

DRAFT

Guidelines for Section 10/404 Activities

Department of Natural Resources
Water Pollution Control Program

Excavation at Lake of the Ozarks

Discussion:

There is a considerable amount of excavation in coves throughout the Lake of the Ozarks. The applicants are normally private individuals, developers, or commercial interests. The excavation is usually accomplished by a dragline, backhoe, or bulldozer. This excavation results in localized increases in turbidity and suspended solids in violation of the Water Quality Standards. The excavation can also result in the partial or complete loss of wetlands in a cove including their waste assimilation capacities and the loss of valuable shallow water habitat for aquatic life.

Applicability

All waters in the Lake of the Ozarks where these activities occur.

DNR Response Procedure:

The response by the Department of Natural Resources will depend on the purpose and the amount of excavation proposed.

- 1) If the purpose of the excavation is to create deeper water for boat access in front of lake front property, the Department will recommend that the applicant consider the feasibility of utilizing a "community" boat dock instead of a private boat dock for each lot owner. This would significantly reduce or eliminate the excavation required. The

"community" boat dock could be located further out into the cove toward the main channel. This recommendation is normally applicable where the applicant is a developer.

- 2) If the purpose of the excavation is to create a sufficient water depth for boat access to a boat dock by a private individual, then the Department shall recommend that the Corps of Engineers restrict the excavation to that amount necessary to provide adequate boat access from the dock to deep water.
- 3) If the purpose of the excavation is to create lake front property by excavating the head of the cove, the Department will object to issuance of the permit.
- 4) If the purpose of the project is to eliminate shallow water or wetland areas in a cove, the department will object to issuance of the permit.

Section 401 Water Quality Certification

Excavation which does not result in the placement of fill material only requires a permit from the Corps of Engineers under the authority of Section 10 of the River and Harbor Act of 1899. Therefore, water quality certification is not required. If the project also includes the placement of fill material, then a Section 404 permit and water quality certification would also be required. For the projects which require a Section 404 permit, water quality certification will be issued, conditioned, or denied depending on the purpose of the excavation as described above.

Sediment Analysis for Dredging Projects

Discussion:

There is a potential for water quality degradation from dredging, particularly for harbor and shoreline dredging near urban areas or other pollution sources. The Department of Natural Resources needs to be able to assess the impacts of a dredging project to determine issuance, denial, or conditioning of Section 401 water quality certification.

Applicability:

As a guide for requesting sediment analyses for Section 401 water quality certification:

- I. A sediment analysis will be required each time water quality certification is requested with the stipulation that additional analyses may be required during the life of the permit if the results of the first analysis indicates polluted sediments for:
 - A. All harbor and channel maintenance dredging on the Mississippi River between UMR mile 160-190.
 - B. All harbor dredging on the Mississippi River below UMR mile 160.
 - C. All harbor dredging on the Mississippi River above UMR mile 190.

D. All harbor dredging on the Missouri River.

E. All dredging on the Blue River (Kansas City).

F. All dredging on urban lakes or streams listed in the Missouri Water Quality Standards for protection of aquatic life.

II. A sediment analysis may be requested on a case by case basis for channelization, pipeline crossings, streambank protection works, or other projects which may be proposed in a location where contaminated sediments are suspected.

For category I, the following list of parameters will be requested for analysis:

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|--------------|--------------|
| 1. COD | 7. Chlordane |
| 2. Manganese | 8. Lead |
| 3. Ammonia | 9. Zinc |
| 4. Mercury | 10. Copper |
| 5. PCBs | 11. Chromium |
| 6. Dieldrin | 12. Cadmium |

The results of these analyses will be evaluated by a mathematical model of desorption and dilution of pollutants caused by dredge disposal. This model was developed by the Waterways Experiment Station, Corps of Engineers, and modified by the University of Iowa for use in rivers.

DNR Response Procedure:

Comment letters on public notices will request a sediment analysis for all dredging projects on applicable waters prior to any determination of water quality certification.

Section 401 Water Quality Certification

A sediment analysis will be required for dredging projects prior to any determination of Section 401 water quality certification. Additional analyses may be required during the life of the permit if the results of the first analysis indicates polluted sediments. With the data from the sediment analysis the Department of Natural Resources has the option of:

1. Issuing water quality certification for a project where the analysis indicate no contamination or low levels of contaminants and very little chance of violations of the Water Quality Standards.
2. Issuing conditions for water quality certification where the analysis indicates contaminated sediments and the project as proposed would result in water quality violations. The certification could include:
 - a. a condition that return flows be diverted into the main channel to ensure rapid dilution.*

- b. a condition that all return flows be impounded until the suspended solids level reaches a specified point.*
3. Deny water quality certification for a project where the analysis indicates contaminated sediments and conditioning the certification is not feasible or would not prevent violations of the Water Quality Standards.

* All return flows from a dredged disposal site would also require a NPDES permit.

Small Hydropower Projects

Discussion

There is a potential for violations of the Water Quality Standards from small hydropower projects. Downstream dewatering may result in an adverse effect on the beneficial uses of the stream. In addition, during power generation low levels of dissolved oxygen may occur downstream. Downstream flooding may also occur.

Applicability

All waters of the state

DNR Response Procedure:

Department comments on public notices for hydropower projects should address the concerns listed above.

Section 401 Water Quality Certification

Water quality certification may be conditioned to ensure that violations of the Water Quality Standards do not occur. For example the certification could be conditioned to require maintenance of minimum instream flows.

Use of Pentachlorophenol and Creosote - Treated Materials in Waters of State

Discussion:

Occasionally the Water Pollution Control Program reviews a project which involves the use of treated wood products (i.e. retaining walls or boat docks) which would be in direct contact with the water. The wood products could be treated with pentachlorophenol or creosote. Both of these wood products potentially have detrimental effects on water quality. Pentachlorophenol is toxic to aquatic life. The Environmental Protection Agency Ambient Water Quality Criteria for Pentachlorophenol states that the criterion for protection of freshwater aquatic life is 6.2 ug/l as a 24 hour average and the concentrations should not exceed 14 ug/l at any time. Also studies have shown that in the presence of natural light, dioxins and other toxic chemicals are produced in penta-treated products. Creosote has been shown to be carcinogenic. In addition the creosote-based substance can be taken up by fish, producing an off-flavor.

The Water Quality Standards state that "persistent, bioaccumulative, man-made toxic substances are not allowed in waters of the state".

Applicability

All waters of the state.

DNR Response Procedure:

In March 1982, the Water Pollution Control Program sent a letter to each of the Corps districts informing the Corps that the Department of Natural Resources would not issue water quality certification for Section 404 permits involving the use of wood products treated with creosote or pentachlorophenol. The Corps districts responded by issuing a public notice which stated the Department's position. The Kansas City Corps district has incorporated a special condition in their Section 404 permit which restricts the use of pentachlorophenol and creosote.

Section 401 Water Quality Certification

Since the Corps of Engineers has agreed with the Department's position on the use of wood products treated with pentachlorophenol and creosote, it has normally not been necessary to condition the water quality certification. Where treated wood products have been necessary, the Department has not objected to the use of Chromated Copper Arsenate (CCA).

Sand and Gravel Dredging

Discussion:

Instream sand and gravel dredging increases levels of turbidity and suspended solids in the immediate area and downstream. These increases may cause violations of the Water Quality Standards and may also have negative impacts on aquatic life, for example, the mussels on the Meramec and Gasconade Rivers. If the bottom substrate contains metal or other toxic materials, these may be resuspended in the water column during the dredging process, which may also result in standard violations. Improper location of an instream operation could result in channel instability and bank erosion.

Return water from hydraulic dredging and washing operations can also cause water quality standard violations.

Instream operations utilizing draglines, sauermans, clamshells or similar equipment can be relocated to the flood plain. Sand and gravel operators can develop long range plans which will allow for a reasonable transition to methods or locations that do not violate standards. For example, an interim operation could be located in backwater eddies where effects of the operation will not propagate downstream. Return water from hydraulic dredging and washing operations shall be regulated by NPDES permits, with a discharge limit of 1.0 milliliter per liter of settleable solids. Dredging shall not be allowed where toxics may be resuspended in the water column.

Applicability:

All waters of the state, especially waters where turbidity or suspended solids would interfere with beneficial uses or where any bottom sediments contain toxics.

DNR Response Procedure:

Comment letters on public notices will address concerns and possible remedies on applicable waters.

Section 401 Water Quality Certification:

Water quality certification will be issued for only those facilities that are not causing impacts or are on an enforceable schedule to eliminate impacts. Certification will not be issued for those facilities needing, and operating without, NPDES permits until such permit applications have been submitted.

Fill in Wetlands

Discussion:

Fill in wetlands has many potential negative impacts, including the loss of low flow augmentation, aquifer recharge, water purification and fish and wildlife habitat. Wetlands adjacent to rivers also function as storage for flood flows.

Wetlands have been destroyed by a number of activities, including road construction, stream channelization, cultivation or fill for development purposes. A large percentage of wetlands have been destroyed and the cumulative impacts of the loss of small wetlands can be significant.

In most cases, alternative sites are available for a project. If wetlands are the only sites available, mitigation of the wetlands lost may be accomplished to a limited degree through the creation of other new wetlands or the enhancement of other or remaining wetlands. The Environmental Protection Agency's 404 (b)(1) Guidelines state "no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less impact on the aquatic ecosystem."

Applicability:

Wetlands throughout the state.

DNR Response Procedures:

Comment letters on public notices will object to any loss of wetlands where other alternatives are available. Where alternatives do not exist, the comment letter will object unless appropriate mitigation is included.

401 Certification:

Water quality certification will be issued for only those projects that apparently will not violate Water Quality Standards.

Retaining Walls

Discussion:

Lakeside and riverside developments can have significant impacts on aquatic habitat and water quality. Shallow water habitat can be destroyed by the placement of retaining walls in relatively deeper water and backfilling, or by covering the bottom substrate with a ramp. Water quality concerns include the short term impacts of construction, the placement of septic tank drain field in retaining wall backfill, sanitary wastes from some dock facilities, and the concerns related to fuel use and storage. In addition this category of activities may involve wetlands, excavations or toxic substances, which are discussed separately.

Generally, proposed retaining walls can be located above the ordinary high water mark. For Lake of the Ozarks, a habitat evaluation procedure has been established to base appropriate permit actions on the value of the habitat involved (which follows this section). Similar actions can be taken in other lakes. If possible or where necessary, construction of walls or ramps can be done at times of low water and outside of major spawning periods for fish. The prohibition against placing septic tank drain fields in backfill is routinely included as a condition of retaining wall permits. Restaurants or other activities on docks requiring sanitary facilities or special fuel handling capabilities can have these made conditions of the permit.

Applicability:

All waters of the state but most commonly Lake of the Ozarks.

DNR Response Procedures: Comment letters on public notices will raise the above concerns, as appropriate, and identify any known remedies.

401 Certification: Water quality certification will be issued for only those projects that apparently will not violate Water Quality Standards. Certification will not be issued for projects where the septic tank drain field is located in the backfill of the retaining wall or for other projects which do not have adequate facilities to handle the sanitary wastes.

Pipeline Crossing

Discussion:

The burial of pipelines in riverbeds may cause temporary increases in turbidity and suspended solids. If the bed and stream banks are not restored to its original contours, scouring or bank erosion may also occur.

Work of this nature should be conducted during periods of low flow to minimize the entrainment and transport of bed materials. These activities should not be located where the temporary effects may harm sensitive aquatic life, e.g., mussels. Riverbeds and banks should be restored to the original contours.

Applicability:

All classified waters of the state.

DNR Response Procedure:

Comment letters on public notices will address concerns and any possible remedies.

401 Certification: Water quality certification will be issued where the above concerns have been minimized through appropriate remedies.

Bank Stabilization

Discussion:

The Water Pollution Control Program normally has no objection to bank stabilization activities provided clean, non-polluted material, such as rock riprap, is used. When reviewing a project for bank stabilization, staff must ensure that the material used will not result in violations of the Water Quality Standards or the Clean Water Law. The Staff should also ensure that the project will not result in other violations. For example, the placement of car bodies for bank stabilization may be a potential pollution problem but it is also in violation of Chapter 577.070, RSMo (Littering) and Chapter 260.210, RSMo (Missouri Solid Waste Management Law).

Applicability:

All waters of the state

DNR Response Procedure:

Comment letters on Corps of Engineers public notices for bank stabilization will reflect the concerns cited above. Where any material, such as demolition material, car bodies, etc., are proposed, the Water Pollution Control Program will coordinate with the Waste Management Program. Also the comment letter will recommend that the applicant establish or maintain a riparian vegetative buffer strip of at least 50 feet to provide long term bank stabilization.

Section 401 Water Quality Certification

Water quality certification will be issued for those projects which apparently will not violate the Water Quality Standards.