

Aquatic and Riparian Ecosystems – Inyo National Forest Plan Components

Introduction

The Aquatic and Riparian Conservation Strategy (Strategy) sets the context for the Inyo National Forest's approach for water, watersheds, and aquatic and riparian conservation. The proposed final Inyo forest plan includes direction (articulated through desired conditions, objectives, standards, guidelines and goals) that helps us achieve our desired results. Below you will find a brief description of the Strategy and the associated plan components.

The long-term goal of the Strategy is to develop a network of properly functioning watersheds that support populations of aquatic and riparian species and high quality water. To achieve these ends, we use a landscape scale approach, focus on ecosystem processes and functions, and prioritize restoration treatments in the best condition watersheds first.

The elements of the Strategy include: analysis, monitoring, land allocations (i.e., riparian conservation areas, conservation watersheds, priority watersheds) and watershed restoration. These elements work together to achieve desired conditions across the planning area.

- **Riparian Conservation Areas and Conservation Watersheds** are areas designated through forest planning to conserve aquatic resources and sources of high quality water. Achieving desired conditions may take more than one planning cycle.
- **Priority Watersheds** are focused areas for short-term tactically-planned restoration. Restoration projects could be completed within a 5-7 year period. They are identified in the forest plan, but not designated through planning.
- **Monitoring** (unit level and broad-scale) is included as plan content required under the 2012 Planning Rule.
- **Analysis** draws on existing Forest Service mid-level and project data assessments and other scientific information. It contributes to planning, but is not included in forest plans. Instead, analysis is documented in best management practices or in procedural guides.
- **Watershed restoration** focuses on reestablishing the function of watersheds including their biological, physical and chemical characteristics to support aquatic and riparian organisms.

Priority watersheds and conservation watersheds have different but overlapping purposes. Priority watersheds, designated in part using the national Watershed Condition Framework, are intended to be a focus for short-term restoration efforts. Watershed restoration action plans are developed and completed within a 5-7 year period. Once restoration is completed Forest Service staff select a new priority watershed. Conservation watersheds represent a long-term prioritization for maintenance and restoration that may require more than one planning cycle to complete. They serve as strongholds for aquatic biodiversity and high quality water.

Here's an example of how the terms may overlap: the Inyo National Forest may prioritize a need for conservation of specific aquatic or riparian resources through designation of a priority watershed. Priority watersheds may be designated within or between conservation watersheds to

promote desired conditions over time. Partners who wish to collaborate with the Forest on restoring aquatic and riparian resources could use the conservation watersheds as a guide to know which watersheds the Inyo considers are strongholds for at-risk species and high quality water.

We will provide more descriptive information about conservation watersheds, priority watersheds and other aquatic related issues in an appendix to the final forest plan. In the final plan, we will cross-reference direction related to aquatic species, invasive species, rangeland and other resources.

Watersheds (WTR)

Desired Conditions (FW-DC-WTR)

- 01 Adequate quantity and timing of water flows support ecological structure and functions, including aquatic species diversity and riparian vegetation. Watershed resilience to higher air temperatures, reduced snowpack, erratic runoff timing and other effects of climate change is sustained or maintained or restored.
- 02 Water quality supports State-designated beneficial uses of water and is sustained at a level that retains the biological, physical, and chemical integrity of aquatic systems and benefits the survival, growth, reproduction and migration of native aquatic and riparian species.
- 03 Watersheds have the following conditions: fully functioning or trending toward fully functioning and resilient; recover from natural and human disturbances at a rate appropriate with the capability of the site; and have a high degree of hydrologic connectivity laterally across the floodplain and valley bottom, and vertically between surface and subsurface flows. Physical (geomorphic, hydrologic) connectivity and associated surface processes (i.e., runoff, flooding, in-stream flow regime, erosion and sedimentation) are maintained and restored. Watersheds provide important ecosystem services: high quality water; recharge of streams and shallow groundwater; maintenance of riparian communities; and moderation of climate change and atmospheric deposition. Watersheds maintain long term soil productivity.
- 04 Soil and vegetation functions in upland and riparian areas are sustained and resilient. Healthy soils provide the base for resilient landscapes and nutritive forage for browsing and grazing animals, and support timber production. Healthy upland and riparian areas support healthy fish and wildlife populations, enhance recreation opportunities, and maintain water quality.
- 05 Infrastructure exhibits limited risk to riparian and aquatic resources. This infrastructure includes administrative sites, recreation facilities, and roads.
- 06 The sediment regime within water bodies is within the natural range of variation. Elements of the sediment regime include the timing, volume, rate, and character of sediment input, storage and transport.

Objectives (FW-OBJ-WTR)

- 01 Priority watersheds achieve or are moving toward “functioning properly” condition class, as defined by the national Watershed Condition Framework within 10 years of plan approval.

Goal (FW-GOAL-WTR)

- 01 Collaborate with local, state and federal agencies, adjacent landowners, and other interested parties on watershed restoration across ownership boundaries.

Standards (FW-STD-WTR)

- 01 Use best management practices as described in agency technical guides and handbooks to minimize adverse impacts to soils and water resources during the planning and implementation of forest activities.
- 02 Restoration projects will not result in long-term degradation of aquatic and riparian conditions, including connectivity, at the watershed or subwatershed scale. Adverse effects from project activities may be acceptable when they are short-term, site-scale, and support or do not diminish long-term recovery of aquatic and riparian resources.
- 03 For exempt hydroelectric facilities on national forest lands, ensure that special use permit language provides adequate in stream flow requirements to maintain, restore, or recover favorable ecological conditions for local riparian- and aquatic-dependent species.

Guidelines (FW-GDL-WTR)

- 01 After restoration actions, including soil disturbance or seeding activities, subsequent soil-disturbing management activities should not occur until desired conditions for the project have been met, unless a resource team determines that disturbance will help achieve desired conditions.
- 02 Minimize the effects of stream diversions or other flow modifications on at-risk species as well as other beneficial uses during relicensing; planning for state and other authorized water use; and water rights. Determine and recommend in-stream flow requirements and habitat conditions that maintain, enhance, or restore all life stages of native aquatic species and that maintain or restore riparian resources, channel integrity and aquatic passage.
- 03 Use passive restoration techniques to achieve desired conditions, unless active restoration would best meet those conditions.

Potential Management Approach

- 01 Restoration projects shall promote long-term ecological integrity and resilience and facilitate attainment of aquatic and riparian desired conditions.

Conservation Watersheds (CW)

Conservation watersheds are a specific subset of watersheds (10- or 12-digit hydrologic unit codes) which provide for the long-term persistence of at-risk species and high quality water.

Desired Conditions (MA-CW-DC)

- 01 Conservation watersheds serve as a network of watersheds with high-quality habitat and functionally intact ecosystems contributing to and enhancing recovery of threatened or endangered aquatic species and aquatic and riparian-dependent species of conservation concern and providing high water quality and quantity. The network contributes to short-term conservation and long-term recovery of at-risk species at the appropriate population scales.

- 02 Conservation watersheds exhibit long-term (multiple planning cycles) high watershed integrity and have aquatic and riparian ecosystems resilient to stochastic disturbance events such as wildfires, floods, landslides and human activities.
- 03 The drainage connections between floodplains, wetlands, upland slopes, headwaters tributaries are intact and provide for at-risk species habitat refugia. These areas provide refugia if other areas of the watershed are disturbed by stochastic events such as floods, landslides, and fires.

Objectives (MA-CW-OBJ)

- 01 Within 20 years of plan approval, 5 percent of the indicators within the Watershed Condition Framework have been improved to, or result in, a functioning condition rating.

Standards (MA-CW-STD)

- 01 For conservation watersheds, net increases in sediment production, water capture, and impacts to stream connectivity by roads will be avoided unless the net increase benefits the ecological function in aquatic ecosystems.
- 02 Project activities in conservation watersheds will not result in long-term degradation of aquatic and riparian conditions, including connectivity, at the watershed or subwatershed scale. Adverse effects from project activities may be acceptable when they are short-term, site-scale, and support or do not diminish long-term recovery of aquatic and riparian resources.

Guidelines (MA-CW-GDL)

- 01 Consider Watershed Condition Framework indicators when developing restoration activities within conservation watersheds.

Potential Management Approach

- 01 Evaluate if seeking withdrawal of lands in conservation watersheds from location and entry under federal mining laws, subject to valid existing rights is needed to provide for the long term sustainability of watershed values, especially those of at-risk species.

Riparian Conservation Areas

Riparian conservation areas are portions of watersheds where riparian-associated resources receive primary emphasis, and management activities are subject to specific standards and guidelines. Riparian conservation areas include traditional riparian corridors, wetlands, intermittent streams, and other areas that help maintain the integrity of aquatic ecosystems by (1) influencing the delivery of coarse sediment, organic matter, and woody debris to streams, (2) providing root strength for channel stability, (3) shading the stream, and (4) protecting water quality. Riparian conservation areas provide other riparian functions, including delivery of organic matter and woody debris, stream shading, and bank stability. Another critical function of riparian conservation areas is to provide for wildlife habitat use and connectivity.

Riparian conservation area widths are defined by type: (1) perennial streams, 300 feet on each side of the stream, measured from the bank full edge of the stream; (2) seasonally flowing streams (includes intermittent and ephemeral streams), 150 feet on each side of the stream, measured from the bank full edge of the stream; (3) streams in inner gorge (defined by stream adjacent slopes greater than 70 percent gradient), top of inner gorge; (4) special aquatic features

(including lakes, wet meadows, bogs, fens, wetlands, vernal pools, and springs) or perennial streams with riparian conditions extending more than 150 feet from edge of streambank or seasonally flowing streams with riparian conditions extending more than 50 feet from edge of streambank, 300 feet from edge of feature or riparian vegetation, whichever width is greater; and (5) other hydrological or topographic depressions without a defined channel, riparian conservation area width and protection measures determined through project level analysis. Riparian conservation area widths may be adjusted at the project level if interdisciplinary analysis demonstrates a need for different widths to meet or improve riparian conservation area desired conditions.

Riparian conservation area plan components apply to the entire riparian conservation area, as well as the specific riparian and aquatic environments contained within them, such as rivers, streams, meadows, springs and seeps. Riparian and aquatic environments also have additional direction specific to each environment. The relationship among watersheds, riparian conservation areas, and riparian and aquatic environments will be displayed in the final plan or in an appendix.

Desired Conditions (FW-DC-RCA)

- 01 The connections of floodplains, channels, and water tables distribute flood flows and sustain diverse habitats.
- 02 Riparian conservation areas have ecological conditions that contribute to the recovery of threatened and endangered species and support persistence of species of conservation concern as well as native and desired non-native aquatic and riparian-dependent plant and animal species.
- 03 The distribution and health of biotic communities in special aquatic habitats perpetuates their unique functions and biological diversity.
- 04 Native fish, amphibians and other native aquatic species are present within their historic distribution, adjusted for climate change, and habitat conditions support self-sustaining populations, except where distributions are altered by areas managed for desirable non-native fish species. Streams and rivers provide a variety of habitats for aquatic species, including deep pools and overhanging banks, structure provided by large wood, off channel areas and cover within their natural range of variation. Woody and herbaceous overstory and understory regulate stream temperatures. Aquatic and upland components are linked, providing access to food, water, cover, nesting areas and protected pathways for aquatic, riparian and upland species.
- 05 Riparian areas provide a range of substrates to sustain habitat for a variety of aquatic and terrestrial fauna within their natural capacity of the system. Soil structure and function is sustained to infiltrate and disperse water properly, withstand erosive forces, sustain favorable conditions of stream flow, and cycle nutrients. Associated water tables support riparian vegetation and restrict non-riparian vegetation.
- 06 Key riparian processes and conditions, including slope stability and associated vegetative root strength, wood delivery to streams and floodplains, input of leaf and organic matter to aquatic and terrestrial systems, solar shading, microclimate, and water quality, operate consistently with local disturbance regimes.

- 07 The condition of riparian vegetation including riparian species composition, stand density and fuel loading are consistent with healthy riparian systems and reduce risks due to high-intensity wildfire in the watershed.
- 08 Riparian areas in frequent fire landscapes (e.g., montane) have low to moderate intensity fire restored as an ecological process. Fire effects occur in a mosaic and support restoration and ecological integrity and function of composition, structure, and ecological resilience.
- 09 Riparian areas protect or improve riparian area-dependent resources while allowing for management of other compatible uses like recreation, vegetation management or livestock grazing.

Meadows (RCA-MDW-DC)

- 01 Meadows are hydrologically functional. Sites of accelerated erosion, such as gullies and headcuts are stabilized, recovering, or within the natural range of variability. Vegetation roots occur throughout the available soil profile. Meadows with perennial and intermittent streams have the following characteristics: (1) stream energy from high flows is dissipated, reducing erosion and improving water quality; (2) streams filter sediment and capture bedload, aiding floodplain development; (3) meadow conditions enhance floodwater retention and groundwater recharge; and (4) root masses stabilize stream banks against cutting action.
- 02 Wetlands and groundwater-dependent ecosystems, including springs, seeps, fens, wet meadows, and associated wetlands or riparian systems, support stable herbaceous and woody vegetative communities that are resilient to drought, climate change and other stressors. Root masses stabilize stream channels, shorelines and soil surfaces. The natural hydrologic, hydraulic and geomorphic processes in these ecosystems sustain their unique functions and biological diversity.
- 03 Meadows are resilient and recover rapidly from natural and human disturbances; they exhibit a high degree of hydrologic connectivity, laterally across the floodplain, and vertically between surface and subsurface flows; they provide important ecosystem services such as high quality water, recharge of streams and aquifers, and moderation of climate variability and change.
- 04 Soil in wet and headwater meadows are influenced by a shallow water table and function to filter water. These soils also store and release water over an extended period of time, which helps to maintain streamflow during dry summer months.
- 05 Meadows have substantive ground cover and a rich and diverse species composition, especially of grasses and forbs. Meadows have high plant functional diversity with multiple successional functional types represented. Perennial streams in meadows contain a diversity of age classes of hardwood shrubs along the stream bank, where the potential exists.
- 06 A complexity of meadow habitat types and successional patterns support native plant and animal communities. Meadow species composition is predominantly native, where graminoid (grass-like) species are well represented and vigorous, and regeneration occurs naturally. Healthy stands of willow, alder, and aspen are present within and adjacent to meadows with suitable physical conditions for these species. Natural disturbances and

management activities are sufficient to maintain desired vegetation structure, species diversity, and nutrient cycling.

- 07 Meadows in montane and upper montane areas have low to moderate intensity fire restored as an ecological process, especially on meadow edges, limiting conifer encroachment and enhancing native understory plant composition and cover.
- 08 Fen condition is within the natural range of variation. Fens are resilient with continual peat accumulation. The hydrologic regime, and vegetation, soil and water characteristics sustain the fen's ability to support unique physical and biological attributes.

Rivers and Streams (RCA-RIV-DC)

- 01 Stream ecosystems, riparian corridors and associated stream courses sustain ecosystem structure; are resilient to natural disturbances (e.g., flooding) and climate change; promote the natural movement of water, sediment and woody debris; and provide habitat for native aquatic species or desirable non-native species.
- 02 Stream ecosystems, including ephemeral watercourses, exhibit full connectivity where feasible to maintain aquatic species diversity, except where barriers are maintained in good condition to protect native aquatic species. Ephemeral watercourses provide for dispersal, access to new habitats, and perpetuation of genetic diversity, as well as nesting and foraging for riparian and aquatic species.
- 03 In-stream flows are sufficient to sustain desired conditions of riparian, aquatic, wetland, and meadow habitats and retain patterns of sediment, nutrient and wood routing as close as possible to those with which aquatic and riparian biota evolved. The physical structure and condition of stream banks and shorelines minimizes erosion and sustains desired habitat diversity.
- 04 Streams and rivers maintain seasonal water flow over time, including periodic flooding, which promotes natural movement of water, sediment, nutrients and woody debris. Flooding creates a mix of stream substrates for fish habitat, including clean gravels for fish spawning, large wood structures and sites for germination and establishment of riparian vegetation.
- 05 Stream channel conditions exhibit a sediment regime under which aquatic and riparian ecosystems evolved. Elements of the sediment regime include the timing, volume, rate, and character of sediment input, storage, and transport. Sediment regime should be similar to the natural distribution of reference conditions.

Lakes, Pools, Ponds (RCA-LPP-DC)

- 01 Natural lakes and ponds retain necessary attributes, such as adequate vegetation and large woody debris, to function properly and support native biotic communities. Attributes include floodwater retention and groundwater recharge, stabilized islands and shoreline features, and diverse characteristics to provide for amphibian production, waterfowl breeding and biodiversity.

Springs and Seeps (RCA-SPR-DC)

- 01 Springs provide sufficient water to maintain healthy habitats for native riparian and aquatic species.

- 02 Springs are resilient to natural disturbances, groundwater diversions, and changing climate conditions. Springs function across the landscape within their type and water availability.
- 03 Springs and associated streams and wetlands have the necessary soil, water, and vegetation attributes to be healthy and functioning at or near potential. Water flow is similar to historic levels and persists over time, within constraints of climate change.

Objectives (MA-RCA-OBJ)

- 01 Restore the structure and composition of 400 to 500 acres in riparian areas within ten years following plan approval, emphasizing riparian areas that face the most risk from large-scale high intensity fire, past fire exclusion or accelerated flooding events associated with climate change.

Meadows (MA-MDW-OBJ)

- 01 Take action to maintain, enhance, or improve conditions on 5 to 10 meadows of any size, within ten years following plan approval.

Rivers and Streams (MA-RIV-OBJ)

- 01 Take action to maintain or restore structure, composition, or function of habitat for fisheries and other aquatic species along 10 to 20 stream miles over a 10 year period.
- 02 Eliminate or mitigate one priority barrier to aquatic organism passage or ecological connectivity within ten years following plan approval.

Standards (MA-RCA-STD)

- 01 Ensure that management activities do not adversely affect water temperatures necessary for local aquatic- and riparian-dependent species assemblages.
- 02 Limit pesticide applications to cases where project level analysis indicates that pesticide applications are consistent with riparian conservation areas desired conditions.
- 03 Prohibit storage of fuels and other toxic materials except at designated administrative sites and sites covered by special use authorization. Prohibit refueling within riparian conservation areas except if there are no other alternatives.
- 04 Ensure that culverts or other stream crossings do not create barriers to upstream or downstream passage for aquatic-dependent species, except where desired to protect native species.
- 05 All new or replaced permanent stream crossings shall accommodate at least the 100-year flood and its bedload and debris. The 100-year flood estimates will reflect the best available science regarding potential effects of climate change.
- 06 Locate water drafting sites to minimize adverse effects to in stream flows and depletion of pool habitat.
- 07 Prevent disturbance to streambanks and shorelines of natural lakes and ponds caused by resource activities (e.g., off-highway vehicles, and dispersed recreation) from exceeding 20 percent of stream reach, or 20 percent of natural lake and pond shorelines. Disturbance includes bank sloughing, chiseling, trampling, and other means of exposing bare soil or

cutting plant roots. This standard may not be met within Destination Recreation Management Areas; sites authorized under special use permits; and designated off-highway vehicle routes, but activities will be designed and managed to reduce the percent of impact to the extent feasible with meeting other desired uses.

- 08 Use screening devices for water drafting pumps. (Fire suppression activities are exempt during initial attack.) Use pumps with low entry velocity to minimize removal of aquatic species from aquatic habitats, including juvenile fish, amphibian egg masses and tadpoles.
- 09 Prohibit or mitigate ground-disturbing activities that adversely affect hydrologic processes that maintain water flow, water quality, or water temperature critical to sustaining fen ecosystems and the plant species that depend on these ecosystems. During project analysis, survey, map, and develop measures to protect fens from activities causing significant degradation, such as trampling by livestock, pack stock, and humans. In all cases, wheeled vehicles should be prohibited from entering fens.
- 10 Manage livestock grazing to attain desired conditions in Riparian Conservation Areas. Where livestock grazing is found to be contributing to a decline in the function of riparian systems, modify grazing practices as prescribed in the Inyo Forest Supplement to the R5 Rangeland Analysis and Planning Guide. If adjusting practices is not effective, remove livestock from that area using appropriate administrative authorities and procedures.
- 11 Assess the hydrologic function of riparian areas, meadows, fens, and other special aquatic features during rangeland management analysis. Ensure that characteristics of special features are, at a minimum, at proper functioning condition or functional at risk¹ and trending toward proper functioning condition, as defined in appropriate technical reports.²
- 12 Complete initial inventories of fens within active grazing allotments prior to completing the allotment NEPA analysis. If more than 10 fens occur on an allotment, ensure at least 25 percent of all fens are inventoried, and establish a 5-year schedule to complete inventory.
- 13 Designate equipment exclusion zones within riparian conservation areas when designing projects. The default is half of the riparian conservation area width (150 feet for perennial streams, 75 feet for intermittent streams):

¹ The Inyo National Forest has a forest supplement for evaluation of hydrologic function at the site-specific key grazing area. These other protocols are incorporated into the R5 Rangeland Analysis Guide R5-EM-TP-004. Citation: Inyo National Forest Supplement #1-2017 to USDA Forest Service Pacific Southwest Region Rangeland Analysis and Planning Guide R5-EM-TP-004 (March 1997)

² USDI Bureau of Land Management. 2003. Riparian Area Management: A User Guide to Assessing Proper Functioning Condition and Supporting Science for Lentic Areas, Technical Reference 1737-16. National Applied Resource Sciences Center, Denver, CO. 109 pp.

USDI Bureau of Land Management. 2015. Riparian area management: Proper functioning condition assessment for lotic areas, Technical Reference 1737-15, Second Edition. National Operations Center, Denver, CO. 174 pp

Weixelman, D.A., D.J. Cooper. 2009. Assessing Proper Functioning Condition for Fen Areas in the Sierra Nevada and Southern Cascade Ranges in California, A User Guide, R5-TP-028. USDA Forest Service, Pacific Southwest Region 5, Vallejo, CA. 52 pp.

- a. These widths may be adjusted on a project-by-project basis based on geomorphology, slope, and/or soil conditions, as long as best management practices and other plan direction are met. Adjustments may be made only after consultation with experts in aquatic ecology, soils, and/or hydrology.
- b. If further mechanical incursion is warranted, use methods that limit soil disturbance within the riparian conservation area, such as low ground pressure equipment, helicopters, over the snow logging, extra ground cover requirements, or other non-ground disturbing actions to achieve desired conditions consistent with best management practices and other plan direction.
- c. When vegetation is treated in the near stream area, meet the needs for coarse wood in stream channels where possible.

Guidelines (MA-RCA-GDL)

- 01 Prior to activities that could adversely affect streams, determine if relevant stream characteristics are within the range of natural variation. If characteristics are outside the range of natural variation, mitigation measures should be considered.
- 02 Post-wildfire management activities in riparian conservation areas and conservation watersheds should emphasize enhancing native vegetation cover, stabilizing channels, and minimizing adverse effects from the existing road network. Post-wildfire operations shall minimize the exposure of bare soil, to limit erosion.
- 03 Maintain and restore the hydrologic connectivity of streams, meadows, wetlands, and other special aquatic features by identifying roads and trails that intercept, divert, or disrupt natural surface and subsurface water flow paths. Implement corrective actions where necessary to restore connectivity.
- 04 Within rivers and streams, ensure proposed management activities maintain the level of coarse large woody debris within the natural range of variation.
- 05 Locate new livestock handling facilities and stock driveways, salting and supplemental feeding outside of meadows and riparian areas except where there are no other feasible alternatives and where placement is consistent with meeting watershed or water quality best management practices if located in riparian conservation areas.
- 06 Minimize the construction of new skid trails or temporary roads for access into riparian conservation areas. Construction activities and use along skid trails or temporary roads should be managed to protect and restore aquatic and riparian desired conditions.
- 07 Consider actions in project design to ensure consistency with standards and guidelines and move toward desired conditions for roads, trails, off-highway vehicle trails and staging areas, developed recreation sites, dispersed campgrounds, special use permits, grazing permits, and day use sites that have been identified as contributing to degradation of water quality or habitat for aquatic and riparian-dependent species.
- 08 During permit reissuance for livestock, evaluate impacts of facilities on the riparian conservation areas and consider relocating existing livestock facilities outside of meadows and riparian areas.

- 09 Comply with Executive Order 11988, as applicable, when considering new facilities and infrastructure in riparian conservation areas.
- 10 Minimize dispersed and developed recreation impacts that hinder attainment of aquatic and riparian desired conditions.
- 11 Limit wildfire control methods and activities that would impact the riparian conservation area. Where possible, avoid dozer-built lines. When rehabilitating the fire control sites, emphasize the restoration of dozer impacts within this area.
- 12 Manage all stream reaches of all state designated wild trout waters, as of February 2001, according to the following:
 - a. Any activity that results in trampling and chiseling should not exceed 10 percent of any given stream reach. A reach is defined as a continuous portion of a stream with homogeneous physical characteristics.
 - b. Unstable or eroding stream banks should be restored to attain a stream bank system that is no more than 10 percent unstable of the reaches current potential.
 - c. Streamside vegetation should strive to provide a minimum of 90 percent of the habitat's capability to provide stream shading and fish cover.
- 13 Prohibit stream modifying construction activities within or immediately adjacent to the aquatic zone during the following spawning seasons:
 - a. In streams with spring spawning species (rainbow, cutthroat, and golden trout), February 15 to August 20.
 - b. In streams with fall spawning species (brown and brook trout), October 1 to April 15.
 - c. The Forest Supervisor has the authority to make exceptions to these seasons.

Goals (MA-RCA-GOAL)

- 01 Coordinate and collaborate with State fish and wildlife agencies to address native aquatic species issues, including evaluating management and monitoring needs to address aquatic species requirements across ownership boundaries.
- 02 Where invasive species are adversely affecting the persistence of native species, work with the appropriate state and federal wildlife agencies to reduce impacts of invasive species to native populations.

Potential Management Approach

- 01 When conducting proper functioning condition assessments, if information is available to show the historic potential of an area, and the current potential is different from that historical potential, consider restoration measures that would be necessary to attain the historical potential.