

Crosswalk for Programmatic Biological Assessment (PBA) Minimization Measures

MM #	Category	PBA Minimization Measure Language	Revised PBA Minimization Measure Language for the Commitment Tracking System	Phase	Responsibility	Existing Method of Implementation	Notes
1	Stormwater Quantity and Quality	All projects (except exempt activities as listed in section 3-2.2 of the Highway Runoff Manual (HRM, WSDOT 2014), are subject to minimum stormwater management requirements as outlined in Section 3-3 of the HRM. Non-exempt projects must address erosion control if = 7,000 ft ² of soil will be disturbed or if there is = 2000 ft ² of new, replaced, or new + replaced impervious surface. Erosion control requirements include: 1) a temporary erosion and sediment control (TESC) plan (see TESC Manual), and a project specific spill prevention, control and countermeasures (SPCC) Plan as required in Standard Specification 1.07-15(1).	All projects (except exempt activities as listed in section 3-2.2 of the Highway Runoff Manual (2014), are subject to minimum stormwater management requirements as outlined in Section 3-3 of the Highway Runoff Manual. Non-exempt projects must address erosion control if ≥ 7,000 ft ² of soil will be disturbed or if there is ≥ 2000 ft ² of new, replaced, or new + replaced impervious surface. Erosion control requirements include: 1) a Temporary Erosion and Sediment Control (TESC) Plan (see TESC Manual), and a project specific Spill Prevention, Control and Countermeasures (SPCC) Plan as required in Standard Specification 1.07-15(1).	Design Construction	WSDOT Design Contractor	HRM Section 3-2.2 8-01 1-07.15(1)	None
2	Stormwater Quantity and Quality	WSDOT will ensure that projects within 200 feet of surface water will install and maintain Best Management Practices (BMPs) as stated in the Contract to ensure that no foreign material, such as pavement slurry from asphalt grinding equipment, is sidecast, and to control and prevent sediments from entering aquatic systems.	WSDOT will ensure that projects within 200 feet of surface water will install and maintain Best Management Practices (BMPs) as stated in the Contract to ensure that no foreign material, such as pavement slurry from asphalt grinding equipment, is sidecast, and to control and prevent sediments from entering aquatic systems.	Construction	Contractor	1-07.5(3) 2-03.3(7) 5-01.3(11) 5-02.3(5)	None
3	Stormwater Quantity and Quality	The Contractor shall comply with Washington Department of Ecology’s State Water Quality Standards (WAC 173-201) or permit modifications. Permit modifications are limited to an extended temporary area of mixing granted by Ecology in a 401 Water Quality Certification.	The Contractor shall comply with Washington Department of Ecology’s State Water Quality Standards (WAC 173-201) or permit modifications. Permit modifications are limited to an extended temporary area of mixing granted by Ecology in a 401 Water Quality Certification.	Construction	Contractor	1-07.5(3) 1-07.5(3).OPT1(A).FR1	None
4	Stormwater Quantity and Quality	Projects that drain to waters that may be used by listed fish species and create more than 500 ft ² of new pollution generating impervious surface in any TDA will use the most current WSDOT stormwater effects analysis guidance to evaluate the potential effects of each proposed project. The PBA Determination Form and/or supplemented documents must include the following information at a minimum: 1) Sufficient information to assess pre-project and post-project stormwater pollutant loadings and end of pipe concentrations. 2) Identify the receiving waterbodies for the stormwater runoff associated with the new pollution and post-project stormwater pollutant loadings and end of pipe concentrations. 3) Identify the receiving waterbodies for the stormwater runoff associated with the new pollution generating impervious surface. 4) A qualitative or quantitative description of pre-and post-project mixing zones or dilution analysis, consistent with WSDOT stormwater effects analysis guidance. If exposure to listed fish species in the dilution zone cannot be discounted, a quantitative description is recommended. 5) Describe potential effects to	Projects that drain to waters that may be used by listed fish species and create more than 500 ft ² of new pollution generating impervious surface in any TDA will use the most current WSDOT stormwater effects analysis guidance to evaluate the potential effects of each proposed project. The PBA Determination Form and/or supplemented documents must include the following information at a minimum: 1) Sufficient information to assess pre-project and post-project stormwater pollutant loadings and end of pipe concentrations. 2) Identify the receiving waterbodies for the stormwater runoff associated with the new pollution and post-project stormwater pollutant loadings and end of pipe concentrations. 3) Identify the receiving waterbodies for the stormwater runoff associated with the new pollution generating impervious surface. 4) A qualitative or quantitative description of pre-and post-project mixing zones or dilution analysis, consistent with WSDOT stormwater effects analysis guidance. If exposure to listed fish species in the dilution zone cannot be discounted, a quantitative description is recommended. 5) Describe	Design	WSDOT Biology & WSDOT Design	BA Manual – Chapter 14 Stormwater Analysis	None

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		hydrology (i.e., peak flows, base flows, flow durations, etc.) and instream conditions (i.e., bed and bank scour or erosion, channel stability, etc.) due to the proposed project.	potential effects to hydrology (i.e., peak flows, base flows, flow durations, etc.) and instream conditions (i.e., bed and bank scour or erosion, channel stability, etc.) due to the proposed project.				
5	Stormwater Quantity and Quality	The project will not cause or contribute to bed or bank scour or erosion (channel instability), and will not measurably affect base, peak, or flow durations in any Threshold Discharge Area (TDA) or receiving waterbody.	The project will not cause or contribute to bed or bank scour or erosion (channel instability), and will not measurably affect base, peak, or flow durations in any Threshold Discharge Area (TDA) or receiving waterbody.	Design	WSDOT Biology & WSDOT Design	BA Manual and HRM	None
6	Stormwater Quantity and Quality	Stormwater will be infiltrated and/or dispersed when possible.	Stormwater will be infiltrated and/or dispersed when possible.	Design	WSDOT Design	Highway Runoff Manual	This is post construction stormwater.
7	Aquatic Area Buffers	No contractor staging areas will be allowed within 200 feet of potentially suitable wetland, stream, estuarine, river or marine drainage as identified by the project biologist, unless site specific review completed by the project biologist indicates that no impacts to the sensitive resource areas will occur due to topography or other factors.	The contractor shall not stage equipment or materials within 200 feet of potentially suitable wetland, stream, estuarine, river or marine drainage as identified by the project biologist, unless site specific review completed by the project biologist indicates that no impacts to the sensitive resource areas will occur due to topography or other factors.	Construction	Contractor	1-07.5.OPT1(C).FR1	None
8	Aquatic Area Buffers	During the rainy season, (October 1 through June 1), temporary material storage piles consisting of erosive materials will be placed such that fluctuating water elevations don't contact the piles. Emergency projects are excluded from this requirement and non-emergency projects can be excluded if specific site review indicates that topography or other factors preclude runoff from entering waterbodies containing listed fish species or their prey. Material to be used within 12 hours of deposition will not be considered a temporary material storage pile.	The contractor shall place temporary material storage piles consisting of erosive materials outside the 100-year floodplain during the rainy season (October 1 through June 1) except for emergency projects, or unless site specific review completed by the project biologist indicates that topography or other factors preclude runoff from entering waterbodies containing listed fish species or their prey. Such temporary storage piles will be stabilized with plastic sheeting, straw bales, or other BMPs, to prevent sediment delivery to these waterbodies. Material to be used within 12 hours of deposition will not be considered a temporary material storage pile.	Construction	Contractor	1-07.5(6).OPT1(B).GR1	None
9	Aquatic Area Buffers	All excavated materials will be removed to an upland location where they cannot enter the water body.	The contractor shall remove all excavated materials to an upland location where they cannot enter the water body.	Construction	Contractor	2-02.3 2-02.3(7)C	None
10	Vegetation Removal	To facilitate compliance with the Northwest Forest Plan Standards and Guidelines, WSDOT will coordinate with the appropriate Forest Service ranger district if tree removal, including dying, dead, or downed wood is proposed on lands identified in the plan.	To facilitate compliance with the Northwest Forest Plan Standards and Guidelines, WSDOT Designers will coordinate with the appropriate Forest Service ranger district if tree removal, including dying, dead, or downed wood is proposed on lands identified in the plan.	Design	WSDOT Design	Standard Operating Procedures	None

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11	Vegetation Removal	WSDOT Designers will minimize removal of riparian vegetation and contractors shall replant riparian vegetation. Replanting may not be possible in permanent impact areas, the roadway clear zone, or adjacent to or under bridges. However, potential replanting of riparian vegetation near the site should be evaluated. The PBA Determination Form will provide the justification for the removal of riparian vegetation and will include the proposed replanting plans, if applicable.	WSDOT Designers will minimize removal of riparian vegetation and contractors shall replant riparian vegetation. Replanting may not be possible in permanent impact areas, the roadway clear zone, or adjacent to or under bridges. However, potential replanting of riparian vegetation near the site should be evaluated. The PBA Determination Form will provide the justification for the removal of riparian vegetation and will include the proposed planting plans, if applicable.	Design Construction	WSDOT Design & WSDOT Landscape Contractor	1-07.5(2)3 1-07.16(2) 8-02.3(2) Planting Plans	Compare to WAC 220-660-120(4)d, which is more restrictive than this MM.
12	Vegetation Removal	Vegetation will only be grubbed from areas undergoing permanent alteration. No grubbing will occur in areas slated for temporary impacts. Exceptions to grubbing temporary impact areas can be made if the temporary area is currently covered by non-native or invasive species and will be replanted with native species.	Vegetation will only be grubbed from areas undergoing permanent alteration. No grubbing will occur in areas slated for temporary impacts. Exceptions to grubbing temporary impact areas can be made if the temporary area is currently covered by non-native or invasive species and will be replanted with native species.	Construction	Contractor	1-04	None
13	Vegetation Removal	Disturbance to riparian vegetation from the operation of heavy equipment will be minimized as practicable by straddling it with heavy equipment or by pruning it without damaging the roots. Existing riparian vegetation outside of the work area will not be removed or disturbed.	The contractor will minimize disturbance to riparian vegetation from the operation of heavy equipment by straddling it with heavy equipment or by pruning it without damaging the roots. Existing riparian vegetation outside of the work area will not be removed or disturbed.	Construction	Contractor	1-07.16(2) 1-07.16(2)A 1-07.16(2).OPT1.GR1 1-08.4	None
14	In-Water Work	Seasonal restrictions applied to work conducted within or below the OHWM or MHHW, will follow requirements within the HPA issued by the Washington Department of Fish and Wildlife, and Water Quality Standards for Surface Waters of the State of Washington (Chapter 173-201A WAC). In-water work duration will be minimized as practicable.	The contractor will follow the seasonal restrictions applied to work conducted within or below the OHWM or MHHW, will follow requirements within the HPA issued by the Washington Department of Fish and Wildlife, and Water Quality Standards for Surface Waters of the State of Washington (Chapter 173-201A WAC). In-water work duration will be minimized as practicable.	Construction	Contractor	1-04 1-07.1 1-07.5	None
15	In-Water Work	No temporary floating work platform will place its anchors or allow grounding in fish spawning areas in freshwater or in eelgrass, kelp, macro algae, or intertidal wetlands. Anchoring above beds or eelgrass, kelp, or macro algae will be kept to a minimum.	The contractor will not allow any temporary floating work platform to place its anchors or allow grounding in fish spawning areas in freshwater or in eelgrass, kelp, macro algae, or intertidal wetlands. Anchoring above beds or eelgrass, kelp, or macro algae will be kept to a minimum.	Construction	Contractor	1-07.5(6).OPT1(C).FR1	None
16	In-Water Work	Construction equipment will not enter any water body without authorization from the Washington Department of Fish and Wildlife, USFWS, and the NMFS. Equipment will be operated as far from the water's edge as possible.	The contractor's equipment will not enter any water body without authorization from the Washington Department of Fish and Wildlife, USFWS, and the NMFS. Equipment will be operated as far from the water's edge as possible.	Construction	Contractor	1-07.5(1)	Note: the second sentence is achieved when WSDOT identifies temporary wetland and stream impacts as part of the JARPA submittal.
17	In-Water Work	Anthropogenic debris from bridge demolition will be directed toward storage areas on land or barges. Bridge demolition will include sectioning the structure to the extent possible to provide for safer disposal and to minimize debris falling into surface waters.	The contractor will direct debris from bridge demolition toward storage areas on land or barges. Bridge demolition will include sectioning the structure to the extent possible to provide for safer disposal and to minimize debris falling into surface waters.	Construction	Contractor	1-07.5(3) 2-02.3(2)A1 2-03.3(7)C	2-02.3(2)A1 requires a Type 2E bridge demolition plan submittal. A licensed PE must prepare this plan and they have to respond to our comments before starting work.

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18	Revegetation and Slope Stability	<p>Erodible earth not being worked, whether at final grade or not, shall be covered within the specified time periods below, using an approved soil covering practice:</p> <p>Western Washington (west of the Cascade Mountain Crest) 1) from October 1 through April 30 erodible earth may be exposed without cover for a 2 day maximum, 2) from May 1 to September 30 for 7 days maximum</p> <p>Eastern Washington (east of the Cascade Mountain Crest) 1) from October 1 through June 30 erodible earth may be exposed without cover for a 5 day maximum, 2) from July 1 to September 30 for 10 days maximum</p>	<p>Erodible earth not being worked, whether at final grade or not, shall be covered within the specified time periods below, using an approved soil covering practice:</p> <p>Western Washington (west of the Cascade Mountain Crest) 1) from October 1 through April 30 erodible earth may be exposed without cover for a 2 day maximum, 2) from May 1 to September 30 for 7 days maximum</p> <p>Eastern Washington (east of the Cascade Mountain Crest) 1) from October 1 through June 30 erodible earth may be exposed without cover for a 5 day maximum, 2) from July 1 to September 30 for 10 days maximum</p>	Construction	Contractor	8-01.3(1)	None
19	Revegetation and Slope Stability	Temporarily disturbed areas will be restored to pre-work conditions to the extent possible, including protecting existing root systems and allowing re-sprouting of herbaceous and woody plants. Native trees and shrubs will be used that are endemic to the project vicinity or region of the State where the activity is occurring.	The contractor shall restore temporarily disturbed areas to pre-work conditions to the extent possible, including protecting existing root systems and allowing re-sprouting of herbaceous and woody plants. Native trees and shrubs will be used that are endemic to the project vicinity or region of the State where the activity is occurring.	Construction Design	Contractor WSDOT Design	8-02.3(2) Planting Plans	The Roadside Restoration Worksheet is filled out during the project scoping or early project estimating phase. It documents design decisions as a response to roadside policies as stated in the <i>Roadside Policy Manual</i> and permit requirements. The project is designed to meet those requirements. The results are Plans and Specifications that become part of the Contract, which are implemented by the Contractor.

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20	Revegetation and Slope Stability	All exposed areas will be mulched and seeded with an approved native or noninvasive herbaceous seed mix following construction and/or planted with native woody vegetation and trees (if appropriate) during the first available planting season.	WSDOT Designers will ensure that all exposed areas will be mulched and seeded with an approved native or noninvasive herbaceous seed mix following construction and/or planted with native woody vegetation and trees (if appropriate) during the first available planting season.	Design Construction	WSDOT Design Contractor	Standard Operating Procedures 8-02.3(2)	The Roadside Restoration Worksheet is filled out during the project scoping or early project estimating phase. It documents design decisions as a response to roadside policies as stated in the <i>Roadside Policy Manual</i> and permit requirements. The project is designed to meet those requirements. The results are Plans and Specifications that become part of the Contract, which are implemented by the Contractor.
21	General Construction	Construction impacts will be confined to the minimum area necessary to complete the project.	WSDOT Designers will minimize the construction footprint to minimize impacts to complete the project.	Design	WSDOT Design	Standard Operating Procedure	Mitigating disturbed sensitive areas cost WSDOT money, so we naturally minimize it where possible.
22	General Construction	WSDOT Construction will clearly flag the boundaries of clearing limits to prevent disturbance outside of the limits. The contractor shall install high visibility fencing in accordance with WSDOT Standard Specifications.	WSDOT Construction will clearly flag the boundaries of clearing limits to prevent disturbance outside of the limits. The contractor shall install high visibility fencing in accordance with WSDOT Standard Specifications.	Construction	WSDOT Construction Contractor	1-08.4 8-01.3(1) 8-01.3(9)A Standard Plan 1-1.10-01	The boundaries established in the JARPA plan sheets are transferred to Contract Plans. Boundaries are identified in the field by either HVF or other flagging/staking.
23	Pollutant Protection	The contractor will use BMPs, as stated in their Spill Prevention Control and Countermeasures Plan, to ensure that no foreign material such as oil or fuel from construction equipment will enter any wetlands, flowing or standing water.	The contractor will use BMPs, as stated in their Spill Prevention Control and Countermeasures Plan, to ensure that no foreign material such as oil or fuel from construction equipment will enter any wetlands, flowing or standing water.	Construction	Contractor	1-07.5(3) 1-07.15(1)	None
24	Pollutant Protection	All equipment will be fueled and maintained more than 200 feet from the nearest wetland, ditches, flowing or standing water, unless site specific review completed by the project biologist indicates that no impacts to the resource areas will result due to topography or other factors. Exceptions to this requirement are allowed for large cranes, pile drivers, and drill rigs if they cannot be easily moved.	The contractor shall fuel and maintain equipment at least 200 feet from the nearest wetland, ditches, flowing or standing water, unless site specific review completed by the project biologist indicates that no impacts to the resource areas will result due to topography or other factors. Exceptions to this requirement are allowed for large cranes, pile drivers, and drill rigs if they cannot be easily moved.	Construction	Contractor	1-07.5.OPT1(C).FR1	

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25	Pollutant Protection	Equipment will be checked daily for leaks and will be well maintained to prevent lubricants and any other deleterious materials from entering waters of the State. Prior to entering the water or below the OHWM, all equipment will be free of any external petroleum products, hydraulic fluid, coolants, and other deleterious materials. Wash water will not be discharged to any water body without pre-treatment.	The contractor shall check equipment daily for leaks and will maintain them to prevent lubricants and any other deleterious materials from entering waters of the State. Prior to entering the water or below the OHWM, all equipment will be free of any external petroleum products, hydraulic fluid, coolants, and other deleterious materials. Wash water will not be discharged to any water body without pre-treatment.	Construction	Contractor	1-07.5(3) 1-07.15(1) Element #7(g), (h), (i)	None
26	Pollutant Protection	All equipment entering waters that may be used by listed fish species and/or if the waters are critical habitat, will use vegetable oil or other biodegradable acceptable hydraulic fluid substitute, unless the project is an emergency action.	Unless the project is an emergency action, the contractor will use vegetable oil or other biodegradable acceptable hydraulic fluid substitute for all equipment entering waters that may be used by listed fish species and/or if the waters are critical habitat.	Construction	Contractor	8-01.3(1)C6	None
27	Concrete Work	For projects involving concrete, concrete truck chute cleanout areas shall be established to properly contain wet concrete and wash water and prevent it from entering wetlands and other waterbodies.	The contractor will provide concrete truck chute cleanout areas to properly contain wet concrete and wash water and prevent it from entering wetlands and other waterbodies.	Construction	Contractor	1-07.5(6).OPT1(D).GR1	None
28	Concrete Work	The contractor will protect all inlets and catchments from stormwater runoff from fresh concrete, tackifier, paving, or paint striping if inclement weather unexpectedly occurs.	The contractor will protect all inlets and catchments from stormwater runoff from fresh concrete, tackifier, paving, or paint striping if inclement weather unexpectedly occurs.	Construction	Contractor	1-07.5(3) 1-07.15(1) 5-04.3(16)	None
29	Concrete Work	All concrete will be poured in the dry, or within confined waters not being dewatered to surface waters, and will be allowed to cure a minimum of 7 days before contact with surface water.	The contractor shall pour all concrete in the dry, or within confined waters not being dewatered to surface waters, and will be allowed to cure a minimum of 7 days before contact with surface water.	Construction	Contractor	1-07.5(3) 6-02.3(6)(B),(C) 6-02.3(11) 8-01.3(1)C	None

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30	Access Roads and Bridges	The establishment and use of temporary access roads will meet the following conditions: 1) Existing roadways or travel paths will be used whenever they provide the needed access. 2) Where stream crossings are essential, the crossing design will accommodate reasonably foreseeable risks (such as flooding and associated bedload and debris) to prevent diversion of stream flow out of the channel and down the road in the event of a crossing failure. 3) Vehicles and machinery must cross riparian areas and streams perpendicular to the main channel unless site specific conditions require an alternate approach. 4) Vehicles and machinery will not cross within a wetted stream, unless necessary as part of an emergency action. The PBA Determination Form must state why avoidance of crossing a wetted stream is not possible if proposed as part of an emergency action. 5) Temporary roads within 300 feet of streams will avoid, minimize, and mitigate soil disturbance and compaction by clearing vegetation to ground level, and placing clean gravel over geotextile fabric. 6) Vehicles and machinery operating below the OHWM (except if operating in the dry or during emergency actions) will use biodegradable hydraulic fluids and lubricants to reduce the potential impacts associated a potential oil spill or leak. 7) The number of stream crossings will be minimized.	Temporary access roads established and used by the contractor shall meet the following conditions: 1) Existing roadways or travel paths will be used whenever they provide the needed access. 2) Where stream crossings are essential, the crossing design will accommodate reasonably foreseeable risks (such as flooding and associated bedload and debris) to prevent diversion of stream flow out of the channel and down the road in the event of a crossing failure. 3) Vehicles and machinery must cross riparian areas and streams perpendicular to the main channel unless site specific conditions require an alternate approach. 4) Vehicles and machinery will not cross within a wetted stream, unless necessary as part of an emergency action. The PBA Determination Form must state why avoidance of crossing a wetted stream is not possible if proposed as part of an emergency action. 5) Temporary roads within 300 feet of streams will avoid, minimize, and mitigate soil disturbance and compaction by clearing vegetation to ground level, and placing clean gravel over geotextile fabric. 6) Vehicles and machinery operating below the OHWM (except if operating in the dry or during emergency actions) will use biodegradable hydraulic fluids and lubricants to reduce the potential impacts associated a potential oil spill or leak. 7) The number of stream crossings will be minimized.	Design	WSDOT Design	WSDOT will permit temporary stream crossing and any impact to steams, wetlands, and their buffers. This is done prior to ad date. 1-07.5(1) 1-07.5(1) Roadside Manual – Revegetation for Stream Restoration & Fish Passage 8-01.3(1)C6	This is really 7 different commitments.
				Design	WSDOT Design		
				Construction	Contractor		
				Construction	Contractor		
				Design	WSDOT Design		
				Construction	Contractor		
				Design	WSDOT Design		
31	Access Roads and Bridges	New stream crossing structures, including channel-spanning bridges, will not reduce the existing stream width.	WSDOT Designers will ensure that new stream crossing structures, including channel-spanning bridges, will not reduce the existing stream width.	Design	WSDOT Design	WDFW Water Crossing Design Guidelines	None
32	Restrictions in Rainy Weather	No paving, chip sealing, or stripe painting will be initiated in rainy weather.	The contractor shall not conduct paving, chip sealing, or stripe painting in rainy weather.	Construction	Contractor	1-04.4 1-05.1	The Project Engineer has full capacity to suspend work for any reason; of which these would apply.
17*	Bridge Work	Anthropogenic debris from bridge demolition will be directed toward storage areas on land or barges. Bridge	The contractor will direct bridge demolition debris toward storage areas on land or barges. Bridge demolition will	Construction	Contractor	1-07.5(3)	2-02.3(2)A1 requires a Type 2E bridge demolition plan

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		demolition will include sectioning the structure to the extent possible to provide for safer disposal and to minimize debris falling into surface waters.	include sectioning the structure to the extent possible to provide for safer disposal and to minimize debris falling into surface waters.			2-02.3(2)A1 2-03.3(7)C	submittal. A licensed PE must prepare this plan and they have to respond to our comments.
33	Bridge Work	Bridge construction will take place from the adjacent streambanks, existing bridges, barges, or temporary work bridges. Some work may be allowed within a dewatered channel or on a dry gravel bar with WDFW, NMFS and USFWS approval, but no equipment or vehicle staging will be allowed in these areas.	The contractor will conduct bridge construction from the adjacent streambanks, existing bridges, barges, or temporary work bridges. Some work may be allowed within a dewatered channel or on a dry gravel bar with WDFW, NMFS and USFWS approval, but no equipment or vehicle staging will be allowed in these areas.	Construction	Contractor	1-07.5(1) Contract Plans 7-06.SA1.FR7 7-06.SA2.FR7 1-08.4	Projects permit temporary impacts to conduct the work. And WSDOT prepares environmental compliance plan sheets that show these areas. WSDOT also shows areas needing protection with HVF. The contractor must adhere to the restrictions within the contract.
34	Bridge Work	Concentrated accumulations of bird feces, road grit, sand, and loose paint chips will be removed from bridges before dismantling unless such activities would result in a higher risk of materials entering the water. This material will be scraped, swept or vacuumed from the bridge structure and collected and disposed of at permitted and approved upland location. A 5.25 percent sodium hypochlorite solution may be used directly on residual accumulations of guano or fungus after prior dry cleaning and washing. Wash water from the sodium hypochlorite solution shall be full contained and not allowed to enter state waters.	The contractor shall remove concentrated accumulations of bird feces, road grit, sand, and loose paint chips from bridges before dismantling unless such activities would result in a higher risk of materials entering the water. This material will be scraped, swept or vacuumed from the bridge structure and collected and disposed of at permitted and approved upland location. A 5.25 percent sodium hypochlorite solution may be used directly on residual accumulations of guano or fungus after prior dry cleaning and washing. Wash water from the sodium hypochlorite solution shall be full contained and not allowed to enter state waters.	Construction	Contractor	1-05.3 1-07.5(3) 2-02.3(2)A1 6-07.3(10) 6-07.3(10)B 6-07.3(2)E	None
35	Bridge Painting	For brush and/or roller paint applications, painters will work from pails containing a maximum of 2 gallons of paint to minimize the impact of accidental spillage, except for sealed containers that are part of a spray system.	For brush and/or roller paint applications, the contractor will work from pails containing a maximum of 2 gallons of paint to minimize the impact of accidental spillage, except for sealed containers that are part of a spray system.	Construction	Contractor	6-07.3(10)N	None
36	Bridge Painting	Cleaning of paint materials and maintenance equipment will not be done in or over waters of the State nor will resultant cleaning runoff be allowed to enter State waters.	The contractor shall not clean paint materials or maintain equipment in or over waters of the State, nor shall any runoff from cleaning be allowed to enter State waters.	Construction	Contractor	6-07.3(10)Q 1-07.5(3)	None
37	Bridge Painting	Drip pans or other protective devices will be required for all paint mixing and solvent transfer operations.	The contractor shall use drip pans or other protective devices for all paint mixing and solvent transfer operations.	Construction	Contractor	6-07.3(10)J	None
38	Bridge Painting	Drip tarps will be suspended below paint platforms to prevent spilled paint, buckets, brushes, etc. from entering State waters.	The contractor shall suspend drip tarps below paint platforms to prevent spilled paint, buckets, brushes, etc. from entering State waters.	Construction	Contractor	6-07.3(10)	None

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39	Bridge Painting	Residual grease will be removed by hand from bridges and roadways with a degreaser on absorbent-material to prevent cleaning agents and grease from entering waters of the State.	The contractor shall remove residual grease by hand from bridges and roadways with a degreaser on absorbent-material to prevent cleaning agents and grease from entering waters of the State.	Construction	Contractor	1-05.3 1-07.5(3) 2-02.3(2)A1 6-07.3(10) 6-07.3(10)B 6-07.3(2)E	None
40	Bridge Painting	Bridges will first be cleaned using dry methods and equipment. Debris accumulations on the bridge, road surface, and within the bridge drains will be collected or swept up and properly disposed of prior to fresh water flushing. Debris disposal will occur in approved locations above the limits of flood water or extreme high tide. Debris will not be placed in road drainages, wetlands, riparian areas, or on adjacent land where it may be transported into state waters. Flushing will involve the use of clean water only, to prevent detergents or other cleaning agents from entering waters of the State.	The contractor will first clean bridges using dry methods and equipment. Debris accumulations on the bridge, road surface, and within the bridge drains will be collected or swept up and properly disposed of prior to fresh water flushing. Debris disposal will occur in approved locations above the limits of flood water or extreme high tide. Debris will not be placed in road drainages, wetlands, riparian areas, or on adjacent land where it may be transported into state waters. Flushing will involve the use of clean water only, to prevent detergents or other cleaning agents from entering waters of the State.	Construction	Contractor	1-07.5(3) 2-03.3(7)C 6-07.3(10)	None
41	Bridge Painting	Preparatory painting pressure washing of structures will be done using appropriate filter fabric to control and contain paint particles generated by the activity. Wash water will be fully contained when it would otherwise discharge to waters with listed fish species.	The contractor shall use appropriate filter fabric when pressure washing structures to control and contain paint particles generated by the activity. Wash water will be fully contained when it would otherwise discharge to waters with listed fish species.	Construction	Contractor	6-07.3(10) 9-08.6 Must prepare a special provision for scenarios when listed species exist.	None
42	Bridge Painting	During abrasive blasting of a steel bridge prior to painting, a containment system appropriate for the type and location of the bridge will be in place and maintained to prevent spent blast media from reaching State Waters. Spent blast media will be collected, sampled, designated for its hazardous waste content, and disposed of as appropriate for its waste designation at an approved and permitted site.	During abrasive blasting of a steel bridge prior to painting, the contractor shall install and maintain a containment system appropriate for the type and location of the bridge to prevent spent blast media from reaching State Waters. Spent blast media will be collected, sampled, designated for its hazardous waste content, and disposed of as appropriate for its waste designation at an approved and permitted site.	Construction	Contractor	6-07.3(10) 6-07.3(10)A 6-07.3(10)F	None
43	Sub-surface Sampling	During subsurface sampling within 200 feet of waters containing listed fish, all materials removed from the test hole will be removed from the site until sub-sampling is completed. Uncontaminated material may be returned to the test hole. All subsurface sampling sites within waterbodies will be refilled with clean, silt-free material if the holes create a potential stranding hazard.	During subsurface sampling within 200 feet of waters containing listed fish, WSDOT Geotechnical crews will remove all materials from the test hole will be removed from the site until sub-sampling is completed. Uncontaminated material may be returned to the test hole. All subsurface sampling sites within waterbodies will be refilled with clean, silt-free material if the holes create a potential stranding hazard.	Design	WSDOT Geotechnical	Geotechnical Design Manual	Supplement best practices in the WSDOT Geotechnical Design Manual.

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MM #	Category	PBA Minimization Measure Language	Revised PBA Minimization Measure Language for the Commitment Tracking System	Phase	Responsibility	Existing Method of Implementation	Notes
44	Sub-surface Sampling	Oil absorbent pads will be placed under the drill rig to catch and control spills during subsurface sampling when within 200 feet of waters containing listed fish species.	WSDOT Geotechnical crews will place oil absorbent pads under the drill rig to catch and control spills during subsurface sampling when within 200 feet of waters containing listed fish species.	Design	WSDOT Geotechnical	Geotechnical Design Manual	Supplement best practices in the WSDOT Geotechnical Design Manual
45	Sub-surface Sampling	For subsurface sampling within 200 feet of waters containing listed species, the team lead will have a minimum of 4 hours erosion control, spill control and containment training.	The team lead of the WSDOT Geotechnical crew will have a minimum of 4 hours erosion control, spill control and containment training for subsurface sampling within 200 feet of waters containing listed species.	Design	WSDOT Geotechnical	Geotechnical Design Manual	Supplement best practices in the WSDOT Geotechnical Design Manual
46	Sub-surface Sampling	For subsurface sampling all existing large woody debris will be left on or adjacent to the site if feasible.	WSDOT Geotechnical crews conducting subsurface sampling will leave all existing large woody debris on or adjacent to the site if feasible.	Design	WSDOT Geotechnical	Geotechnical Design Manual	Supplement best practices in the WSDOT Geotechnical Design Manual
47	Sub-surface Sampling	For subsurface sampling, no geared mechanisms (e.g., tires, tracks) will enter the wetted perimeter of a waterbody. Truck mounted and tracked drilling equipment will work from a location outside of the wetted perimeter unless working off of a temporary floating work platform or barge. The temporary floating work platforms will not ground on the bed of State waters.	For subsurface sampling, no geared mechanisms (e.g., tires, tracks) will enter the wetted perimeter of a waterbody. Truck mounted and tracked drilling equipment will work from a location outside of the wetted perimeter unless working off of a temporary floating work platform or barge. The temporary floating work platforms will not ground on the bed of State waters.	Design	WSDOT Geotechnical	Geotechnical Design Manual Marine Sediment Test Boring GHPA Statewide Fresh Water Geotechnical Survey GHPA	Supplement best practices in the WSDOT Geotechnical Design Manual.
48	Emergencies	Report emergency actions to the NMFS/USFWS within one workday where listed fish species or other federally listed species are potentially present. Emergency activities should be limited to only those actions that are necessary to address the immediate emergency.	WSDOT Region Environmental Office staff shall report emergency actions to the NMFS/USFWS within one workday where listed fish species or other federally listed species are potentially present. Emergency activities should be limited to only those actions that are necessary to address the immediate emergency.	Design	WSDOT Region Environmental Office	WSDOT Intranet Fish & Wildlife Page	None
49	Bank Protection	If site-specific conditions allow, improve fish habitat by incorporating LWD into bank protection projects.	If site-specific conditions allow, WSDOT Designers will improve fish habitat by incorporating LWD into bank protection projects.	Design	WSDOT Design	WDFW Integrated Streambank Protection Guidelines (see Programmatic BO Appendices for NMFS and USFWS)	See WAC 220-660-130
50	Bank Protection	Installation of riprap and other materials will occur from the banks or outside the wetted perimeter as much as possible.	The contractor will install riprap and other materials from the banks or outside the wetted perimeter as much as possible.	Construction	Contractor	Contract Plans 1-07.5(1) WAC 220-660-130 (6)(d)	Projects permit temporary impacts to conduct the work. And WSDOT prepares environmental compliance plan sheets that show these areas. WSDOT also shows areas needing protection with HVF. The contractor must adhere to the restrictions within the contract.

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51	Bank Protection	Project areas with existing riprap will be allowed to increase the lineal distance of the riprapped area below the OHWM by an additional 5 percent. If the project footprint needs to be increased beyond this, riprap placement will demonstrate consistency with the Integrated Streambank Protection techniques that are defined for WSDOT projects (see Working Document).	Project areas with existing riprap will be allowed to increase the lineal distance of the riprapped area below the OHWM by an additional 5 percent. If the project footprint needs to be increased beyond this, riprap placement will demonstrate consistency with the Integrated Streambank Protection techniques that are defined for WSDOT projects (see Working Document).	Design	WSDOT Design	WDFW Integrated Streambank Protection Guidelines (see Programmatic BO Appendices for NMFS and USFWS)	See Army Corps requirements for bank stabilization (NWP 13) and Regional General Condition #3 and #4.
52	Bank Protection	All materials, such as riprap or gravel, placed within the water will be free of rock fines, silt, soil, or other extraneous material. An exception to the presence of fines is permitted if they are required as part of channel bed reconstruction.	WSDOT will ensure that all materials, such as riprap or gravel, placed within the water will be free of rock fines, silt, soil, or other extraneous material. An exception to the presence of fines is permitted if they are required as part of channel bed reconstruction.	Construction	Contractor	1-07.5(3) Region Special Provisions for Aggregate for Streams	None
53	Work Area Isolation and Fish Handling	Listed fish species, including their forage fish, will be removed from the work area prior to any in-water work activities, unless removal would affect the individuals more than leaving them on-site. Fish exclusion activities will follow the most recent WSDOT protocol that has been approved by the NMFS.	WSDOT Biologists will remove listed fish species, including their forage fish, from the work area prior to any in-water work activities, unless removal would affect the individuals more than leaving them on-site. Fish exclusion activities will follow the most recent WSDOT protocol that has been approved by the NMFS.	Construction	WSDOT Biology or Consultant Biologists	Fish Exclusion Protocols and Standards WAC 220-660-120	None
54	Work Area Isolation and Fish Handling	Water pumped out of the isolated project area will be discharged to a temporary storage and treatment site or to upland areas and filtered through vegetation prior to reentering the stream channel.	The contractor will pump water out of the isolated project area and discharged to a temporary storage and treatment site or to upland areas and filtered through vegetation prior to reentering the stream channel.	Construction	Contractor	7-06.SA1.FR7 7-06.SA2.FR7 8-01.3(1)C	None
55	Work Area Isolation and Fish Handling	All intake pumps within fish bearing streams will have a fish screen installed, operated and maintained. Screening techniques must utilize the specifications in the HPA and be in compliance with RCW 77.55.010, RCW 77.57.040 and RCW 77.57.070 or the specifications in the NMFS Anadromous Salmonid Passage Facility Design manual (2008) and NMFS Fish Screening Criteria for Anadromous Salmonids (1997), whichever is more restrictive.	The contractor will install and maintain a fish screen on all intake pumps. Screening techniques must utilize the specifications in the HPA and be in compliance with RCW 77.55.010, RCW 77.57.040 and RCW 77.57.070 or the specifications in the NMFS Anadromous Salmonid Passage Facility Design manual (2008) and NMFS Fish Screening Criteria for Anadromous Salmonids (1997), whichever is more restrictive.	Construction	Contractor	7-06.SA1.FR7 7-06.SA2.FR7	The contractor's Temporary Stream Diversion Plan must cover this MM.
56	Work Area Isolation and Fish Handling	Temporary diversion structures will be non-erosive (e.g., sand bags filled with clean gravel and covered with plastic sheeting, portable bladder dam).	The contractor will use non-erosive temporary diversion structures (e.g., sand bags filled with clean gravel and covered with plastic sheeting, portable bladder dam).	Construction	Contractor	7-06.SA1.FR7 7-06.SA2.FR7	None
57	Work Area Isolation and Fish Handling	Temporary bypass systems will utilize non-erosive techniques, such as pipe or a plastic-lined channel that will accommodate the predicted peak flow rate during construction.	The contractors temporary bypass systems will utilize non-erosive techniques, such as pipe or a plastic-lined channel that will accommodate the predicted peak flow rate during construction.	Construction	Contractor	7-06.SA1.FR7 7-06.SA2.FR7	None
58	Work Area Isolation and Fish Handling	Temporary bypass structures will have energy dissipaters at the outflow to prevent erosion.	The contractor will install energy dissipaters at the outflow of the temporary bypass structure to prevent erosion.	Construction	Contractor	7-06.SA1.FR7 7-06.SA2.FR7 WAC 220-660-120	The contractor's Temporary Stream Diversion Plan must cover this MM.

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59	Work Area Isolation and Fish Handling	WSDOT Biologists will follow the WSDOT Fish Exclusion Protocols and Standards to conduct work area isolation, fish capture and removal, and dewatering/rewatering. Implementing these factors depends to some degree on local conditions and the professional judgment of the biologist. If block nets are in use, they will be checked 3 times daily. Flows shall be gradually reintroduced to the isolated work area, to prevent channel bed or bank instability, excessive scour, or turbidity and sedimentation. The directing biologist shall inspect the work area downstream reach to ensure no fish are stranded or in distress during reintroduction of flows.	WSDOT Biologists will follow the WSDOT Fish Exclusion Protocols and Standards to conduct work area isolation, fish capture and removal, and dewatering/rewatering. Implementing these factors depends to some degree on local conditions and the professional judgment of the biologist. If block nets are in use, they will be checked 3 times daily. Flows shall be gradually reintroduced to the isolated work area, to prevent channel bed or bank instability, excessive scour, or turbidity and sedimentation. The directing biologist shall inspect the work area downstream reach to ensure no fish are stranded or in distress during reintroduction of flows.	Construction	WSDOT Biology Contractor	Fish Exclusion Protocols and Standards 7-06.SA1.FR7 7-06.SA2.FR7	None
60	Work Area Isolation and Fish Handling	Upon completion of all in-water work, all stream diversion devices, equipment, pipe, and conduits will be removed and disturbed soil will be restored after diversions are removed. Streambank plantings may occur at a later date during the planting season.	Upon completion of all in-water work, the contractor will remove all stream diversion devices, equipment, pipe, and conduits and restore disturbed soil after diversions are removed. Streambank plantings may occur at a later date during the planting season.	Construction	Contractor	7-06.SA1.FR7 7-06.SA2.FR7 Planting Plan	The contractor's Temporary Stream Diversion Plan must cover this MM.
61	Work Area Isolation and Fish Handling	Projects will not inhibit passage of any listed fish species life stage following completion. When feasible, a bypass system will be installed during construction to permit both upstream and downstream passage of listed fish and their prey.	Projects will not inhibit passage of any listed fish species life stage following completion. When feasible, a bypass system will be installed during construction to permit both upstream and downstream passage of listed fish and their prey.	Design	WSDOT Design	Standard Operating Procedures	WSDOT Designers will build a bridge, prescribe a Stream Simulation culvert, or do an alternative design which meets the culvert injunction.
62	Culvert Work	Culvert cleaning, repair, and maintenance will occur during the dry or when listed fish are least likely to be present.	The contractor will perform culvert cleaning, repair, and maintenance during the dry or when listed fish are least likely to be present.	Construction	Contractor	Must Prepare a Special Provision Perhaps supplement 7-07.3	None
63	Culvert Work	For waters that may be used by listed fish species and include critical habitat, culvert cleaning will occur either by hand or from the top of the bank when flow is in the channel or when the stream is either dry or a flow bypass is installed.	The contractor will perform culvert cleaning for waters that may be used by listed fish species and include critical habitat, either by hand or from the top of the bank when flow is in the channel or when the stream is either dry or a flow bypass is installed.	Construction	Contractor	Must Prepare a Special Provision Perhaps supplement 7-07.3	None
64	Culvert Work	All culverts conveying fish bearing streams will be designed and constructed in accordance with WDFW's Water Crossing Design Guidelines (Barnard et al. 2013) or most current document and related Washington Administrative Code criteria. Culverts must be designed to either meet the "no slope" or the "stream simulation" model design, whichever is most appropriate.	WSDOT will design and construct all culverts conveying fish bearing streams in accordance with WDFW's Water Crossing Design Guidelines (Barnard et al. 2013) or most current document and related Washington Administrative Code criteria. Culverts must be designed to either meet the "no slope" or the "stream simulation" model design, whichever is most appropriate.	Design	WSDOT Design	WDFW Water Crossing Design Guidelines	None

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65	Culvert Work	Repair or extension of culverts that are partial or complete fish passage barriers will incorporate measures to improve fish passage for all life stages. The retrofit of an existing culvert to provide fish passage will require approval of the project design from the WDFW's Area Habitat Biologist and WDFW's Area Engineer.	WSDOT Design will incorporate measures to improve fish passage for all life stages for repaired or extended culverts that are partial or complete fish passage barriers. The retrofit of an existing culvert to provide fish passage will require approval of the project design from the WDFW's Area Habitat Biologist and WDFW's Area Engineer.	Design	WSDOT Design	WSDOT and WDFW MOA	None
66	Cutting and Filling	Fill material will only be placed in specified and permitted locations. Fill placement may be permanent or temporary and will be located in a way that minimizes impacts to sensitive areas.	Fill material will only be placed in specified and permitted locations. Fill placement may be permanent or temporary and will be located in a way that minimizes impacts to sensitive areas.	Design	WSDOT Design	Standard Operating Procedures	Projects permit temporary and permanent impacts to conduct the work.
67	Cutting and Filling	Temporary fills must be entirely removed and the site restored to pre-existing contours.	The contractor will entirely remove all temporary fills and restore the site to pre-existing contours.	Construction	Contractor	1-07.5(5).OPT1(E).GR1	
68	Pile Installation/ Removal	Installation of steel piles with an impact hammer in-water requires the use of a bubble curtain or other approved sound attenuation method(s) to minimize impacts within waterbodies that may be used by listed species, including marine mammals.	Installation of steel piles with an impact hammer in-water requires the use of a bubble curtain or other approved sound attenuation method(s) to minimize impacts within waterbodies that may be used by listed species, including marine mammals.	Design Construction	WSDOT Design Contractor	NMFS Programmatic Biological Opinion Must prepare a special provision Supplement 1-07.5(6).GR1 or 6-05.3	None
69	Pile Installation/ Removal	No creosote-treated wood will be used below the OHWM.	The contractor shall not use creosote-treated wood below the OHWM.	Construction	Contractor	1-07.5(6).OPT1(E).GR1	None
70	Pile Installation/ Removal	Any removed piling or other materials, including their waste water, will be fully contained and disposed of at a location with regulatory approval.	The contractor shall fully contain and dispose any removed piling or other materials, including their waste water, at a location with regulatory approval.	Construction	Contractor	2-03.3(7)C 1-07.5(3)	Addresses disposal aspect. Addresses the water quality aspect.
71	Pile Installation/ Removal	For pile removal, direct pulling, vibratory removal, or cutting the piles below ground level will be prioritized to minimize localized turbidity. If using a clamshell bucket is necessary due to pile breakage and the action will generate turbidity, the contractor shall employ a turbidity control BMP that is appropriate for that site.	For pile removal, the contractor will directly pull, use vibratory methods, or cut the piles below ground level to minimize localized turbidity. If use of a clamshell bucket is necessary due to pile breakage and the action will generate turbidity, the contractor shall employ a turbidity control BMP that is appropriate for that site.	Construction	Contractor	1-07.5(6).OPT1(F).GR1	None
72	Pile Installation/ Removal	In tidally influenced areas, piles will be driven during slack tides whenever practicable.	In tidally influenced areas, piles will be driven during slack tides whenever practicable.	Construction	Contractor	Must prepare a special provision Supplement 1-07.5(6).GR1 or 6-05.3	None

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MM #	Category	PBA Minimization Measure Language	Revised PBA Minimization Measure Language for the Commitment Tracking System	Phase	Responsibility	Existing Method of Implementation	Notes
73	Pile Installation/ Removal	All treated wood will be contained during and after removal to preclude sediments and any contaminated materials from re-entering the aquatic environment. All contaminated materials will be disposed of at an approved and permitted disposal facility. No reuse of treated wood will occur.	The contractor will contain all treated wood during and after removal to preclude sediments and any contaminated materials from re-entering the aquatic environment. All contaminated materials will be disposed of at an approved and permitted disposal facility. No reuse of treated wood will occur.	Construction	Contractor	1-07.5(6).OPT1(G).GR1 2-02.3(2)A1 1-07.5(3) 2-03.3(7)C	For bridge removal, the Standard Specifications cover it. 2-02.3(2)A1 requires a Type 2E bridge demolition plan submittal. A licensed PE must prepare this plan and they have to respond to our comments.
74	Pile Installation/ Removal	Sound pressure will be monitored per the approved WSDOT Hydroacoustic Monitoring Protocol for in-water pile driving to determine ambient conditions and the sound pressure generated during in-water impact pile driving of steel piles, including H-piles, and sheet piles. Sound pressure monitoring will occur for in-water work where listed fish species may be present. Monitoring results will be provided to the Service within 90 days following completion of pile driving.	WSDOT Biologists will monitor sound pressure per the approved WSDOT Hydroacoustic Monitoring Protocol for in-water pile driving to determine ambient conditions and the sound pressure generated during in-water impact pile driving of steel piles, including H-piles, and sheet piles. Sound pressure monitoring will occur for in-water work where listed fish species may be present. Monitoring results will be provided to the Service within 90 days following completion of pile driving.	Construction	WSDOT Noise Specialist Contractor	1-07.5(6).OPT1(H).GR1	None
75	Herbicide Use	Herbicides will not be used within 200 ft of listed fish species spawning and rearing streams unless site specific review completed by the project biologist and landscape architect indicates that topography or other factors preclude herbicides from reaching spawning and rearing stream occupied by listed fish species.	The contractor shall not use herbicides within 200 ft of listed fish species spawning and rearing streams unless site specific review completed by the project biologist and landscape architect indicates that topography or other factors preclude herbicides from reaching spawning and rearing stream occupied by listed fish species.	Construction	Contractor	8-02.3(2)A 8-02.3(2)B 8-02.3(3)B	None
76	Lighting	Temporary lights for night work will be directed away from waters with listed fish species to the greatest extent possible, with the intent to prevent light from shining on surface waters.	The contractor shall direct temporary lights for night work away from waters with listed fish species to the greatest extent possible, with the intent to prevent light from shining on surface waters.	Construction	Contractor	1-07.5(6).OPT1(I).FR1	None
77	Lighting	When permanent lighting is needed on a bridge or road segment adjacent to surface waters with listed fish species, individual “cobra head” or similar lamps will be used when possible, rather than area lights that illuminate larger areas. Lights will be directed away from waters with listed fish species to the extent possible.	When permanent lighting is needed on a bridge or road segment adjacent to surface waters with listed fish species, WSDOT Designers will prescribe individual “cobra head” or similar lamps when possible, rather than area lights that illuminate larger areas. Lights will be directed away from waters with listed fish species to the extent possible.	Design	WSDOT Design	Standard Operating Procedures	None
78	Lighting	Walkways and bicycle lanes on bridges will be lit from below if possible to minimize nighttime light exposure of waters with listed fish species.	WSDOT Designers will light walkways and bicycle lanes on bridges from below, if possible, to minimize nighttime light exposure of waters with listed fish species.	Design	WSDOT Design	Standard Operating Procedures	None
79	Lighting	When permanent lighting is needed on a road segment adjacent to prairie species habitat, individual “cobra head” or similar lamps will be used when possible, rather than area lights that illuminate larger areas. Lights will be directed away from prairie species habitat to the extent possible.	When permanent lighting is needed on a road segment adjacent to prairie species habitat, WSDOT Designers will prescribe individual “cobra head” or similar lamps when possible, rather than area lights that illuminate larger areas.	Design	WSDOT Design	Standard Operating Procedures	None

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			Lights will be directed away from prairie species habitat to the extent possible.				
80	Prairie Species	Activities located within 200 feet of native upland prairies and open oak woodlands potentially suitable to listed prairie species as identified by the project biologist, will install and maintain all appropriate BMPs to ensure that no foreign material, such as pavement slurry, is sidecast, and that sediments are minimized unless site specific review completed by the project biologist indicates that topography or other factors preclude impacts to this habitat.	The contractor will install all appropriate BMPs for activities located within 200 feet of native upland prairies and open oak woodlands potentially suitable to listed prairie species as identified by the project biologist, to ensure that no foreign material, such as pavement slurry, is sidecast, and that sediments are minimized unless site specific review completed by the project biologist indicates that topography or other factors preclude impacts to this habitat.	WSDOT Construction	Design Contractor	Plans Preparation Manual 1-08.4 5-01.3(11) 8-01.3(9)A1 8-01.3(9)A3 9-14.5(8) 9-14.5(9)	None
81	Prairie Species	No contractor staging areas will be allowed within 200 feet of native upland prairies and open oak woodlands potentially suitable to listed prairie species as identified by the project biologist, unless site specific review completed by the project biologist indicates that no impacts to the sensitive resource areas will occur due to topography or other factors.	The contractor shall not stage within 200 feet of native upland prairies and open oak woodlands potentially suitable to listed prairie species as identified by the project biologist, unless site specific review completed by the project biologist indicates that no impacts to the sensitive resource areas will occur due to topography or other factors.	Construction	Contractor	Must Prepare a Special Provision	None
82	Marbled Murrelet and N. Spotted Owl	For projects with spotted owls or murrelets that have night work only, work will be conducted during the period from 2 hours after sunset to 2 hours before sunrise.	The contractor shall only conduct night work during the period from 2 hours after sunset to 2 hours before sunrise.	Construction	Contractor	1-07.5(6).OPT1(J).FR1	None
83	Marbled Murrelet and N. Spotted Owl	For projects with spotted owls or murrelets that have night work only, work will be conducted during the period from 1 hour after sunset to 1 hour before sunrise.	The contractor shall only conduct night work during the period from 1 hour after sunset to 1 hour before sunrise.	Construction	Contractor	1-07.5(6).OPT1(K).FR1	None
84	Marbled Murrelet and N. Spotted Owl	For projects with spotted owls or murrelets that have with night work only, work will begin at such time as WSDOT determines is necessary based upon daytime traffic volumes and cease work 2 hours before sunrise.	The Engineer will evaluate traffic volumes to determine when night work can start. The contractor must cease work 2 hours before sunrise.	Construction	Contractor	1-07.5(6).OPT1(L).FR1	None
85	Marbled Murrelet and N. Spotted Owl	For projects with spotted owls or murrelets that have night and day time work (24/7), no work will occur from 1 hour before sunrise to 2 hours after sunrise and no work from 2 hours before sunset to 1 hour after sunset.	When night and day time work is required, the contractor shall not perform work from 1 hour before sunrise to 2 hours after sunrise and no work from 2 hours before sunset to 1 hour after sunset.	Construction	Contractor	1-07.5(6).OPT1(M).FR1	None
86	Marbled Murrelet and N. Spotted Owl	For projects with spotted owls or murrelets that have night and day time work (24/7), no work will be conducted from 1 hour before sunrise to 2 hours after sunrise (avoiding the am crepuscular period only).	When night and day time work is required, the contractor shall not perform work from 1 hour before sunrise to 2 hours after sunrise.	Construction	Contractor	1-07.5(6).OPT1(N).FR1	None

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87	Marbled Murrelet and N. Spotted Owl	Activities located within one mile of a murrelet detection section or designated critical habitat will develop and implement a trash handling plan to insure that food wastes and other items attractive to crows, jays, and other Corvidae will be disposed of in a manner that makes it unavailable to these species at any time.	Contractor activities located within one mile of a murrelet detection section or designated critical habitat will develop and implement a trash handling plan to insure that food wastes and other items attractive to crows, jays, and other Corvidae will be disposed of in a manner that makes it unavailable to these species at any time.	Construction	Contractor	1-07.5(6).OPT1(O).GR1	None
88	Marbled Murrelet and N. Spotted Owl	Trees that are removed in potential murrelet nesting habitat will be dropped into the road ROW or areas that will be cleared of vegetation to avoid impacts to adjacent potential habitat. Downed trees will be retained onsite unless prohibited by the land owner. In those circumstances, LWD will be removed and used for future environmental restoration efforts where possible. The PBA Project Notification Form will provide justification for not retaining downed trees on-site or if they are not used for restoration efforts.	Trees that are removed in potential murrelet nesting habitat will be dropped into the road ROW or areas that will be cleared of vegetation to avoid impacts to adjacent potential habitat. Downed trees will be retained onsite unless prohibited by the land owner. In those circumstances, LWD will be removed and used for future environmental restoration efforts where possible. The PBA Project Notification Form will provide justification for not retaining downed trees on-site or if they are not used for restoration efforts.	Construction	Contractor	2-01.3(1).OPT1.GR2	This MM is particularly challenging because the Standard Specs (2-01.2) encourages the contractor to sell trees felled as part of the work.
89	Marbled Murrelet and N. Spotted Owl	Currently or previously-known occupied murrelet or northern spotted owl nest trees will not be removed.	The contractor shall not remove currently or previously-known occupied murrelet or northern spotted owl nest trees.	Design Construction	WSDOT Biology Contractor	1-04.4 1-07.16(2)	None
90	Marbled Murrelet and N. Spotted Owl	The number of large conifers (20 inches dbh or larger) removed will be minimized.	WSDOT Designers will minimize the number of large conifers (20 inches dbh or larger) removed.	Design	WSDOT Design	Standard Operating Procedures	None
91	Marbled Murrelet and N. Spotted Owl	If an active murrelet or northern spotted owl nest is discovered, the activity will cease immediately. A WSDOT and USFWS biologist will be notified immediately and all activities within the disturbance threshold distances (within 0.25 mile of an active nest tree for all activities except blasting, which is 1 mile) will be postponed until after the nesting season.	If the Contractor, WSDOT Construction or Biology staff discovers an active murrelet or northern spotted owl nest, the activity will cease immediately. A WSDOT and USFWS biologist will be notified immediately and all activities within the disturbance threshold distances (within 0.25 mile of an active nest tree for all activities except blasting, which is 1 mile) will be postponed until after the nesting season.	Construction Construction	WSDOT Construction or Biology Contractor	1-04.4	This Standard Specification is entitled 'Changes' and the contractor must follow orders from the PE to speed up or delay work.
92	Marbled Murrelet and N. Spotted Owl	When working within the early northern spotted owl or murrelet nesting season is unavoidable (i.e., due to adverse weather conditions and snow at high elevations [including blasting], low temperature or coastal fog, or emergency actions addressed in this PBA), work will be phased to the extent possible so activities within disturbance threshold distances are conducted as late as possible in the nesting period.	When working within the early northern spotted owl or murrelet nesting season is unavoidable (i.e., due to adverse weather conditions and snow at high elevations [including blasting], low temperature or coastal fog, or emergency actions addressed in this PBA), WSDOT Designers will phase the work to the extent possible so activities within disturbance threshold distances are conducted as late as possible in the nesting period.	Design	WSDOT Design	Standard Operating Procedures	None

Crosswalk for Programmatic Biological Assessment (PBA) Minimization Measures

MM #	Category	PBA Minimization Measure Language	Revised PBA Minimization Measure Language for the Commitment Tracking System	Phase	Responsibility	Existing Method of Implementation	Notes
93	Marbled Murrelet and N. Spotted Owl	All activities that may result in visual or noise disturbance based on accepted thresholds, within suitable murrelet nesting habitat will restrict activities to between two hours after sunrise and two hours before sunset during the murrelet nesting season (April 1 to September 22).	Contractor activities that may result in visual or noise disturbance based on accepted thresholds, within suitable murrelet nesting habitat will restrict activities to between two hours after sunrise and two hours before sunset during the murrelet nesting season (April 1 to September 22).	Construction	Contractor	1-07.5(6).OPT1(P).FR1	None
94	Marbled Murrelet and N. Spotted Owl	If blasting is to occur in or adjacent to murrelet or northern spotted owl suitable habitat during the nesting season, no blasting will occur that may physically impact potential nest trees, the trees buffering the nest tree, the individual murrelets, northern spotted owls, and/or their eggs.	If blasting is to occur in or adjacent to murrelet or northern spotted owl suitable habitat during the nesting season, the contractor shall not physically impact potential nest trees, the trees buffering the nest tree, the individual murrelets, northern spotted owls, and/or their eggs.	Design Construction	WSDOT Biology Contractor	 2-03.3(2)	We need to encourage our biologists to get engaged in the review of the contractors Type 2E submittal for this Standard Specification.
95	Marbled Murrelet and N. Spotted Owl	Activities will not downgrade a forested stand of suitable murrelet nesting habitat to unsuitable murrelet nesting habitat.	WSDOT Designers will ensure project activities will not downgrade a forested stand of suitable murrelet nesting habitat to unsuitable murrelet nesting habitat.	Design	WSDOT Design and Biology	USFWS Programmatic Biological Opinion - Appendix H	None
96	Marbled Murrelet and N. Spotted Owl	Activities will not downgrade suitable northern spotted owl nesting habitat to roosting and foraging habitat; roosting and foraging habitat to dispersal habitat, and/or dispersal habitat to non-dispersal habitat.	WSDOT Designers will ensure project activities will not downgrade suitable northern spotted owl nesting habitat to roosting and foraging habitat; roosting and foraging habitat to dispersal habitat, and/or dispersal habitat to non-dispersal habitat.	Design	WSDOT Design and Biology	USFWS Programmatic Biological Opinion - Appendix I	None
97	Marbled Murrelet and N. Spotted Owl	Suitable nest trees and suitable habitat cannot be removed during the nesting season.	WSDOT Designers will ensure that suitable nest trees and suitable habitat will not be removed during the nesting season.	Design	WSDOT Design	USFWS Programmatic Biological Opinion - Appendix H and I	None
98	Western Snowy Plover	Activities located within one mile of suitable western snowy plover critical habitat, as identified by the project biologist, will develop and implement a trash handling plan to insure that food wastes and other items attractive to crows, jays, and other Corvidae will be disposed of in a manner that makes it unavailable to these species at any time.	Contractor activities located within one mile of suitable western snowy plover critical habitat, as identified by the project biologist, will develop and implement a trash handling plan to insure that food wastes and other items attractive to crows, jays, and other Corvidae will be disposed of in a manner that makes it unavailable to these species at any time.	Construction	Contractor	Must prepare a region special provision	One GSP can be written for Western Snowy Plover (MM#98), Marbled Murrelet/Spotted Owl (MM#93) since these provisions are identical.
99	Grizzly Bear	Projects involving bridge replacements within the range of the grizzly bear will design the new structure to accommodate the passage of wildlife when practicable.	WSDOT Designers will ensure that new bridges within the range of the grizzly bear will design the new structure to accommodate the passage of wildlife when practicable.	Design	WSDOT Design	Standard Operating Procedures	None
100	Oregon Spotted Frog	An Environmentally Sensitive Area fence (for example, high visibility exclusion fencing) will be installed as necessary along project boundaries to protect offsite habitat including potential breeding sites for Oregon spotted frog. A separate fencing plan should include a map showing the preliminary location of the fence for the project. Construction personnel will not enter the Environmentally Sensitive Areas.	The contractor will install high visibility exclusion fencing as necessary along Environmentally Sensitive Area boundaries to protect offsite habitat including potential breeding sites for Oregon spotted frog. WSDOT Designers will show on the Plans where the fencing must be installed. The contractor shall not enter the Environmentally Sensitive Areas.	Design Construction	WSDOT Design Contractor	Standard Operating Procedures 1-08.4 Standard Plan I-10.10-01	The Designer will show on the plans the placement of the HVF to protect frog habitat.

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101	Oregon Spotted Frog	For Oregon spotted frog projects (except exempt activities as listed in section 3-2.2 of the Highway Runoff Manual (HRM, WSDOT 2014), are subject to minimum stormwater management requirements as outlined in Section 3-3 of the HRM. Non-exempt projects must address erosion control if = 7,000 ft ² of soil will be disturbed or if there is = 2000 ft ² of new, replaced, or new + replaced impervious surface. Erosion control requirements include: 1) a temporary erosion and sediment control (TESC) plan (see TESC Manual), and a project specific spill prevention, control and countermeasures (SPCC) Plan as required in Standard Specification 1.07-15(1).	Oregon spotted frog projects (except exempt activities as listed in section 3-2.2 of the Highway Runoff Manual (2014), are subject to minimum stormwater management requirements as outlined in Section 3-3 of the Highway Runoff Manual. Non-exempt projects must address erosion control if ≥ 7,000 ft ² of soil will be disturbed or if there is ≥ 2000 ft ² of new, replaced, or new + replaced impervious surface. Erosion control requirements include: 1) a Temporary Erosion and Sediment Control (TESC) Plan (see TESC Manual), and a project specific Spill Prevention, Control and Countermeasures (SPCC) Plan as required in Standard Specification 1.07-15(1).	Design Construction	WSDOT Design Contractor	Standard Operating Procedures 8-01 1-07.15(1)	None
102	Oregon Spotted Frog	Stormwater will not be discharged to habitat potentially suitable for Oregon Spotted Frog. Detention ponds will be designed to not attract or promote bullfrogs.	WSDOT Designers will prevent stormwater discharges to habitat potentially suitable for Oregon Spotted Frog. Detention ponds will be designed to not attract or promote bullfrogs.	Design	WSDOT Design	Standard Operating Procedures	None
103	Oregon Spotted Frog	Projects within 200 ft of surface water or areas inundated for four or more months per year will install and maintain BMPs as stated in the HRM and TESC manuals to ensure that no foreign material, such as pavement slurry from asphalt grinding equipment, is sidecast, and to control and prevent sediments from entering aquatic systems.	Projects within 200 ft of surface water or areas inundated for four or more months per year will install and maintain BMPs as stated in the Contract to ensure that no foreign material, such as pavement slurry from asphalt grinding equipment, is sidecast, and to control and prevent sediments from entering aquatic systems.	Construction	Contractor	1-07.5(3) 2-03.3(7) 5-01.3(11) 5-02.3(5)	None
104	Oregon Spotted Frog	WSDOT Designers will minimize the removal of riparian vegetation and the contractor will replant riparian vegetation. Replanting may not be possible in permanent impact areas, the roadway clear zone, or adjacent to or under bridges. However, potential replanting of riparian vegetation near the site should be evaluated. In areas containing suitable Oregon Spotted Frog habitat, ensure revegetation does not change vegetation from a low vegetation type (grasses and forbs) to a high vegetation type (shrubs and trees).	WSDOT Designers will minimize the removal of riparian vegetation and the contractor will replant riparian vegetation. Replanting may not be possible in permanent impact areas, the roadway clear zone, or adjacent to or under bridges. However, potential replanting of riparian vegetation near the site should be evaluated. In areas containing suitable Oregon Spotted Frog habitat, ensure revegetation does not change vegetation from a low vegetation type (grasses and forbs) to a high vegetation type (shrubs and trees).	Design Construction	WSDOT Design & WSDOT Landscape Contractor	Standard Operating Procedures 1-07.5(2) 1-07.16(2) 8-02.3(2) Planting Plans	The Roadside Restoration Worksheet is filled during the project scoping or early project estimating phase. It documents design decisions as a response to roadside policies as stated in the <i>Roadside Policy Manual</i> and permit requirements. The project is designed to meet those requirements. The Plans and Specifications become part of the Contract, which are implemented by the Contractor.
105	Oregon Spotted Frog	Upon completion of all in-water work, all stream diversion devices, equipment, pipe, and conduits will be removed and disturbed soil will be restored after diversions are removed. Streambank plantings may occur at a later date during the planting season. In areas with suitable Oregon Spotted Frog breeding habitat, do not plant trees, especially conifers, along the shoreline to avoid shading of potential breeding sites.	Upon completion of all in-water work, the contractor shall remove all stream diversion devices, equipment, pipe, and conduits and disturbed soil will be restored after diversions are removed. WSDOT Designers will schedule streambank plantings for a date later in the planting season. In areas with suitable Oregon Spotted Frog breeding habitat, do not plant trees, especially conifers, along the shoreline to avoid shading of potential breeding sites.	Construction Design	Contractor WSDOT Design	7-06.SA1.FR7 7-06.SA2.FR7 8-02.3(8) Standard Operating Procedures	None

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106	Oregon Spotted Frog	Herbicides will not be used within 200 ft of waterbodies unless site specific review completed by the project biologist and landscape architect indicates that topography or other factors preclude herbicides from reaching habitats used by Oregon Spotted Frog. Herbicides applied during the dry season on lands that flood during the winter/spring must break down in the environment before the next inundation	The contractor will not use herbicides within 200 ft of waterbodies unless site specific review completed by the project biologist and landscape architect indicates that topography or other factors preclude herbicides from reaching habitats used by Oregon Spotted Frog. Herbicides applied during the dry season on lands that flood during the winter/spring must break down in the environment before the next inundation.	Construction	Contractor	8-02.3(3)A 8-02.3(2)B 8-02.3(3)B	Permitting Compliance Program has draft edits to the existing Standard Specifications that clearly address this MM.
107	Oregon Spotted Frog	For waters that may be used by Oregon Spotted Frog, culvert cleaning will occur either by hand or from the top of the bank when flow is in the channel, when the stream is either dry, or a flow bypass is installed.	For waters that may be used by Oregon Spotted Frog, the contractor will clean the culvert either by hand or from the top of the bank when flow is in the channel, when the stream is either dry, or a flow bypass is installed.	Construction	Contractor	Must Prepare a Special Provision Perhaps Supplement 7-07.3	None
108	Coordination with Other Federal Agencies	To facilitate compliance with the Northwest Forest Plan Standards and Guidelines, WSDOT will coordinate with the appropriate Forest Service ranger district if tree removal, including dying, dead, or downed wood is proposed on lands identified in the plan. Coordination will be documented within the PBA notification form.	To facilitate compliance with the Northwest Forest Plan Standards and Guidelines, WSDOT Designers will coordinate with the appropriate Forest Service ranger district if tree removal, including dying, dead, or downed wood is proposed on lands identified in the plan. Coordination will be documented within the PBA notification form.	Design	WSDOT Design	Standard Operating Procedures	None
109	Coordination with Other Federal Agencies	On National Forests and Parks that do not have a current agreement with WSDOT to use this PBA, the project biologist will contact appropriate Forest/Park staff and receive written approval to use the PBA. The Forest/Park may have additional conditions that will be followed.	On National Forests and Parks that do not have a current agreement with WSDOT to use this PBA, the WSDOT Biologist will contact appropriate Forest/Park staff and receive written approval to use the PBA. The Forest/Park may have additional conditions that will be followed.	Design	WSDOT Design	Standard Operating Procedures	None