

Species at Risk

Pacific Water Shrew

Sorex bendirii



STATUS

The Pacific Water Shrew is protected under the federal *Species at Risk Act*.

HABITAT DESCRIPTION

The Pacific Water Shrew is generally found in riparian and wetland habitats near water, though individuals have been found in forests as far as 25 to 350 m from a stream. In British Columbia, the species is also found in non-forested grassy habitats bordering ditches and sloughs. This species is associated with skunk cabbage (*Lysichiton americanus*) marshes, red alder (*Alnus rubra*) riparian habitat, and dense, wet forests of western redcedar (*Thuja plicata*). There are no specific data on habitat trends for this species, but there has been a significant loss of wetlands and forests habitats since the early 1900s.

HABITAT FEATURES (BIOPHYSICAL ATTRIBUTES)

Pacific Water Shrews require habitat with the following biophysical attributes:

- Coniferous or deciduous forest or dense marsh/wetland vegetation to provide cover and maintain a moist microenvironment;
- An area of water (natural stream, wetland, or channelized watercourse, whether permanent, ephemeral, or intermittent) to support foraging and provide a moist microenvironment; and
- Downed wood to provide cover and nesting and foraging substrate.

CRITICAL HABITAT RANGE

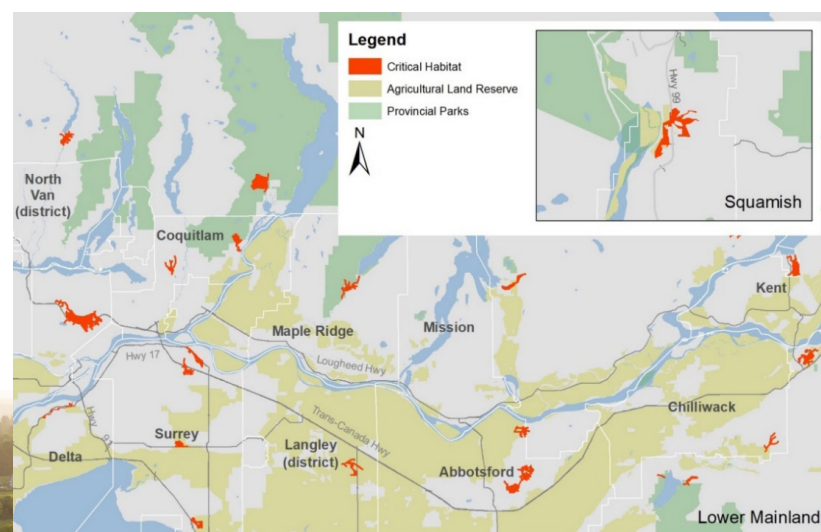


Figure 1: Pacific Water Shrews are found in moist climates throughout the Lower Mainland and in Squamish.

CRITICAL HABITAT FEATURE LINK TO BC AGRICULTURAL BMPs

This table identifies which Environmental Farm Plan (EFP) Beneficial Management Practices (BMPs) may be applicable; other stewardship actions may also be possible.

| Habitat biophysical attributes | Activity that would destroy critical habitat | Agricultural BMP for protection or enhancement of habitat | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| <ul style="list-style-type: none"> Intact riparian vegetation cover Coniferous or deciduous forest stands within 100 m¹ of a watercourse | <p>Partial or total riparian vegetation removal (e.g., forest harvesting, urban or agricultural conversion, linear developments, livestock grazing/trampling).</p> <p><i>How activity would destroy critical habitat:</i></p> <ul style="list-style-type: none"> Vegetation removal (tree/canopy removal, understory alteration) leads to elimination of cover needed for nesting and dispersal Warming/drying of the microclimate, debris deposition, and bank erosion (causing sedimentation of the water course) lead to loss of water quantity/quality required to support foraging on aquatic invertebrates | <ul style="list-style-type: none"> Protect and enhance riparian vegetation Protect and enhance forest stands adjacent to riparian areas <p>BMPs</p> <table> <tr> <td>2006-0601</td> <td>2006-0602</td> </tr> <tr> <td>2006-1002</td> <td>2006-1003</td> </tr> <tr> <td>2006-2001</td> <td>2006-2101</td> </tr> <tr> <td>2006-2104</td> <td>2006-2107</td> </tr> <tr> <td>2006-2203</td> <td>2018/2019-0601</td> </tr> <tr> <td>2018/2019-0704</td> <td>2018/2019-3001</td> </tr> <tr> <td>2018/2019-1002</td> <td>2018/2019-1003</td> </tr> <tr> <td>2018/2019-1004</td> <td>2018/2019-1005</td> </tr> <tr> <td>2018/2019-1101</td> <td>2018/2019-2201</td> </tr> <tr> <td>2018/2019-2202</td> <td>2018/2019-2204</td> </tr> <tr> <td>2018/2019-2205</td> <td>2018/2019-3501</td> </tr> </table> | 2006-0601 | 2006-0602 | 2006-1002 | 2006-1003 | 2006-2001 | 2006-2101 | 2006-2104 | 2006-2107 | 2006-2203 | 2018/2019-0601 | 2018/2019-0704 | 2018/2019-3001 | 2018/2019-1002 | 2018/2019-1003 | 2018/2019-1004 | 2018/2019-1005 | 2018/2019-1101 | 2018/2019-2201 | 2018/2019-2202 | 2018/2019-2204 | 2018/2019-2205 | 2018/2019-3501 |
| 2006-0601 | 2006-0602 | | | | | | | | | | | | | | | | | | | | | | | |
| 2006-1002 | 2006-1003 | | | | | | | | | | | | | | | | | | | | | | | |
| 2006-2001 | 2006-2101 | | | | | | | | | | | | | | | | | | | | | | | |
| 2006-2104 | 2006-2107 | | | | | | | | | | | | | | | | | | | | | | | |
| 2006-2203 | 2018/2019-0601 | | | | | | | | | | | | | | | | | | | | | | | |
| 2018/2019-0704 | 2018/2019-3001 | | | | | | | | | | | | | | | | | | | | | | | |
| 2018/2019-1002 | 2018/2019-1003 | | | | | | | | | | | | | | | | | | | | | | | |
| 2018/2019-1004 | 2018/2019-1005 | | | | | | | | | | | | | | | | | | | | | | | |
| 2018/2019-1101 | 2018/2019-2201 | | | | | | | | | | | | | | | | | | | | | | | |
| 2018/2019-2202 | 2018/2019-2204 | | | | | | | | | | | | | | | | | | | | | | | |
| 2018/2019-2205 | 2018/2019-3501 | | | | | | | | | | | | | | | | | | | | | | | |
| <ul style="list-style-type: none"> Downed woody debris in riparian understorey | <p>Removal of woody debris in riparian understorey.</p> <p><i>How activity would destroy critical habitat:</i></p> <ul style="list-style-type: none"> Removal of woody debris leads to loss of nesting, foraging, and cover structures | <ul style="list-style-type: none"> Protect or create woody debris in riparian understorey <p>BMPs</p> <p>2006-2107 2018/2019-1002 2018/2019-1101 2018/2019-3501</p> | | | | | | | | | | | | | | | | | | | | | | |
| <ul style="list-style-type: none"> An area of water (natural stream, wetland, or channelized watercourse, whether permanent, ephemeral, or intermittent) unaltered by ditching/channeling, culverting, ditch clearing or impassable barrier | <p>Alteration of water courses/wetted areas (e.g., ditching/channeling, culverting, ditch cleaning).</p> <p><i>How activity would destroy critical habitat:</i></p> <ul style="list-style-type: none"> Alteration of water courses leads to changes in water quantity and in the flow rate and pattern that are required to support foraging on aquatic invertebrates Loss of water/wetted areas leads to drying of the riparian microclimate <p>Installation of impassable barriers (e.g., multi-lane roads with no culverts).</p> <p><i>How activity would destroy critical habitat:</i></p> <ul style="list-style-type: none"> Installation of impassable barriers leads to elimination of access between foraging, dispersal, and breeding habitats, which results in loss of habitat function and reduced gene flow | <ul style="list-style-type: none"> Protect watercourses; avoid any alteration that will affect water quantity or flow or create an impassable barrier <p>BMPs</p> <p>2006-1005 2006-1006 2006-1101 2006-1802 2006-2103 2006-2105 2006-2107 2006-2202 2018/2019-3001 2018/2019-1003 2018/2019-1006 2018/2019-1101 2018/2019-0601 2018/2019-0704 2018/2019-2201 2018/2019-2202 2018/2019-2203 2018/2019-2205 2018/2019-3501</p> | | | | | | | | | | | | | | | | | | | | | | |
| <ul style="list-style-type: none"> No alterations of water chemistry (e.g. by herbicide/pesticide application, road or agricultural run-off) | <p>Release of pollutants into or adjacent to water courses (e.g., herbicide/pesticide application, road and agricultural run-off).</p> <p><i>How activity would destroy critical habitat:</i></p> <ul style="list-style-type: none"> Changes in water chemistry lead to loss of water quality required to support foraging on aquatic invertebrates | <ul style="list-style-type: none"> Ensure agricultural activities do not lead to leaching or runoff of chemicals, contaminants or sediment into watercourses Carry out erosion and sediment control measures for any activity where there is a risk of sediment entering a watercourse Apply pesticides according to provincial best management practices <p>BMPs</p> <p>2006-0501 2006-1301 2006-1802 2006-2102 2006-2201 2018/2019-0501 2018/2019-0704 2018/2019-1101 2018/2019-1601 2018/2019-1701 2018/2019-3501</p> | | | | | | | | | | | | | | | | | | | | | | |

¹ Represents interpretation of the recovery strategy information



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