



Teaching Guide to the Laguna de Santa Rosa Trail

Starting at Hwy 12 trailhead, turning west onto north trail of Meadowlark field, turning north on pedestrian-only trail, re-joining Laguna Trail & looping around Kelly Pond.

Elements of the walk:

- **Introduction:**
 - Welcome & Thanks for coming!
 - Introduce:
 - Yourself
 - The Laguna Foundation
 - The Laguna de Santa Rosa
 - Invite participants to introduce themselves
 - Provide Overview to
 - The walk
 - The site

STOP # 1—Standing on the high point at junction with Meadowlark Trail

- **Point out the watershed:**
 - **Mayacamas, Sonoma Volcanics, Santa Rosa Plain, Coast Range**
 - Major peaks: Bennett Mountain, Taylor Mountain, Sonoma Mountain (Mt St. Helena is outside the Laguna watershed)
 - **Major creeks from East:** Santa Rosa Creek & Matanzas Creek
 - **Major creek from South:** Copland Creek
 - **Major creek from West:** Blucher Creek & Calder Creek
 - **Major creeks from North:** Windsor and Mark West
- **Invite participants to look for the riparian zone**

STOP # 2—Somewhere along Meadowlark's north trail, before joining the pedestrian-only trail

- Name plants along the trail, including those used in restoration, and share interesting information
- Notice Valley Oak snags – any bird activity?
- What was Meadowlark field before now?
- Along the Laguna from Hwy 12 north to nearly Occidental Road is the site of the Middle Reach Restoration Project
 - Does anyone know why restoration work is important?
- Point out that fact we are about to walk on the “no hooves, no paws, no wheels” section of the trail.

STOP # 3—Somewhere along the Laguna as you walk on the pedestrian-only trail

- Name plants along the trail, including those used in restoration, and share interesting information
- Pause and look for birds

MENTION—Near Gate, before joining the multi-use trail

Point out that fact that the gate designates the “no hooves, no paws, no wheels” section of the trail that we have just been on.

STOP #4 @ Kelly Marsh

- Tell the story of the marsh
- Look for birds
- Talk about tule
- **Mention:** Over 100 bird species have been sighted utilizing the wetland – river otter & mink reside in the wetland. So, if you see someone letting their dog swim in the pond, please let them know it isn’t a good idea – for nature’s sake...
- Look in the Eucalyptus trees for nests of Red-shouldered Hawks, Red-tailed Hawks or Great Horned Owls

STOP #5 - Under the Valley Oaks

- What do you see out there?
- What else is out there that we aren’t seeing?
- Talk about Valley Oaks – their importance as a “keystone species.”
- Does anyone know about Grasslands?
- This is indeed important and sensitive wildlife habitat!
- Closure

Background Information for Your Knowledge

At the heart of the Laguna's 254 square-mile watershed is the largest freshwater wetland complex in coastal northern California.

- The Laguna is a unique ecological system that is comprised of a mosaic of open water, wetland, riparian forest, oak woodland, grassland and vernal pools.
- The Laguna comprises more than 10% of the Russian River watershed area and is its southern-most and largest tributary.

Founded in 1989, the Laguna Foundation is a place-based organization focused on the Laguna de Santa Rosa, a Wetland of International Importance. **The Foundation is a 501(c)3 non-profit with the mission to preserve, restore and enhance the Laguna de Santa Rosa, and to inspire public appreciation and understanding of this magnificent natural area.**

We accomplish this mission by:

- Removing non-native invasive species and planting tens of thousands of trees and other native plants to restore lost habitat.
- Conducting conservation science activities to provide information for endangered species management and to inform our restoration activities.
- Educating students and adults about the Laguna ecosystem.
- Collaborating with other non-profits on county wide issues such as helping ecosystems adapt to climate change.

The Foundation has a small staff and we rely on the support of the community to help us achieve these goals. Please consider volunteering, becoming a member, or donating to the Foundation; pulling together as a community of nature lovers, we can make a difference!

Most of the Laguna proper is in private ownership.

- CA Department of Fish and Wildlife owns 2 parcels along the Laguna one south of Sebastopol, the other just north.
 - The City of Santa Rosa owns several farms along the Laguna on Llano Road, with areas directly adjacent to the Laguna set aside as Natural Areas.
 - The City of Sebastopol owns property on both sides of the Laguna right here: Meadowlark Field which is part of the Laguna Wetland Preserve which can be accessed from here during the summer months when a floating bridge is installed.
- The trail came together because of several organizations working together: the City of Santa Rosa, Sonoma County Ag & Open Space District, the City of Sebastopol, and the Coastal Conservancy. Once the trail opened in November of 2012, Sonoma County Regional Parks became in charge of the trail.
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Commonly seen birds to know and identify:

Year round:

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|-----------------------------|-----------------------------|
| • Pied-bill Grebe | • Belted Kingfisher |
| • Double-crested Cormorant | • Anna's Hummingbird |
| • Great Blue Heron | • Northern Flicker |
| • Great Egret | • Downy Woodpecker |
| • Snowy Egret | • Nuttall's Woodpecker |
| • Black-crowned Night Heron | • Black Phoebe |
| • Canada Goose | • Western Scrub Jay |
| • Mallard | • American Crow |
| • Ruddy Duck | • Oak Titmouse |
| • Turkey Vulture | • Chestnut-backed Chickadee |
| • Northern Harrier | • Bushtit |
| • White-tailed Kite | • Western Bluebird |
| • Cooper's Hawk | • American Robin |
| • Red-shouldered Hawk | • Northern Mockingbird |
| • Red tailed Hawk | • European Starling |
| • Bald Eagle | • Orange-crowned Warbler |
| • American Kestrel | • California Towhee |
| • Wild Turkey | • Spotted Towhee |
| • California Quail | • Song Sparrow |
| • American Coot | • Oregon Junco |
| • Killdeer | • Western Meadowlark |
| • Western Gull | • Red-winged Blackbird |
| • Mourning Dove | • Brewer's Blackbird |
| • Eurasian Collared-Dove | • House Finch |
| • Barn Owl | • Lesser Goldfinch |
| • Great Horned Owl | • American Goldfinch |
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Spring-Summer

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|---|---------------------|
| • Osprey | • Barn Swallow |
| • Long-billed Curlew (flocks often seen stopping over during migration) | • Cliff Swallow |
| • Western Kingbird | • Swainson's Thrush |
| • Tree Swallow | • Yellow Warbler |
| • Violet Green Swallow | • Bullock's Oriole |
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Fall-Winter

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|---|--------------------------|
| • American White Pelican (often seen into Spring) | • Ruby-crowned Kinglet |
| • Northern Shoveler | • Hermit Thrush |
| • Greater Yellowlegs | • Yellow-rumped Warbler |
| • Says Phoebe | • Golden-crowned Sparrow |

Please know this bird list is not comprehensive! Refer to the Laguna Birds checklist.

What was Meadowlark field before now?

- It has always been wildlife habitat!
- In 1925 an airplane landing strip was built right here by Louis Cnopius who was the second husband of Birdie Miller – the longest owner of Stone farm (1903-65) (where the Laguna Environmental Center is located)
- Dispersal site for apple processing waste

Major and minor creeks

- Major creeks from East: Santa Rosa Creek & Matanzas Creek
 - Minor creeks that feed them: Piner, Paulin, Rincon, Brush, Ducker & Spring
- Major creek from South: Copland Creek
 - Minor creeks: Roseland, Colgan, Bellevue, Hinebaugh & Crane
- Major creek from West: Blucher Creek & Calder Creek
 - Minor creek from the West: Washoe & Gossage
- Laguna flows north from here, picking up water from
 - Duer Creek & Irwin Creek and through former Lake Jonive & former Lake Ballard
 - Major creeks from North: Windsor and Mark West
 - Minor creeks that feed them: Pool, Porter, Humbug, Van Buren, Mill and Weeks

Along the Laguna from Hwy 12 north to nearly Occidental Road is the site of the Middle Reach Restoration Project

- The Laguna Foundation with support from the Cities of Sebastopol and Santa Rosa, along with the Sonoma County Agricultural Preservation and Open Space District, CA Coastal Conservancy and several grantors has widened the riparian zone and upland and increase its variety of plants to provide greater shelter, shade and food for a greater diversity of wildlife – everything from aquatic to terrestrial wildlife - insects to mammals.
- Over 8,000 native plants have been installed in this region of the Laguna.
 - Plants include:

- Box Elder, Elderberry, Valley oak, Oregon Ash, Coyote Brush, CA wild rose, native blackberry, basket sedge, juncus – plants that will create a multi-storied canopy

Why restore? Vegetation:

- slows storm energy & holds water
- prevents erosion
- the roots of plants stabilize stream banks.
- creates food and shelter for wildlife.
- increases the scenic beauty and the ecosystem services for us

Why should dogs be on-leash?

- From the Sonoma County Regional Parks website: *Parks are a place for all to enjoy, with a variety of visitors appreciating different things about each park. While some people are not comfortable around dogs in general, most don't want an unfamiliar dog bounding toward them when their owner has let them run off leash. No person, or their dog, should ever feel threatened by another's dog. Parks need to remain a safe, comfortable place for all park users.*
- **A diverse array of wildlife and plants make their home in the county parks. All these inhabitants have laws to protect them from being disturbed.**
- Unleashed dogs have been known to injure or kill park creatures ranging from gophers to deer.
- **Wildlife can also be a danger to the unleashed dog.**
 - A dog's curiosity may get him sprayed by a skunk or net him a snout full of quills.
 - Pet dogs have been killed by wildlife, in self-defense or for a meal.
 - There is also the potential for exposure to rabies and distemper.
- **In addition to the leash law, there is also a requirement that owners clean up after their dog.**
 - Dog feces are smelly, unhealthy and unsightly.
 - In addition, canine waste material carries diseases that can be deadly to foxes, otters, raccoons, skunks, and other animals.

Park rangers will issue citations for dogs off-leash.

Fines can reach upward of \$500.00 and may require court appearance

Kelly Marsh on the City of Santa Rosa's Kelly Farm

- Constructed in 1989 to study benefits of tertiary treated municipal wastewater for wetland creation and restoration (created wetlands are used as polishing areas in some regions like Eureka/Humbolt)
- 21 acres with 3 ponds of different depths
- Constructed to provide a small-scale version of large natural wetlands that include many variations of each of these habitat types
- Open water (about 6 feet deep) for waterfowl
- Emergent Wetland – rooted aquatic plants like tule provide cover, shelter, nesting sites & food for birds and other wildlife
- Riparian vegetation (water loving) like willows, Oregon Ash, Fremont Cottonwood, snowberries, plus many grasses, rushes and sedges
- Upland vegetation like valley oak trees, blackberries, California wild rose and grasses
- Tule is a really interesting and important plant!
 - Emergent plant – starts its lifecycle underwater and emerges above the surface – special design (like a bunch of straws) to get oxygen to the roots.
 - Very strong & versatile
 - Anchors bank
 - Provides cover & shelter & nesting sites.
 - The seeds are used as a food source.
 - The native people of this region recognized tule's many uses and used it in several ways including:

- It is strong so they made ropes & houses called Kotchas (co-cha-s).
- Because of tule's structure, it floats so they made boats as well.
- It is fairly easy to weave with so they made mats, baskets and toys.

Now over 100 bird species have been sighted utilizing the wetland – otter & mink reside in the wetland. So, if you see someone letting their dog swim in the pond, please let them know it isn't a good idea – for nature's sake...

VALLEY OAKS

- Mostly what we see in the Laguna floodplain are Valley Oaks. They are dormant in the winter so they can tolerate having their roots submerged for long periods of time. Black oaks sometimes too but they "prefer" to be out of the floodplain
- OAKS ARE IMPORTANT!
 - They provide habitat for hundreds or even thousands of other species!
 - Oaks form the foundation of an intricate food web where herbivores consume acorns, leaves, twigs, sap, roots, flowers and pollen.
 - Because oaks have a diversity of food to offer, they support many types of organisms that use different resources from the same tree.
 - Every part of an oak from treetops to root tips is utilized.
 - In the leaf canopy the wind, light and temperature are moderated. Birds take advantage of this protection to build nests and insects deposit eggs.
 - Cavities in the limbs and trunks provide nesting and hiding opportunities even long after the tree has died.
 - A standing dead tree is referred to as a snag. Snags are potential homes to animals using the cavities or living under the bark. Snags also serve as perches, used by birds of prey as they hunt.
 - The leaf litter under the tree is a moist, nutrient-rich location where many invertebrates and microorganisms live.
 - The soil below the rich litter, surrounding the roots, is home to many arthropods, protists, fungi and bacteria – which are decomposers, returning nutrients to the system.
- Oaks are in the genus *Quercus* which is a Latin name derived from two Celtic words: *quer* (meaning "fine") and *cuez* (meaning "tree").

These **Upland areas** (above the riparian wetland and the floodplain) is Grassland ecosystem which at one time would have supported abundant wildflowers and native grasses with long, deep roots.

- Now grasslands are mostly comprised of annual, introduced grasses with shallow roots that grow very tall, out-competing the wildflowers and native grasses.
- Grasslands are one of California's most threatened habitats
- Grassland mammals include: coyote, bobcat, long-tailed weasel, jackrabbit, black-tailed deer, Meadow Vole

Notes about non-native species (introduced species)

- Native animals have evolved with native plants.
- Arrival of migrant birds or hatching insects is timed with native blooming flowers. If those plants don't exist when they arrive= no food for that species.
- Not all native species can adapt as quickly as the environment is changed by humans
- Introduced species often take over as they face no natural predators
- Natives competing with non-natives is like tying someone's legs together and putting them in a race where no-one else's legs are tied = not a fair competition!

Anecdotes:

- Laguna was hunting grounds to feed the swelling population of San Francisco in the 1850's. Commercial hunting was banned in 1897.
- Widespread agriculture and settlement of the Santa Rosa Plain had impacts on the Laguna that are still felt today: habitat reduction, wildlife reduction, wetlands drained for agriculture, water courses altered for the railroad in the 1860's, increased toxins in the water including: mercury, nitrogen, phosphorus, increased sediment and reduced oxygen. Removing riparian cover increased water temperature which has negative impacts on native aquatic species, including fish.
- Lake Jonive was in this area, stretching north almost to Guerneville Road. There were resorts on the lake in the late 1800's-early 1900's. Recreational boating and swimming were enjoyed in the lake.
- Lake Ballard was associated with lower Mark West Creek
- Up until the early 1960's the Sebastopol's Laguna Wetland Preserve was the municipal dump.
- RESTORATION – Sebastopol Preserve used to be the municipal dump and sewage treatment plant. Meadowlark field used to be an airstrip and where apple effluent was sprayed after processing.
- Responsible Use – we can enjoy shared spaces because we follow rules & customs & are polite
- This is a wildlife area. Dogs remain on leash and out of the waters. Keep poop scooped to avoid pollution and disease transmission.

SAMPLE INTRODUCTION

- I am _____, an education volunteer for the Laguna Foundation a not-for-profit organization that works to scientifically understand and improve the ecological health of the Laguna de Santa Rosa, one of Sonoma County's richest wildlife areas and now a Wetland of International Importance, and to inspire appreciation and enjoyment of this unique natural treasure. Our main program areas include restoration, public education, Learning Laguna, our school program for 2nd-4th grade students, and Conservation science.

SAMPLE CLOSING MESSAGE

Because people often like to walk back at their own pace I'll take a few minutes to wrap up here. But, feel free to walk back with me and ask questions along the way!

Now that you have connected to the trail and learned a bit more about the Laguna, we hope you will become a **voice** for the Laguna and teach others about its value. Visit often – it changes throughout the year!

Come visit us at the Laguna Environmental Center on the Second Saturday of each month from 10-3. Volunteers offer tours of the site & hands-on activities for the whole family.

Consider joining us for a **restoration work day** or join us for **docent training** that happens each spring. And, our list of **public education** events is growing every day.

To stay in touch with the Laguna and the Foundation, visit www.lagunafoundation.org

I'll circulate this sign-up list if you would like to receive the Laguna Foundation e-news. And, here are Laguna Foundation brochures...

Thanks for coming & enjoy the trail & share what you have learned today!

References to enhance your learning and help you prepare to lead educational walks:

- Field Guide to the Laguna de Santa Rosa
- Laguna Birds Checklist
- Common Trees & Shrubs of the Laguna de Santa Rosa (pdf)
- Bird field guide. **Recommended guides:**
 - **Peterson's Field Guide to Birds of Western North America**
 - **The Sibley Guide to Birds of Western North America**
 - **National Geographic Field Guide to the Birds of Western North America**
 - ***Birds of Northern California*** (Fix & Bezener authors, published by Lone Pine) is a helpful beginner's guide.

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