

1 Department of Natural Resources

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3 Waters Division

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5 Adopted Amendments to Rules Governing Permits for Making Changes  
6 in the Course, Current, or Cross-Section of Public Waters

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8 Rules as Adopted

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10 STANDARDS AND CRITERIA FOR GRANTING

11 PERMITS TO CHANGE THE COURSE, CURRENT,

12 OR CROSS-SECTION OF PROTECTED WATERS

13 6 MCAR S 1.5020 General provisions.

14 A. Purpose. The purpose of 6 MCAR SS 1.5020-1.5028 is to  
15 provide for the orderly and consistent review of permit  
16 applications in order to conserve and utilize the water  
17 resources of the state in the best interest of its people. In  
18 deciding whether to issue permits, the department shall be  
19 guided by the policies and requirements declared in Minnesota  
20 Statutes, sections 104.01, 104.25, 104.32, 105.38, 105.42,  
21 105.64, and 116D.04.

22 The proposed development must also be consistent with the  
23 goals and objectives of applicable federal, state, and local  
24 environmental quality programs and policies including but not  
25 limited to shoreland management, floodplain management, water  
26 surface use management, boat and water safety, wild and scenic  
27 rivers management, water quality management, recreational or  
28 wilderness management, critical areas management, scientific and  
29 natural areas management, and protected species management.

30 B. Scope. To achieve the purpose declared in A. these rules  
31 set forth minimum standards and criteria for the review,  
32 issuance, and denial of permits for proposed projects affecting  
33 protected waters. Permits shall be required for any activity  
34 affecting the course, current, or cross-section of protected  
35 waters unless specifically exempted within these rules.

36 C. Jurisdiction. These standards and criteria apply to any

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1 and all work which will cause or result in the alteration of the  
2 course, current, or cross-section of protected waters except for  
3 the following:

4 1. utility crossings of protected waters which are  
5 regulated under Minnesota Statutes, section 84.415 and rules  
6 promulgated thereunder; or

7 2. destruction and control of aquatic vegetation which is  
8 regulated under Minnesota Statutes, section 98.48, subdivision 9  
9 and rules promulgated thereunder.

10 D. Definitions. For the purposes of 6 MCAR SS  
11 1.5020-1.5028, certain terms or words used herein shall be  
12 interpreted as follows: the word "shall" is mandatory, not  
13 permissive. All distances unless otherwise specified shall be  
14 measured horizontally.

15 1. "Alteration" means any activity that will change or  
16 diminish the course, current, or cross-section of protected  
17 waters.

18 2. "Beds of protected waters" means all portions of  
19 protected waters located below the ordinary high water mark.

20 3. "Breakwater" means an offshore structure intended to  
21 protect a shore area, harbor, or marina from wave and current  
22 action, erosion, or sedimentation.

23 4. "Commissioner" means the Commissioner of Natural  
24 Resources.

25 5. "Department" means the Department of Natural Resources.

26 6. "Dock" means a narrow platform extending waterward  
27 from the shoreline intended for ingress and egress for moored  
28 watercraft or to provide access to deeper water for swimming,  
29 fishing, or other water-oriented recreational activities.

30 7. "Drainage" means any method for removing or diverting  
31 waters from protected waterbasins or wetlands. Such methods  
32 shall include, but are not limited to, excavation of an open  
33 ditch, installation of subsurface drainage tile, filling,  
34 diking, or pumping.

35 8. "Drawdown" means a temporary lowering of water levels,  
36 for a maximum duration of two years.

1           9. "Excavation" means the displacement or removal of the  
2 sediment or other materials from the beds of protected waters by  
3 means of hydraulic suction or mechanical operations.

4           10. "Fill" means any material placed or intended to be  
5 placed on the bed or bank of any protected water.

6           11. "Filter" means a transitional layer of gravel, small  
7 stone, or fabric between the fine material of an embankment and  
8 riprap shore protection materials.

9           12. "Floating structure" means any houseboat, mooring or  
10 navigational buoy, swimming or diving platform, water ski jump,  
11 watercraft, or other structure supported entirely by its own  
12 buoyancy which is not permanently anchored by means of pilings,  
13 foundations, gabion baskets, or other materials incapable of  
14 removal by nonmechanized means.

15           13. "Floodplain" means the areas adjoining a watercourse  
16 which has been or hereafter may be covered by the regional flood.

17           14. "Floodway" means the channel of the watercourse and  
18 those portions of the adjoining floodplains which are reasonably  
19 required to carry and discharge the regional flood.

20           15. "Harbor" means either an inland or offshore area  
21 protected from waves which is intended for the mooring of  
22 watercraft.

23           16. "Inland boat slip" means an inland excavation  
24 generally having a uniform width which serves as a protective  
25 area for launching and mooring of a single watercraft.

26           17. "Inland excavation" means any excavation intended to  
27 extend the cross-section of protected waters landward of the  
28 natural or preexisting shoreline.

29           18. "Low-water ford type crossing" means a stream  
30 crossing which conforms to the natural cross-section of the  
31 stream and utilizes the placement of a suitable substrate to  
32 allow vehicular passage without confining the stream flow within  
33 culverts or other hydraulic enclosures.

34           19. "Marina" means either an inland or offshore structure  
35 for the concentrated mooring of five or more watercraft wherein  
36 facilities are provided for ancillary services such as boat

1 mooring, storage, fueling, launching, mechanical repairs,  
2 sanitary pumpout, and restaurant services.

3       20. "Maximum," with respect to storage capacity, refers  
4 to the most severe design condition, including surcharge  
5 (floodwater storage).

6       21. "Mining activity" means the construction,  
7 reconstruction, repair, relocation, expansion, or removal of any  
8 facility for the extraction, stockpiling, storage, disposal, or  
9 reclamation of metallic or nonmetallic minerals. Facilities  
10 include all mine pits, quarries, stockpiles, tailings basins,  
11 and any structures which drain or divert protected waters to  
12 allow mining. Ancillary facilities such as access roads,  
13 bridges, culverts, and water level control structures are not  
14 mining activities.

15       22. "Mooring" means any containment of free-floating  
16 watercraft that provides a fixed fastening for the craft.

17       23. "Offshore" means the area waterward of the ordinary  
18 high water mark of a protected water.

19       24. "Ordinary high water mark" means the boundary of  
20 protected waters as defined in Minnesota Statutes, section  
21 105.37, subdivision 16.

22       25. "Permanent dock" means any dock other than seasonal  
23 docks and wharves as defined by this rule.

24       26. "Port" means a water transportation complex  
25 established and operated under the jurisdiction of a port  
26 authority pursuant to Minnesota Statutes, chapter 458.

27       27. "Port facility" means any facility useful in the  
28 maintenance and operation of a port. Facilities include, but  
29 are not limited to, transportation facilities, terminal and  
30 storage facilities, floating and handling equipment, power  
31 stations, and other facilities necessary for the maintenance and  
32 operation of a port.

33       28. "Principal spillway" means a spillway designed to  
34 convey water from an impoundment at release rates established  
35 for the structure.

36       29. "Professional engineer" means an engineer registered

1 to practice in Minnesota.

2 30. "Protected waters" means those waters of the state  
3 identified as public waters or wetlands under Minnesota  
4 Statutes, section 105.37, subdivision 14 or 15, or 105.391,  
5 subdivision 1.

6 31. "Reconstruction" means the rebuilding or renovation  
7 of an existing structure, where the cost of such work will  
8 exceed 50 percent of the replacement cost.

9 32. "Regional flood" means the flood which is  
10 representative of large floods known to have occurred generally  
11 in Minnesota and reasonably characteristic of what can be  
12 expected to occur on an average frequency in the magnitude of  
13 the 100-year recurrence interval.

14 33. "Retaining walls" means vertical or nearly-vertical  
15 structures constructed of mortar-rubble masonry, handlaid rock  
16 or stone, vertical timber pilings, horizontal timber planks with  
17 piling supports, sheet pilings, poured concrete, concrete  
18 blocks, or other durable materials and constructed approximately  
19 parallel to the shoreline.

20 34. "Riprap shore protection" means coarse stones,  
21 boulders, cobbles, artificially broken rock or concrete, or  
22 brick materials laid loosely or within gabion baskets against  
23 the slope of the existing bank of a protected water.

24 35. "Seasonal dock" means a dock so designed and  
25 constructed that it may be removed from the lake or stream bed  
26 on a seasonal basis. All components such as supports, decking,  
27 and footings must be capable of removal by nonmechanized means.

28 36. "Structure" means any building, footing, foundation,  
29 slab, roof, boathouse, deck, wall, or any other object extending  
30 over, anchored, or permanently attached to the bed or bank of a  
31 protected water.

32 37. "Structural height" means the vertical distance from  
33 the natural bed of the stream or watercourse measured at the  
34 downstream toe of the control structure or from the lowest  
35 elevation of the outside limit of the control structure, if it  
36 is not across a stream channel or watercourse, to the maximum

1 storage elevation.

2 38. "Swellhead" means the difference between the  
3 headwater elevation necessary to pass the regional flood through  
4 the proposed structure and the tailwater elevation below the  
5 structure.

6 39. "Temporary structure" means any seasonal dock or  
7 floating structure that can be removed from protected waters  
8 before winter freeze-up.

9 40. "Watercourse" means any channel having definable beds  
10 and banks capable of conducting generally confined runoff from  
11 adjacent lands. During floods water may leave the confining  
12 beds and banks but under low and normal flows water is confined  
13 within the channel. A watercourse may be perennial or  
14 intermittent.

15 41. "Water level control structure" means any structure  
16 which impounds or regulates the water surface elevation or flow  
17 of protected waters, including dams regulated under the  
18 provisions of 6 MCAR SS 1.5030-1.5034.

19 42. "Wharf" means a permanent structure constructed into  
20 navigable waters as a part of a port facility for berthing or  
21 mooring commercial watercraft, or for transferring cargo to and  
22 from watercraft in an industrial or commercial enterprise, or  
23 for loading or unloading passengers from commercial watercraft,  
24 or for the operation of a port facility.

25 6 MCAR S 1.5021 Filling into protected waters.

26 A. Goals. It is the goal of the department to limit the  
27 placement of any fill material into protected waters in order to:

28 1. minimize encroachment, change, or damage to the  
29 environment;

30 2. regulate the quantity and quality of fill and the  
31 purposes for which filling may be allowed based upon the  
32 capabilities of the waters to assimilate the material; and

33 3. maintain consistency with floodplain, shoreland, and  
34 wild and scenic rivers management standards and ordinances.

35 B. General standards.

36 1. Scope. Filling as used in this rule involves

1 placement of unconfined or loosely confined materials in  
2 protected waters.

3 2. Placement shall not be permitted in the following  
4 cases:

5 a. to achieve vegetation control;

6 b. to create upland areas, except where expressly  
7 provided herein;

8 c. to stabilize beds of protected waters which cannot  
9 support fill materials because of excessive depths of muck,  
10 steep bank, bed slope, or other conditions;

11 d. to stabilize or impound the site of active springs;

12 e. to dispose of rock, sand, gravel, or any other  
13 solid material resulting from activities carried out above the  
14 ordinary high water mark;

15 f. to construct a roadway or pathway, or create or  
16 improve land accesses from peripheral shorelands to islands, or  
17 to facilitate land transportation across the waters; however,  
18 where a project is proposed by a federal, state, or local  
19 government agency and this provision would prevent or restrict  
20 the project, or create a major conflict with other public  
21 purposes or interests, the commissioner may waive this provision  
22 provided:

23 (1) there is no other feasible and practical  
24 alternative to the project that would have less environmental  
25 impact; and

26 (2) that the public need for the project rules out  
27 the no-build alternative.

28 g. filling of posted fish spawning areas is prohibited.

29 3. No permit shall be required for the following  
30 activities unless prohibited under 2.:

31 a. To install a beach sand blanket provided the sand  
32 or gravel layer does not exceed six inches in thickness, 50 feet  
33 in width along the shoreline, or one-half the width of the lot,  
34 whichever is less, and does not extend more than ten feet  
35 waterward of the ordinary high water mark, provided local  
36 watershed district and local zoning officials are given at least

1 seven days notice by the landowner.

2 b. For one additional installation of a sand or gravel  
3 layer subsequent to an initial installation at the same location  
4 and not exceeding the same amounts and dimensions allowed under  
5 a.

6 c. To install riprap shore protection, except along  
7 the shores of Lake Superior and officially designated trout  
8 streams, provided the riprap materials consist of natural rock  
9 having an average size of 12 inches or larger in its smallest  
10 dimension, and conform with the natural alignment of the  
11 shoreline, with a minimum finished slope not steeper than 3:1  
12 horizontal:vertical, no materials are placed more than five feet  
13 waterward of the ordinary high water mark, and the material does  
14 not obstruct the flow of water.

15 d. To place fill in a protected watercourse having a  
16 total drainage area, at its mouth, of five square miles or less,  
17 provided that the watercourse is not an officially designated  
18 trout stream and the placement of fill shall not result in:

19 (1) any diversions of water from the drainage area;

20 (2) any impoundment of waters by damming the  
21 watercourse;

22 (3) any actions which would result in erosion and  
23 cause sedimentation of downstream waters as determined by the  
24 county or local soil and water conservation district.

25 4. Permits shall be required for the placement of fill in  
26 protected waters, except as provided under 2. and 3., and shall  
27 meet all of the following requirements:

28 a. The project will involve a minimum of encroachment,  
29 change, or damage to the environment, including but not limited  
30 to fish and wildlife habitat, navigation, water supply, and  
31 storm water retention.

32 b. The fill consists of clean inorganic material that  
33 is free of pollutants and nutrients.

34 c. The existence of a stable, supporting foundation is  
35 established by appropriate means, including soil boring data  
36 where deemed necessary by the commissioner.



1 d. Where erosion protection is deemed necessary by the  
2 commissioner, the site conditions and fill material are capable  
3 of being stabilized by an approved erosion control method such  
4 as riprap, retaining wall, or other method which is consistent  
5 with existing land uses on the affected protected water.

6 e. The proposed project must represent the minimal  
7 impact solution to a specific need with respect to all other  
8 reasonable alternatives.

9 f. The size, shape, depths, shoreline, and bottom  
10 character and topography, and susceptibility of the beds of  
11 protected waters to actions of wind, waves, and currents are  
12 such that the fill will be stable.

13 g. Adverse effects on the physical or biological  
14 character of the waters shall be subject to feasible and  
15 practical measures to mitigate the effects.

16 h. The proposed filling must be consistent with  
17 applicable floodplain, shoreland, and wild and scenic rivers  
18 management standards and ordinances for the waters involved.

19 i. The proposed filling must be consistent with water  
20 and related land management plans and programs of local and  
21 regional governments provided such plans and programs are  
22 consistent with state plans and programs.

23 C. Specific standards. In addition to compliance with the  
24 general standards in B. specific requirements for certain  
25 activities shall be met as follows:

26 1. Riprap shore protection. The protection of shoreline  
27 from continued erosion by placement of natural rock riprap along  
28 the shore shall be permitted provided:

29 a. The riprap materials are of sufficient size,  
30 quality, and thickness to withstand ice and wave action. The  
31 riprap shall be placed with a minimum amount of space between  
32 the larger materials and the space between them shall be filled  
33 with firmly seated smaller rocks or gabion baskets to procure a  
34 uniform surface.

35 b. The site soils are capable of supporting riprap and  
36 a filter consisting of well-graded gravel, crushed stone, or

1 fabric is installed to prevent undercutting of the riprap.

2 c. The encroachment into the water is the minimum  
3 amount necessary to provide protection and does not unduly  
4 interfere with the flow of water.

5 2. Navigational access.

6 a. Filling to gain navigational access to waters shall  
7 be permitted only where access to navigable depths cannot be  
8 reasonably attained by utilizing a dock, the excavation of an  
9 offshore access channel, or other alternatives which would  
10 result in less environmental impact.

11 b. Fill for navigational access shall not extend  
12 beyond the edge of open water, shall not exceed side slopes  
13 greater than 2:1 horizontal:vertical, shall not exceed a maximum  
14 width of 15 feet at the base of the fill, and shall not extend  
15 to a water depth greater than four feet.

16 3. Shoreline lost by erosion. Applications for filling  
17 to recover shoreland lost by erosion or other natural forces  
18 shall be permitted only where:

19 a. The loss of shoreline is a threat to health and  
20 safety through the impending loss or damage to existing  
21 shoreline developments.

22 b. The loss of shoreline has occurred as a result of  
23 changes in water level or flow conditions caused by artificial  
24 manipulation of flows or levels of the waters involved within a  
25 period of not more than five years prior to the date when an  
26 application for filling is submitted.

27 c. The requirements of a. and b. shall not preclude  
28 the issuance of permits to place riprap materials or use other  
29 structural means for protection of the shoreline to prevent  
30 continuous erosion.

31 4. Filling necessary for port development or improvement  
32 shall be allowed only on those waters which are under the  
33 jurisdiction of established port authorities subject to the  
34 following:

35 a. no filling shall be allowed to extend beyond the  
36 limits of federally established harbor lines, or where no harbor

1 line has been established, beyond the maximum distance waterward  
2 which could be attained without obstructing navigational use of  
3 the waters;

4           b. the proposed development must be part of a  
5 comprehensive port development plan which has been approved by  
6 the commissioner; and

7           c. adverse effects of the proposed filling on the  
8 physical and biological character of the area shall be subject  
9 to mitigation measures approved by the commissioner.

10           5. Filling to restore or improve fish and wildlife  
11 habitat, except for filling in designated trout streams, shall  
12 be permitted provided:

13           a. plans are submitted showing the nature and degree  
14 of habitat to be benefited; and

15           b. the project will not create other adverse effects  
16 such as flooding, erosion, sedimentation, or navigational  
17 obstructions.

18           6. Filling in trout streams officially designated by the  
19 commissioner shall be allowed only if:

20           a. the amount, method of placement, and location of  
21 the fill will not result in increased water temperatures,  
22 excessive sedimentation in the stream, or destruction of fish  
23 habitat; and

24           b. there is no other feasible or practical alternative  
25 other than filling.

26           7. Filling for other purposes not specifically listed  
27 shall be subject to the general standards in B. and submission  
28 of information to show that:

29           a. the intended purpose of the fill is reasonable with  
30 respect to all other alternatives and there are no feasible and  
31 practical means to attain the intended purpose without filling;  
32 and

33           b. the proposal will adequately protect public safety  
34 and promote the public welfare.

35           D. Relationship to standards and criteria for other  
36 activities involving changes in course, current, or

1 cross-section. Unless otherwise specified in other rules, the  
2 provisions of this rule shall apply to filling proposed as part  
3 of any other activity or activities including but not limited to:  
4 Excavations 6 MCAR S 1.5022, Structures 6 MCAR S 1.5023, Water  
5 level controls 6 MCAR S 1.5024, Bridges and culverts 6 MCAR S  
6 1.5025, Drainage of protected waters 6 MCAR S 1.5026, and  
7 Alterations of protected waters for mining 6 MCAR S 1.5027.

8 6 MCAR S 1.5022 Excavation of protected waters.

9 A. Goals. It is the goal of the department to limit the  
10 excavation of materials from the beds of protected waters in  
11 order to:

12 1. Preserve the natural character of protected waters and  
13 their shorelands, in order to minimize encroachment, change, or  
14 damage to the environment, particularly the ecosystem of the  
15 waters.

16 2. Regulate the nature, degree, and purpose of  
17 excavations so that excavations will be compatible with the  
18 capability of the waters to assimilate the excavation.

19 3. Control the deposition of materials excavated from  
20 protected waters and protect and preserve the waters and  
21 adjacent lands from sedimentation and other adverse physical and  
22 biological effects.

23 B. General standards.

24 1. Scope. Excavation as used in this rule includes any  
25 activity which results in the displacement or removal of bottom  
26 materials or the widening, deepening, straightening, realigning,  
27 or extending of protected waters. It may involve proposals for  
28 excavations landward or waterward from the ordinary high water  
29 mark.

30 2. Excavation shall not be permitted in the following  
31 cases:

32 a. where it is intended to gain access to navigable  
33 water depths when such access can be reasonably attained by  
34 alternative means which would result in less environmental  
35 impact;

36 b. where inland excavation is intended to extend

1 riparian rights to nonriparian lands, or to promote the  
2 subdivision and development of nonriparian lands;

3 c. where the proposed excavation will be detrimental  
4 to significant fish and wildlife habitat, or protected  
5 vegetation and there are no feasible, practical, or ecologically  
6 acceptable means to mitigate the effects;

7 d. to control or eliminate vegetation for the  
8 development of beach areas;

9 e. where it is intended to provide fill materials for  
10 development purposes except as provided under 6 MCAR S 1.5027;

11 f. where the excavation would not provide an effective  
12 solution to a problem because of recurrent sedimentation and  
13 there are feasible and practical alternative solutions which do  
14 not require excavation;

15 g. unless the excavation project includes provisions  
16 for acceptable disposal of excavated materials as provided in  
17 these rules; or

18 h. where the excavation would cause increased seepage  
19 of water which would lower the water level of protected waters  
20 and result in subsurface drainage.

21 3. No permit for excavation shall be required for the  
22 following activities unless prohibited in 2.

23 a. For excavations in a protected watercourse having a  
24 total drainage area, at its mouth, of five square miles or less,  
25 provided that the watercourse is not an officially designated  
26 trout stream and the excavation will not result in:

27 (1) any diversions of water from the drainage area;

28 (2) any impoundment of waters by damming the  
29 watercourse;

30 (3) any actions which would result in erosion and  
31 cause sedimentation of downstream waters as determined by the  
32 county or local soil and water conservation district.

33 b. To remove debris such as trees, logs, stumps, and  
34 trash provided such removal does not alter the original  
35 alignment, slope, or cross-section of the waters.

36 c. For repair of a public drainage system lawfully

1 established pursuant to Minnesota Statutes, chapters 106 and 112  
2 consistent with the definition of "repair" set forth in  
3 Minnesota Statutes, section 106.471, subdivision 1.

4 4. Permits shall be required for the excavation and  
5 removal of any materials from protected waters or any  
6 excavations extending into or out of protected waters, except as  
7 provided in 2. and 3., and shall be subject to the following  
8 general criteria:

9 a. The project must be reasonable and practical based  
10 upon geologic and hydrologic conditions including but not  
11 limited to:

12 (1) quantity and quality of local drainage at the  
13 site;

14 (2) type of sediment/soil strata and underground  
15 formations in the vicinity;

16 (3) life expectancy of the excavation with respect  
17 to bedload, long-shore drift, and siltation patterns in the  
18 project vicinity; and

19 (4) protection of the water body from increased  
20 seepage, pollution, and other hydrologic impacts.

21 b. The disposal of excavated materials shall be  
22 subject to the following requirements:

23 (1) The disposal of any excavated materials  
24 containing pollutants shall be subject to requirements of  
25 Minnesota Statutes, chapter 115.

26 (2) The most acceptable means of disposing of clean  
27 materials, free from pollutants, which are excavated from  
28 protected waters listed in order of preference are:

29 (a) Complete removal of excavated materials from  
30 the waters and disposal or reuse for other purposes outside of  
31 the floodplain.

32 (b) Deposition in stable on-land disposal sites  
33 located above the ordinary high water mark and outside of  
34 floodway districts established under local ordinance.

35 Provisions must be included for sodding, seeding, or otherwise  
36 properly stabilizing these materials.

1 (c) Temporary deposition along shorelines or  
2 within floodplains by stockpiling materials for subsequent  
3 removal to areas outside of any protected waters and outside of  
4 established floodplain districts provided that: any stockpile  
5 materials are removed within one year of stockpiling; and the  
6 stockpile is constructed so that any materials or waters  
7 entering or leaving the stockpile are controlled to prevent any  
8 introduction of sediment into the environment surrounding the  
9 stockpile.

10 (d) Redeposition of excavated materials,  
11 consisting of inorganic materials free from pollutants, into  
12 protected waters shall only be permitted when it will result in  
13 improvement of natural conditions of protected waters for the  
14 public benefit and will not result in sedimentation, obstruction  
15 of navigation, or a loss of fish or wildlife habitat. Separate  
16 permit provisions shall be required for redeposition of  
17 excavated materials subject to the standards and criteria of B.

18 (e) Determination of the public benefit served by  
19 redeposition of excavated materials shall be based on the value  
20 to the public of redeposited materials in order to protect  
21 shorelines from the damaging effects of erosion due to winds and  
22 waves when there are no other feasible, practical, and  
23 ecologically acceptable means to protect the shoreline; or  
24 create or improve habitat areas for fish and wildlife; or  
25 mitigate or enhance the physical and biological environment  
26 within protected waters when mitigative or enhancement measures  
27 are required as a condition of a permitted activity within the  
28 waters involved and there are no other feasible, practical, and  
29 ecologically acceptable mitigative measures.

30 c. The proposed project must represent the "minimal  
31 impact" solution to a specific need with respect to all other  
32 reasonable alternatives.

33 d. The excavation must be limited to the minimum  
34 dimensions necessary for achieving the desired purpose.

35 e. Where excavation is proposed in a protected water  
36 that is perched on an impervious stratum, soil borings must show

1 that the proposed excavation will not rupture the impervious  
2 stratum.

3 f. The biological character of the waters and  
4 surrounding shorelines shall be affected to the minimum degree  
5 feasible and practical.

6 g. Adverse effects on the physical or biological  
7 character of the waters shall be subject to feasible and  
8 practical measures to mitigate the effects.

9 h. The water supply, navigational, and drainage  
10 characteristics of the waters shall be protected to ensure that  
11 the interests of the public and of private riparian landowners  
12 are not adversely affected by the proposed excavation.

13 i. The proposed excavation shall be consistent with  
14 applicable floodplain, shoreland, and wild and scenic rivers  
15 management standards and ordinances for the waters involved.

16 j. The proposed excavation shall be consistent with  
17 plans and management programs of local and regional governments  
18 provided that such plans are consistent with state plans and  
19 programs.

20 k. For harbors, boat slips, and other mooring  
21 facilities, the excavation shall be appropriately sized to  
22 provide a single mooring space for each riparian lot to be  
23 served. The number of mooring spaces to be provided shall  
24 generally be the amount of natural shoreline to be served  
25 divided by the lot requirements of the local land use control  
26 authority and the state shoreland management standards.

27 C. Specific standards. In addition to compliance with the  
28 general standards in B. specific requirements shall be met for  
29 the following activities:

30 1. Excavations for beach development.

31 a. The existing site conditions will not provide a  
32 suitable beach using a sand blanket alone.

33 b. When the proposal includes the installation of a  
34 beach sand blanket the area to be excavated shall be consistent  
35 with the criteria for filling under 6 MCAR S 1.5021 B.

36 c. The depth of excavation needed to reach a suitable



1 beach stratum shall be the minimum depth necessary considering  
2 anticipated site maintenance and reasonable water depths for a  
3 beach.

4         2. Excavations for improvement or enhancement of  
5 hydrologic and biologic conditions in all, or large portions of  
6 waterbasins.

7             a. A public need for the excavation has been  
8 established by local governmental resolution specifying the  
9 public interests to be improved or enhanced, except where the  
10 project is state sponsored.

11             b. The proposed project is intended to achieve one or  
12 more of the following public purposes:

13                 (1) to improve navigation, swimming, and other  
14 recreational uses;

15                 (2) to reduce winter fish-kill potential;

16                 (3) sediment removal to eliminate a source of  
17 nutrients and/or contaminants.

18             c. The proposed excavation is part of an overall  
19 improvement or enhancement project based upon adequate  
20 background and field test data for which a comprehensive plan is  
21 submitted at the time of application detailing all of the  
22 following:

23                 (1) Objectives to be accomplished, and an analysis  
24 of any alternative means considered to meet the objectives and  
25 the rationale for selecting excavation.

26                 (2) Sufficient soil boring and bottom sampling data  
27 to evaluate sediment quality and bottom "seal" conditions.

28 Where excavation is proposed on a waterbasin that is perched on  
29 an impervious stratum, soil borings must show that the proposed  
30 excavation will not rupture the impervious stratum.

31                 (3) The methods, uses, and locations to be employed  
32 in excavating and disposing of excavated material consistent  
33 with the provisions of 6 MCAR S 1.5021.

34                 (4) Existing water quality data and provision for  
35 future water quality monitoring including any water returned to  
36 the waterbasin during the removal of excavated materials.

1 (5) A timetable which indicates anticipated yearly  
2 excavation areas and volumes of materials to be removed, plus  
3 the selected disposal methods, uses, and deposition locations  
4 for each excavation period.

5 (6) A detailed description of proposed excavation  
6 and disposal equipment and facilities, including, where  
7 applicable, the length of discharge pipe purchased or available  
8 for the project and the pumping characteristics of the equipment.

9 3. Excavations for navigation related purposes.

10 a. Access channels from shorelines for recreational  
11 craft.

12 (1) Excavations for accesses from shorelines to  
13 reach navigable depths shall not be allowed if:

14 (a) access could reasonably be obtained through  
15 use of a dock to reach navigable depths; and

16 (b) prevalent wind, wave, and current conditions  
17 would not impair reasonable access to reach navigable depths.

18 (2) When shoreline conditions and wind, wave, and  
19 current conditions preclude access to navigable depths,  
20 excavations for navigational access shall be allowed provided  
21 the access channel shall not exceed four feet in depth, more  
22 than 15 feet in bottom width, and will not extend to an offshore  
23 water depth greater than four feet.

24 b. Other navigational channels:

25 (1) Excavations shall be limited to the minimum  
26 depth and width necessary to allow reasonable use of anticipated  
27 watercraft.

28 (2) Excavations to provide maintenance of  
29 navigational channel projects shall be limited to the length,  
30 width, and depth dimensions of the original channel.

31 4. Harbors and boat slips.

32 a. Excavations for development of offshore or inland  
33 harbors or boat slips for the mooring of more than 25 watercraft  
34 or watercraft larger than 20 feet in length shall be restricted  
35 to those waters which have the following characteristics:

36 (1) waterbasins having areas of 1,000 acres or more;

1           (2) watercourses which are used for commercial or  
2 industrial navigational purposes.

3           b. Excavations for development of offshore harbors  
4 serving fewer than 25 watercraft shall be limited to those water  
5 areas where the location of the proposed offshore harbor would  
6 not create unreasonable obstructions to public use and  
7 navigation on the water involved. Unreasonable obstructions  
8 include any development which would result in threats to public  
9 health, safety, or welfare.

10          c. Excavations for development of private inland  
11 harbors or boat slips serving fewer than 25 watercraft or  
12 watercraft less than 20 feet in length shall be limited to those  
13 waters where:

14           (1) Prevalent wind, wave, or current conditions  
15 along the shoreline where excavation is proposed are of a  
16 magnitude and frequency which precludes the use and maintenance  
17 of docks to moor watercraft. Determinations of magnitude and  
18 frequency which would inhibit use of docks shall be based on  
19 supporting facts including:

20           (a) the character of the water involved and its  
21 shoreline in relation to exposure to severe wind, wave, or  
22 current actions and the configuration and area of the water;

23           (b) the frequency of occurrence of storms  
24 producing severe winds and waves based on climatological data  
25 for the area; and

26           (c) the average number of days during each month  
27 of the navigational season when the shoreline is affected by  
28 severe winds, waves, or currents;

29           (2) The presence of lake bed and bank conditions  
30 would preclude the use and maintenance of docks and the  
31 conditions of the site and the number, type, or size of  
32 watercraft intended to be moored would preclude the development  
33 and use of on-land facilities, such as rollers, winch and track  
34 systems, sliderails, or other facilities which could be used to  
35 haul watercraft out of the water for on-land storage; or

36           (3) The proposed site is located in an area of the

1 water body where offshore mooring or excavations or extensive  
2 dock development would create unreasonable obstructions to  
3 public use and navigation of the water body.

4 d. The width and length of boat slips shall not exceed  
5 150 percent of the width and length of the anticipated  
6 watercraft and all authorized boat slips shall be oriented to  
7 maximize the degree of wave protection.

8 e. Excavations for development of inland harbors shall  
9 be limited to those waters described in C.4.c. and shall meet  
10 the following additional requirements:

11 (1) Requirements applicable to all commercial and  
12 industrial inland harbors:

13 (a) The mooring area of the harbor shall be  
14 compactly shaped in order to minimize the surface area excavated  
15 in relation to the number of mooring spaces to be provided and  
16 shall be located at an adequate distance from the shoreline to  
17 provide wave protection and prevent breakthrough.

18 (b) No branch or connecting channels shall be  
19 permitted extending laterally outward from authorized inland  
20 excavations.

21 (c) If practical, a "dogleg" shall be  
22 incorporated in the approach channel located between the mooring  
23 area and the shoreline to minimize visual impact from the water  
24 body and promote wave dissipation.

25 (d) The excavation shall not extend more than 200  
26 feet inland from the protected water unless evidence is provided  
27 to show that greater distances are required because of the  
28 dimensions of the watercraft to be moored.

29 (e) The methods, use, and deposition locations to  
30 be employed in disposing of excavated materials shall be  
31 consistent with the provisions of B.4.b.

32 (2) An application for a permit shall contain plans,  
33 maps, and supporting data ~~including-but-not-limited-to~~ regarding  
34 proposed excavation site soil borings, ground water levels and  
35 characteristics, water quality, topography, drainage, and  
36 vegetation which shall substantiate that the proposed project

1 must be reasonable and practical based upon geologic and  
2 hydrologic conditions including:

3 (a) quantity and quality of stream flow and local  
4 drainage at the proposed project site;

5 (b) water stagnancy problems including the  
6 capability of being flushed or drained;

7 (c) interference with stream flow or longshore  
8 drift;

9 (d) type of soil strata and underground  
10 formations in the project vicinity;

11 (e) protection of the water body itself in terms  
12 of reduced water supply, increased seepage or drainage,  
13 pollution, increased flooding, and other adverse hydrological  
14 impacts;

15 (f) adequate entrance openings;

16 (g) ample turning radius;

17 (h) adequate depth and size for the anticipated  
18 watercraft usage;

19 (i) adequate reduction of wave heights in mooring  
20 areas;

21 (j) proper harbor shape to reduce wave resonance;

22 (k) need for and feasibility of maintenance  
23 dredging;

24 (l) adequate height of perimeter wall;

25 (m) need for wave absorbers within the harbor;

26 and

27 (n) bank stabilization by appropriate erosion  
28 control measures.

29 (3) Additional requirements applicable to specific  
30 types of harbors.

31 (a) Private inland harbors serving two or more  
32 single family residential riparian lots shall, if practical, be  
33 located along the mutual boundary of properties to be served.

34 (b) Private inland harbors for proposed  
35 multi-family or cluster developments, residential planned unit  
36 developments, or for resorts, campgrounds, or other commercial

1 purposes:

2 (1) The development plan shall be approved by the  
3 local governmental unit;

4 (2) The permit shall be of the title-registration  
5 type including a provision that the individual waterfront lots  
6 in the development have priority rights to the available mooring  
7 spaces thus obviating issuance of future permits for individual  
8 harbors for these lots; and

9 (3) The harbor shall be appropriately sized,  
10 consistent with the number of watercraft to be served with the  
11 number of mooring spaces not to exceed one mooring space for  
12 each riparian unit served or each rental cabin or campsite unit  
13 plus consideration of use by transient watercraft.

14 (c) Public inland harbor projects must be  
15 justified by:

16 (1) a public need for the proposed inland harbor  
17 established by local governmental resolution specifying public  
18 interests to be enhanced;

19 (2) the harbor shall be appropriately sized  
20 consistent with the demand for mooring facilities in the area  
21 and the number of watercraft to be served;

22 (3) the harbor shall be available for use by the  
23 general public; and

24 (4) the harbor may extend more than 200 feet inland  
25 provided the plans minimize the total length by which the  
26 protected water is proposed to be extended in keeping with the  
27 number of watercraft to be served and the topography.

28 5. Excavations for fish and wildlife habitat improvement.

29 a. Excavation to restore or improve fish and wildlife  
30 habitat require:

31 (1) plans showing the nature and degree of habitat  
32 to be benefited; and

33 (2) information showing that the project will not  
34 create other adverse effects such as flooding, erosion,  
35 sedimentation, or navigational obstructions.

36 b. Excavations in trout streams officially designated

1 by the commissioner shall be allowed only if:

2 (1) the amount, method, and location of the  
3 excavation will not result in increased water temperatures,  
4 cause excessive sedimentation in the stream, or destruction of  
5 fish habitat; and

6 (2) there is no other feasible or practical  
7 alternative other than excavation.

8 6. Excavations in protected watercourses. Except as  
9 noted in B.3., a permit shall be required for any excavation in  
10 a protected watercourse and shall be subject to the following  
11 specific requirements in addition to the general requirements of  
12 B.:

13 a. The watercourse capacity shall be sufficient to  
14 adequately convey normal runoff.

15 b. The watercourse bottom gradients shall be such that  
16 normal low flow velocities are nonerosive and the sideslopes  
17 shall be graded such that bank slumping is not a hazard. Where  
18 excavation will result in excessive bank erosion, energy  
19 dissipation structures, channel and bank protection, or other  
20 engineering measures shall be required.

21 c. The outlet shall be adequate in that it:

22 (1) sufficiently conveys the discharge waters from  
23 the area proposed for excavation;

24 (2) does not produce substantial increases in  
25 downstream overbank flooding; and

26 (3) does not produce downstream erosion hazards as a  
27 result of the watercourse excavation.

28 d. When projects involve widening or straightening  
29 which alters the watercourse banks, all sideslopes which  
30 contribute direct surface runoff into the authorized altered  
31 watercourse, and a strip of land along both sides of the  
32 watercourse, one rod wide or to the top of the spoil bank,  
33 whichever is the greater, shall be seeded and maintained in  
34 permanent grasses. No mowing of this grassed strip shall be  
35 allowed until after July 31 of each year.

36 e. The alignment and slope of the excavated channel

1 shall be such as to provide a smooth transition between the  
2 existing and the excavated channel.

3 f. Disposal of excavated material from channel  
4 excavation shall be consistent with B.4., except where the  
5 original channel is allowed to be filled as part of the project.

6 g. No significant increase in flood damages will be  
7 permitted. Floodwater retardance structures may be required to  
8 minimize any increase in flood damage.

9 h. The applicant shall submit the names and addresses  
10 of landowners located immediately upstream, downstream, and  
11 adjacent to any proposed watercourse alteration resulting from  
12 excavation. In addition, the applicant shall submit the names  
13 and addresses of other landowners and occupants that the  
14 commissioner, after reviewing the plans for the proposed  
15 excavation, believes will have a substantial interest in the  
16 channel change or will be substantially affected by the  
17 watercourse alteration.

18 i. The preferred alternative to widening, deepening,  
19 or straightening a watercourse for control of flood waters is  
20 the construction of water impoundment structures in upstream  
21 areas. Where impoundments are infeasible, impractical, or would  
22 result in adverse effects on health and safety or greater  
23 adverse environmental effects, the preferred alternative is the  
24 construction of flood bypass channels to convey high velocity  
25 flood flows.

26 (1) Excavations in protected watercourses for flood  
27 management purposes shall be allowed only where an upstream  
28 impoundment or a flood bypass channel is infeasible or  
29 impractical or excavation is the least damaging environmentally.

30 (2) Excavations for widening, deepening, or  
31 straightening portions of watercourses shall be based on flood  
32 management plans which provide details on the relationship of  
33 the proposed excavation to management of flood flows for the  
34 entire watercourse and shall be consistent with state standards  
35 and state approved local standards for floodplain management  
36 including maximum use of nonstructural measures where feasible



1 and practical.

2 j. Excavations shall be limited to the minimum extent  
3 necessary to facilitate construction of the road crossing and  
4 shall include provisions for adequate riprap or other bank  
5 protection measures to protect altered banks from erosion.

6 k. Excavations for construction of sediment traps or  
7 settling basins to control sedimentation and water quality shall  
8 be based on plans approved by the Pollution Control Agency or  
9 the local soil and water conservation districts district and  
10 shall be consistent with any state and local standards,  
11 regulations, and requirements.

12 l. Watercourse channel excavations to restore or  
13 improve fish and wildlife habitat shall require:

14 (1) plans showing the nature and degree of habitat  
15 to be benefited; and

16 (2) information showing that the project will not  
17 create other adverse effects such as flooding, erosion,  
18 sedimentation, or navigational obstructions.

19 m. Watercourse channel excavations in trout streams  
20 officially designated by the commissioner shall only be allowed  
21 if:

22 (1) the amount, method, and location of the channel  
23 excavation will not result in increased water temperatures,  
24 cause excessive sedimentation in the stream, or destruction of  
25 fish habitat; and

26 (2) there is no other feasible or practical  
27 alternative other than channel excavation.

28 n. The straightening or realignment of a watercourse  
29 with a total drainage area, at its mouth, greater than five  
30 square miles shall only be permitted where the project will not  
31 result in increased downstream flooding, erosion, or  
32 sedimentation. Where it is proposed to straighten or realign a  
33 watercourse with a total drainage area, at its mouth, greater  
34 than five square miles, the applicant may be required to submit  
35 appropriate hydraulic data. Such data may include, ~~but are not~~  
36 ~~limited to:~~

1 (1) contributing watershed above the project;

2 (2) data for the flood of record;

3 (3) maximum observed high water level;

4 (4) flow data, based on the best available

5 technology as follows:

6 (a) existing and proposed time of concentration;

7 (b) existing and proposed stage downstream;

8 (c) existing and proposed mean velocity

9 downstream;

10 (5) certification that the data was prepared by a  
11 registered professional engineer.

12 o. The alteration of watercourses by straightening or  
13 realigning channels to facilitate adjacent land use shall be  
14 allowed only if the applicant provides evidence:

15 (1) that the alteration is reasonable, practical,  
16 and will adequately protect public safety and welfare; and

17 (2) that the alteration will involve a minimum of  
18 encroachment, change, or damage to the environment, particularly  
19 to the ecological system of the waterway.

20 p. All other proposals for excavations in protected  
21 watercourses shall meet the general requirements of B. and the  
22 specific requirements of C.1.-5. and shall require submission of  
23 supporting evidence as provided in C.6.n. and o.

24 D. Relationship to standards and criteria for other  
25 activities involving changes in course, current, or  
26 cross-section. Unless otherwise specified in other rules the  
27 provisions of this rule shall apply to excavations proposed as  
28 part of any other activity or activities including but not  
29 limited to: Filling 6 MCAR S 1.5021, Structures 6 MCAR S  
30 1.5023, Water level controls 6 MCAR S 1.5024, Bridges and  
31 culverts 6 MCAR S 1.5025, Drainage of protected waters 6 MCAR S  
32 1.5026, and Alterations of protected waters for mining 6 MCAR S  
33 1.5027.

34 6 MCAR S 1.5023 Structures in protected waters.

35 A. Goals. It is the goal of the department to limit the  
36 occupation of protected waters by offshore navigational

1 facilities, retaining walls, and other structures in order to:

2 1. preserve the natural character of protected waters and  
3 their shorelands;

4 2. provide a balance between the protection and  
5 utilization of protected waters; and

6 3. encourage the removal of existing structures which do  
7 not serve the public interest from the beds of protected waters  
8 at the earliest practicable date.

9 B. General standards.

10 1. Scope. This rule applies to the placement,  
11 construction, reconstruction, repair, relocation, abandonment,  
12 or removal of any structure placed on or in protected waters.

13 2. Placement of structures shall not be permitted where  
14 the structure:

15 a. Will obstruct navigation or create a water safety  
16 hazard.

17 b. Will be detrimental to significant fish and  
18 wildlife habitat, or protected vegetation. Construction is  
19 prohibited in posted fish spawning areas.

20 c. Is designed or intended to be used for human  
21 habitation or as a boathouse.

22 d. Is designed or intended to include walls, a roof,  
23 or sewage facilities.

24 3. No permit shall be required for the following  
25 activities, unless prohibited under 2.:

26 a. To construct, reconstruct, or install a seasonal  
27 dock or floating structure provided:

28 (1) the structure will not constitute a hazard to  
29 navigation or public health, safety, and welfare, as determined  
30 by the commissioner;

31 (2) the structure will not include fuel-handling  
32 facilities;

33 (3) the structure will allow the free flow of water  
34 beneath it; and

35 (4) the structure is not used or intended to be used  
36 as a marina.

1           b. To construct or reconstruct a permanent dock on  
2 wood pilings or rock filled cribs on lakes provided:

3           (1) the dock is a single lineal structure with no  
4 appurtenances;

5           (2) only one dock is installed per riparian lot;

6           (3) the structure shall not exceed six feet in width  
7 nor exceed 50 feet in length, or extend to a depth greater than  
8 four feet, whichever is less;

9           (4) the structure shall comply with the requirements  
10 of 3.a.(2), (3), and (4) above;

11           (5) for a permanent dock on wood pilings, the  
12 surface area of the lake is equal to or greater than 500 acres;

13           (6) for a permanent dock on rock filled cribs, the  
14 surface area of the lake is equal to or greater than 2,500 acres;  
15 and

16           (7) structures using rock filled cribs shall only be  
17 placed where the lakebed is predominantly bedrock which is  
18 incapable of supporting wood pilings and shall utilize  
19 intermittently spaced cribs which allow unrestricted circulation  
20 of water beneath the dock.

21           c. To construct or reconstruct a boat launching ramp  
22 provided:

23           (1) Privately owned ramps shall not exceed 12 feet  
24 in width, and extend more than ten feet beyond the ordinary high  
25 water mark or into water more than four feet in depth, whichever  
26 is less. Excavations five cubic yards or less, and placement of  
27 up to five cubic yards of crushed rock, gravel, clean sand, or  
28 small stone shall be allowed in order to provide a stable base  
29 or maintain use of the ramp.

30           (2) Publicly owned ramps shall not exceed 24 feet in  
31 width and extend more than 20 feet waterward of the shoreline or  
32 into water more than four feet in depth, whichever is less.  
33 Excavations of 60 cubic yards or less, and placement of up to 30  
34 cubic yards of crushed rock, gravel, clean sand, or small stone  
35 shall be allowed in order to provide a stable base or maintain  
36 use of the ramp.

1           (3) The ramp shall be constructed of gravel, natural  
2 rock, concrete, steel matting, or other durable inorganic  
3 material not exceeding six inches in thickness.

4           d. Remove structures or other waterway obstructions  
5 provided:

6           (1) the original cross-section and bed conditions  
7 shall be restored insofar as practicable;

8           (2) the structure shall be completely removed  
9 including any footings or pilings which obstruct navigation;

10           (3) the structure is not located on an officially  
11 designated trout stream;

12           (4) the structure does not function as a water level  
13 control device.

14           4. Permits shall be required for the construction,  
15 reconstruction, repair, or relocation of any structure on or in  
16 protected waters, except as provided under B.2. and 3. above,  
17 and shall meet the following general criteria:

18           a. The proposed project must represent the minimal  
19 impact solution to a specific need with respect to all other  
20 reasonable alternatives.

21           b. The project will involve a minimum of encroachment,  
22 change, or damage to the environment, including but not limited  
23 to fish and wildlife habitat, navigation, water supply, and  
24 storm water retention.

25           c. The proposed structure shall be consistent with  
26 applicable floodplain, shoreland, and wild and scenic rivers  
27 management standards and ordinances for the waters involved.

28           d. Adverse effects on the physical or biological  
29 character of the waters shall be subject to feasible and  
30 practical measures to mitigate the effects.

31           e. The proposed structure shall be consistent with  
32 water and related land management plans and programs of local  
33 and regional governments, provided these plans and programs are  
34 consistent with state plans and programs.

35           f. Except for docks and boat ramps, all new structures  
36 shall have a title-registered permit, unless a public agency or

1 local governmental unit accepts responsibility for future  
2 maintenance or removal.

3 C. Specific standards. In addition to compliance with the  
4 general standards in B., specific requirements shall apply to  
5 the following activities:

6 1. Docks. Except as provided in B.2.b., a permit shall  
7 be required for the construction or reconstruction of any dock  
8 and shall be granted provided:

9 a. Similarly situated docks in the vicinity have not  
10 experienced maintenance difficulty and the use of a seasonal  
11 dock is precluded because:

12 (1) long fetches would subject seasonal docks to  
13 damaging storm wave conditions;

14 (2) bottom conditions such as bedrock or an  
15 extremely gradual offshore slope would preclude the use of  
16 seasonal dock stringers; or

17 (3) the number of public and private users is so  
18 great the seasonal docking equipment would not provide adequate  
19 stability.

20 b. Piling docks shall be preferred in all cases unless  
21 the depth to bedrock is too shallow to allow the driving of  
22 piles, in which case rock crib docks may be authorized.

23 c. The docks shall extend waterward only to a  
24 navigable depth, generally considered to be no greater than four  
25 feet.

26 d. The dock shall not exceed six feet in width.

27 2. Wharves.

28 a. A permit shall be required for the construction or  
29 reconstruction of all wharves. The following order of  
30 preference for construction types shall be utilized:

31 (1) bulkheaded shoreline;

32 (2) inland slip with bulkheaded sidewalls;

33 (3) wharf projecting into protected waters.

34 b. Wharves shall be permitted provided the structure:

35 (1) is part of a designated port facility;

36 (2) is consistent with local land use plans and

1 ordinances;

2 (3) does not extend further waterward than any  
3 existing wharves in the area or beyond any established harbor  
4 line, whichever is less;

5 (4) size is the minimum practicable; and

6 (5) is not an obstruction to flood flows or  
7 longshore drift and is adequately designed to resist the natural  
8 forces of ice, wind, and wave.

9 3. A permit shall be required for the construction or  
10 reconstruction of all offshore breakwaters and marinas. These  
11 structures shall be permitted provided the following general  
12 conditions and the additional listed specific conditions are met:

13 a. Alternative dock or inland facilities are  
14 infeasible.

15 b. The facility shall be adequate in relation to  
16 appropriate engineering factors including but not limited to  
17 those listed in 6 MCAR S 1.5022 C.4.e.(2)(f)-~~(m)~~ (n).

18 c. The plan shall be adequate in relation to  
19 appropriate the geologic and hydrologic factors ~~including-but~~  
20 ~~not-limited-to-these~~ listed in 6 MCAR S 1.5022 C.4.e.(2)(a)-(e).

21 d. The size and shape shall be designed in a compact  
22 fashion so as to blend in with the surrounding shoreline while  
23 minimizing the surface area occupied in relation to the number  
24 of watercraft to be served.

25 e. The breakwaters shall not exceed the minimum  
26 thickness necessary to withstand the anticipated forces  
27 consistent with maintenance requirements and shall be faced with  
28 an adequate layer of natural rock riprap of appropriate size and  
29 gradation.

30 f. The following types of offshore structures shall be  
31 permitted, subject to the listed specific conditions:

32 (1) Private offshore structures serving several  
33 contiguous riparian lots; provided:

34 (a) The site shall meet the standards of C.1. for  
35 a dock.

36 (b) The structure shall minimize encroachment

1 waterward of the ordinary high water mark.

2 (c) The total length of the structure shall be  
3 appropriately sized to provide a single mooring space for each  
4 riparian lot served.

5 (2) Private offshore structures for proposed  
6 multi-family or cluster or residential planned unit developments;  
7 provided:

8 (a) The structure shall minimize encroachment  
9 waterward of the ordinary high water mark and its total length  
10 shall be appropriately sized to provide a single mooring space  
11 for each riparian lot to be served. The number of mooring  
12 spaces to be provided shall generally be the amount of natural  
13 shoreline to be served divided by the lot frontage requirements  
14 of the local land use control authority.

15 (b) The development plan shall be approved by the  
16 local land use control authority.

17 (3) Private offshore structures for resorts,  
18 campgrounds, or similar enterprises; provided:

19 (a) The structure shall minimize encroachment  
20 waterward of the ordinary high water mark and its total length  
21 shall be appropriately sized to provide one mooring space for  
22 each rental cabin or campsite unit plus a reasonable number of  
23 mooring spaces for transient watercraft.

24 (b) The development plan shall be approved by the  
25 local land use control authority.

26 (4) Public offshore structure projects; provided:

27 (a) A local unit of government shall pass a  
28 resolution which specifies the public interests to be benefited  
29 by the proposal.

30 (b) The structure shall be appropriately sized  
31 consistent with the demand for mooring facilities in the area  
32 and the number of watercraft to be served.

33 (c) The structure shall be available for use by  
34 the general public.

35 (d) The development plans shall minimize the  
36 waterward encroachment of the facilities.



1 (5) Offshore marinas; provided:

2 (a) The area shall be zoned for such use or local  
3 government shall grant a land use permit.

4 (b) The proposed marina shall minimize  
5 encroachment waterward of the ordinary high water mark.

6 (c) The marina shall be sized consistent with the  
7 demand for mooring facilities in the area and the number of  
8 watercraft to be served.

9 4. A permit shall be required for the construction or  
10 reconstruction of all retaining walls and erosion and  
11 sedimentation control structures that do not impound water. The  
12 construction of retaining walls shall be discouraged because  
13 their appearance is generally not consistent with the natural  
14 environment and their construction and maintenance cost is  
15 generally greater than riprap.

16 The issuance of permits shall be contingent on the  
17 following conditions:

18 a. Existing or expected erosion problems shall  
19 preclude the use of riprap shore protection, or there shall be a  
20 demonstrated need for direct shoreland docking; or

21 b. Design shall be consistent with existing uses in  
22 the area. Examples are: riverfront commercial-industrial areas  
23 having existing structures of this nature, dense residential  
24 shoreland areas where similar retaining walls are common,  
25 resorts where floating docks may be attached to such a bulkhead,  
26 or where barges are utilized to transport equipment and  
27 supplies; and

28 c. Adequate engineering studies shall be performed of  
29 foundation conditions, tiebacks, internal drainage, construction  
30 materials, and protection against flanking; and

31 d. The facility shall not be an aesthetic intrusion  
32 upon the area and is consistent with all applicable local,  
33 state, and federal management plans and programs for the water  
34 body; and

35 e. Encroachment below the ordinary high water mark  
36 shall be held to the absolute minimum necessary for construction.

1           5. A permit shall be required for the construction or  
2 reconstruction of any boat launching ramp not covered under  
3 B.3.c., and shall be granted provided:

4           a. the applicant shall demonstrate a need for a  
5 launching facility;

6           b. the proposed ramp shall be of the minimum  
7 dimensions necessary for launching of watercraft;

8           c. the proposed ramp shall not obstruct flowing water;  
9 and

10           d. construction shall not necessitate alteration of  
11 shoreland which could result in substantial erosion and  
12 sedimentation.

13           6. A permit shall be required for the construction,  
14 reconstruction, relocation, removal, repair, and abandonment of  
15 all other offshore structures, cables other than utility  
16 crossings, pilings, or other facilities not covered by specific  
17 regulations:

18           a. Permits for structural repair, relocation, or  
19 modification, other than minor maintenance work such as  
20 reroofing, painting of structures or similar work, shall be  
21 issued provided all of the following conditions are met:

22                   (1) the applicant demonstrates a need for the work;

23                   (2) the cost of the work will not exceed 50 percent  
24 of the replacement cost of the structure;

25                   (3) the degree of permanence of the structure will  
26 not be materially increased by virtue of constructing a new  
27 foundation or replacing the majority of the structure above the  
28 foundation;

29                   (4) the structure being repaired has appropriate  
30 permits from the local land use or sanitary authority;

31                   (5) the degree of obstruction or structure size is  
32 not increased.

33           b. Permits for construction, relocation, or  
34 reconstruction of publicly-owned structures shall be issued  
35 where:

36                   (1) public need is documented and outweighs adverse

1 environmental impact;

2 (2) the site is adequately protected from the forces  
3 of ice and wave pressures; and

4 (3) the proposed construction is of sound design and  
5 is not necessarily obtrusive or visually incompatible with the  
6 natural surroundings.

7 c. The construction, relocation, or reconstruction of  
8 privately-owned structures shall be permitted only when a  
9 governmental agency or local governmental unit accepts  
10 responsibility for future maintenance of the structure or its  
11 removal.

12 7. Where the commissioner has determined that a structure  
13 is no longer functional, constitutes a public nuisance or a  
14 hazard to navigation, or poses a threat to public health or  
15 safety, the structure shall be removed from protected waters  
16 under the applicable provisions of these rules. Except as  
17 provided under B.3.d., a permit is required for the removal or  
18 abandonment of all existing waterway obstructions including  
19 boathouses, bridges, culverts, pilings, piers, and docks.  
20 Permits shall be issued provided:

21 a. the original cross-section and bed conditions will  
22 be restored insofar as practicable;

23 b. adequate provisions are made to mitigate any side  
24 effects resulting from removal, such as restoration of wave or  
25 current forces; and

26 c. no portion of the structure remains which would  
27 obstruct or impair navigation, interfere with the passage of  
28 flood waters, or contribute to erosion and sedimentation.

29 D. Relationship to standards and criteria for other  
30 activities involving changes in course, current, or  
31 cross-section.

32 Unless otherwise specified in other rules, the provisions  
33 of this rule shall apply to structures proposed as part of any  
34 other activity or activities including but not limited to:  
35 Filling 6 MCAR S 1.5021, Excavations 6 MCAR S 1.5022, Water  
36 level controls 6 MCAR S 1.5024, Bridges and culverts 6 MCAR S

1 1.5025, Drainage of protected waters 6 MCAR S 1.5026, and  
2 Alterations of protected waters for mining 6 MCAR S 1.5027.  
3 6 MCAR S 1.5024 Water level controls.

4 A. Goals. It is the goal of the department to manage  
5 protected waters in order to:

6 1. maintain natural flow and natural water level  
7 conditions to the maximum feasible extent;

8 2. encourage the construction of small upstream retarding  
9 structures for the conservation of water in natural waterbasins  
10 and watercourses, consistent with any overall plans for the  
11 affected watershed area; and

12 3. limit the artificial manipulation of water levels  
13 except where the balance of affected public interests clearly  
14 warrants the establishment of appropriate controls and it is not  
15 proposed solely to satisfy private interests.

16 B. General standards.

17 1. Scope. The construction, repair, reconstruction, or  
18 abandonment of any structure intended to impound, divert, or  
19 control the level or flow of protected waters shall be subject  
20 to the provisions of this rule.

21 2. Construction or reconstruction of water level control  
22 facilities shall not be allowed where it is intended to  
23 manipulate water levels solely to satisfy private interests.

24 3. No permit shall be required to construct, reconstruct,  
25 or abandon a water level control structure on protected  
26 watercourses with a contributing watershed of 300 acres or less,  
27 except on officially designated trout streams, provided the  
28 structure does not qualify as a dam under the rules for dam  
29 safety.

30 4. Permits shall be required for the construction,  
31 repair, reconstruction, or abandonment of any water level  
32 control structure except as provided in 2. and 3., and shall  
33 meet the following general criteria:

34 a. The project will involve a minimum of encroachment,  
35 change, or damage to the environment including but not limited  
36 to fish and wildlife habitat, navigation, water supply, storm

1 water retention, and agricultural uses.

2 b. Adverse effects on the physical or biological  
3 character of the waters shall be subject to feasible and  
4 practical measures to mitigate the effects.

5 c. The proposed project shall be consistent with  
6 applicable floodplain, shoreland, and wild and scenic rivers  
7 management standards and ordinances for the waters involved.

8 d. The proposed project shall be consistent with water  
9 and related land management plans and programs of local and  
10 regional governments, provided such plans and programs are  
11 consistent with state plans and programs.

12 e. The construction or reconstruction shall comply  
13 with the requirements of 6 MCAR SS 1.5030-1.5034 with respect to  
14 dam safety for the protection of human life and property.

15 f. The construction or reconstruction of water level  
16 control structures or changing the level of an existing  
17 structure may be permitted to:

18 (1) control and store flood waters;

19 (2) maintain low flows for instream flow or water  
20 level protection;

21 (3) manage water quality, including the prevention  
22 and/or or control of erosion and sedimentation;

23 (4) improve water-based recreation;

24 (5) create, improve, and maintain water supplies;

25 (6) create, improve, or maintain aquatic habitat for  
26 fish and wildlife species;

27 (7) establish, improve, or maintain the generation  
28 of hydroelectric power.

29 ~~5.--The-commissioner-shall-require-the-owner-or-operator~~  
30 ~~of-any-water-level-control-structure,-reservoir,-or-waterway~~  
31 ~~obstruction-within-protected-waters,-constructed-before-a-permit~~  
32 ~~was-required-by-law,-to-secure-approval-from-the-commissioner-of~~  
33 ~~the-manner-by-which-the-structure-is-to-be-operated-and~~  
34 ~~maintained-when-ever-the-commissioner-finds-that-such-operation~~  
35 ~~and-maintenance-approval-is-necessary-in-the-public-interest~~  
36 ~~after-there-is-either:~~

1           a.--verified-and-supported-complaints-by-the-public-or  
2 governmental-agencies-that-the-existing-or-proposed-operation  
3 and-maintenance-is-or-would-be-detrimental-to-public-health,  
4 safety,-and-welfare-or-environmental-protection-with-respect-to  
5 problems-of-flooding,-instream-flows,-water-quality,-fish-and  
6 wildlife,-or-violations-of-land-use-regulations,-requirements,  
7 and-standards-for-lands-abutting-the-protected-waters-involved;  
8 or

9           b.--notification-to-the-commissioner-by-the-owner-or  
10 operator-of-the-intent-to-make-any-of-the-following-changes-in  
11 the-operation-or-maintenance-of-the-structure:

12           (1)-proposed-new-uses-or-reuse-of-the-structure-for  
13 any-purpose-after-the-use-of-the-structure-has-been-discontinued  
14 for-at-least-one-year;-or

15           (2)-proposed-changes-or-alterations-in-the-operaton  
16 of-the-structure-which-would-affect-water-levels,-flows,-or  
17 water-quality-in-protected-waters.

18           6.--The-owner-or-operator-of-any-water-level-control  
19 structure,-reservoir,-or-waterway-obstruction-within-protected  
20 waters,-constructed-before-a-permit-was-required-by-law,-shall  
21 comply-with-the-following-provisions-when-notified-by-the  
22 commissioner-that-approval-is-required-for-operation-and  
23 maintenance-of-the-structure:

24           a.--The-owner-or-operator-shall-submit-plans,  
25 specifications,-and-information-on-the-structure-including:

26           (1)-An-explanation-of-the-purposes-for-which-the  
27 structure-is-operated-or-intended-to-be-operated.

28           (2)-Available-data-on-the-past-history-of-use-and  
29 operation-of-the-structure-and-any-evidence-of-easements-or  
30 other-rights-which-exist-or-would-be-obtained.

31           (3)-Engineering-details-on-the-structural-features  
32 and-characteristics-of-the-structure-which-involve-the-existing  
33 or-proposed-operation-of-the-structure-including-but-not-limited  
34 to-any-gates,-sluiceways,-penstocks,-turbines,-waterwheels,-or  
35 other-mechanical-devices-employed-or-to-be-employed-in-the  
36 operation-of-the-structure.

1           (4)-Available-information-on-the-hydraulic-and  
2 hydrologic-characteristics-of-the-structure-and-the-area  
3 upstream-and-downstream-of-the-structure-which-is-affected-by  
4 the-structure-including-any-available-information-on-flows,  
5 water-levels,-and-water-quality.

6           (5)-Available-information-on-the-physical-condition  
7 of-the-structure-including-engineering-data-on-original  
8 construction,-any-reconstruction-or-repairs-and-the-dates-of  
9 original-construction-and-subsequent-reconstruction-or-repairs.

10           (6)-If-the-structure-contains-features-or-is  
11 intended-to-contain-features-which-allow-or-would-allow  
12 manipulations-of-water-levels,-details-shall-be-provided-on-the  
13 methods,-frequency,-time,-duration-of-operation,-and-any-existing  
14 or-proposed-operating-plans.

15           (7)-Such-other-available-or-attainable-information  
16 on-hydraulic,-hydrologic,-or-geologic-characteristics-as-the  
17 commissioner-may-deem-necessary-in-order-to-assess-the-impacts  
18 or-effects-of-the-structure-and-its-operation.

19           b.--After-receipt-of-all-supporting-facts-and-available  
20 information-required-by-5.-and-6.a.,-the-commissioner-shall  
21 review-the-existing-or-proposed-operational-and-maintenance  
22 aspects-of-the-structure-and-shall-grant-approval-of-the  
23 operation-and-maintenance-provided-that:

24           (i)-The-operation-and-maintenance-does-not-or-will  
25 not-result-in-destruction-or-significant-impairment-of-the  
26 protected-waters-with-respect-to:

27           (a)-the-ecosystem-of-the-protected-waters  
28 including-quantity-and-quality-effects;

29           (b)-potential-threats-to-life-or-property-due-to  
30 flooding-and-overflow-of-upstream-and-downstream-lands-unless  
31 allowed-by-easement-or-other-legal-means-including-acquisition  
32 of-flooded-property;

33           (c)-maintenance-of-adequate-water-flows-and  
34 levels-for-upstream-and-downstream-higher-priority-users  
35 particularly-for-public-domestic-water-supplies.

36           (2)-The-existing-or-proposed-operation-and

1 maintenance-is-or-will-be-consistent-with-applicable-state-and  
2 local-land-use-standards,-regulations,-and-requirements  
3 including-floodplain,-shoreland,-and-wild-and-scenic-rivers  
4 management-standards-and-ordinances-

5 (3)-The-existing-or-proposed-operation-and  
6 maintenance-does-not-or-will-not-result-in-significant-decreased  
7 public-use-of-the-surface-of-the-protected-waters-affected-by  
8 the-structure-including-existing-uses-for-fishing,-hunting,-or  
9 navigation-

10 (4)-The-existing-or-proposed-operation-and  
11 maintenance-will-comply,-when-applicable,-with-the-requirements  
12 of-6-MCAR-SS-1.5030-1.5034-relating-to-dam-safety-

13 e.--If-the-commissioner-determines-that-the-existing-or  
14 proposed-operation-and-maintenance-will-be-detrimental-to-public  
15 health,-safety,-and-welfare-or-the-ecosystem-of-the-protected  
16 waters-based-on-provisions-of-6.b.-the-commissioner-shall-not  
17 approve-the-manner-of-operation-and-maintenance-of-the-structure  
18 until-the-operation-and-maintenance-is-modified-to-meet-the  
19 provisions-

20 C. Specific standards. In addition to the general standards  
21 in B., specific requirements for water level control structures  
22 shall be met as follows:

23 1. Permanent lake level control facilities shall be  
24 approved when the commissioner initiates proceedings for the  
25 purpose of conserving or utilizing the water resources of the  
26 state and assumes responsibility for operation and future  
27 maintenance, or when all of the following conditions are met:

28 a. The ordinary high water mark and runout elevation  
29 of the water body have been determined by a detailed engineering  
30 survey, or by order of the commissioner following a public  
31 hearing;

32 b. The proposed facilities shall be "reasonably  
33 consistent with natural conditions":

34 (1) Where a functioning outlet existed in a state of  
35 nature or for a long period of time following lawful creation or  
36 alteration of an outlet by the activities of man or animals, or



1 cataclysmic events, the proposed outlet is at essentially the  
2 same control elevation;

3 (2) Where no natural or artificial outlet exists and  
4 the lake is for all practical purposes "landlocked," the control  
5 elevation shall not be more than 1-1/2 feet below the ordinary  
6 high water mark;

7 c. The project is sponsored by a governmental unit  
8 which assumes responsibility for operation and future  
9 maintenance, except where:

10 (1) the majority of the riparian owners sign the  
11 permit application;

12 (2) appropriate easements or other property  
13 interests have been obtained from all affected owners;

14 (3) a title-registration type permit shall be issued  
15 to the owner or owners of the property upon which the proposed  
16 water level control structure will be located; and

17 (4) the structure will further public interests in  
18 navigation, propagation of fish or wildlife, or other beneficial  
19 public uses of the water;

20 d. Justification has been made of the need in terms of  
21 public and private interests and the available alternatives,  
22 including the impact on receiving waters and public uses  
23 thereof, through a detailed hydrologic study; and

24 e. A detailed plan is developed for operation and  
25 control including:

26 (1) manner and time of operation;

27 (2) frequency of maintenance;

28 (3) appropriate monitoring of water levels, water  
29 quality, and other factors;

30 (4) management of excess waters.

31 2. Fish and wildlife management proposals made pursuant  
32 to Minnesota Statutes, section 97.48, subdivision 11, or other  
33 appropriate authority shall be approved where:

34 a. The protected water has been designated for  
35 wildlife management purposes.

36 b. There is a specific water level management plan for

1 the lake basin.

2 c. Any drawdown of the lake is only temporary and the  
3 management plans include a permanent facility for restoration of  
4 water levels following such drawdowns.

5 d. Any alteration of a watercourse included in the  
6 plan follows the requirements specified in 6 MCAR S 1.5022 C.6.

7 e. Appropriate easements or fee title have been  
8 obtained.

9 f. Specified management personnel are required to  
10 establish a lake level gauge and keep a record of water levels  
11 with a specified frequency during seasons of active water level  
12 manipulation and with a lesser frequency during all other open  
13 water seasons.

14 3. Plans for landlocked waterbasins less than 25 acres in  
15 surface area and contained completely within the municipal  
16 boundaries of a single city shall be approved where:

17 a. A municipal drainage plan for the affected  
18 tributary watershed is prepared by a qualified engineer or  
19 hydrologist and is approved by the affected watershed district  
20 and the city.

21 b. The city has a field survey made of the waterbasin  
22 after consultation with the department including but not limited  
23 to:

24 (1) the elevation of the aquatic vegetation fringe;

25 (2) the elevation of the tree line and a description  
26 of the location, type, and size of representative trees;

27 (3) groundwater elevations, if appropriate;

28 (4) other information as requested by the department.

29 c. Control elevations and associated physical  
30 parameters are approved by the department and the city.

31 d. The city holds a public hearing on the proposal and  
32 provides a transcript of the proceedings to the department.

33 Provision of a transcript may be waived by the department.

34 4. Permits for the construction, reconstruction, and  
35 abandonment of all other water level control structures shall be  
36 issued provided:

1 a. The need is established in terms of quantifiable  
2 benefits.

3 b. The structural design shall be done by a  
4 professional engineer or by a qualified engineer of the Soil  
5 Conservation Service or the Corps of Engineers and must include  
6 the following considerations:

7 (1) gravity forces;

8 (2) hydrostatic pressure;

9 (3) uplift forces;

10 (4) overturning moment;

11 (5) resistance to sliding;

12 (6) ice pressures;

13 (7) earthquake forces;

14 (8) slope stability including consolidation and pore  
15 pressures;

16 (9) seepage collection or prevention;

17 (10) foundation conditions including appropriate  
18 borings and determination of the strength of foundation  
19 materials;

20 (11) specifications for materials of construction  
21 and their placement or installation;

22 (12) adequate construction inspection to assure  
23 conformance with design assumptions; and

24 (13) adequacy of the cofferdam or diversion during  
25 construction, if any.

26 c. Adequate assurances shall be made for future  
27 maintenance of new water level control structures:

28 (1) For water level control structures 25 feet or  
29 more in structural height or having a maximum storage capacity  
30 of 50 acre-feet or more, permits will be issued only to  
31 governmental agencies, public utilities, or corporations having  
32 authority to construct and maintain such projects, except that a  
33 title-registration type permit may be issued to the owner or  
34 owners of the private property upon which the proposed water  
35 level control structure will be located where the provisions of  
36 C.l.c. are met.

1 (2) For other water level control structures,  
2 title-registration type permits may be issued to the owner or  
3 owners of the private property upon which the water level  
4 control structure will be located which shall run with the land  
5 and require breaching or removal if it ever falls into a state  
6 of disrepair or becomes unsafe.

7 (3) Periodic engineering inspections of authorized  
8 water level control structures may be made by the department or  
9 its designee.

10 D. Relationship to standards and criteria for other  
11 activities involving changes in course, current, or  
12 cross-section. Unless otherwise specified in other rules the  
13 provisions of this rule shall apply to water level control  
14 structures proposed as part of any other activity or activities  
15 including but not limited to: Filling 6 MCAR S 1.5021,  
16 Excavations 6 MCAR S 1.5022, Structures 6 MCAR S 1.5023, Bridges  
17 and culverts 6 MCAR S 1.5025, Drainage of protected waters 6  
18 MCAR S 1.5026, and Alterations of protected waters for mining 6  
19 MCAR S 1.5027.

20 6 MCAR S 1.5025 Bridges and culverts, intakes and outfalls.

21 A. Goals. It is the goal of the department to allow  
22 crossings of protected waters, including the construction of  
23 water intake and sewer outfall structures in protected waters,  
24 only when less detrimental alternatives are unavailable or  
25 unreasonable, and where such facilities adequately protect  
26 public health, safety, and welfare.

27 B. General standards.

28 1. Scope. The construction or reconstruction of any  
29 bridge, culvert, intake, outfall, or other crossing of protected  
30 waters shall be subject to the provisions of this rule.

31 Abandonment or removal of all crossings and structures governed  
32 by this rule shall require a permit pursuant to 6 MCAR S 1.5023

33 C.7.

34 2. Crossings shall not be permitted where the project:

35 a. Will obstruct navigation or create a water safety  
36 hazard.

1           b. Will cause or contribute to significant increases  
2 in flood elevations and flood damages either upstream or  
3 downstream.

4           c. Would involve extensive channelization above and  
5 beyond minor stream channel realignments to improve hydraulic  
6 entrance or exit conditions, except where a separate permit is  
7 obtained pursuant to 6 MCAR S 1.5022 C.6.; or

8           d. Will be detrimental to water quality, or  
9 significant fish and wildlife habitat, or protected vegetation.

10          3. No permit shall be required to construct the following  
11 types of crossings on protected waters, unless prohibited in 2.:

12           a. To construct or reconstruct a bridge or culvert on  
13 a protected watercourse with a total drainage area, at its  
14 mouth, of five square miles or less, except on officially  
15 designated trout streams.

16           b. To construct or reconstruct a low-water ford type  
17 crossing provided that:

18           (1) the stream bed is capable of supporting the  
19 crossing without the use of pilings, culverts, dredging, or  
20 other special site preparation;

21           (2) the water depth does not exceed two feet under  
22 normal summer flow conditions;

23           (3) the crossing conforms to the natural  
24 cross-section of the stream channel and does not reduce or  
25 restrict normal low-water flows;

26           (4) the original stream bank at the site does not  
27 exceed four feet in height;

28           (5) the crossing is constructed of gravel, natural  
29 rock, concrete, steel matting, or other durable inorganic  
30 material not exceeding one foot in thickness;

31           (6) the approach is graded to a finished slope not  
32 steeper than 5:1 horizontal:vertical, and all graded banks are  
33 seeded or mulched to prevent erosion and sedimentation; and

34           (7) the crossing is not placed on an officially  
35 designated trout stream, on a wild, scenic, or recreational  
36 river or on an officially designated canoe and boating route.

1 c. To construct or reconstruct a temporary bridge  
2 provided that:

3 (1) The stream bank is capable of supporting the  
4 bridge without the use of foundations, pilings, culverts,  
5 excavation, or other special site preparation;

6 (2) Nothing is placed in the bed of the stream;

7 (3) The bridge is designed and constructed so that  
8 it can be removed for maintenance and flood damage prevention;

9 (4) The bridge is firmly anchored at one end and so  
10 constructed as to swing away in order to allow flood waters to  
11 pass;

12 (5) The lowest portion of the bridge shall be at  
13 least three feet above the ordinary high water mark on navigable  
14 streams; and

15 (6) The bridge is consistent with state and local  
16 rules and regulations for floodplain, shoreland, and wild,  
17 scenic, or recreational rivers management standards and  
18 ordinances.

19 d. To maintain the hydraulic adequacy of any storm  
20 sewer or agricultural drain tile outfall or ditch which has been  
21 functioning within the previous five years if such work does not  
22 alter the original course, current, or cross-section of the  
23 protected waters.

24 e. To install an agricultural drain tile outletting  
25 into protected waters provided:

26 (1) the bank is restored to the original  
27 cross-section or contour; and

28 (2) no permanent structure is placed below the  
29 ordinary high water mark, except for the drain tile.

30 4. Permits shall be required for the construction or  
31 reconstruction of any bridge, culvert, intake, outfall, or other  
32 crossing of protected waters except as provided in 2. and 3.  
33 above, and shall meet the following general criteria:

34 a. The project will involve a minimum of encroachment,  
35 change, or damage to the environment including but not limited  
36 to fish and wildlife habitat, navigation, water supply, and

1 storm water retention.

2           b. Adverse effects on the physical or biological  
3 character of the waters shall be subject to feasible and  
4 practical measures to mitigate the effects.

5           c. The proposed crossing shall be consistent with  
6 applicable floodplain, shoreland, and wild and scenic rivers  
7 management standards and ordinances for the waters involved.

8           d. The proposed crossing shall be consistent with  
9 water and related land management plans and programs of local  
10 and regional governments, provided such plans and programs are  
11 consistent with state plans and programs.

12           e. Crossings of protected waterbasins or wetlands  
13 shall be allowed only where there is no feasible and practical  
14 alternative which does not require filling, excavating, or the  
15 placement of a structure in protected waters.

16       C. Specific standards. In addition to the general standards  
17 in B., specific requirements for bridges, culverts, intakes,  
18 outfalls, and other crossings of protected waters shall be met  
19 as follows:

20       1. The construction, reconstruction, or relocation of all  
21 bridges, culverts, or other crossings over protected waters  
22 shall be permitted provided all of the following criteria are  
23 met:

24           a. The hydraulic capacity of the structure must be  
25 established by a competent technical study. The sizing shall  
26 not be based solely on the size of existing upstream and  
27 downstream structures. If a state or federal floodplain  
28 information study exists for the area, or a U.S. Geological  
29 Survey gaging station is located nearby on the stream, the  
30 hydraulics of the proposed bridge/culvert design must be  
31 consistent with these data. The department may waive this  
32 requirement if:

33           (1) the department has performed a hydraulic study  
34 based upon available information and reasonable assumptions;

35           (2) the department has made a field investigation of  
36 the project site;

1 (3) the project will not cause flood-related damages  
2 or problems for upstream or downstream interests.

3 b. New crossings and replacements of existing  
4 crossings must comply with local floodplain management  
5 ordinances and with provisions of NR 87 (d) (1) (6 MCAR S 1.0087  
6 (d) (1)).

7 (1) New crossings:

8 (a) No approach fill for a crossing can encroach  
9 upon a community designated floodway.

10 (b) Where a floodway has not been designated or  
11 where a floodplain management ordinance has not been adopted,  
12 increases in flood stage in the regional flood of up to one-half  
13 of one foot shall be permitted if they will not materially  
14 increase flood damage potential. Additional increases may be  
15 permitted if: a field investigation and other available data  
16 indicate that no significant increase in flood damage potential  
17 would occur upstream or downstream, and any increases in flood  
18 stage are reflected in the floodplain boundaries and flood  
19 protection elevation adopted in the local floodplain management  
20 ordinance.

21 (2) Replacement of existing crossings:

22 (a) If the existing crossing has a swellhead of  
23 one-half of one foot or less for the regional flood, the  
24 replacement crossing shall comply with the provisions for new  
25 crossings in C.1.b.(1).

26 (b) If the existing crossing has a swellhead of  
27 more than one-half of one foot for the regional flood, stage  
28 increases up to the existing swellhead may be allowed provided  
29 field investigation and other available data indicate that no  
30 significant flood damage potential exists upstream from the  
31 crossing based on analysis of data submitted by the applicant.  
32 The swellhead for the replacement crossing may exceed the  
33 existing swellhead if it complies with the provisions for new  
34 crossings found in C.1.b.(1)(b).

35 (3) The decks and approaches to bridges or culverts  
36 on major transportation routes and on roads that provide access



1 to development at urban densities shall be no lower than two  
2 feet below the flood protection elevation as defined in NR 87  
3 (e) (6 MCAR S 1.0087 (e)) unless it can be shown that  
4 alternative routes or access can be provided during the regional  
5 flood.

6 c. The structure shall provide for game fish movement,  
7 unless the structure is intended to impede rough fish movement  
8 or the stream has negligible fisheries value.

9 d. The structure will not obstruct reasonable public  
10 navigation. For bridges over protected watercourses, three feet  
11 above the calculated 50-year flood stage will ordinarily satisfy  
12 navigational clearance requirements. For bridges over protected  
13 waterbasins or wetlands, and all culverts, three feet of  
14 clearance above the ordinary high water mark will ordinarily  
15 satisfy navigational requirements.

16 e. Any project proposed near an existing or proposed  
17 segment of the state trails system should be consistent  
18 therewith.

19 f. Footbridges and walkways:

20 (1) Over watercourses:

21 (a) Must be designed to cause negligible  
22 backwater effects during floods.

23 (b) Must be securely anchored or otherwise  
24 capable of withstanding the dynamic forces of flowing water,  
25 ice, and debris.

26 (c) Approaches must not be raised above the  
27 adjacent floodplain lands.

28 (2) New walkways across any portion of protected  
29 waters to provide private access to an island will be  
30 prohibited. Permits for reconstruction of existing walkways or  
31 for the construction of new walkways intended to provide public  
32 access will be issued only if:

33 (a) The walkway provides the only existing access  
34 to the island.

35 (b) There is existing development thereon.

36 (c) The design will provide for any public

1 navigational needs and is consistent with the natural  
2 surroundings.

3       2. The construction, reconstruction, or relocation of all  
4 water intake and sewer outfall structures placed in protected  
5 waters shall be permitted provided all of the following criteria  
6 are met:

7           a. Adequate attention is given to methods of screening  
8 the structure from view as much as possible from the surface of  
9 the protected water through the use of existing vegetation  
10 and/or or new plantings.

11           b. The project is not detrimental to public values  
12 including but not limited to fish and wildlife habitat,  
13 navigation, water supply, water quality, or storm water  
14 retention.

15           c. No site conditions will require frequent future  
16 disruption of the beds of protected waters.

17           d. Adequate precautions must be planned during and  
18 after construction to prevent silt, soil, and other suspended  
19 particles from being discharged into protected waters.

20           e. Adjacent to the intake structure, the banks and bed  
21 of the protected water must be protected from erosion and scour  
22 by placement of suitable riprap shore protection.

23           f. The banks must be revegetated by seeding and/or  
24 sodding.

25           g. The structure must be designed by a professional  
26 engineer.

27           h. Intake structures:

28               (1) Excavation must be detailed in the application  
29 and on design plans.

30               (2) Where necessary, a water appropriation permit  
31 must be obtained from the department prior to operation.

32               (3) An appropriate sized screen must be used to  
33 prevent fish intake.

34           i. Outfall structure design shall:

35               (1) Where necessary, incorporate a stilling-basin,  
36 surge-basin, energy dissipator, or other device or devices to

1 minimize disturbance and erosion of natural shoreline and bed  
2 resulting from peak flows.

3 (2) Where feasible, utilize discharge to natural  
4 wetlands, natural or artificial stilling or sedimentation  
5 basins, or other devices for entrapment of sand, silt, debris,  
6 and organic matter.

7 (3) Where feasible, maximize use of natural or  
8 artificial ponding areas to provide water retention and storage  
9 for the reduction of peak flows into protected waters.

10 D. Relationship to standards and criteria for other  
11 activities involving changes in course, current, or  
12 cross-section. Unless otherwise specified in other rules the  
13 provisions of this rule shall apply to bridges and culverts  
14 proposed as part of any other activity or activities including  
15 but not limited to: Filling 6 MCAR S 1.5021, Excavations, 6  
16 MCAR S 1.5022, Structures 6 MCAR S 1.5023, Water level controls  
17 6 MCAR S 1.5024, Drainage of protected waters 6 MCAR S 1.5026,  
18 and Alterations of protected waters for mining 6 MCAR S 1.5027.  
19 6 MCAR S 1.5026 Drainage of protected waters.

20 A. Goals. It is the goal of the department to protect and  
21 preserve protected waterbasins and wetlands from damage or  
22 destruction by drainage.

23 B. General standards.

24 1. Scope. This rule relates to the partial drainage or  
25 temporary drawdown of protected waterbasins and wetlands for all  
26 purposes except mining of metallic or nonmetallic minerals which  
27 are subject to provisions of 6 MCAR S 1.5027.

28 2. Except as provided in Minnesota Statutes, section  
29 105.391, subdivision 3, the permanent or total drainage of  
30 protected waterbasins and wetlands shall not be permitted.

31 3. A permit shall be required for the partial drainage or  
32 temporary drawdown of protected waterbasins and wetlands and  
33 shall be granted provided all of the following conditions are  
34 met:

35 a. The proposed project is intended to achieve one or  
36 more of the following purposes:

- 1 (1) improve navigational or recreational uses;
- 2 (2) improve or restore fish or wildlife habitat;
- 3 (3) expose sediment in order to remove or eliminate
- 4 nutrients or contaminants;
- 5 (4) alleviate flooding of agricultural lands caused
- 6 by artificial obstruction of downstream drainage or increased
- 7 upstream discharge;
- 8 (5) allow the mining of iron ore, taconite, copper,
- 9 copper-nickel, or nickel under the provisions of Minnesota
- 10 Statutes, section 105.64.

11 b. The project will involve a minimum of encroachment,  
12 change, or damage to the environment including but not limited  
13 to fish and wildlife habitat, navigation, water supply, water  
14 quality, and storm water retention.

15 c. Adverse effects on the physical or biological  
16 character of the waters shall be subject to feasible and  
17 practical measures to mitigate the effects.

18 d. The proposed project shall be consistent with  
19 applicable floodplain, shoreland, and wild and scenic rivers  
20 management standards and ordinances for the waters involved.

21 e. The proposed project shall be consistent with water  
22 and related land management plans and programs of local and  
23 regional governments provided such plans and programs are  
24 consistent with state plans and programs.

25 C. Specific standards. In addition to compliance with the  
26 general standards in B., specific requirements for drainage or  
27 drawdown activities shall be met as follows:

28 1. The drainage or diversion of protected waters for  
29 mining iron ore, taconite, copper, copper-nickel, or nickel  
30 shall be permitted only where all of the provisions of Minnesota  
31 Statutes, section 105.64 and 6 MCAR S 1.5027 have been met.

32 2. The drainage or diversion of protected waters for  
33 mining all other metallic and nonmetallic minerals shall be  
34 permitted only when the protected waters being drained are  
35 replaced by protected waters which will have equal or greater  
36 public value, subject to provisions of 6 MCAR S 1.5027.

1           3. All other drainage or diversion of protected waters  
2 allowed in B. shall be permitted provided all of the following  
3 specific criteria are met:

4           a. For protected waterbasins, permits will be issued  
5 only to governmental agencies having the authority to undertake  
6 such projects. In addition, a public need for the partial  
7 drainage or temporary drawdown shall be established by  
8 specifying the public interests to be enhanced.

9           b. Written consent for the partial drainage or  
10 temporary drawdown of protected waterbasins and wetlands has  
11 been obtained from all riparian owners.

12           c. Partial drainage or temporary drawdown of protected  
13 waterbasins and wetlands shall be permitted only where the  
14 applicant has submitted data to confirm:

15                 (1) that the partial drainage will improve  
16 navigation or recreational uses;

17                 (2) that the partial drainage will improve or  
18 restore fish and wildlife habitat; or

19                 (3) that agricultural lands have been flooded due to  
20 artificial obstruction of downstream drainage or increased  
21 upstream discharge.

22           d. Any proposed temporary drawdown shall not exceed  
23 two years in duration under normal climatic conditions.

24           e. There are no feasible and practical means to attain  
25 the intended purpose without drainage.

26           f. The proposal will adequately protect public safety  
27 and promote the public welfare.

28           D. Relationship to standards and criteria for other  
29 activities involving changes in course, current, or  
30 cross-section. Unless otherwise specified in other rules the  
31 provisions of this rule shall apply to drainage activities  
32 proposed as part of any other activity or activities including  
33 but not limited to: Filling 6 MCAR S 1.5021, Excavations 6 MCAR  
34 S 1.5022, Structures 6 MCAR S 1.5023, Water level controls 6  
35 MCAR S 1.5024, and Bridges and culverts 6 MCAR S 1.5025.  
36 6 MCAR S 1.5027 Alterations of protected waters for mining.

1 A. Goals. It is the goal of the department to ensure that  
2 alterations of protected waters for mining or reclamation of  
3 mining areas will minimize adverse environmental effects,  
4 preserve water resources to the maximum extent feasible and  
5 practical, and encourage the planning of future land and water  
6 utilization while at the same time promoting the orderly  
7 development of mining and the use of sound mining practices.

8 B. Standards and criteria.

9 1. Scope. Mining activities which may involve  
10 alterations of protected waters include the mining of metallic  
11 minerals including but not limited to iron ore, taconite,  
12 copper, copper-nickel, nickel, cobalt, and gold; and the mining  
13 of nonmetallic minerals including but not limited to sand and  
14 gravel, stone, clay, marl, oil, gas, and coal; and the mining of  
15 peat.

16 2. Permits shall be required for any alterations of  
17 protected waters to facilitate mining of iron ore, taconite,  
18 copper, copper-nickel, or nickel minerals or reclamation of  
19 mining areas provided that:

20 a. Permits to mine shall be obtained when required by  
21 Minnesota Statutes, section 93.44 to 93.51.

22 b. Permits for alterations in protected waters shall  
23 be granted in accordance with provisions of Minnesota Statutes,  
24 section 105.64. Applications for permits for alterations in  
25 protected waters shall include an analysis showing why  
26 underground mining without drainage, diversion, or control of  
27 protected waters is not feasible or economical.

28 3. Permits shall be required for mining of nonmetallic  
29 minerals, peat, and other metallic minerals not regulated in  
30 Minnesota Statutes, section 105.64, or reclamation of mining  
31 areas provided that the applicant provides evidence that:

32 a. There is no other feasible and practical location  
33 for the proposed mining activity;

34 b. There is no other feasible or economical method to  
35 mine except by draining, diverting, or controlling the protected  
36 waters;

1           c. The proposed alteration of protected waters is  
2 necessary and no other feasible and economical method for it is  
3 reasonably available;

4           d. The proposed alteration of protected waters will  
5 not substantially impair the interests of the public in lands or  
6 waters or the substantial beneficial public use thereof, except  
7 as expressly authorized in the permit, and will not endanger  
8 public health or safety;

9           e. The proposed mining operations will be in the  
10 public interest and that the public benefits resulting from it  
11 will be sufficient to warrant the proposed alteration of  
12 protected waters;

13           f. The activities represent the minimal impact  
14 solution with respect to watershed modifications, watercourse  
15 diversions or changes, drainage, runoff and seepage management,  
16 and avoidance of major adverse changes in the ecosystem of  
17 protected waters having substantial public value;

18           g. Whenever protected watercourses must be diverted or  
19 changed to facilitate mining, the design and construction of the  
20 diversion or change shall provide for:

21                 (1) Maintenance of adequate flows and levels in  
22 order to protect instream flows and prevent downstream flooding;

23                 (2) Measures to prevent bank erosion and  
24 sedimentation in order to protect water quality; and

25                 (3) Details on the location, relocation, and  
26 utilization of the watercourse after cessation of mining;

27           h. Whenever protected waterbasins are allowed to be  
28 drained to facilitate mining, and such drainage is justified and  
29 legally permitted, compensation for the loss of the basin must  
30 be provided for by either:

31                 (1) Immediate replacement of the protected basin  
32 with waters of equal or greater value; or

33                 (2) Submission of acceptable plans for the eventual  
34 replacement of the protected basin with waters of equal or  
35 greater value upon cessation of mining activities; and

36           i. Whenever a water impoundment is necessary and

1 justified to facilitate mining, the design, construction,  
2 operation, and maintenance of the impoundment structure shall:

3 (1) Meet the applicable requirements of 6 MCAR SS  
4 1.5030-1.5034 pertaining to dam safety;

5 (2) Provide hydrologic and hydraulic measures to  
6 ensure that any protected waters downstream of the impoundment  
7 area are adequately protected with respect to maintenance of  
8 water quantity and quality and prevention of flooding; and

9 (3) Include plans detailing the disposition and  
10 utilization of the impoundment area after cessation of mining  
11 activities.

12 4. Whenever metallic, nonmetallic, and peat mining  
13 activities in the beds of protected waters will result in  
14 detrimental effects on the physical and biological character of  
15 protected waters, measures to compensate for the detrimental  
16 aspects shall be required in the permit conditions.

17 6 MCAR S 1.5028 General administration.

18 A. Application for protected waters permits. All  
19 applications pursuant to 6 MCAR SS 1.5020 -1.5027 shall be made  
20 on forms prepared by the department and submitted to the  
21 regional office for the area where the majority of the proposed  
22 project is located.

23 1. Who may apply: Applications shall be submitted by the  
24 riparian owner of the land on which a project is proposed,  
25 except:

26 a. A governmental agency, public utility, or  
27 corporation authorized by law to conduct the project may apply  
28 if the property rights acquired or to be acquired are fully  
29 described in the application.

30 b. A holder of appropriate property rights such as a  
31 lease or easement may apply provided that the application is  
32 countersigned by the owner and accompanied by a copy of the  
33 lease or other agreement. A permit may be issued for the term  
34 of the lease only, subject to cancellation prior to the  
35 termination date of the agreement if the agreement is cancelled.

36 c. A prospective lessee of state-owned lands may apply



1 for a permit in his own name after he has requested a lease from  
2 the departmental official responsible for the affected lands.

3 Both the lease request and the permit application will be  
4 processed concurrently with appropriate coordination.

5 2. Information required: Pursuant to Minnesota Statutes,  
6 section 105.44, subdivision 4, an application shall be  
7 considered complete when:

8 a. It includes all of the information specified in the  
9 appropriate section or sections of these standards.

10 b. It is accompanied by appropriate photographs, maps,  
11 sketches, drawings, or other plans which adequately describe the  
12 proposed project.

13 c. It includes a brief statement regarding the  
14 following points:

15 (1) Anticipated changes in water and related land  
16 resources.

17 (2) Unavoidable anticipated detrimental effects on  
18 the natural environment.

19 (3) Alternatives to the proposed action.

20 d. Application fees have been paid. Note that final  
21 permits cannot be issued until any field inspection fees are  
22 paid.

23 e. Proof of service of a copy of the application and  
24 accompanying documents on the mayor of the city or the secretary  
25 of the board of the district is included with the application if  
26 the project is within or affects a city, watershed district, or  
27 soil and water conservation district.

28 3. Fees: All applications shall be accompanied by an  
29 application fee as required by 6 MCAR S 1.5000 E.1. An  
30 additional fee may be charged for field inspections conducted by  
31 department personnel in the course of review subject to the  
32 provisions of 6 MCAR SS 1.5000 G.1.-1.5000 G.5.

33 B. Permit review.

34 1. Field inspection: The department may conduct field  
35 investigations to determine a project's nature, scope, and  
36 impact on water and related land resources. The department

1 shall determine which applications must be investigated and such  
2 inspections shall be made in a timely fashion.

3       2. Coordination with other agencies: Nothing in these  
4 standards is intended to supersede or rescind the laws, rules,  
5 regulations, standards, and criteria of other federal, state,  
6 regional, or local governmental subdivisions with the authority  
7 to regulate work in the beds or on the shorelands of protected  
8 waters. The issuance of a permit shall not confer upon an  
9 applicant the approval of any other unit of government for the  
10 proposed project. The department shall coordinate the review  
11 with other units of government having jurisdiction in such  
12 matters.

13       3. Procedure upon decision: The commissioner may grant  
14 permits, with or without conditions, or deny them. In all  
15 cases, the applicant, the managers of the watershed district,  
16 the board of supervisors of the soil and water conservation  
17 district, or the mayor of the city may demand a hearing in the  
18 manner specified in Minnesota Statutes, section 105.44,  
19 subdivision 3, within 30 days after receiving mailed notice  
20 outlining the reasons for denying or modifying an application.  
21 Any hearing shall be conducted as a contested case hearing  
22 before a hearing examiner from the independent Office of  
23 Administrative Hearings in accordance with Minnesota Statutes,  
24 chapter ~~15~~ 14 and sections 105.44 and 105.45.

25       C. Statutory requirements. Further provisions for the  
26 administration of these rules are found in Minnesota Statutes,  
27 chapter 105, including but not limited to sections 105.44 to  
28 105.463, 105.541, and 105.55.