GREEN GROUND
Low Impact Development Program

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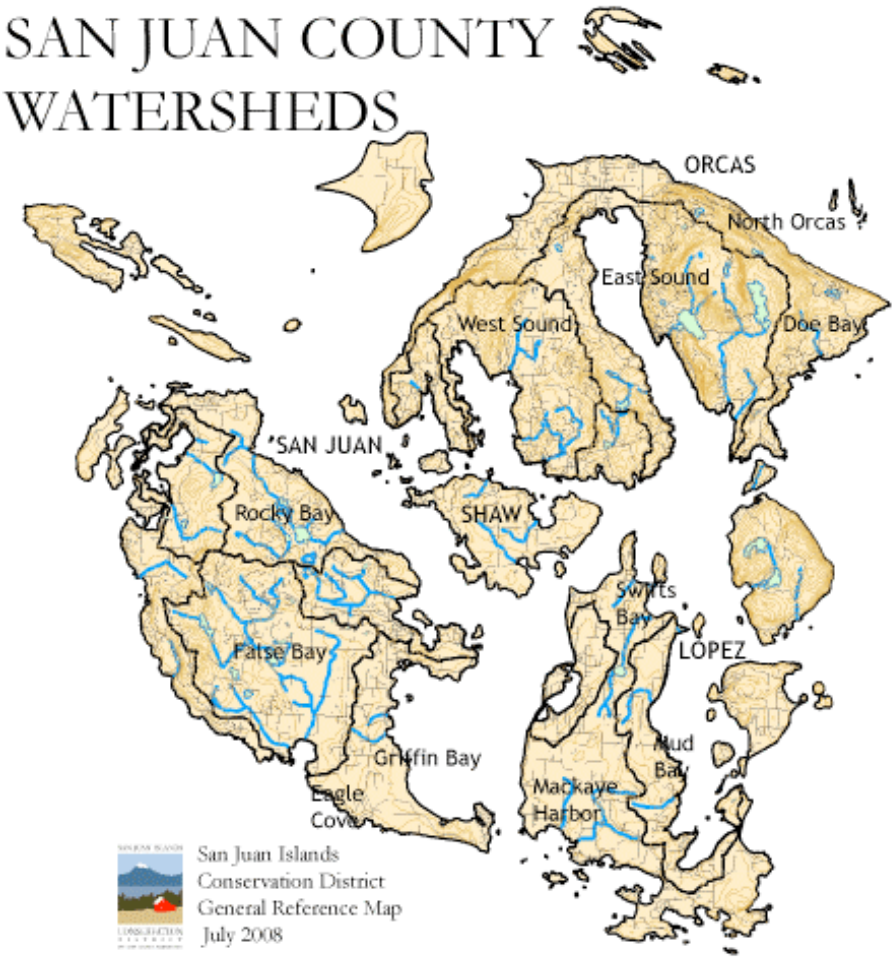
Watersheds, Woodlands and Wildlife

Everyone lives in a **watershed**. A watershed is an area of land that drains water to a common waterbody (called “receiving water”). In the San Juan Islands most “receiving waters” are marine. Humans are an integral part of the watersheds in which they live. Human activities, both in the water and on the land, can have a great impact on watershed functions. Wildlife habitats can be protected and preserved either through actions and practices that serve to support and maintain the important components of these systems. Conservation easements, designed to protect habitats through land preservation (i.e. non-disturbance of the land), also help protect habitats.



Watershed Functions

Watersheds transport the water that runs over the land and into the ground, providing many vital ecological and hydrologic functions. (Hydrology: surface water and ground water functions and behavior). Watersheds collect water from rainfall, storing some of this precipitation in wetlands, soils, trees and other vegetation, and under-ground in aquifers. The floodplain (i.e. “riparian zone”) along the banks of streams also serves as an important storage system for water during periods of heavy or prolonged rain. These natural storage facilities help eliminate contaminants as suspended particles settle out and as water infiltrates into the soil where biological and chemical reactions can break down impurities. Some of this stored water eventually flows into streams, lakes and marine waters thru surface runoff and as subsurface flow. And, ecologically, watersheds provide critical habitat for many plant and animal species, as well as transport paths for sediment, nutrients, minerals, and a variety of chemicals.

Recommendations:

- Observe your land. Get familiar with where water flows (especially before clearing/building).
- When carrying out land disturbing projects consider how the hydrology may be impacted and apply “low impact development” techniques to hold and infiltrate rainwater on your property

Maintaining and Enhancing Wildlife Habitats:

There are many woodland management practices that you can perform on your property to maintain and preserve wildlife habitat.

Snag and Den Trees:

Both snag and den trees (trees with internal cavities) provide essential nesting habitat for more than 60 cavity nesting birds and mammals. Woodpeckers and flickers excavate holes in dead wood for nests and later secondary cavity nesters, such as wood ducks and raccoons use holes for nests and dens that were created by the cavity excavators.

Another important function of snags is as a food source for a large number of bird species that glean insects and other invertebrates from dead wood, bark, and fissures / cracks in the dead and dying wood. Many live trees may be classed as snags or “wildlife trees”. These include trees with large broken tops and ensuing decay or have several large dead branches.

Recommendations:

- Retain snags and cavity trees wherever possible
- Create snags by cutting or “girdling” the tree
- Leave fallen trees, limbs and leaf litter for foraging, nesting and den sites.
- Consider leaving high stumps wherever possible

Travel Lanes and Wildlife Corridors: Many times forested areas become fragmented due to land development and vegetation removal. Isolated woodlands can benefit wildlife if they are linked together. Some wildlife, venture only a short distance from cover when feeding or nesting. Travel lanes through open fields allow wildlife to venture out a little further, so they can use more of the field.

Recommendations:

- The wider the travel lane the better.
- Travel lanes should be a minimum of 20 ft. wide.
- Shrubs growing alongside fences form good travel lanes.

- Hedgerows along roads serve as travel lanes.

Forest Edge:

"Edge" habitats exist where two landscapes or habitats interface, like where a grassland field meets a forest. Edges can be classified into two types: inherent and induced. Inherent edges result from permanent features in the landscape, such as abrupt changes in soil or topography, and tend to be relatively stable. In contrast, induced edges are constantly changing because of vegetation growth and succession, and are caused by human activities such as agriculture, timber harvest, and development, or natural events such as fire, disease, insect damage, or wind throw.

Some species will benefit from an increase in edge habitat and others will be influenced negatively. Wildlife "generalist" species — those that can reside in a variety of habitats or habitat conditions, such as white-tailed deer—are often benefited while habitat "specialists"—those that have very specific habitat requirements, such as the piliated woodpecker—are often disadvantaged. Before physically altering landscapes, potential impacts of proposed management should be assessed for any residing sensitive species in order to understand costs and benefits that may be experienced.

Recommendations to Decrease Edge:

- Avoid land use practices that fragment large areas of native vegetation into small parcels. Examples include conversion of forest to introduced pasture.
- Control encroachment of invasive or noxious plants into grasslands and forests.
- Use timber harvest techniques such as selective cutting that retain forest cover.

Riparian Habitats:

The vegetated area with moist soils adjacent a stream is termed "riparian" habitat. Many kinds of wildlife use riparian woodlands. Not only do these woodlands provide food, dens, roosts, and nesting sites…they also serve as wildlife migration corridors. Trees are beneficial to the stream system. Shading the water with their canopy provides organic matter to feed aquatic invertebrates, fish and other animals. Plus root systems serve to stabilize stream banks and prevent erosion. Riparian woodlands warrant extra protection due to the diverse wildlife community that use these areas and the need for maintaining environmental services such as water purification.

Recommendations:

- If riparian habitat is in tact, preserve a wide corridor of trees (100 - 200 ft. wide, if possible) on each side of the stream.
- If the existing riparian zone shows disturbance of soils or vegetation, re-establish vegetation by planting seedlings (choosing fast-growing species such as cottonwood or willow), or seed from nearby trees to speed up regrowth.
- If the riparian area contains grasses and other low-growing vegetation, but does not contain large, woody vegetation, plant fast-growing tree species to revegetate the area.

First in a twelve part series on Conservation and Stewardship in the San Juan Islands.

The San Juan Islands Conservation District is a non-regulatory, non-enforcement agency. We provide **FREE** technical assistance to landowners and residents interested in the conservation of natural resources. For more information about Conservation District Services or to request a site visit, come by the San Juan Islands Conservation District office at 540 Guard Street #150 Friday Harbor, WA 98250 or phone us at 360-378-6621 or email us at info2007@sanjuanislandscd.org.

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