

Proposed Draft HPA Rules (Version 4) Pertaining to Forest Practices: Revised Provisions, Potential Impacts to Fish from Projects and How Rules Address Impacts, and Supporting Best Available Science, Regulations, or Policy

Proposed WAC Number	Title	Existing WAC Number	Reason for Rule Change (e.g. why new section?)	New or Revised Provisions	Potential Impacts to Fish Caused by Regulated Projects	How Rules Address Impacts	Citation(s) for “Best Available Science”, Regulation or Policy
WAC 220-110-080	Mitigation requirements for hydraulic projects	New section	The new section was needed to implement new statutes and policies. The section clarifies when WDFW may require compensatory mitigation and establishes the baseline for measuring impacts as the existing habitat condition.	This new section specifies mitigation requirements, compensatory mitigation, and mitigation plan requirements to assure no-net-loss. A section on mitigation banks and credits is included. It also includes the requirements for and contents of a mitigation plan. This section makes the Hydraulic Code Rules consistent with WDFW’s current mitigation statutes.	Most work in or near water can negatively impact fish life.	Best management practices such as proper design and siting, construction timing, isolation of the work area, sediment and erosion control planning, water-quality management, and re-vegetation can avoid and minimize many of these impacts. However, remaining impacts may require compensation to offset the loss of fish habitat function and area by habitat type.	RCW 77.55.241 Off-site Mitigation RCW 77.55.251 RCW Mitigation Plan Review RCW 90.74 RCW Aquatic Resources Mitigation State of Washington Alternative Mitigation Policy Guidelines from the Departments of Ecology and Fish and Wildlife (2000) Interagency Regulatory Guide on Advance Permittee-Responsible Mitigation (2012) Policy 5002 Requiring or Recommending Mitigation
WAC 220-110-100	Common construction requirements	New section	Combined the common construction requirements that apply to many types of hydraulic projects into a single section.	This new section specifies the construction requirements common to most hydraulic projects. The intent is to minimize disturbance from construction activities and includes requirements to maintain water quality, isolate the work area, and notification of fish kills.	Construction and other work can negatively affect fish life. Some activities may kill or injure fish while others can cause behavioral changes that reduce fish growth and survival. Some activities can damage the habitat used for spawning and egg incubation, rearing, feeding, hiding from	Common construction provisions address impacts associated with staging areas, job site access, equipment use, storage of construction materials, sediment and erosion control containment, in-water work area isolation (bypass), fish removal, job site repair, and revegetation.	White Paper – Treated Wood Issues Associated with Overwater Structures in Marine and Freshwater Environments (2001) Integrated Streambank Protection Guidelines (2002) Draft Shoreline Modifications White Paper (2007)

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					predators and migration.		
WAC 220-110-130	Streambank protection and lake shoreline stabilization	WAC 220-110-050 and 220-110-223	There are several common bank protection techniques for which there are no rules currently. The requirement for the rationale for selecting a proposed technique ensures the appropriate lake or streambank treatment is selected based on site conditions, reach conditions and habitat impacts.	Subsections covering groins, barbs, engineered logjams, floodplain roughness and flow spreaders have been added. The new language requires the applicant to provide rationale for the technique proposed. The rule also requires the permittee to establish benchmarks so WDFW can verify compliance with the approved plans. A list of common alternatives to shoreline stabilization, ranked by level of impact, has also been added.	<ul style="list-style-type: none"> Increased sedimentation / turbidity Habitat loss Altered predator/prey relationships Injury/mortality Altered physical processes 	<ul style="list-style-type: none"> Requires a professional assessment of risk and justification for project More robust design requirements will minimize impacts to habitat Construction methods and material requirements will minimize impacts to fish and habitat Work windows will minimize overlap of authorized work with presence of relevant life history stages of fish Mitigation will adequately compensate for loss of habitat and function 	Integrated Streambank Protection Guidelines (2002) White Paper – Ecological Issues in Floodplains and Riparian Corridors (2001) Draft Bank Protection/Stabilization White Paper (2006) Draft Flow Control Structures White Paper (2007) Draft Shoreline Modifications White Paper (2007) Complied White Papers for Hydraulic Project Approval Habitat Conservation Plan (2009)
WAC 220-110-190	Water crossing structures	WAC 220-110-070	This section covers the design and construction of stream simulation and no-slope culverts and bridges as well as temporary crossings, and culvert abandonment. The existing rules did not cover stream simulation, fords or culvert abandonment (removal). Hydraulic method was	Performance-based criteria and design-type criteria are intended to protect fish life and its habitat. The revised regulations strengthen the requirements for bridge design and construction standards to avoid flood impacts and channel disturbance. New restrictions on culvert construction and design are included. Many of the changes	<ul style="list-style-type: none"> Migration barriers Increased sedimentation /turbidity Reduced productivity (loss of spawning habitat) Altered physical processes (sediment transport) Future risks of failure Loss of prey Injury/mortality Reduced habitat complexity 	<ul style="list-style-type: none"> Design must allow for upstream and downstream passage at all flows. Design must not alter natural processes (e.g., sediment transport). Work windows will minimize overlap of authorized work with presence of relevant life history stages of fish. Increased probability of 	Water Crossing Design Guidelines (2013) Water Crossings White Paper (2006) Draft Fish Passage White Paper (2008) Draft Evaluation of the Stream Simulation Culvert Design Method in Western Washington, a Preliminary

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			moved to fish passage improvement structures since this method does not pass all fish at all life stages.	relate to modeling requirements for designing water crossing structures. Criteria are also included for fords, temporary water crossings, and water crossing removal.		providing passage for fish at all life stages.	Study (2003) Complied White Papers for Hydraulic Project Approval Habitat Conservation Plan (2009)
WAC 220-110-200	Fish Passage Improvement Structures	New section	There are no requirements for the design and construction of fish passage facilities for upstream migrating fish in the existing rules. The section reflects current fish science and technology measures to avoid or minimize adverse impacts to fish, shellfish and their habitat.	This new section establishes criteria for constructing and operating fish ladders, weirs for fish passage, roughened channels, and trap-and-haul operations. Specifications for design and operation of hydraulic culvert provisions are also included.	<ul style="list-style-type: none"> • Migration barriers • Increased sedimentation /turbidity • Reduced productivity (loss of spawning habitat) • Altered physical processes (sediment transport) • Loss of prey • Injury/mortality • Reduced habitat complexity 	<ul style="list-style-type: none"> • Work windows will minimize overlap of authorized work with presence of relevant life history stages of fish. • Design must allow for upstream and downstream passage at all flows. 	Draft Fishway Guidelines for Washington State (2000) Draft Fish Passage White Paper (2008) Fish Passage Barrier and Surface Water Diversion Screening Assessment and Prioritization Manual (2009) Complied White Papers for Hydraulic Project Approval Habitat Conservation Plan (2009)
WAC 220-110-220	Large woody material placement, repositioning and removal in freshwater areas	WAC 220-110-150	Large wood provides important habitat functions.	Conditions under which removal of large woody debris may be authorized and regulations for the removal process have been added. A provision has been added that large woody debris cannot be cut for firewood.	<ul style="list-style-type: none"> • Reduced channel complexity • Reduced cover (increased predation) • Reduced productivity (less gravel retention) • Reduced prey abundance/diversity • Altered physical processes (flow energy dissipation) • Sedimentation/turbidity 	<ul style="list-style-type: none"> • All wood removed would be placed in a location where it would provide similar benefits • Requires protection of banks and bed to minimize erosion, sedimentation and turbidity • All vegetation, and banks damaged must be restored to pre-project conditions 	Draft Habitat Modifications White Paper (2007) Draft Shoreline Modifications White Paper (2007) Stream Habitat Restoration Guidelines (2012) Complied White Papers for Hydraulic Project Approval Habitat Conservation Plan (2009)

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WAC 220-110-230	Beaver dam management	New section	There are no specific requirements for this common project type. The section reflects current fish science and technology measures to avoid or minimize adverse modifications to fish and shellfish habitat.	This new section introduces regulations for beaver dam removal and installation of water leveling and exclusion devices. Beaver dams can be removed or breached, when there is a threat to private and public land or infrastructure. The methods for removal are specified and include requirements to protect fish habitat and compensatory mitigation may be required for lost habitat.	<ul style="list-style-type: none"> • Sedimentation/ turbidity • Injury/mortality (stranding) • Water quality degradation • Loss of rearing habitat • Altered predator/prey relationships • Barriers to migration 	<ul style="list-style-type: none"> • Procedures for dam breaching would minimize the potential for sedimentation and turbidity, stranding, and degradation of water quality • Mitigation may be required to compensate for habitat loss • Work windows established to minimize impacts to incubating fish • Design of water level control devices and beaver exclusion devices must allow for fish passage • Requires monitoring for fish stranding and removal, if necessary, to free flowing water • More robust design requirements will minimize impacts to habitat • Construction methods and material requirements will minimize impacts to fish and habitat 	Draft Habitat Modifications White Paper (2007) Complied White Papers for Hydraulic Project Approval Habitat Conservation Plan (2009)
WAC 220-110-280	Felling and yarding of timber	WAC 220-110-160	No substantive changes proposed.	No substantive changes have been made.	<ul style="list-style-type: none"> • Sedimentation/turbidity • Altered hydrology • Altered substrate • Riparian vegetation damage 	<ul style="list-style-type: none"> • Prohibits tree felling across a stream unless authorized in special provisions. • Restricts the removal of 	Complied White Papers for Hydraulic Project Approval Habitat Conservation Plan (2009)

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						<p>trees which accidentally enter a watercourse</p> <ul style="list-style-type: none"> • Requires removal of limbs and small debris that enter the watercourse • Requires that transportation of logs across a watercourse avoids damage to the bed and banks. • Restricts the placement of cable tailholds. • Requires precautions to minimize the release of sediment to the stream. 	