

Green Diamond RMWDRs and Proposed FMWDRs  
COVERED ACTIVITIES MATRIX

Covered Activities	Reference Conservation Measures	Reference Environmental Document
<b><i>EXISTING ROAD MANAGEMENT WDRs</i></b>		
A1) <b>Road Upgrading, Decommissioning and Maintenance</b>	<b>Purpose of the measures is to reduce and minimize sediment production caused by road upgrading, decommissioning and maintenance.</b> Measures for upgrading roads (AHCP 6.2.3.4 and MATO Conditions A1, A3 and A6); Measures for decommissioning roads (AHCP 6.2.3.3 and MATO Conditions A1, A4 and A6); Measures for maintaining roads (AHCP 6.2.3.9 and MATO Conditions A1, A3, A5, and A6)	Biological Resources (MND pg 17-27); Geology, Soils and Seismicity (MND pg 30-37); Hydrology and Water Quality (MND pg 44-49); Geology, Geomorphology and Mineral Resources: Surface Erosion (FEIS 4.2.3.1), Road-related Sediment Production (FEIS 4.2.3.4); Hydrology and Water Quality: Hydrology (FEIS 4.3.3.1), Water Temperature (FEIS 4.3.3.2), Sediment Control (FEIS 4.3.3.3); Aquatic Resources: Hydrologic Effects (FEIS 4.4.3.1), Sediment Production and Delivery (FEIS 4.4.3.3), Aquatic Habitat (FEIS 4.4.3.4)
<b><i>PROPOSED FOREST MANAGEMENT WDRs</i></b>		
B1) <b>Road Construction and Reconstruction</b>	<b>Purpose of the measures is to reduce and minimize road-related sediment production caused by road construction and reconstruction.</b> Measures for constructing new roads or reconstructing existing roads (AHCP 6.2.3.5 and MATO Conditions A1 and A2); Erosion control measures for new road construction (AHCP 6.2.3.8); New road construction and reconstruction requirements on SSS slopes (AHCP 6.2.2.1.9), headwall swales (AHCP 6.2.2.2.5), deep-seated landslides (AHCP 6.2.2.3.6), and shallow rapid landslides (AHCP 6.2.2.4).	Biological Resources (MND pg 17-27); Geology, Soils and Seismicity (MND pg 30-37); Hydrology and Water Quality (MND pg 44-49); Geology, Geomorphology and Mineral Resources: Surface Erosion (FEIS 4.2.3.1), Hillslope Mass Wasting (FEIS 4.2.3.2), Road-related Sediment Production (FEIS 4.2.3.4); Hydrology and Water Quality: Hydrology (FEIS 4.3.3.1), Water Temperature (FEIS 4.3.3.2), Sediment Control (FEIS 4.3.3.3); Aquatic Resources: Sediment Production and Delivery (FEIS 4.4.3.3), Aquatic Habitat (FEIS 4.4.3.4)
B2) <b>Timber-Product Harvest and Transport Activities</b>		
a) <b>Felling and Bucking Timber</b>	<b>Purpose of the measures is to reduce and minimize surface erosion, hillslope mass wasting and road-related sediment delivery from the potential affects of felling and bucking timber. The riparian and slope stability measures also provide LWD recruitment, stream shading, sediment filtration, streambank stability and nutrient inputs through the retention of trees on slopes adjacent to watercourses and unstable areas.</b> Measures for riparian management (AHCP 6.2.1); Measures for managing slope stability (AHCP 6.2.2); Time of year restrictions (AHCP 6.2.4.4); Erosion control and treatment of exposed soils in RMZs and EEZs (AHCP 6.2.4.4); Ground based falling slope gradient restrictions (AHCP 6.2.4.5.2)	Biological Resources (MND pg 17-27); Geology, Soils and Seismicity (MND pg 30-37); Hydrology and Water Quality (MND pg 44-49); Geology, Geomorphology and Mineral Resources: Surface Erosion (FEIS 4.2.3.1), Hillslope Mass Wasting (FEIS 4.2.3.2), Reduced Streambank Stability (FEIS 4.2.3.3); Hydrology and Water Quality: Hydrology (FEIS 4.3.3.1), Water Temperature (FEIS 4.3.3.2), Sediment Control (FEIS 4.3.3.3); Aquatic Resources: Hydrologic Effects (FEIS 4.4.3.1), Riparian Conditions (FEIS 4.4.3.2), Sediment Production and Delivery (FEIS 4.4.3.3), Aquatic Habitat (FEIS 4.4.3.4)
b) <b>Yarding Timber</b>	<b>Purpose of the measures is to reduce and minimize surface erosion, hillslope mass wasting and road-related sediment delivery from the potential affects of yarding timber. The riparian and slope stability measures also provide LWD recruitment, stream shading, sediment filtration, streambank stability and nutrient inputs through the retention of trees on slopes adjacent to watercourses and unstable areas.</b> Measures for riparian management (AHCP 6.2.1); Measures for managing slope stability (AHCP 6.2.2); Erosion control and treatment of exposed soils in RMZs and EEZs (AHCP 6.2.4.4)	Biological Resources (MND pg 17-27); Geology, Soils and Seismicity (MND pg 30-37); Hydrology and Water Quality (MND pg 44-49); Geology, Geomorphology and Mineral Resources: Surface Erosion (FEIS 4.2.3.1), Hillslope Mass Wasting (FEIS 4.2.3.2), Reduced Streambank Stability (FEIS 4.2.3.3); Hydrology and Water Quality: Hydrology (FEIS 4.3.3.1), Water Temperature (FEIS 4.3.3.2), Sediment Control (FEIS 4.3.3.3); Aquatic Resources: Hydrologic Effects (FEIS 4.4.3.1), Riparian Conditions (FEIS 4.4.3.2), Sediment Production and Delivery (FEIS 4.4.3.3), Aquatic Habitat (FEIS 4.4.3.4)

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i. Ground-Based Yarding	<p><b>Purpose of the measures is to reduce and minimize surface erosion and hillslope mass wasting and to maintain streambank stability from the potential affects of ground-based yarding activities.</b> Time of year restrictions and skid trail use procedures when using tractors, skidders and fowarders (AHCP 6.2.4.5); Assessment and repair of legacy skid trails within harvest units (AHCP 6.2.4.6); Time of year restrictions for feller bunchers and shovel logging operations (AHCP 6.2.4.7)</p>	<p>Biological Resources (MND pg 17-27); Geology, Soils and Seismicity (MND pg 30-37); Hydrology and Water Quality (MND pg 44-49); Geology, Geomorphology and Mineral Resources: Surface Erosion (FEIS 4.2.3.1), Hillslope Mass Wasting (FEIS 4.2.3.2), Reduced Streambank Stability (FEIS 4.2.3.3); Hydrology and Water Quality: Hydrology (FEIS 4.3.3.1), Water Temperature (FEIS 4.3.3.2), Sediment Control (FEIS 4.3.3.3); Aquatic Resources: Hydrologic Effects (FEIS 4.4.3.1), Riparian Conditions (FEIS 4.4.3.2), Sediment Production and Delivery (FEIS 4.4.3.3), Aquatic Habitat (FEIS 4.4.3.4)</p>
ii. Cable Yarding	<p><b>Purpose of the measures is to reduce and minimize surface erosion and hillslope mass wasting and to maintain streambank stability from the potential affects of cable yarding activities.</b> Minimize ground impacts in RMZs and EEZs; Treat exposed soils in RMZs and EEZs and waterbar cable corridors that can delievery sediment to a watercourse (AHCP 6.2.4.8)</p>	<p>Biological Resources (MND pg 17-27); Geology, Soils and Seismicity (MND pg 30-37); Hydrology and Water Quality (MND pg 44-49); Geology, Geomorphology and Mineral Resources: Surface Erosion (FEIS 4.2.3.1), Hillslope Mass Wasting (FEIS 4.2.3.2), Reduced Streambank Stability (FEIS 4.2.3.3); Hydrology and Water Quality: Hydrology (FEIS 4.3.3.1), Water Temperature (FEIS 4.3.3.2), Sediment Control (FEIS 4.3.3.3); Aquatic Resources: Hydrologic Effects (FEIS 4.4.3.1), Riparian Conditions (FEIS 4.4.3.2), Sediment Production and Delivery (FEIS 4.4.3.3), Aquatic Habitat (FEIS 4.4.3.4)</p>
iii. Aerial Yarding	<p><b>Purpose of the measures is to reduce and minimize surface erosion, hillslope mass wasting, and road-related sediment delivery and to maintain streambank stability from the potential affects of aerial yarding activities.</b> Alternative to ground-based and cable yarding to avoid road construction across overly steep and/or unstable terrain (AHCP 6.2.4.9); Helicopter landing use limitations (AHCP 6.2.3.10.3)</p>	<p>Biological Resources (MND pg 17-27); Geology, Soils and Seismicity (MND pg 30-37); Hydrology and Water Quality (MND pg 44-49); Geology, Geomorphology and Mineral Resources: Surface Erosion (FEIS 4.2.3.1), Hillslope Mass Wasting (FEIS 4.2.3.2), Reduced Streambank Stability (FEIS 4.2.3.3); Hydrology and Water Quality: Hydrology (FEIS 4.3.3.1), Water Temperature (FEIS 4.3.3.2), Sediment Control (FEIS 4.3.3.3); Aquatic Resources: Hydrologic Effects (FEIS 4.4.3.1), Riparian Conditions (FEIS 4.4.3.2), Sediment Production and Delivery (FEIS 4.4.3.3), Aquatic Habitat (FEIS 4.4.3.4)</p>
c) Landing Construction and Maintenance	<p><b>Purpose of the measures is to reduce and minimize sediment production caused by landing construction and maintenance.</b> Timing, location and specifications of landing construction (AHCP 6.2.3.7); Erosion control for landing construction (AHCP 6.2.3.8)</p>	<p>Biological Resources (MND pg 17-27); Geology, Soils and Seismicity (MND pg 30-37); Hydrology and Water Quality (MND pg 44-49); Geology, Geomorphology and Mineral Resources: Surface Erosion (FEIS 4.2.3.1), Hillslope Mass Wasting (FEIS 4.2.3.2), Road-related Sediment Production (FEIS 4.2.3.4); Hydrology and Water Quality: Hydrology (FEIS 4.3.3.1), Water Temperature (FEIS 4.3.3.2), Sediment Control (FEIS 4.3.3.3); Aquatic Resources: Sediment Production and Delivery (FEIS 4.4.3.3), Aquatic Habitat (FEIS 4.4.3.4)</p>

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d) Loading and Other Landing Operations	<b>Purpose of the measures is to reduce and minimize surface erosion, hillslope mass wasting, and road-related sediment delivery to watercourses from the potential affects of loading and other landing operations.</b> Minimize landing construction and size of landings (AHCP 6.2.4.10); Landing surfaces and timing of loading (AHCP 6.2.3.10); Restrictions for using landings in RMZs (AHCP 6.2.3.10.5); Measures for landing construction (AHCP 6.2.3.7 and 6.2.3.8)	Biological Resources (MND pg 17-27); Geology, Soils and Seismicity (MND pg 30-37); Hydrology and Water Quality (MND pg 44-49); Geology, Geomorphology and Mineral Resources: Surface Erosion (FEIS 4.2.3.1), Road-related Sediment Production (FEIS 4.2.3.4); Hydrology and Water Quality: Hydrology (FEIS 4.3.3.1), Water Temperature (FEIS 4.3.3.2), Sediment Control (FEIS 4.3.3.3); Aquatic Resources: Hydrologic Effects (FEIS 4.4.3.1), Sediment Production and Delivery (FEIS 4.4.3.3), Aquatic Habitat (FEIS 4.4.3.4)
e) Salvaging Timber Products	<b>Purpose of the measures is to reduce and minimize surface erosion and hillslope mass wasting from the potential affects of salvage operations.</b> No salvage in Class I floodplains or CMZs (AHCP 6.2.1.2.10); No or limited salvage in Class I and II RMZs (AHCP 6.2.1.2.9, 6.2.1.2.11, 6.2.1.4.8, 6.2.1.4.9); Retain LWD in Class III EEZs (AHCP 6.2.1.7.5); Measures for changed circumstances related to fire and salvaging (AHCP 6.2.9.1)	Biological Resources (MND pg 17-27); Geology, Soils and Seismicity (MND pg 30-37); Hydrology and Water Quality (MND pg 44-49); Geology, Geomorphology and Mineral Resources: Surface Erosion (FEIS 4.2.3.1), Hillslope Mass Wasting (FEIS 4.2.3.2), Reduced Streambank Stability (FEIS 4.2.3.3); Hydrology and Water Quality: Hydrology (FEIS 4.3.3.1), Water Temperature (FEIS 4.3.3.2), Sediment Control (FEIS 4.3.3.3); Aquatic Resources: Hydrologic Effects (FEIS 4.4.3.1), Riparian Conditions (FEIS 4.4.3.2), Sediment Production and Delivery (FEIS 4.4.3.3), Aquatic Habitat (FEIS 4.4.3.4)
f) Transporting Timber and Rock Products	<b>Purpose of the measures is to reduce and minimize surface erosion caused by road use.</b> Turbidity restrictions, seasonal road use and landing restrictions (AHCP 6.2.3.10 and 6.2.3.13.3)	Geology, Soils and Seismicity (MND pg 30-37); Hydrology and Water Quality (MND pg 44-49); Geology, Geomorphology and Mineral Resources: Surface Erosion (FEIS 4.2.3.1), Road-Related Sediment Production (FEIS 4.2.3.4); Hydrology and Water Quality: Water Temperature (FEIS 4.3.3.2), Sediment Control (FEIS 4.3.3.3); Aquatic Resources: Hydrologic Effects (FEIS 4.4.3.1), Sediment Production and Delivery (FEIS 4.4.3.3), Aquatic Habitat (FEIS 4.4.3.4)
g) Rock Pit Construction and Use	<b>Purpose of the measures is to reduce and minimize sediment production caused by rock pit construction and use.</b> Turbidity restriction, location of new rock quarries and use restrictions of existing quarries (AHCP 6.2.3.13)	Mineral Resources (MND pg 51-52); Aquatic Resources: Other Factors (FEIS 4.4.3.5); Also see 'Road Use including Transporting Timber and Rock Products'
h) Equipment Maintenance	<b>Measures to prevent soil and water contamination when conducting equipment maintenance (MATO A1)</b>	Hazards and Hazardous Materials (MND pg 40-44)
i) Water Drafting and Storage	<b>Purpose of the measures are to prevent aquatic vertebrates from being suctioned up or dewatering sections of streams.</b> Water drafting and storage restrictions (MATO A7)	Air Quality (MND pg 15-16); Aquatic Resources: Other Factors (FEIS 4.4.3.5)

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<b>B3) Silvicultural Regimes and Timber Stand Regeneration and Improvement</b>		
a) Site Preparation, Prescribed Burning, and Slash Treatment	<b>Purpose of the measures is to limit the amount of ground and forest floor disturbance while preparing the ground for planting. The measures reduce and minimize surface erosion from treated areas and from road use.</b> Measures to manage logging slash to reduce risk of fire and prepare the ground for reforestation includes broadcast burning, pile burning and mechanized site preparation such as biomass harvesting (AHCP 6.2.4.2); Road use limitations and exceptions for site preparation burning purposes (AHCP 6.2.3.10 and 6.2.3.10.4)	Air Quality (MND pg 15-16); Geology, Soils and Seismicity (MND pg 30-37); Hydrology and Water Quality (MND pg 44-49); Geology, Geomorphology and Mineral Resources: Surface Erosion (FEIS 4.2.3.1); Hydrology and Water Quality: Hydrology (FEIS 4.3.3.1), Sediment Control (FEIS 4.3.3.3); Aquatic Resources: Hydrologic Effects (FEIS 4.4.3.1), Riparian Conditions (FEIS 4.4.3.2), Sediment Production and Delivery (FEIS 4.4.3.3)
b) Tree Planting	<b>Purpose of the measures is to reduce and minimize surface erosion caused by road use during tree planting activities.</b> Road use limitations and exceptions for tree planting purposes (AHCP 6.2.3.10 and 6.2.3.10.4)	Geology, Soils and Seismicity (MND pg 30-37); Hydrology and Water Quality (MND pg 44-49); Geology, Geomorphology and Mineral Resources: Road-Related Sediment Production (FEIS 4.2.3.4); Aquatic Resources: Sediment Production and Delivery (FEIS 4.4.3.3)
c) Control of Competing Vegetation	<b>Purpose of the measures is to reduce and minimize surface erosion caused mechanical falling of competing vegetation and by road use.</b> Time of year restrictions (AHCP 6.2.4.4); Road use limitations (AHCP 6.2.3.10)	Application of Herbicides and Fertilizer (FEIS 4.1.2.4)
d) Precommercial Thinning and Pruning	<b>Purpose of the measures is to reduce and minimize surface erosion, hillslope mass wasting and road-related sediment delivery from the potential affects of precommercial thinning and pruning activities.</b> Time of year restrictions (AHCP 6.2.4.3 and 6.2.4.4); Road use limitations (AHCP 6.2.3.10)	Biological Resources (MND pg 17-27); Geology, Soils and Seismicity (MND pg 30-37); Hydrology and Water Quality (MND pg 44-49); Geology, Geomorphology and Mineral Resources: Surface Erosion (FEIS 4.2.3.1), Hillslope Mass Wasting (FEIS 4.2.3.2), Reduced Streambank Stability (FEIS 4.2.3.3); Hydrology and Water Quality: Water Temperature (FEIS 4.3.3.2), Sediment Control (FEIS 4.3.3.3); Aquatic Resources: Hydrologic Effects (FEIS 4.4.3.1), Riparian Conditions (FEIS 4.4.3.2), Sediment Production and Delivery (FEIS 4.4.3.3), Aquatic Habitat (FEIS 4.4.3.4)
e) Commercial Thinning	<b>Purpose of the measures is to reduce and minimize surface erosion, hillslope mass wasting and road-related sediment delivery from the potential affects of commercial thinning activities.</b> Seasonal limits on felling and yarding operations (AHCP 6.2.4.3 through 6.2.4.9); Road use limitations (AHCP 6.2.3.10)	Biological Resources (MND pg 17-27); Geology, Soils and Seismicity (MND pg 30-37); Hydrology and Water Quality (MND pg 44-49); Geology, Geomorphology and Mineral Resources: Surface Erosion (FEIS 4.2.3.1), Hillslope Mass Wasting (FEIS 4.2.3.2), Reduced Streambank Stability (FEIS 4.2.3.3); Hydrology and Water Quality: Water Temperature (FEIS 4.3.3.2), Sediment Control (FEIS 4.3.3.3); Aquatic Resources: Hydrologic Effects (FEIS 4.4.3.1), Riparian Conditions (FEIS 4.4.3.2), Sediment Production and Delivery (FEIS 4.4.3.3), Aquatic Habitat (FEIS 4.4.3.4)

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f) Selection Harvest	<b>Purpose of the measures is to reduce and minimize surface erosion, hillslope mass wasting and road-related sediment delivery from the potential affects of selection harvest activities.</b> Measures for riparian management (AHCP 6.2.1); Measures for managing slope stability (AHCP 6.2.2); Seasonal limits on felling and yarding operations (AHCP 6.2.4.3 through 6.2.4.9); Road use limitations (AHCP 6.2.3.10)	Biological Resources (MND pg 17-27); Geology, Soils and Seismicity (MND pg 30-37); Hydrology and Water Quality (MND pg 44-49); Geology, Geomorphology and Mineral Resources: Surface Erosion (FEIS 4.2.3.1), Hillslope Mass Wasting (FEIS 4.2.3.2), Reduced Streambank Stability (FEIS 4.2.3.3); Hydrology and Water Quality: Water Temperature (FEIS 4.3.3.2), Sediment Control (FEIS 4.3.3.3); Aquatic Resources: Hydrologic Effects (FEIS 4.4.3.1), Riparian Conditions (FEIS 4.4.3.2), Sediment Production and Delivery (FEIS 4.4.3.3), Aquatic Habitat (FEIS 4.4.3.4)
g) Even-aged harvest	<b>Purpose of the measures is to reduce and minimize surface erosion, hillslope mass wasting and road-related sediment delivery from the potential affects of even-aged harvest activities.</b> Measures for riparian management (AHCP 6.2.1); Measures for managing slope stability (AHCP 6.2.2); Seasonal limits on felling and yarding operations (AHCP 6.2.4.3 through 6.2.4.9); Road use limitations (AHCP 6.2.3.10)	Biological Resources (MND pg 17-27); Geology, Soils and Seismicity (MND pg 30-37); Hydrology and Water Quality (MND pg 44-49); Geology, Geomorphology and Mineral Resources: Surface Erosion (FEIS 4.2.3.1), Hillslope Mass Wasting (FEIS 4.2.3.2), Reduced Streambank Stability (FEIS 4.2.3.3); Hydrology and Water Quality: Water Temperature (FEIS 4.3.3.2), Sediment Control (FEIS 4.3.3.3); Aquatic Resources: Hydrologic Effects (FEIS 4.4.3.1), Riparian Conditions (FEIS 4.4.3.2), Sediment Production and Delivery (FEIS 4.4.3.3), Aquatic Habitat (FEIS 4.4.3.4)
B4) <b>Minor Forest-Product Harvest</b>	<b>Purpose of the measures is to reduce and minimize surface erosion, hillslope mass wasting and road-related sediment delivery from the potential affects of harvesting minor forest-products.</b> Seasonal limits on felling and yarding operations (AHCP 6.2.4.3 through 6.2.4.9); Road use limitations (AHCP 6.2.3.10)	Biological Resources (MND pg 17-27); Geology, Soils and Seismicity (MND pg 30-37); Hydrology and Water Quality (MND pg 44-49); Geology, Geomorphology and Mineral Resources: Surface Erosion (FEIS 4.2.3.1), Hillslope Mass Wasting (FEIS 4.2.3.2), Reduced Streambank Stability (FEIS 4.2.3.3); Hydrology and Water Quality: Hydrology (FEIS 4.3.3.1), Water Temperature (FEIS 4.3.3.2), Sediment Control (FEIS 4.3.3.3); Aquatic Resources: Hydrologic Effects (FEIS 4.4.3.1), Riparian Conditions (FEIS 4.4.3.2), Sediment Production and Delivery (FEIS 4.4.3.3), Aquatic Habitat (FEIS 4.4.3.4)
B5) <b>Instream and Riparian Restoration</b>	<b>Purpose of measures is to improve the riparian and instream habitat conditions for aquatic species.</b> Timing, methods, and procedures for conducting instream and riparian restoration projects (MATO A8)	Manadatory Findings of Significance (MND pg 63-64); Aquatic Resources: Research and Monitoring (FEIS 4.4.3.6)

**References**

<b>AHCP:</b>	<a href="#">Green Diamond Resource Company's Aquatic Habitat Conservation Plan and Candidate Conservation Agreement With Assurances. October 2006.</a>
<b>FEIS:</b>	<a href="#">Final Environmental Impact Statement For Authorization for Incidental Take and Implementation of a Multiple Species Aquatic Habitat Conservation Plan and Candidate Conservation Agreement with Assurances Issued to Green Diamond Resource Company. October</a>
<b>MND:</b>	<a href="#">Initial Study/Mitigated Negative Declaration for a Master Agreement for Timber Operations and Road Management Waste Discharge Requirements for Green Diamond Resource Company Northern California Timberlands. May 2010</a>
<b>MATO:</b>	<a href="#">Master Agreement for Timber Operations No. 1600-2010-0114-R1 By and Between California Department of Fish and Game and Green Diamond Resource Company. May 2010.</a>