



# MARYS RIVER WATERSHED COUNCIL

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## Proposal to Name an Oak Creek Tributary In Benton County, Oregon

Marys River Watershed Council and its partners propose that a tributary of Oak Creek in Benton County, Oregon be officially named **Lamprey Creek**. According to Mary Gallagher, Benton County Historical Society, the tributary in question has not had a documented name in recorded history (Appendix A). Unnamed waterways tend to receive less attention from residents and agencies. In order to support continued and improved stream stewardship in Oak Creek, we believe this creek deserves a name.



### Background

Oak Creek is located in Benton County, Oregon and the northwest quadrant of the City of Corvallis. The confluence of Oak Creek and the Marys River lies southeast of Oregon State University's Reser Stadium near the intersection of Brooklane Drive and Highway 20/34. The 8,300 acre watershed is more than 70% forested, 12% agricultural and a small portion lies within the Oregon State University (OSU) campus. OSU manages 90% of the watershed. (City of Corvallis Stormwater Master Plan, page 11-1)

The unnamed Oak Creek tributary is a 3-mile (16,250') stream channel with a watershed of approximately 807 acres of sloping foothills in the northwest corner of Corvallis, Oregon. This tributary comprises 10% of the Oak Creek watershed. The elevation of the watershed ranges from 270 to 1025 feet above sea level, with an elevation gain of 755'. Over the 3-mile length of the tributary, there is a 370' elevation differential. During the typical 2-year flood event, velocities exceed 4.8 cfs, well above the threshold erosive rate. The longest segment of the tributary parallels Walnut Blvd. from Martin Luther King, Jr. Park south to the intersection of Walnut Blvd. and Harrison Avenue.

Seventy percent (563 ac) of the unnamed watershed is in Benton County, and 30% (244 ac) in the City of Corvallis. More than half of the County land falls within Corvallis' Urban Growth Boundary. Although less than 5% of the unnamed watershed is currently impervious, if the urban growth boundary is developed the impervious area will rise significantly, with potential negative effects on the tributary's water quality and aquatic life.

### **Why name the creek?**

The creek **provides habitat** for several well-known species such as cutthroat trout and beaver, as well as the lesser-known Pacific and brook lamprey, sculpins, crayfish, and other invertebrate fauna. The unnamed tributary is significant enough to have been mapped as far back as the 1851 general lands survey and on the 1921 Metzger map developed during the farming era. It is also depicted in current municipal, county and USGS maps (Appendix B).

The tributary is of local **environmental and cultural value**. City stormwater analyses indicate that discharge from this tributary reach sufficiently high velocity (4.8 cfs during 2-year event) to require possible intervention to prevent erosion (City Stormwater Master Plan, Figure 11-2 and Table 11-2). At least four bridges and one culvert under an arterial road cross the tributary channel.

Tributary headwaters include the Corvallis Skyline neighborhood, encompassing NW Royal Oaks and NW Fairfax drives. City staff has recognized the need for **signage to ensure citizen awareness of the stream**. At culvert crossings, signs label the creek as a tributary to Oak Creek. The signs are confusing, as observers may believe that this tributary is the main stem of Oak Creek, rather than a significant tributary in its own right.

Oregon State University has collaborated with Benton Soil and Water Conservation District (BSWCD), USDA Natural Resources Conservation Service and others to **protect and restore the tributary on OSU property**. In the past, horses and other livestock have had easy access to the stream banks and streambed, causing erosion, compaction and destruction of aquatic habitat. An algae bloom in the lower portions of the creek has been attributed to excess nutrients caused by defecation from agricultural animals (Corvallis Salmon Study). The conservation partnership ("Horse CREP Project") resulted in livestock exclusion fencing and an extensive riparian planting project, designed to provide runoff filtration and shade for the creek.

During a winter rainstorm in 2014, a drunk driver crashed on Walnut Boulevard and ended up in the unnamed creek (see Appendix C). Neither rescuers nor the media were aware of the creek, as it was unnamed and unmarked along this arterial road. Formally naming the creek, especially with a unique and noticeable name, will **assist emergency responders** and allow for instant recognition by both safety professionals and the media.

## Why *Lamprey Creek*?

Lamprey, colloquially referred to as “eels,” have a very special meaning to the native people that lived in this watershed for thousands of years. Pacific lamprey are an integral part of Northwest Native American culture, serving as a dietary staple for the Kalapuyan people, who were the original inhabitants of the central Willamette Valley. Naming this tributary Lamprey Creek will honor that special meaning and will carry respect for this animal to the current culture inhabiting the waters of the lamprey.

One of the criteria for name selection by the Oregon Geographic Names Board is that new names do not replicate existing names in Oregon. An internet search of stream names within the United States indicates that there are no streams named Lamprey Creek in the entire country. There is one Lamprey Creek in British Columbia, Canada. This lack of nomenclature for a widespread and culturally important stream inhabitant is both surprising and provides us with a wonderful opportunity to create something unique here in Benton County, Corvallis and on the OSU campus.



Naming the tributary Lamprey Creek will acknowledge the globally recognized research scholarship provided by OSU faculty and students, who brought this 400 million year-old fish species to public attention. Pacific lamprey has long been overlooked in the United States and past attention has been negative, focused on the invasive sea lamprey in the Great Lakes region. The OSU Cooperative Fisheries and Wildlife Research Unit, and the Department of Fisheries and Wildlife at Oregon State University are leaders in the field of lamprey research and conservation.

Oregon State University research documented many of the ecological roles lamprey play in stream ecosystems of Western Oregon:

- In the early 1990s, OSU scientists Hiram and Judy Li were the first to acknowledge the decline of Pacific lamprey, as first recognized by Native American Tribes of the Pacific Northwest and brought to light by then graduate student David Close. David has since authored studies on the ecological concerns of Pacific lamprey and their cultural importance to Native Americans. This research is a good example of Traditional Ecological Knowledge (TEK) guiding western science and remains one of OSU’s “Points of Pride” (<http://oregonstate.edu/brand/points-pride/saving-pacific-lamprey>).

- Dr. Carl Schreck (Oregon Cooperative Research Unit and OSU Fisheries & Wildlife) laid a foundation for important ecological and physiological research on lamprey, initially working with Hiram and David. Carl currently leads projects that focus on the Willamette River Basin. The Willamette River supports one of the last traditional Native American harvest sites of Pacific lamprey at Willamette Falls. The Willamette River lamprey population persists in contrast to significant declines in adjacent river basins. Nearly all of the lamprey biologists working with Tribes and agencies in the Pacific Northwest were students in the Schreck lab.
- Dr. David Noakes identified native larval lamprey in the Great Lakes Region, to protect the fish from the control efforts focused on invasive sea lamprey. Noakes now leads the Oregon Hatchery Research Center (the site of a 2013 lamprey workshop) and has opened up opportunities at the OHRC for research focused on lamprey conservation. David has been instrumental in publishing the first of a two-volume series titled Lampreys: Biology, Conservation and Control, edited by Margaret Docker.
- Dr. Carl Bond, the founder of the OSU Ichthyology Collection, and Ph.D. student Tin Tien Kan, described the world's smallest predatory lamprey in 1973, using museum specimens. Miller Lake lamprey *Entosphenus minima* was presumed extinct due to lake poisoning by the Oregon Department of Fish and Wildlife in 1958. Dr. Doug Markle, Bond's successor, along with Dan Logan and Dave Simon, rediscovered Miller Lake lamprey in 1992, along with Chris Lorion, they described its expanded range outside Miller Lake. Roger Smith, an OSU graduate, wrote a Miller Lake lamprey conservation plan for ODFW in 2005 and successfully reintroduced them into Miller Lake in 2010.
- Staff from the OSU Lamprey Project discovered lamprey ammocoetes (larval stage) in the lower portions of the unnamed tributary. Ammocoetes release pheromones into the water that float downstream and attract migrating lamprey to their location. The existence of larval lamprey in the stream improves the chances that additional lamprey will be recruited to the tributary in the future (USFWS Lamprey Factsheet - <http://www.fws.gov/oregonfwo/species/data/pacificlamprey/documents/012808pl-factsheet.pdf>).



## **Conclusion**

A stream without a name is often a stream not respected enough to protect and restore. By naming the tributary, a sense of place and meaning is provided to neighbors, the community and the region. It is a place that can be readily identified by all, including the media (Appendix C). A unique name that depicts a very special fish that predates the dinosaurs and all other fish in the Pacific Northwest will provide an opportunity for both inspiration and challenge to protect and restore this tributary to improve the chances of more lamprey returning to this special place on OSU, City and private property.

## **Project Partners**

Marys River Watershed Council  
Corvallis Sustainability Coalition, Water Action Team  
Freshwaters Illustrated  
Oregon Cooperative Fish & Wildlife Research Unit

## **Project Supporters**

Benton County Commission  
Columbia River Intertribal Fish Commission  
Marys Peak Chapter, Sierra Club  
Native Fish Society  
Oregon State University, Office of the President  
Skyline West Neighborhood Association

## Appendix A. Name Search.

### **Mary Gallagher**

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Water Action Team Leader  
228 NW 28th Street  
Corvallis, OR 97330

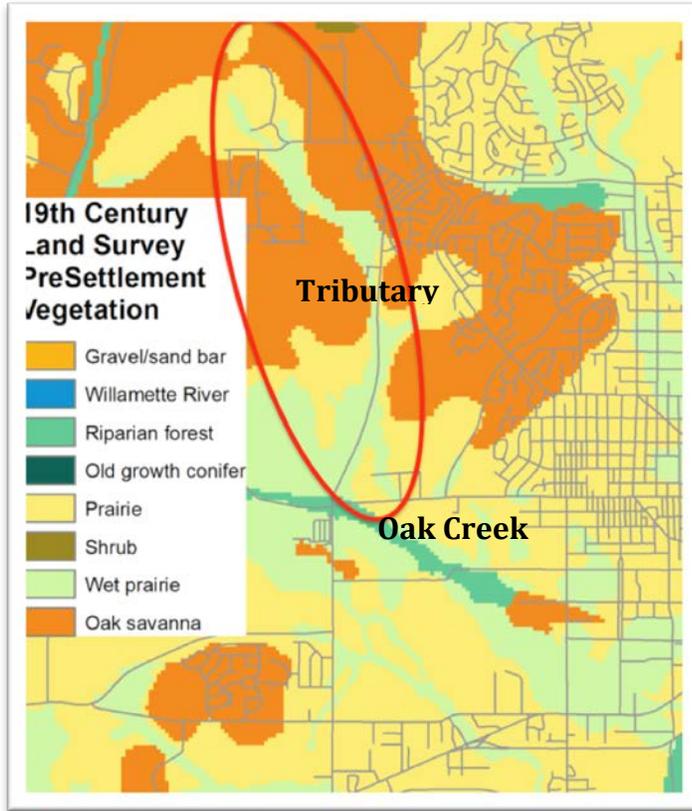
Hello Mr. Eckert,

As per your request, I have examined the maps in the Benton County Historical Society collection to determine if the Oak Creek tributary that parallels Walnut Blvd. has an official or vernacular name. None of the maps, including a detailed 1921 map of the Yates Farm which includes the stream's source and the portion of the stream that flows through Martin Luther King Park, provide a name for this tributary.

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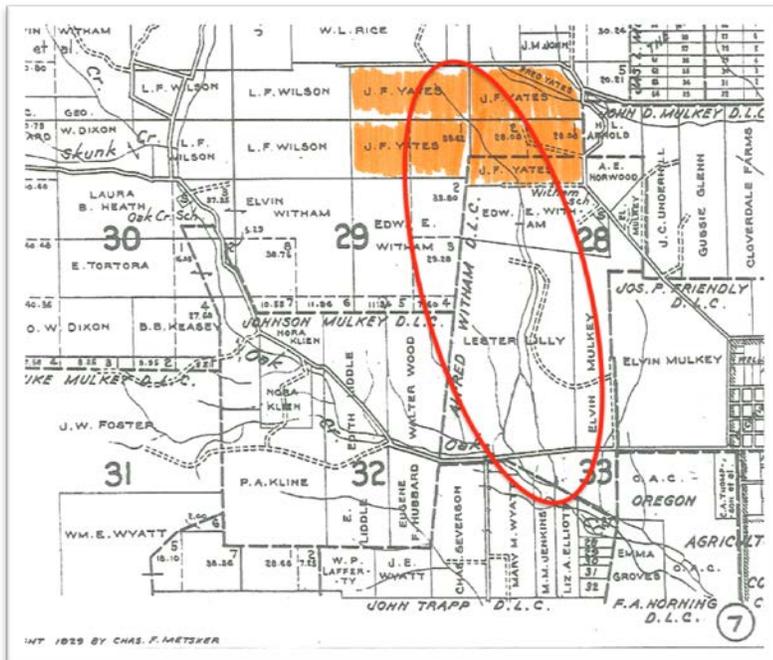
## Appendix B. Maps.

### 1851 Survey Map



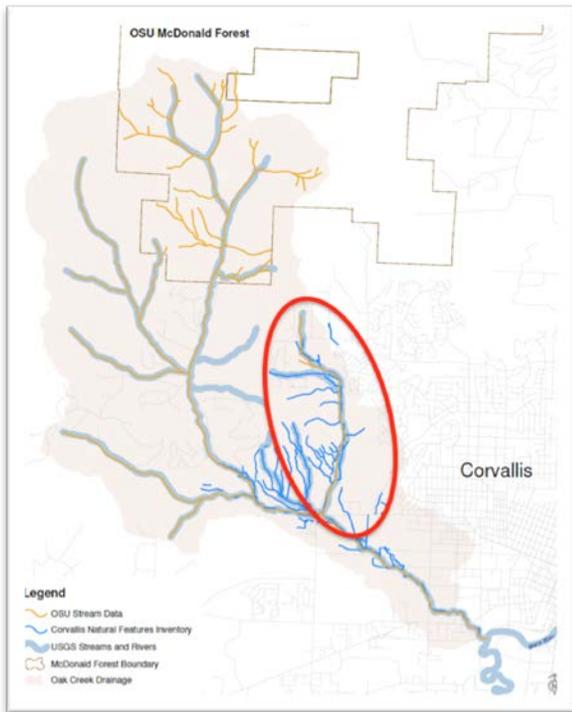
A reconstruction of the 1851 General Lands Survey plant data for the Mid-Willamette Valley indicates that a wet prairie extended along the same course as the current tributary channel. A linear wet prairie was the indication of a stream course in 1851 prior to tilling or channelization by pioneers. This unnamed tributary was therefore a native stream. Note that the tributary drainage enters Oak Creek at two outfalls, one upstream of the current confluence and one significantly downstream along Oak Creek.

### 1921 - Farmland



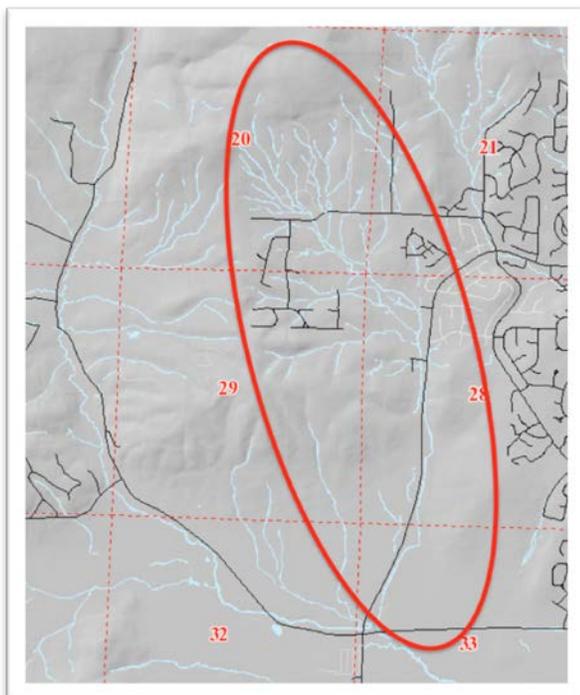
The 1921 Metzger Map indicates that the tributary was fully functional during the era of farming in that watershed. Mary Gallagher (Appendix A) of the Benton Historical Society and Museum indicated by phone that none of the Yates family (see filled tax lots) letters and documents indicated any name for the creek that passed through their farm. Note that at that time, Walnut Blvd. Does not exist and the tributary has two channels in the middle of its course.

## Current City Map



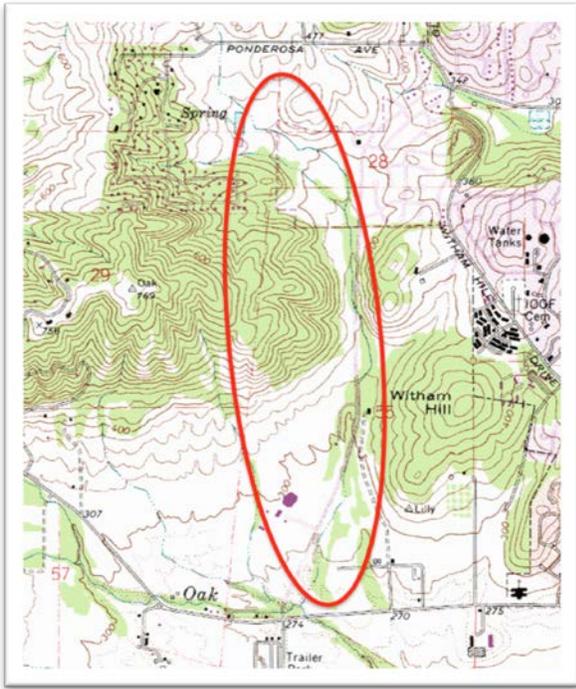
The city of Corvallis includes the unnamed tributary in its geospatial information system (GIS) and includes smaller tributaries to this unnamed tributary. In addition, the City lists the tributary in its Stormwater Master Plan and refers to it by the name of the adjacent road – Walnut Blvd. The report indicates that the 2-year discharge exceeds the 4-feet per second threshold, indicating that sufficient flows occurs in this stream during major storms to create erosion problems for adjacent property owners. This demonstrates the significance of this tributary to the City of Corvallis.

## Current Benton County GIS Data



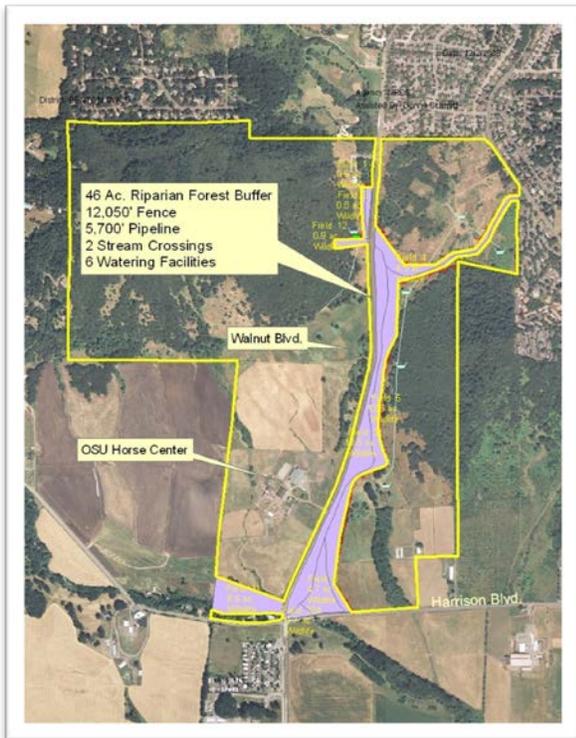
Benton County's GIS program indicates a complex system of first order streams feeding into the designated unnamed Oak Creek tributary. This complex system indicates a greater need to name and monitor this tributary that spans suburban and rural environments.

## USGS Map



The unnamed tributary to Oak Creek is also illustrated on standard USGS topographic maps.

## OSU Horse Conservation Reserve Enhancement Program (CREP)



NRCS-funded program to keep OSU horses out of the designated unnamed Oak Creek tributary. Facilitated by Benton Soil and Water Conservation District.

## Appendix C. Gazette-Times story.

Corvallis Gazette-Times - Thursday, February 13, 2014 - Page 3

[http://www.gazettetimes.com/news/local/woman-rescued-then-taken-into-custody/article\\_eb882aa8-9485-11e3-860a-0019bb2963f4.html](http://www.gazettetimes.com/news/local/woman-rescued-then-taken-into-custody/article_eb882aa8-9485-11e3-860a-0019bb2963f4.html)

Following is the text of a Gazette-Times article indicating the flow of our designated unnamed tributary during a storm and its impact on a vehicle, driver and rescue crew. The reporter for the Gazette-Times also indicated in a conversation that the journalists had trouble locating the creek in question because it didn't have a name listed on any maps.

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*What started with a rescue ended with handcuffs Wednesday night after a woman fell into a rain-swollen creek and needed help crossing it.*

*Sgt. Randy Hiner of the Benton County Sheriff's Office said that "an extremely intoxicated woman ... **fell in a creek**," off Walnut Boulevard, halfway between Martin Luther King Park and the Oregon State University Horse barns. She reportedly got out, sat in the tall, wet grass and called on her cellphone for rescue, Hiner said. But she didn't know where she was in the darkness, he said.*

*So, dispatchers "pinged" the cell phone for a general location, and then sheriff's deputies Aaron Gevatosky and David Iverson turned on their sirens and overhead lights so she could see them.*

*"They followed their own sirens," Hiner said. After turning on their spotlights, the deputies spotted the woman, wet and cold, unable to come across the creek to the road.*

*Lt. Kevin Fulsher of the Corvallis Fire Department said firefighters from Station 2 arrived at 6:36 p.m. but couldn't get her back across with a 20-foot ladder. So the department sent its truck with an 104-foot aerial ladder and bucket about 10 minutes later. "It took one rescuer to get a harness on her and get her into the bucket," Fulsher said. "She just really wanted to get across that creek."*