

Protection for Threatened and Impaired Watersheds

[The following is a collection of the threatened and impaired rules, which were adopted and amended in 2000 and 2001 and became effective in 2000 and 2002. The underlined sections of the following rules are those that were adopted, corrected or amended and apply only to plans approved after July 1, 2000.] (JJO edits in red and double underlined)

895 Abbreviations Applicable Throughout Chapter

The following abbreviations are applicable throughout this chapter:

CDF California Department of Forestry and Fire Protection

DFG California Department of Fish and Game

HCP Habitat Conservation Plan

NMFS National Marine Fisheries Service

RWQCB Regional Water Quality Control Board

895.1. Definitions

Bankfull stage means the stage that occurs when discharge fills the entire channel cross section without significant inundation of the adjacent floodplain, and has a recurrence interval of 1.5 to 2.0 years.

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Beneficial Functions of Riparian Zone means the specific role of the riparian zone to provide protection for water temperature control, streambed and flow modification by large woody debris, filtration of organic and inorganic material, upslope stability, bank and channel stabilization and vegetative structure diversity for fish and wildlife habitat.

Channel zone means that area that includes a watercourse's channel at bankfull stage and a watercourse's floodplain, encompassing the area between the watercourse transition lines.

Inner Gorge means a geomorphic feature formed by coalescing scars originating from landsliding and erosional processes caused by active stream erosion. The feature is identified as that area beginning immediately adjacent to the stream channel below the first break in slope.

Saturated Soil Conditions means that site conditions are sufficiently wet that timber operations displace soils in yarding or mechanical site preparation areas or displace road and landing surface materials in amounts sufficient to cause a turbidity increase in drainage facilities that discharge into Class I, II, III, or IV waters, or in downstream Class I, II, III, or IV waters that is visible or would violate applicable water quality requirements.

In yarding and site preparation areas, this condition may be evidenced by: a) reduced traction by equipment as indicated by spinning or churning of wheels or tracks in excess of normal performance, b) inadequate traction without blading wet soil, c) soil displacement in amounts that cause visible increase in turbidity of the downstream waters in a receiving Class I, II, III, or IV waters, or in amounts sufficient to cause a turbidity increase in drainage facilities that discharge into Class I, II, III, or IV waters, or d) creation of ruts greater than would be normal following a light rainfall.

1 On logging roads and landing surfaces, this condition may be evidenced by a) reduced traction
2 by equipment as indicated by spinning or churning of wheels or tracks in excess of normal
3 performance, b) inadequate traction without blading wet soil, c) soil displacement in amounts
4 that cause visible increase in turbidity of the downstream waters in receiving Class I, II, III, or IV
5 waters, or in amounts sufficient to cause a turbidity increase in drainage facilities that discharge
6 into Class I, II, III, or IV waters, d) pumping of road surface materials by traffic, or e) creation of
7 ruts greater than would be created by traffic following normal road watering, which transports
8 surface material to a drainage facility that discharges directly into a watercourse.

9 Soils or road and landing surfaces that are hard frozen are excluded from this definition.

10
11 **Watercourse or Lake Transition Line**

12 (a) for a watercourse with an unconfined channel (a channel with a valley to width ratio at
13 bankfull stage of 4 or greater) means that line defined by the landward margin of the most active
14 portion of the channel zone area readily identified in the field by riverine hardwood and conifer
15 trees at least twenty-five (25) years in age at breast height.

16 (b) for a watercourse with a confined channel means that line that is the outer boundary of a
17 watercourse's 20-year return interval flood event floodplain. This outer boundary corresponds to
18 an elevation equivalent to twice the maximum depth of the adjacent riffle at bankfull stage. The
19 bankfull stage elevation shall be determined by field indicators and may be verified by drainage
20 area/bankfull discharge relationships.

21 (c) for a lake, it is that line closest to the lake where riparian vegetation is permanently
22 established.

23
24 **Watersheds with threatened or ~~endangered anadromous salmonids~~ means any planning**
25 **watershed where populations of anadromous salmonids that are listed as threatened, endangered,**

Comment [J1]: This change is more in line with the actual definition. Threatened and Impaired is not descriptive of the intent of the regulations.

Deleted: impaired values

1 or candidate under the State or Federal Endangered Species Acts with their implementing
2 regulations, are currently present or can be restored.

3
4 The amendments to 14 CCR § 895.1 adopted on March 15, 2000 and April 4, 2000, which
5 became effective July 1, 2000, shall expire on December 31, 2006.

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7 **898 Feasibility Alternatives**

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9 After considering the rules of the Board and any mitigation measures proposed in the plan, the
10 RPF shall indicate whether the operation would have any significant adverse impact on the
11 environment. On TPZ lands, the harvesting per se of trees shall not be presumed to have a
12 significant adverse impact on the environment. If the RPF indicates that significant adverse
13 impacts will occur, the RPF shall explain in the plan why any alternatives or additional
14 mitigation measures that would significantly reduce the impact are not feasible.

15 Cumulative impacts shall be assessed based upon the methodology described in Board Technical
16 Rule Addendum Number 2, Forest Practice Cumulative Impacts Assessment Process and shall be
17 guided by standards of practicality and reasonableness. The RPF's and plan submitter's duties
18 under this section shall be limited to closely related past, present and reasonably foreseeable
19 probable future projects within the same ownership and to matters of public record. The Director
20 shall supplement the information provided by the RPF and the plan submitter when necessary to
21 insure that all relevant information is considered.

22 When assessing site specific or cumulative impacts of a proposed project on any portion of a
23 waterbody that is located within or downstream of the proposed timber operation and that is
24 listed as water quality limited under Section 303(d) of the Federal Clean Water Act, the RPF
25 shall assess the degree to which the proposed operations would result in impacts that may

1 combine with existing listed stressors to impair a waterbody's beneficial uses, thereby causing a
2 significant adverse effect on the environment. The plan preparer shall provide feasible
3 mitigation measures to reduce any such impacts from the plan to a level of insignificance, and
4 may provide measures, insofar as feasible, to help attain water quality standards in the listed
5 portion of the waterbody.

6 The Director's evaluation of such impacts and mitigation measures will be done in consultation
7 with the appropriate RWQCB.

Comment [J2]: Consider moving to 916.12.

8 (a) The amendments to 14 CCR § 898 that became effective July 1, 2000 shall expire on
9 December 31, 2006.

11 **898.2 Special Conditions Requiring Disapproval of Plans**

13 The Director shall disapprove a plan as not conforming to the rules of the Board if any one of the
14 following conditions exist:

- 15 (a) Boundaries of the area to be harvested are not clearly delineated in the plan.
- 16 (b) Public acquisition of the parcel for purposes which would be impaired by timber harvesting,
17 is legislatively authorized, funded and imminent.
- 18 (c) There is evidence that the information contained in the plan is incorrect, incomplete or
19 misleading in a material way, or is insufficient to evaluate significant environmental effects. The
20 sufficiency of the information provided in a THP to evaluate significant environmental effects
21 shall be judged in light of what is reasonable and necessary.
- 22 (d) Implementation of the plan as proposed would result in either a "taking" or finding of
23 jeopardy of wildlife species listed as rare, threatened or endangered by the Fish and Game
24 Commission, the National Marine Fisheries Service, or Fish and Wildlife Service, or would
25 cause significant, long-term damage to listed species. The Director is not required to disapprove

1 a plan which would result in a "taking" if the "taking" is incidental and is authorized by a
2 wildlife agency acting within its authority under state or federal endangered species acts.

3 (e) Implementation of the plan would irreparably damage plant species listed as rare or
4 endangered by the Department of Fish and Game and when the timber owner fails to comply
5 with F&GC 1913.

6 (f) Implementation of the plan as proposed would result in the taking of an individual Northern
7 Spotted Owl prohibited by the Federal Endangered Species Act.

8 (g) Implementation of the plan as proposed would not achieve maximum sustained production
9 of high quality timber products as provided for by the rules of the Board, and by the intent of the
10 Act.

11 (h) Implementation of the plan as proposed would cause a violation of any requirement of an
12 applicable water quality control plan adopted or approved by the State Water Resources Control
13 Board.

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15 **914.8, 934.8, 954.8 Tractor Road Watercourse Crossing [All Districts]**

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17 Watercourse crossing facilities on tractor roads shall be planned, constructed, maintained, and
18 removed according to the following standards:

19 (a) The number of crossings shall be kept to a minimum. Existing crossing locations shall be
20 used wherever feasible.

21 (b) A prepared watercourse crossing using a structure such as a bridge, culvert, or temporary
22 log culvert shall be used to protect the watercourse from siltation where tractor roads cross a
23 watercourse in which water may be present during the life of the crossing.

24 (c) Crossing facilities on watercourses that support fish shall allow for unrestricted passage of
25 all life stages of fish that may be present, and for unrestricted passage of water. Such crossing

1 facilities shall be fully described in sufficient clarity and detail to allow evaluation by the review
2 team and the public, provide direction to the LTO for implementation, and provide enforceable
3 standards for the inspector.

4 (d) Watercourse crossing facilities not constructed to permanent crossing standards on tractor
5 roads shall be removed before the beginning of the winter period. If a watercourse crossing is to
6 be removed, it shall be removed in accordance with 14 CCR 923.3(d) [943.3(d), 963.3(d)].

7 (e) If the watercourse crossing involves a culvert, the minimum diameter shall be stated in the
8 THP and the culvert shall be of a sufficient length to extend beyond the fill material.

9 (f) Consistent with the protection of water quality, exceptions may be provided through the Fish
10 and Game Code and shall be indicated in the plan.

11 (g) The amendments to 14 CCR § 914.8 [934.8, 954.8] that became effective July 1, 2000 shall
12 expire on December 31, 2006.

13
14 **916, 936, 956 Intent of Watercourse and Lake Protection [All Districts]**

15 The purpose of this article is to ensure that the **quality and** beneficial uses of water, **native**
16 aquatic and riparian **associated** species, and the beneficial functions of riparian zones are
17 protected from **significant adverse impacts on the environment** associated with timber operations
18 that may be site specific or cumulative. This article also provides protection measures for
19 application in watersheds with threatened and endangered anadromous salmonids and an
20 evaluation framework for application in watersheds listed as water quality limited under Section
21 303(d) of the Federal Clean Water Act.

22 It is the intent of the Board to restore, enhance, and maintain the productivity of timberlands
23 while providing **equal consideration for the beneficial uses of water**. Further, it is the intent of
24 the Board to clarify and assign responsibility for recognition of potential and existing impacts of
25 timber operations on watercourses and lakes, native aquatic and riparian-associated species, and

Comment [J3]: This language is more consistent with CEQA and is more compact than the original.

Deleted: potentially significant adverse site-specific and cumulative impacts

Comment [J4]: This is original language pre 1999.

1 the beneficial functions of riparian zones and to ensure adoption of feasible measures to
 2 effectively achieve compliance with this article. Further, it is the intent of the Board that the
 3 evaluations that are made, and the measures that are taken or prescribed, be documented in a
 4 manner that clearly and accurately represents those existing conditions and those measures.
 5 "Evaluations made" pertain to the assessment of the conditions of the physical form, water
 6 quality, and biological characteristics of watercourses and lakes, including cumulative impacts
 7 affecting the beneficial uses of water on both the area of planned logging operations and in the
 8 Watershed Assessment Area (WAA). "Measures taken" pertain to the procedures used or
 9 prescribed for the restoration, enhancement, and maintenance of the beneficial uses of water.
 10 All provisions of this article shall be applied in a manner, which complies with the following:
 11 ~~(a) Protection of the quality and beneficial uses of water during the planning, review, and~~
 12 ~~conduct of timber operations shall comply with all applicable legal requirements including those~~
 13 ~~set forth in any applicable water quality control plan adopted or approved by the State Water~~
 14 ~~Resources Control Board.~~ ↓
 15 ~~(b) The beneficial functions of riparian zones and the quality and beneficial uses of water shall~~
 16 ~~be given equal consideration as a management objective within any prescribed WLPZ and within~~
 17 ~~any ELZ or EEZ designated for watercourse or lake protection.~~
 18 ~~(c) Maintaining, or restoring where feasible and specified by these rules, the riparian habitat of~~
 19 ~~anadromous salmonids or listed aquatic and riparian-associated species shall be given significant~~
 20 ~~consideration as a management objective within any prescribed WLPZ.~~
 21 ~~(d) The measures set forth in this Section are meant to enforce the public's historical and legal~~
 22 ~~interest in protection for wildlife, fish, and water quality and are to be used to guide timberland~~
 23 ~~owners in meeting their legal responsibilities to protect public trust resources.~~
 24 ~~(e) The amendments to 14 CCR §§ 916 [936, 956] that became effective July 1, 2000 shall~~
 25 ~~expire on December 31, 2006.~~

- Comment [J5]:** The requirement to restore where impaired is a very general requirement and does not define impaired. This new language would allow the Board to specify where and how restoration is required.
- Deleted:** (a) During and following timber operations, the beneficial uses of water, native aquatic and riparian-associated species, and the beneficial functions of riparian zones shall be maintained where they are in good condition, protected where they are threatened, and insofar as feasible, restored where they are impaired.¶
- Deleted:** b
- Comment [J6]:** This whole section is redundant with 916.3.
- Deleted:** At a minimum, the LTO shall not do either of the following during timber operations:¶
- Deleted:** (1) Place, discharge, or dispose of or deposit in such a manner as to permit to pass into the waters of the state, any substances or materials, including, but not limited to, soil, silt, bark, slash, sawdust, or petroleum, in quantities deleterious to fish, wildlife, beneficial functions of riparian zones, or the quality and beneficial uses of water;¶
- Deleted:** (2) Remove water, trees or large woody debris from a watercourse or lake, the adjacent riparian area, or the adjacent flood plain in quantities deleterious to fish, wildlife, beneficial functions of riparian zones, or the quality and beneficial uses of water
- Deleted:** c
- Deleted:** d
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- Deleted:** Protecting and restoring native aquatic and riparian-associated species, t
- Comment [J7]:** Applies to all salmonids!

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2 **916.2, 936.2, 956.2 Protection of the Beneficial Uses of Water and Riparian Functions [All**
3 **Districts]**

4
5 (a) The measures used to protect each watercourse and lake in a logging area shall be
6 determined by the presence and condition of the following values:

7 (1) The existing and potential quality and beneficial uses of water as specified by the applicable
8 water quality control plan and as further identified and refined during preparation and review of
9 the plan.

10 (2) The existing and restorable uses of water for fisheries as identified by the DFG or as further
11 identified and refined during preparation and review of the plan.

12 ~~(3) The beneficial functions of the riparian zone that provides for the biological needs of native~~
13 ~~aquatic and riparian-associated species as specified in 14 CCR 916.4(b) [936.4(b), 956.4(b)] and~~
14 ~~14CCR 916.9 [936.9, 956.9] when the plan is in a planning watershed with threatened or~~
15 ~~endangered anadromous salmonids.~~

16 (4) Sensitive conditions near watercourses and lakes as specified in 14 CCR 916.4(a) [936.4(a),
17 956.4(a)].

18 ~~(5) Waterbodies listed as water quality limited under Section 303(d) of the Clean Water Act.~~

19 These values shall be protected from significant adverse impacts on the environment from
20 timber operations and where specified in these rules, restored to a functional condition, when
21 feasible, through a combination of the rules and plan-specific mitigation. The RPF shall
22 propose and the Director may require, adequate protection of overflow and changeable channels
23 which are not contained within the channel zone.

24 (b) The State's waters are grouped into four classes based on key beneficial uses. These
25 classifications shall be used to determine the appropriate protection measures to be applied

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Comment [J8]: Consistency with the language in a(1) above.

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Deleted: Riparian habitat

Comment [J9]: Not needed in the traditional CEQA context.

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Comment [J10]: This allows site specific designation by the rules for where each value or element of each value will be restored and to what standard it will be restored to.

Comment [J11]: What is a "good" condition. We have a definition of functional in relation to wildlife habitat.

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Comment [J12]: This is more consistent with CEQA and does not allow an argument for the necessity. If the rules specify restoration, then it will be done if feasible. The specific rule could allow for standards of necessity.

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Comment [J13]: This is a confusing double descriptor. Appropriate is all that is needed to allow review of the proposed mitigations.

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1 during the conduct of timber operations. The basis for classification (characteristics and key
2 beneficial uses) are set forth in 14 CCR 916.5 [936.5, 956.5], Table 1 and the range of
3 ~~appropriate~~ protective measures applicable to each class are contained in 14 CCR 916.3 [936.3,
4 956.3], 916.4 [936.4, 956.4], and 916.5 [936.5, 956.5]. ~~and 916.9 when the plan is in a planning~~
5 ~~watershed with threatened or endangered anadromous salmonids.~~

6 (c) When the protective measures contained in 14 CCR 916.5 [936.5, 956.5] ~~and 916.9 when~~
7 ~~the plan is in a planning watershed with threatened or endangered anadromous salmonids or~~
8 ~~pursuant to 14CCR 916.12(a)~~, are not adequate to provide protection to beneficial uses, feasible
9 protective measures shall be developed by the RPF or proposed by the Director under the
10 provisions of 14 CCR 916.6 [936.6, 956.6], Alternative Watercourse and Lake Protection, and
11 incorporated in the plan when approved by the Director.

12 (d) The amendments to 14 CCR § 916.2 [936.2, 956.2] that became effective July 1, 2000 shall
13 expire on December 31, 2006.

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15 **916.9, 936.9, 956.9 Protection and Restoration of the Beneficial Functions of the Riparian**
16 **Zone in Planning Watersheds with Threatened or Endangered Anadromous Salmonids [All**
17 **Districts]**

18
19 In addition to all other district Forest Practice Rules, the following requirements shall apply in
20 any ~~Planning Watershed with Threatened or Endangered Anadromous Salmonids:~~

21 (a) GOAL - Every timber operation shall be planned and conducted to prevent ~~significant~~
22 ~~impacts to the primary limiting factor that affect threatened or endangered anadromous salmonid~~
23 ~~species in the planning watershed~~ (e.g., sediment load increase where sediment is a primary
24 limiting factor; thermal load increase where water temperature is a primary limiting factor; loss
25 of instream large woody debris or recruitment potential where lack of this value is a primary

Comment [J14]: See above.

Deleted: minimum

Comment [J15]: This adds the T&E fish rules to the list of appropriate protection measures.

Comment [J16]: This adds the T&E fish rules to the list of appropriate protection measures.

Comment [J17]: This addition ties in the focus of this section.

Comment [J18]: Name change to be consistent with the actual intent of these rules.

Deleted: Impaired Values

Comment [J19]: See above.

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Deleted: watershed

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Deleted: impaired values

Deleted: deleterious interference

Comment [J20]: Consistency with CEQA. Deleterious interference is a strange term.

Comment [J21]: Need a definition for primary limiting factor.

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Comment [J22]: Consistent with the language used in the other goals in this section. The values in 916.2 are not necessarily related to fisheries. This section should be clear about the strategy for protecting listed fish.

Deleted: the values set forth in 14 CCR 916.2 [936.2, 956.2](a)

1 limiting factor; substantial increase in peak flows or large flood frequency where peak flows or
 2 large flood frequency are primary limiting factors). To achieve this goal, every timber operation
 3 shall be planned and conducted to meet the following objectives where they affect a primary
 4 limiting factor:

5 (1) Comply with the terms of a Total Maximum Daily Load (TMDL) that has been
 6 adopted to address primary limiting factors that may be affected by timber operations.

7 (2) Not result in any significant sediment load increase to a watercourse system or lake.

8 (3) Not result in any significant decrease in the stability of a watercourse channel or of a
 9 watercourse or lake bank.

10 (4) Not result in any significant blockage of any aquatic migratory routes for anadromous
 11 salmonids or listed species.

12 (5) Not result in any significant streamflow reductions during critical low water periods
 13 except as part of an approved water drafting plan pursuant to 14 CCR 916.9(r) [936.9(r),
 14 956.9(r)]. (6) Consistent with the requirements of 14 CCR § 916.9(i), 14 CCR § 936.9(i), or
 15 14 CCR § 956.9(i); protect, maintain, and restore trees (especially conifers), snags, or downed
 16 large woody debris that currently, or may in the foreseeable future, provide large woody debris
 17 recruitment needed for instream habitat structure and fluvial geomorphic functions.

18 (7) Consistent with the requirements of 14 CCR § 916.9(g), 14 CCR § 936.9(g), or 14
 19 CCR § 956.9(g); protect, maintain, and restore the quality and quantity of vegetative canopy
 20 needed to: (A) provide shade to the watercourse or lake to maintain daily and seasonal water
 21 temperatures within the preferred range for anadromous salmonids or listed species where they
 22 are present or could be restored, (B) provide a deciduous vegetation component to the riparian
 23 zone for aquatic nutrient inputs. (8) Result in no significant increases in peak flows or large
 24 flood frequency.

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- Comment [J23]: This maintains the consistency of using limiting factors as the focus of enhanced fisheries protections. It also implies a restoration goal.
- Deleted: if a TMDL has been adopted.
- Comment [J24]: The first goal should be split since not all TMDLs address sediment.
- Comment [J25]: Consistent with CEQA standards. Measurable with todays instrumentation is too extream.
- Deleted: or
- Formatted: Indent: First line: 36 pt
- Deleted: n
- Deleted: measurable
- Comment [J26]: See above
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- Comment [J28]: See above
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- Comment [J29]: This addition sets a very specific standard for protection or restoration of the vegetative canopy. This only applies to class I per the reference to 916.9(g).
- Comment [J30]: Redundant ... [1]
- Deleted: minimize daily and sea ... [2]
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- Comment [J31]: This goal ... [3]
- Comment [J32]: This is ... [4]
- Comment [J33]: Consisten ... [5]
- Deleted: (C) maintain daily and ... [6]
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(b) Pre-plan adverse cumulative watershed effects on the populations and habitat of anadromous salmonids shall be considered. The plan shall specifically acknowledge or refute that such effects exist. ~~When the proposed timber operations will significantly effect existing cumulative watershed effects,~~ the plan shall set forth measures to effectively reduce such effects.

Deleted: Where appropriate

Comment [J34]: This is added for clarity.

Page 11: [1] Comment [J30] Jimo 5/20/2008 2:33:00 PM
Redundant with A above.

Page 11: [2] Deleted Jimo 4/22/2008 10:39:00 AM
minimize daily and seasonal temperature fluctuations

Page 11: [3] Comment [J31] Jimo 5/20/2008 2:33:00 PM
This goal should be discussed in the context of the primer section on
nutrients.

Page 11: [4] Comment [J32] Jimo 5/20/2008 2:33:00 PM
This is redundant with A and B above.

Page 11: [5] Comment [J33] Jimo 5/20/2008 2:33:00 PM
Consistent with CEQA language.

Page 11: [6] Deleted Jimo 5/12/2008 4:29:00 PM
(C) maintain daily and seasonal water temperatures within the preferred range for
anadromous salmonids or listed species where they are present or could be restored, and
(D) provide hiding cover and a food base where needed.