

Chapter 21A-24
Rules and Regulations of the
Department of Development and Environmental Services

Sensitive Areas: Maintenance of
Roadside Ditches Used by Salmonids

Effective Date: July 19, 2002

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21A-24-100 Definitions

A. Department. "Department" means the department of development and environmental services of King County.

B. Emergency action. "Emergency action," as used in K.C.C. 21A.24.050A, means an action taken by a person in direct response to, and to avoid, prevent or protect against the risks or dangers of an emergency and that must be undertaken immediately or within a time too short to allow full compliance with the provisions of K.C.C. Title 21A.

C. Enhancement. "Enhancement" means actions conducted with the intent of improving salmonid habitat or water quality in a roadside ditch.

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D. Historic grade. "Historic Grade" means the depth or grade of the ditch prior to its filling with sediment.

E. King County Road Standards. "King County Road Standards" means the King County Road Standards, 1993, and any future updates adopted under K.C.C. 14.42.010.

F. Maintenance. "Maintenance" means those usual acts to prevent a decline, lapse, or cessation from a lawfully established condition, without any expansion of or significant change from that originally established condition.

G. Qualified biologist. "Qualified biologist" means a person who has earned at least a Bachelor of Science degree in the fisheries sciences, stream ecology or related aquatic sciences from an accredited college or university and who has a minimum of three years field work experience as a stream scientist or who has equivalent educational training and professional experience.

H. Roads Maintenance Guidelines. "Roads Maintenance Guidelines" means the Regional Road Maintenance Endangered Species Act Program Guidelines, Final Draft, August 2, 2000, including Appendices and future amendments.

I. Roadside ditch. "Roadside Ditch" means a channel located within the road right of way structure for the purposes of collecting drainage from the roadway or for conveying naturally occurring flows parallel to the roadway.

J. Surface Water Design Manual. "Surface Water Design Manual" means 1998 King County Surface Water Design Manual including Appendices and future amendments.

21A-24-105 Purpose It is the purpose of these rules to implement K.C.C. 21A.24.370M, or its successor subsection, by describing general protocols for maintaining and enhancing roadside ditches used by salmonids, including timing, special measures for fish protection, excavation, erosion, habitat enhancement and spill prevention and control. These protocols shall be consistent with the protocols contained within the Road Maintenance Guidelines. Activities conducted according

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to these public rules may require other state or federal permits, including, but not limited to, a Washington State Department of Fish and Wildlife Hydraulics Project Approval (HPA) or a U.S. Army Corps of Engineers 404 or Section 10 permit. These rules do not authorize any violation of any provisions of the Endangered Species Act as set forth at 16 U.S.C. § 1531-1543, including the prohibition on the "take" of threatened or endangered species. "Take" is defined at 16 U.S.C. § 1532(19). Compliance with these public rules does not ensure compliance with the Endangered Species Act.

21A-24-110 Applicability

A. Except as otherwise provided in this section, these public rules apply to maintenance and enhancement activities on roadside ditches that are used by salmonids. These rules do not apply to maintenance and enhancement activities in roadside ditches that are not used by salmonids or when the maintenance activity consists of ditching by hand without the use of any mechanical equipment and the area of impact does not exceed fifty square feet.

B. For purposes of this rule, the determination of whether a roadside ditch is used by salmonids shall be made in accordance with department public rules 21A-24-013 Salmonid use - Presumption and rebuttal of presumption.

21A-24-115 Timing

A. All maintenance and enhancement activities shall occur between July 1 and September 30. The department may extend the period to October 15 if the department determines, in writing, that all of the following conditions are present:

1. the flow remains at low levels;
2. the presence of salmonids remains at or below the low numbers present during the July 1 through September 30 time period;
3. there is no increased risk to salmonids or their habitat as a result of extending the period; and
4. there is concurrence by HPA conditions addressing timing.

B. The department may authorize maintenance and enhancement activities at a time other than July 1 through October 15 if the department determines that there is no increased risk to salmonids or their habitat and either of the

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following conditions are present:

1. the determination is based on and supported by a written study particular to the water system, or portion thereof, in which the activities are to occur, and the study was conducted and prepared by a qualified biologist; or

2. the determination is based on and supported by a written study prepared by the National Marine Fisheries Service or U.S. Fish and Wildlife Service.

C. During an emergency that threatens the public health, safety and welfare, and that requires emergency action, the timing restriction shall not apply. The department director shall confirm that an emergency exists. Confirmation is not required prior to implementing emergency actions, however the department shall be notified within 24 hours of a determination by King County Department of Transportation (KCDOT) staff that emergency action is warranted. Actions taken in response to emergencies shall be performed in compliance with the requirements of K.C.C. 21A.24.050, any public rules implementing K.C.C. 21A.24.050 and any future amendments of the ordinance or public rules.

21A-24-120 Fish Protection Measures - Downstream Protection

A. Temporary erosion and sediment control devices shall be installed during any maintenance or enhancement activity to protect watercourses from erosion and sediment suspended during the permitted activity. Installation shall be consistent with the Surface Water Design Manual Appendix D Erosion and Sediment Control Standards or the Roads Maintenance Guidelines. In the event of a conflict the most stringent measures shall apply.

B. All temporary erosion and sediment control devices installed in the stream shall be removed within two days of completing any maintenance or enhancement activity. If the department determines that salmonids will not be adversely impacted by the retention of temporary erosion and sediment control beyond this time period, the department may specify a period of time that the in-stream erosion and sediment control devices may remain in place to improve erosion and sediment control.

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21A-24-125 Fish Protection Measures - Diversion Dam Installation

A. Diversion dams shall be installed on both ends of and encompassing the maintenance or enhancement activity in any roadside ditch with water flowing at the time of the activity for the purpose of stopping flow through the work site. Downstream diversion dams may be necessary to contain sediments within the work site and to prevent backwatering of the work site in low gradient streams.

B. Diversion dams shall be constructed in a manner to prevent water from entering the work site. To achieve this standard, dams may be constructed of gravel filled bags covered with impermeable fabric for higher velocity flows, or straw bales or fences covered with impermeable fabric for lower velocity flows. Other similar materials may be considered. If impermeable fences are used, they shall be installed with sufficient subsurface footing to seal the roadside ditch. Cofferdams, sheet pile or other diversion dam methods may be used as described in the Roads Maintenance Guidelines.

21A-24-130 Fish Protection Measures - Fish Relocation

A. Immediately prior to any maintenance or enhancement activity in the roadside ditch, salmonids shall be removed and excluded from the work site according to protocols set forth in the Road Maintenance Guidelines Appendix B Fish Exclusion Protocol. The fish removal and relocation shall also be conducted in accordance with the conditions of a valid Scientific Collectors permit issued by Washington Department of Fish and Wildlife and any federal permits that may be required to conduct these activities.

1. Block nets shall be installed upstream and downstream of the work site in such a manner as to exclude salmonids from entering the area.

2. If traps or fyke nets are used for fish relocation, trapping or netting may begin fourteen days prior to work site dewatering. Traps and nets shall be checked daily. Seines and other netting may be used where appropriate.

3. If electrofishing is used, the electrofishing team shall have at least one hundred hours of cumulative electrofishing experience.

B. A qualified biologist shall confirm that fish have been removed prior to completely dewatering the work site.

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C. Salmonids shall be removed to a location upstream of the diversion dams or block nets unless the HPA authorizes the salmonids to be placed downstream of the diversion dams or block nets or in a temporary holding tank. If the HPA does not address fish placement, the department may authorize that the salmonids may be placed downstream of the diversion dams or block nets or in a tank if the following conditions are met:

1. the placement provides equivalent or better protection for the salmonids; and
2. there is no other practical alternative place for the salmonids.

D. The department may prescribe modifications to the fish removal and relocation protocol in this rule if it finds, in writing, that the modifications or alternative procedure will provide a greater level of salmonid protection.

21A-24-135 Fish Protection Measures - Flow Bypass

A. Water impounded by a diversion dam shall be transported around the work site using a pipe bypass, pump bypass or other acceptable method as site conditions dictate.

1. When using a pipe, the bypass shall be installed above the upstream diversion dam, but downstream of the block net, to collect water from and divert it around the work site. The pipe shall be large enough to carry the existing flow.

2. If water backs up behind the upstream diversion dam due to an inadequate slope, a pump shall be used to convey water around the activity area. The pump shall meet all of the following:

- a. the intake shall be screened by the upstream block net and by a pump intake screen to keep salmonids from being drawn into the pump;
- b. the pump shall be regularly monitored on a twenty-four hours per day basis and a replacement pump shall be readily available at all times;
- c. the pump shall be of adequate capacity to conduct flows around the work site without altering flows upstream or downstream of the bypass site; and
- d. the downstream flows shall be monitored by a qualified biologist to ensure that fish distress or stranding does not occur.

B. Intake and outlet areas shall be prepared to avoid

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erosion, scour or the generation of fine sediments.

C. Site rewatering shall employ appropriate practices to prevent fines from the "first flush" from leaving the work site. These practices may include gradual site rewatering and the use of pumps and sediment settling tanks or similar techniques described in the Roads Maintenance Guidelines.

D. Only the work site contained within the diversion dam shall be dewatered at any time.

21A-24-140 Excavation Standards

A. Excavation of accumulated sediments shall not increase the historic grade of the roadside ditch being maintained.

B. All excavation shall be performed when the work site is dry, either from naturally occurring dry conditions or by bypassing existing flows around the work site.

C. The side walls shall be stable and shall not be of a steepness that allows sloughing of soil from the sides.

D. Excavation of sediments shall not result in the creation of a fish passage barrier at the ends of, or within, the maintained roadside ditch. Under no circumstances shall a fish barrier of more than 0.8 vertical feet be created by excavation of material.

21A-24-145 Excavation Spoils Placement Except for temporary stockpiles, excavation spoils taken from a roadside ditch shall not be placed within a sensitive area or its buffer and spoils shall be disposed of in a lawful manner. Spoils shall not be allowed to drain to areas outside of the work site. Temporary stockpiles shall be removed and disposed of in a lawful manner as soon as practical and in all cases within seventy-two hours of completion of the excavation work.

21A-24-150 Erosion Control Standards

A. Existing vegetation shall be retained on the side walls of the roadside ditch to the maximum extent possible.

B. Existing vegetation alongside the roadside ditch shall be retained, and only clearing necessary to conduct roadside ditch maintenance shall be allowed.

C. All areas above the Ordinary High Water Mark (OHWM) on the side walls of the roadside ditch and in areas alongside the roadside ditch that are disturbed or have exposed soil

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shall be stabilized by reseeding or replanting. Reseeding and replanting shall conform with all of the following:

1. seed mixes shall be consistent with the Surface Water Design Manual standards and shall not contain invasive species;

2. sterile seed mixes may be allowed for temporary erosion control; and

3. hydroseeding without tackifier or surfactant shall be a preferred method of reseeding, however hand-seeding and mulching may be used.

D. Other erosion control methods shall be used as necessary to prevent erosion. These methods shall be consistent with the requirements of Appendix D of the Surface Water Design Manual and the Roads Maintenance Guidelines.

21A-24-155 Habitat Enhancement Standards

A. In-channel structure shall be installed to provide cover and channel complexity for salmonids when it will not pose a threat to the stability of the roadway or the safety of the public. For sites subject to repetitive maintenance within five years or less, the department may require a written alternatives analysis to demonstrate that there is no practical alternative with less impact to sensitive areas than the proposed maintenance activity.

B. In-channel structure shall meet the following standards:

1. Small woody debris (less than six inch diameter) shall be anchored to the banks of the roadside ditch and placed in the channel. Small woody debris may be anchored to be removable from the roadside ditch to facilitate maintenance and high storm flows;

2. Large woody debris (LWD) shall be anchored to the banks of the roadside ditch or placed in the channel. Large woody debris shall be large enough to stay in the system where it is placed but in no case shall it be smaller than six inches in diameter. LWD may be anchored to be removable from the roadside ditch to facilitate maintenance and high storm flows; and

3. Additional LWD will not be required on subsequent maintenance cycles where LWD has been installed as part of a previous maintenance activity, provided that the LWD is stable and functional and habitat goals and values are being met.

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C. Vegetation shall be planted alongside the roadside ditch to provide cover and shading of the water flowing in the roadside ditch during the first planting season after roadside ditch maintenance or at another time no later than one year after completion of roadside ditch maintenance. These plantings shall conform to applicable King County Road Standards and shall also meet all of the following conditions:

1. only native vegetation shall be planted, except that non-native species may be allowed in county-approved research projects or for temporary erosion control purposes;
2. all vegetation maintenance shall be subject to the restrictions on the use of pesticides and herbicides and other hazardous substances contained in K.C.C. 21A.24; and
3. all plantings shall be maintained by watering, weeding, pest controls, monitoring and other methods to insure that the vegetation becomes permanently established.

D. If noxious weeds are proposed to be removed from the areas adjacent to the roadside ditch or on the roadside ditch's side walls:

1. any disturbed areas of the side walls shall be replanted with native vegetation consistent with subsection (C) of this section; and
2. filter fabric or other filtering devices shall be installed perpendicular to the roadside ditch during the clearing activities if there is flow in the roadside ditch at the time of vegetation removal to prevent transportation of the noxious weeds.

21A-24-160 Off-site Compensatory Mitigation

A. Site constraints due to road safety and design standards contained in King County Road Standards may hinder or prevent implementation of mitigation measures in the immediate vicinity of the work site. These constraints include a need to protect the public safety and welfare by maintaining sight distance standards, by not placing potentially dangerous structures adjacent to the road and other constraints such as the location of existing impervious surfaces that prevent vegetation growth. In the event that mitigation measures cannot be implemented in the immediate vicinity of the site, in or out of the road right of way, off site mitigation may be allowed subject to the following:

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1 Mitigation shall be performed in the same sub-basin as the impacted waters and as close to the impact site as possible at a minimum 1:1 cost ratio relative to the cost for on-site mitigation;

2. If mitigation cannot be performed in the same sub-basin, then mitigation shall be performed in the same basin at a minimum 2:1 cost ratio relative to the cost for on-site mitigation. Basins and sub-basins are as described in the Surface Water Design Manual;

3. If mitigation cannot be performed in the same basin, then mitigation shall be performed in the same Water Resource Inventory Area (WRIA) at a minimum 5:1 cost ratio relative to the cost for on-site mitigation.

B. Off site mitigation shall be designed to compensate for the ecological functions impacted by the maintenance activity unless the applicant demonstrates to the satisfaction of the department that greater ecological benefit may be derived from addressing ecological functions other than those impacted by the maintenance activity.

C. Off site mitigation may also address limiting factors identified in a Watershed Analysis, WRIA basin plan or other comprehensive, peer reviewed biological evaluation of the basin or WRIA.

D. The department shall establish the mitigation requirements for an impact site as if the site constraint were absent and the mitigation was to be conducted at the impact site.

E. The cost of off-site mitigation shall be calculated as if it could be constructed at the impacted site. The dollar amount for plants, habitat structures and other items necessary to perform the mitigation actions shall be calculated using the Bond Quantity Worksheet in the Sensitive Areas Mitigation Guidelines. This dollar amount will constitute the basis for calculating the minimum standards and the minimum cost ratio for off-site mitigation.

21A-24-165 Spill Prevention/Control

A. If heavy equipment or engines are used in any roadside ditch maintenance activities, there shall be spill cleanup materials at the site, and all operators shall be familiar with proper spill cleanup procedures. If any equipment or engines leak petroleum or hydraulic products, the leaked products shall be cleaned up, and the equipment or engines removed from the maintenance area until the leak is

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repaired.

B. Refueling of vehicles shall not occur within the stream buffer. All non-vehicular equipment shall be removed from the vicinity of the water and refueled where spills can be readily contained.

C. Pumps shall be placed within a receptacle capable of containing all petrochemicals within the pump and refueling containers that could be discharged due to accidental leaks, equipment failure or refueling accidents.

D. Spill cleanup kits shall be clearly labeled and shall be kept in the immediate vicinity of bypass pumps at all times.

E. In the event of a petrochemical spill that enters a sensitive area, the department shall be notified within twenty-four hours.

21A-24-170 Severability

If a provision of the rules contained herein or its applicability to any person or circumstance is held invalid, the remainder of the provisions of these rules or the application of the provision to other persons or circumstances shall not be affected.