

Table 4–1. Impact Mechanisms Associated with Implementation of the Covered Activities

<i>Covered Activity</i>	<i>Impact Mechanisms on Covered Species and Natural Communities</i>
Permanent Development	<ol style="list-style-type: none"> 1. Temporary noise and visual disturbances associated with construction-related activities 2. Ongoing noise and visual disturbances associated with increased human activity near constructed structures 3. Habitat removal within the footprint of constructed structures 4. Direct injury or mortality of covered species associated with construction-related activities 5. Direct injury or mortality of covered species associated with increased human activity near constructed structures (e.g., increased risk for vehicle strikes) 6. Removal of natural communities within the footprint of constructed structures 7. Altered hydrology associated with grading or other modifications to runoff patterns 8. Increased risk for introduction of contaminants associated with construction of and post-construction use of structures (e.g., fuel spills) 9. Introduction of and spread of non-native plants and other organisms associated with construction-related disturbance of soils 10. Erosion and sedimentation associated with construction-related disturbance of soils 11. Increased risk for wildfire associated with increased human activity near constructed structures
Recreational Activity-Related Construction	<ol style="list-style-type: none"> 1. Temporary noise and visual disturbances associated with construction-related activities 2. Ongoing noise and visual disturbances associated with increased human activity near constructed structures 3. Habitat removal within the footprint of constructed structures 4. Direct injury or mortality of covered species associated with construction-related activities 5. Direct injury or mortality of covered species associated with increased human activity near constructed structures (e.g., increased risk for vehicle strikes) 6. Increased risk for spread of non-native plants from boats coming from different watersheds (from boat ramps) 7. Change in hydrology and modified runoff patterns (from construction and storm facilities) 8. Changes in water quality (sediment load, eutrophication, toxics) (from golf course, ball field construction)
Transportation Facilities Construction	<ol style="list-style-type: none"> 1. Temporary noise and visual disturbances associated with construction-related activities 2. Ongoing noise and visual disturbances associated with increased human activity near constructed structures 3. Habitat removal within the footprint of constructed structures 4. Direct injury or mortality of covered species associated with construction-related activities 5. Direct injury or mortality of covered species associated with increased human activity near constructed structures (e.g., increased risk for vehicle strikes) 6. Changes in water quality and disturbance of habitat (temporary from construction of bridges)

Table 4-1. Impact Mechanisms Associated with the Covered Activities and Conservation Measures (continued)

<i>Covered Activity</i>	<i>Impact Mechanisms on Covered Species and Natural Communities</i>
Permanent Development	
Pipeline Installation	<ol style="list-style-type: none"> 1. Temporary noise and visual disturbances associated with construction-related and subsequent maintenance activities 2. Temporary and permanent habitat removal within the footprint of constructed structures 3. Direct injury or mortality of covered species associated with construction-related activities 4. Direct injury or mortality of covered species associated with increased human activity near constructed structures (e.g., increased risk for vehicle strikes) 5. Reduction in water quality (temporary construction of storm drains)
Utility Services – Above and Below Ground	<ol style="list-style-type: none"> 1. Temporary noise and visual disturbances associated with construction-related and subsequent maintenance activities 2. Temporary and permanent habitat removal within the footprint of constructed structures 3. Direct injury or mortality of covered species associated with construction-related activities 4. Direct injury or mortality of covered species associated with increased human activity near constructed structures (e.g., increased risk for vehicle strikes)
Waste and Wastewater Management Activities	<ol style="list-style-type: none"> 1. Temporary noise and visual disturbances associated with construction-related activities 2. Ongoing noise and visual disturbances associated with increased human activity near constructed structures 3. Habitat removal within the footprint of constructed structures 4. Direct injury or mortality of covered species associated with construction-related activities 5. Direct injury or mortality of covered species associated with increased human activity near constructed structures (e.g., increased risk for vehicle strikes) 6. Discharge of effluent 7. Treatment effluent may reduce water quality (eutrophication, turbidity, toxics)
Flood Control and Stormwater Management Activities	<ol style="list-style-type: none"> 1. Temporary noise and visual disturbances associated with construction-related activities 2. Habitat removal within the footprint of constructed structures 3. Direct injury or mortality of covered species associated with construction-related activities 4. Reduction in aquatic habitat 5. Altered in-channel hydrology that influences rearing and holding habitat of covered species

Table 4-1. Impact Mechanisms Associated with the Covered Activities and Conservation Measures (continued)

<i>Covered Activity</i>	<i>Impact Mechanisms on Covered Species and Natural Communities</i>
Agricultural Services	<ol style="list-style-type: none"> 1. Temporary noise and visual disturbances associated with construction-related activities 2. Ongoing noise and visual disturbances associated with increased human activity near constructed structures 3. Habitat removal within the footprint of constructed structures 4. Direct injury or mortality of covered species associated with construction-related activities 5. Removal of natural communities within the footprint of constructed structures 6. Altered hydrology associated with grading or other modifications to runoff patterns 7. Increased risk for introduction of contaminants associated with construction of and post-construction use of structures (e.g., fuel spills) 8. Introduction of and spread of non-native plants and other organisms associated with construction-related disturbance of soils 9. Erosion and sedimentation associated with construction-related disturbance of soils
Ongoing Maintenance	
Recreational Activities	<ol style="list-style-type: none"> 1. Direct injury and mortality to covered species associated with human activity and associated equipment, vehicles, and pets 2. Ongoing noise and visual disturbance to community 3. Temporary reduction in water quality (turbidity, sediment load) in and downstream of maintenance area (from cleaning sediment from boat ramps) 4. Introduction and spread of non-native plants 5. Introduction of contaminants or toxic chemicals due to leaks, spills, or other airborne or effluent emissions from recreational equipment and vehicles. 6. Introduction and spread of non-native terrestrial and aquatic organisms 7. Introduction and spread of airborne and waterborne diseases/pathogens 8. Increased risk of wildfire consequent to human activity. 9. Temporary reduction in water quality (turbidity, sediment load) in and downstream of maintenance area (from cleaning sediment from boat ramps) 10. Ongoing physical disturbance to biotic community and soils
Pipeline Maintenance	<ol style="list-style-type: none"> 1. Ongoing noise and visual disturbance associated with maintenance-related activities, equipment, and human activity 2. Direct injury or mortality of covered species associated with maintenance-related activities and equipment (e.g., vehicle strikes during grading, digging, mowing/felling; application of herbicide or other weed and rodent control/abatement actions) 3. Introduction and spread of non-native plants 4. Introduction and spread of pathogens/diseases 5. Ongoing risk for wildfire 6. Ongoing physical disturbance to biotic community and soils associated with maintenance-related activities 7. Introduction of contaminants or toxic chemicals due to leaks, spills, or other airborne or effluent emissions from equipment.

Table 4-1. Impact Mechanisms Associated with the Covered Activities and Conservation Measures (continued)

<i>Covered Activity</i>	<i>Impact Mechanisms on Covered Species and Natural Communities</i>
Utility Services	<ol style="list-style-type: none"> 1. Ongoing noise and visual disturbance associated with maintenance-related activities, equipment, and human activity 2. Direct injury or mortality of covered species associated with maintenance-related activities 3. Introduction and spread of non-native plants 4. Introduction and spread of pathogens/diseases 5. Ongoing risk for wildfire 6. Ongoing physical disturbance to biotic community and soils associated with maintenance-related activities (e.g., grading, digging, mowing/felling, application of herbicide or other weed and rodent control or abatement actions.) 7. Introduction of contaminants or toxic chemicals due to leaks, spills, or other airborne or effluent emissions from equipment.
Conservation Activities within Conservation Lands	<ol style="list-style-type: none"> 1. Take of covered species from maintenance and monitoring activities (direct death, injury, and stress) 2. Visual and noise disturbance associated with monitoring and maintenance activities 3. Introduction and spread of non-native plants 4. Introduction and spread of non-native terrestrial and aquatic organisms 5. Introduction and spread of airborne and waterborne diseases/pathogens 6. Physical disturbance to community and soil associated with monitoring and maintenance activities (e.g., grading, planting, dredging and/or filling)
Waste and Wastewater Facilities Management Activities	<ol style="list-style-type: none"> 1. Direct injury and mortality of covered species due to maintenance activities (e.g., vehicle strikes, movement of materials) 2. Ongoing visual and noise disturbance from maintenance activities 3. Introduction of contaminants or toxic chemicals due to leaks, spills, or other airborne or effluent emissions from waste materials, maintenance equipment and vehicles. 4. Effluent line maintenance will temporarily reduce water quality (turbidity, nutrients, toxics) 5. Physical disturbance to community and removal of habitat due to maintenance activities 6. Introduction and spread of non-native terrestrial and aquatic organisms

Table 4-1. Impact Mechanisms Associated with the Covered Activities and Conservation Measures (continued)

<i>Covered Activity</i>	<i>Impact Mechanisms on Covered Species and Natural Communities</i>
Flood Control and Stormwater Management Activities	<ol style="list-style-type: none"> 1. Direct injury and mortality of covered species due to channel clearing and maintenance activities (e.g., dredging and/or filling; removal of sediment, large woody debris, and aquatic vegetation) and to associated hydrologic changes 2. Ongoing visual and noise disturbance associated with channel clearing and maintenance activities 3. Introduction and spread of nonnative terrestrial and aquatic organisms 4. Introduction of contaminants or toxic chemicals due to leaks, spills, or other airborne or effluent emissions from maintenance equipment and vehicles. 5. Physical disturbance to community and removal of habitat associated with channel clearing and maintenance activities and to hydrologic changes 6. Temporary reduction in water quality (turbidity) in and downstream of maintenance areas 7. Removal of aquatic vegetation and debris removes habitat for covered fish species 8. Removal of aquatic vegetation and debris changes the hydrology upon which covered fish species rely for rearing, foraging, and holding 9. Physical disturbance to biotic community and soils, and consequent temporary or permanent loss of habitat through inundation, desiccation, and other hydrologic and topographic changes 10. Physical disturbance to community due to channel clearing and other maintenance activities, vehicles, and human activity 11. Increased risk for introduction of non-native diseases/pathogens affecting native plant and wildlife populations
Vegetation Management	<ol style="list-style-type: none"> 1. Direct mortality, injury, and stress associated with ongoing maintenance activities (e.g., vehicle strikes, disturbance, and trampling from grazing, grading, planting, mowing, application of herbicide, prescribed fire, vegetation removal and/or weeding) 2. Ongoing visual and noise disturbance to covered species 3. Introduction of contaminants or toxic chemicals due to leaks, spills, or other airborne or effluent emissions from maintenance equipment and vehicles. 4. Introduction and spread of non-native terrestrial and aquatic organisms 5. Increased risk for introduction of diseases/pathogens affecting covered species 6. Ongoing risk of wildfire associated with maintenance activities. 7. Temporary reduction in water quality (turbidity) in and downstream of maintenance areas 8. Removal of aquatic vegetation removes habitat for covered fish species 9. Removal of aquatic vegetation changes the hydrology upon which covered fish species rely for rearing, foraging, and holding 10. Physical disturbance to biotic community and soils associated with ongoing maintenance activities

Table 4-1. Impact Mechanisms Associated with the Covered Activities and Conservation Measures (continued)

<i>Covered Activity</i>	<i>Impact Mechanisms on Covered Species and Natural Communities</i>
Bridge and Drainage Structure Maintenance	<ol style="list-style-type: none"> 1. Direct injury and mortality of covered species due to maintenance activities (e.g., dredging and/or filling; channel clearing, removal of sediment, large woody debris, and aquatic vegetation; scraping/grading, vegetation maintenance, weed/pest control and abatement) 2. Ongoing visual and noise disturbance to covered species 3. Introduction of contaminants or toxic chemicals due to leaks, spills, or other airborne or effluent emissions from maintenance equipment and vehicles. 4. Introduction and spread of non-native plants and other terrestrial and aquatic organisms 5. Introduction of diseases/pathogens affecting covered species 6. Ongoing risk of wildfire associated with maintenance activities. 7. Temporary harassment of covered fish species in and near maintenance areas 8. Temporary reduction in water quality (turbidity, toxics) in and downstream of maintenance areas 9. Removal of aquatic vegetation and debris removes habitat for covered fish species 10. Removal of aquatic vegetation and debris changes the hydrology upon which covered fish species rely for rearing, foraging, and holding 11. Physical disturbance to biotic community and soils due to maintenance activities
Transportation Facilities Maintenance	<ol style="list-style-type: none"> 1. Ongoing noise and visual disturbance associated with maintenance-related activities, equipment, and human activity 2. Direct injury or mortality of covered species associated with maintenance-related activities 3. Introduction and spread of non-native plants and other terrestrial and aquatic organisms 4. Introduction and spread of pathogens/diseases 5. Introduction of contaminants or toxic chemicals due to leaks, spills, or other airborne or effluent emissions from maintenance equipment and vehicles 6. Ongoing risk for wildfire 7. Temporary reduction in water quality (turbidity, toxics) in and downstream of maintenance areas 8. Removal of aquatic vegetation and debris removes habitat for covered fish species 9. Removal of aquatic vegetation and debris changes the hydrology upon which covered fish species rely for rearing, foraging, and holding 10. Ongoing physical disturbance to biotic community and soils associated with maintenance-related activities
Irrigation Districts (Permanent Development and Ongoing Maintenance)	
Irrigation Canal/Ditch Activities	<ol style="list-style-type: none"> 1. Temporary noise and visual disturbances associated with construction- and maintenance-related activities 2. Habitat removal within the footprint of constructed structures 3. Direct injury or mortality of covered species associated with equipment operation 4. Temporary reduction in water quality in and downstream of construction areas during construction 5. Temporary harassment of covered fish species in and near construction areas during construction 6. Introduction of contaminants or toxic chemicals due to leaks, spills, or other airborne or effluent emissions from maintenance equipment and vehicles. 7. Physical disturbance to biotic community and soils, habitat removal associated with channel clearing and maintenance activities
BRCP Conservation Measures	

Table 4-1. Impact Mechanisms Associated with the Covered Activities and Conservation Measures (continued)

<i>Covered Activity</i>	<i>Impact Mechanisms on Covered Species and Natural Communities</i>
Conservation Activities within Conservation Lands	<ol style="list-style-type: none"> 1. Temporary noise and visual disturbances associated with habitat restoration- and enhancement-related activities 2. Alteration of vegetation (e.g., maintenance of fire breaks, removal of non-native vegetation) 3. Habitat removal within the restoration footprint in locations where habitat is type converted 4. Direct injury or mortality of covered species associated with habitat restoration- and enhancement-related, and monitoring activities 5. Erosion and sedimentation associated with construction-related disturbance of soils