

Table 4-3. Covered Activity Impact Assessment Assumptions

<i>Covered Activity</i>	<i>Impact Assessment Assumptions</i>
Within UPAs	
Permanent Development Activities	
Residential, Commercial, Public Facility, and Industrial Construction	Facility permanent development footprints as represented in the BRCP GIS database capture the full extent of natural community and covered species habitat impacts for this category of activities. It is assumed that no development will occur on municipal airport properties within Zone A, as defined by the Butte County Airport Land Use Compatibility Plan (ALUC), unless development plans are provided by the Airport Operator. Approved land uses are those outlined by the ALUC Plan for Zone A.
Recreational Activity-related Construction	<p>The assessment assumes 5 acres of valley oak riparian forest constituting yellow-breasted chat riparian habitat will be removed over the term of the BRCP for the Cedar Grove portion of Bidwell Park activities.</p> <p>The assessment assumes that construction of each pedestrian bridge in the Bidwell Park Upper Park Trail Plan and pedestrian bridges across the Thermalito Power Canal will disturb 50 feet of channel bank along Big Chico Creek for a total of 200 feet for four bridges, but will not result in removal of yellow-breasted chat habitat.</p> <p>The pedestrian bridge across the Feather River in the Oroville UPA is assumed to have the same footprint as described for new bridge construction below.</p> <p>The assessment assumes that the remaining recreational permanent development footprints as represented in the BRCP GIS database capture the full extent of natural community and covered species habitat impacts for this category of activities.</p>
Transportation Facilities Construction	Most transportation facilities construction is encompassed within the permanent development footprints as represented in the BRCP GIS database and therefore permanent development footprints capture the majority of natural community and covered species habitat impacts for transportation-related activities. Specific bridge and roadway project footprints outside of the permanent development footprints have also been included and capture the remaining impacts.
Pipeline Installation	Pipeline permanent development footprints as represented in the BRCP GIS database capture the full extent of natural community and covered species habitat impacts for this category of activities.
Utility Services – Above and Below Ground	Utility permanent development footprints as represented in the BRCP GIS database capture the full extent of natural community and covered species habitat impacts for this category of activities.
Waste and Wastewater Management Activities	Waste and wastewater management permanent development footprints as represented in the BRCP GIS database capture the full extent of natural community and covered species habitat impacts for this category of activities.
Flood Control and Stormwater Management Activities	Flood control and stormwater management permanent development footprints as represented in the BRCP GIS database capture the full extent of natural community and covered species habitat impacts for this category of activities.
Ongoing Maintenance	
Recreational Activities	Vegetation management activities that could affect riparian habitat are assumed to be permanent and are included in the assumptions for recreational permanent development footprints. No additional impacts on covered species are assumed with implementation of the avoidance and minimization measures described in Chapter 5, Conservation Strategy.

Table 4-3. Covered Activity Impact Assessment Assumptions (continued)

<i>Covered Activity</i>	<i>Impact Assessment Assumptions</i>
Transportation Facilities Maintenance	<p>Maintenance of existing roadways is assumed to have no additional impact on covered species habitats because these activities maintain the existing habitat condition.</p> <p>Noise and visual disturbances associated with maintenance activities are assumed to have no additive impacts to existing noise and visual disturbance impacts associated with existing vehicle traffic on roadways.</p> <p>The right-of-way (ROW) of new roads includes habitat maintenance footprints and, therefore, maintenance activities are assumed to permanently remove habitat.</p>
Pipeline Maintenance	Recurring pipeline maintenance activities are considered to permanently remove habitat and that the removed habitat as represented in the BRCP GIS database capture the full extent of natural community and covered species habitat impacts for this category of activities.
Utility Services	Recurring utility maintenance activities are considered to permanently remove habitat and that the removed habitat as represented in the BRCP GIS database capture the full extent of natural community and covered species habitat impacts for this category of activities.
Waste and Wastewater Facilities Management Activities	Recurring waste and wastewater facilities maintenance activities are considered to permanently remove habitat and that the removed habitat as represented in the BRCP GIS database capture the full extent of natural community and covered species habitat impacts for this category of activities.
Irrigation and Drainage Canal Activities	<p>It is assumed that a total of approximately 3 acres of existing disturbed areas within the footprint of the network of canals and ditches inside the UPAs will be affected by activities to replace existing infrastructure features among Biggs West Gridley Water District, Butte Water District, and Richvale Irrigation District in total.</p> <p>This category also includes other maintenance activities associated with irrigation canals/ditches including mowing, maintaining the width of roadways, and maintaining the canals. Approximately 1 mile of canal and ditches would be expected to be annually maintained among the Biggs West Gridley Water District, Butte Water District, and Richvale Irrigation District in total inside the UPAs.</p>
Flood Control and Stormwater Management Activities	Recurring flood control and stormwater management maintenance activities are considered to permanently remove habitat and that the removed habitat as represented in the BRCP GIS database capture the full extent of natural community and covered species habitat impacts for this category of activities.
Vegetation Management	Recurring vegetation management activities are considered to permanently remove habitat and that the removed habitat as represented in the BRCP GIS database capture the full extent of natural community and covered species habitat impacts for this category of activities.
Bridge and Drainage Structure Maintenance	Recurring bridge and drainage structure maintenance activities are considered to permanently remove habitat and that the removed habitat as represented in the BRCP GIS database capture the full extent of natural community and covered species habitat impacts for this category of activities.

Table 4-3. Covered Activity Impact Assessment Assumptions (continued)

Outside UPAs	
Permanent Development Activities	
<i>Transportation Facilities Construction</i>	
BCAG Regional Transportation Plan and Caltrans Projects	<p>The addition of a single lane to an existing two lane roadway permanently removes 18 acres of non-aquatic habitat per mile.</p> <p>The addition of two lanes to an existing four lane roadway permanently removes 36 acres of non-aquatic habitat per mile.</p> <p>There are two 2-acre roadway staging areas per mile of constructed roadway that are within roadway construction footprints.</p> <p>Roadway interchange projects are assumed to have a 45 acre construction footprint, including staging areas that permanently remove non-aquatic habitat.</p> <p>Caltrans roadway construction projects require four 20 acre borrow sites that are located within one mile of road projects.</p> <p>Caltrans borrow sites are located in annual grassland and avoid impacts on covered plant species.</p>
Butte County Rural Bridge Replacement Projects	<p>Each bridge replacement project is assumed to require a 2 acre construction footprint, including a one acre staging area that permanently removes non-aquatic habitat. In-channel operation of equipment temporarily affects 0.26 acre of channel bed below the centerline of each bridge.</p> <p>Noise, visual, and turbidity disturbance impacts on covered fish species for bridge replacement over permanent stream channels are assumed to extend 100 feet downstream and 20 feet upstream from the centerline of each bridge.</p>
Butte County Rural New Bridge Construction Projects	<p>Each bridge replacement project is assumed to require a 2 acre construction footprint, including a one acre staging area that permanently removes non-aquatic habitat. In-channel operation of equipment temporarily affects 0.26 acre of channel bed below the centerline of each bridge.</p> <p>New bridges are assumed to remove 100 feet of channel bank habitat along each side of the channel associated with placement of bridge revetment material.</p> <p>Noise, visual, and turbidity disturbance impacts on covered fish species for bridge replacement over permanent stream channels are assumed to extend 100 feet downstream and 20 feet upstream from the centerline of each bridge.</p>
Butte County Rural Intersection Improvement Projects	<p>Roadway intersection improvement projects are assumed to have a 3 acre construction footprint, including a staging area that permanently remove non-aquatic habitat.</p>

Table 4-3. Covered Activity Impact Assessment Assumptions (continued)

Butte County Rural Roadway Improvement Projects	<p>The addition of a single lane to an existing two lane roadway permanently removes 18 acres of non-aquatic habitat per mile.</p> <p>The addition of two lanes to an existing four lane roadway permanently removes 36 acres of non-aquatic habitat per mile.</p> <p>Each two lane roadway improvement project in the foothill areas where curve straightening may be needed (e.g., La Porte Rd) permanently removes 12 acres of non-aquatic habitat per mile.</p> <p>There are two 2-acre roadway staging areas per mile of constructed roadway that are within roadway construction footprints.</p> <p>The ROW of the Eaton Road Bypass is 150 feet wide within which all non-aquatic habitat would be permanently removed.</p>
Waste Management and Wastewater Facilities	<p>The Chico Waste Water Treatment Plant (WWTP) new trunk sewer line construction footprint is 5 miles long and 100 feet wide, within which all non-aquatic habitat is permanently removed.</p> <p>The Gridley WWTP new sewer line construction footprint is 3 miles long and 100 feet wide, within which all non-aquatic habitat is permanently removed.</p>
Rerouting of Canals (Western Canal Water District, Biggs West Gridley Water District, Butte Water District, and Richvale Irrigation District)	<p>This category includes the rerouting of existing canals that may occur during the permit term. It is assumed that there may be up to one project per district (four in total) with each project covering an approximate 20 acre area. The assessment assumes up to 40 acres of rice land and 40 acres of other agricultural lands that support Swainson's hawk foraging habitat will be removed as a result of rerouting existing canals.</p> <p>The old canals may be reclaimed to a natural state, restored to better functioning habitat, converted to agricultural uses, planted with trees such as cottonwoods, continued to be used as a canal, or used to store rip-rap. The assessment assumes that the old canals will no longer be used to convey agricultural water.</p>
<i>Ongoing Maintenance</i>	
Transportation Facilities Maintenance	<p>Maintenance of vegetation along existing roadways is assumed to have no additional impact on covered species habitats because these activities maintain the existing habitat condition.</p> <p>Noise and visual disturbances associated with maintenance activities are assumed to have no additive impacts to existing noise and visual disturbance impacts associated with existing vehicle traffic on roadways.</p> <p>The right-of-way (ROW) of new roads includes habitat maintenance footprints and, therefore, maintenance activities are assumed to permanently remove habitat.</p> <p>Bike path maintenance activities are assumed to permanently remove 1 acre of cottonwood-willow riparian forest and 1 acre of oak woodland per CAZ over the term of the BRCP. Maintenance activities implemented in habitat are assumed to use non-intrusive methods such that covered species are not impacted by associated noise and visual disturbances.</p>

Table 4-3. Covered Activity Impact Assessment Assumptions (continued)

Waste and Wastewater Management Activities	<p>Recurring maintenance of new sewer lines will not result in additional impacts on habitat because construction of these lines are assumed to have permanent removed the habitat (see description for the activity category under Permanent Development Activities). Impacts of new sewer line maintenance activities on covered species, however, would be avoided and minimized with implementation of the avoidance and minimization measures described in Chapter 5, <i>Conservation Strategy</i>.</p> <p>Maintenance of existing lines includes 100 foot swaths used for 2 existing lines totaling 9 miles and would be a permanent impact.</p> <p>It is also assumed that maintenance of the existing line associated with the Chico WWTP will be maintained to its outfall and impacts to riverine and riparian habitat would be avoided with implementation of the avoidance and minimization measures described in Chapter 5, <i>Conservation Strategy</i>.</p>
Irrigation and Drainage Canal Activities (Western Canal Water District, Biggs West Gridley Water District, Butte Water District, and Richvale Irrigation District)	<p>Approximately 14 miles of canal and ditches would be expected to be annually maintained among the four water districts. The entire length of each canal and ditch will be maintained at least once over the term of the BRCP with multiple maintenance events along some portions. Except when canal and ditch maintenance activities must be implemented during service periods, all maintenance is conducted when the canals and ditches are not in service (January-April).</p> <p>A total of 45 acres of existing disturbed areas within the footprint of the network of canals and ditches will be affected by activities to replace existing infrastructure features (e.g., repair/replacement of pipe and weirs). These repair/replacement projects are conducted from September-November or late-January-April. Projects conducted in fall may require dewatering of the canal or ditch.</p>
Flood Control and Stormwater Management Activities	<p>Flood control and stormwater maintenance activities are only performed on the Sycamore-Mud Creek system.</p> <p>Maintenance activities are limited to the top and outer side of levees and maintain existing habitat conditions.</p> <p>Maintenance methods are low impact and do not result in noise and visual disturbances to covered species with implementation of the avoidance and minimization measures described in Chapter 5, <i>Conservation Strategy</i>.</p>
Vegetation Management	<p>Maintenance of vegetation along existing roadways is assumed to have no additional impact on covered species habitats because these activities maintain the existing habitat condition.</p> <p>Other vegetation management activities are assumed to remove up to 0.01 percent of all natural communities, except agricultural and vernal pool communities (which would not be affected), within each CAZ that remains following implementation of permanent development activities.</p> <p>Other vegetation management activities are assumed to remove up to 0.01 percent of all covered species habitats, except for those covered species that are only associated with agricultural and vernal pool communities, within each CAZ that remains following implementation of permanent development activities.</p> <p>Maintenance methods are low impact and do not result in noise and visual disturbances to covered species with implementation of the avoidance and minimization measures described in Chapter 5, <i>Conservation Strategy</i>.</p>

Table 4-3. Covered Activity Impact Assessment Assumptions (continued)

Bridge and Drainage Structure Maintenance	Recurring Bridge and drainage structure maintenance activities are assumed to permanently remove 1 acre of cottonwood-willow riparian forest in each CAZ over the term of the BRCP.
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