condition is based. In addition, the

regulations require a certification to include statements of the extent to which each condition of the permit can be made less stringent without violating the requirements of State law.

The draft permit has been sent to the State to begin the certification process. If the state authorizes different or additional conditions as part of the certification, the permit may be changed to reflect these conditions.

Consistency Determination

EPA has sent a copy of the permit to the State of Alaska, Office of Management and Budget, Division of Governmental Coordination (DGC), which will review this permitting action for consistency with the approved Alaska Coastal Management Program (ACMP). For more information concerning this review, please contact Mr. Rex Blazer at (907) 465-8791.

Permit Expiration

This permit will expire five years from the effective date of the permit.

APPENDIX A -- REFERENCES

NPDES Permit Writer's Manual. EPA, Office of Water, Office of Wastewater Management, Permits Division. Washington, DC. 20460; EPA-833-B-96-003, December 1996, 220pp.

Technical Support Document for Water Quality-based Toxics Control. EPA, Office of Water Enforcement and Permits, Office of Water Regulations and Standards. Washington, DC, 20460; EPA/505/2-90-001, March 1991, 145pp.

Impact of suction dredging on water quality, benthic habitat, and biota in the Fortymile River, Resurrection Creek, and Chatanika River, Alaska. Prepared for EPA by Aaron M. Prussian, Todd V. Royer, and G. Wayne Minshall, Idaho State University. June 1999.

Regional Baseline Geochemisty and Environmental Effects of Gold Placer Mining Operations on the Fortymile River, Eastern Alaska. Department of Interior, U.S. Geological Survey. Open-File Report 99-328. 1999.

Regional Geochemical Results from the Analyses of Rock, Water, Soil, Stream Sediment, and Vegetation Samples--Fortymile River Watershed, East-Central Alaska. Department of Interior, U.S. Geological Survey. Open-File Report 99-33. 1999.