

What is Along Our Watershed?

An Introduction to Conducting a Riparian Zone Inventory

What is a RIPARIAN ZONE?

- The riparian zone is the area along a watershed connecting flowing waterways with land.



What is an ECOSYSTEM?

- An ecosystem is a community of different species interacting with each other and the physical environment.
- We can evaluate the riparian zone as part of the watershed ecosystem to determine its health.

The health of the riparian zone affects the waterway

The health of the riparian zone affects the waterway in several ways:

- Shade - temperature of water
- Detritus - disintegrating plant material
- Reduces sediment
- Filters nutrients
- Provides woody debris



Several factors influence the suitability of an area for the kinds of plants and animals that live there.

- Soil
- Sunlight & Wind
- Temperature
- Lay of the Land
- Plant Life
- Animal Life

By completing an inventory of these factors and evaluating the information gained, we can determine the health of the riparian zone in its relationship to the watershed.



Soil

Use a trowel to obtain a small sample of soil from underneath the surface. Feel the soil, determine:

- Wet?
- Moist?
- Dry?
- Texture - sandy? silty? clay-like?
- Color?
- Smell?
- Contains plant material?
- Contains organisms?



Sunlight & Wind

Determine light intensity:

Shady?

Dark?

Medium light?

Bright?

Determine wind movement:

Hold a small strip of paper away from the body, observe whether it hangs straight down or blows at an angle. Use a compass to determine the direction from which the wind is blowing.



Using a Compass

- Turn your body so that you feel the wind at your back.
- Hold the compass flat at waist level.
- Turn the compass until the red arrow matches up with the north arrow on the base of the compass.
- The direction the wind is coming from is the letter or number closest to your belly button.

Wind direction tells you where the wind is coming from.
So a northerly wind blows from the north to south.



Temperature

- Measure the temperature at ground level 2.5 cm (1")
- And at .9 m (1 yard) above



Lay of the Land

- Determine whether the site is flat or sloped.
- Record other land features that may affect the site such as man made structures or natural geographical or geological features adjacent.
- Determine which direction water flows from the site by slowly pouring water onto the ground and observing where it goes. Use a compass to determine the direction of flow.



Plant Life

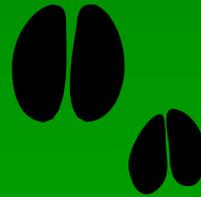
- Observe and record the various kinds of large trees, small trees, shrubs, small plants and grasses.
- Are these native plants?
(Plants that have evolved in the region and function naturally within the ecosystem.)
- Are there any invasives?
(Plants that are not native to the area and interrupt the functioning of the natural ecosystem.)

Animal Life

Observe and record the various kinds of animals on site, such as:

- Insects
- Birds
- Reptiles
- Fish
- Amphibians
- Mammals

Record **evidence** of animals such as scat, tracks, burrows, nests, leaves that have been chewed, bark that has been chewed or scratched etc.



- Scientists use this information in combination with water quality testing and other testing to determine the health of a watershed.
- We can plan riparian restoration projects based upon this information in order to bring the site back to its natural state.

Restoration

Projects to improve the health of a site may include:

- Removal of invasive plant species such as Himalayan Blackberries or Reed Canary Grass.
- Removal of invasive animals such as Nutria and Bull Frogs.
- Planting native species to provide shade for the waterway or create a buffer zone to filter chemicals from man made development etc.
- Adding woody debris to create cover and cooling shade for fish and other aquatic life.
- Educating others about how to reduce non-point source pollution (untreated storm drain water flows directly to streams).
- And **MANY MORE!**

You Can Make a Difference

Study - Learn on site - Plan - Act

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