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SEA Public Meeting at Redding Library Climate Change and BLM Lands Thursday, July 14, 6pm

SEA will be holding its first public meeting since the Covid pandemic! This will be at the Community Room of the Redding Library on Thursday July 14 at 6 pm. N95 or surgical masks may be required regardless of vaccination status depending on the latest Shasta County case counts. Chairs will be spaced for added precautions. The meeting will feature a talk by ecologist Laura Brodhead and SEA President David Ledger will give updates on what SEA is doing, especially with the Redding tree ordinance.

How should we approach land management in a changing climate? In this talk Laura Brodhead, an ecologist, will discuss a useful framework for thinking about how to manage natural resources in a changing climate - called the RAD (Resist, Accept, Direct) framework. She will give a brief overview of the framework, discuss some local examples in how BLM is adapting to climate change and what they are seeing on public lands. She will lead a discussion about possible future actions using the framework as a backdrop in public land management. Laura works for the Bureau of Land Management in the Redding Field Office and has a background as an ecologist. She is interested in science communication and adapting land management to a changing climate.



BLM Recreation sign

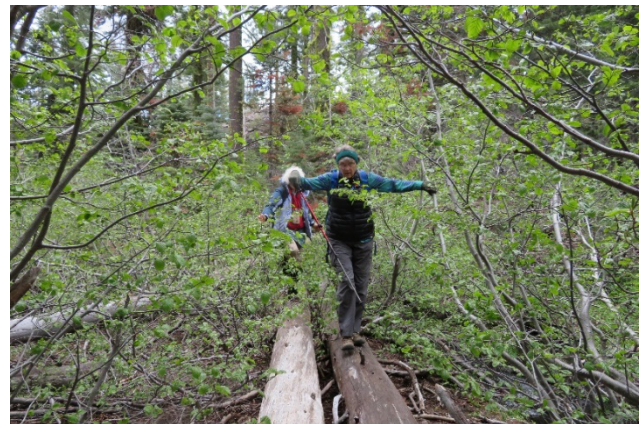
SEA Heart Lake Field Trip



Photo of Heart Lake by artist Marti Weidert

This SEA field trip on June 19 was in an old growth forest following a mountain stream with many beautiful flowers on the way to beautiful Heart Lake in Lassen National Forest. Nine hikers joined SEA for this almost 5-mile hike with the temperature in the upper 40's when we started and about 60 when we finished, providing cool hiking conditions for the 1000-foot elevation climb.

We identified many wildflowers, shrubs and trees. The only broad leaf deciduous trees were quaking aspen, and shrubby thin-leaf alders along the creek. Wildflowers included many large patches of bleeding hearts and corn lilies with rattlesnake plantain, columbine, paintbrush, pussy paws and violets among. The principal conifers are ponderosa, lodgepole, Jeffrey and western white pine, and incense cedar, and red and white fir. The hike wasn't too difficult except for the altitude at 6500 feet. The road to the trail involves driving almost to Lassen Volcanic National Park and then 12 miles of gravel road to the trailhead. We carpooled to save gas and reduce ghg emissions.



Creek crossing required some agility and balance!

Wastewater Treatment Plant Tour

SEA arranged for a tour of the City of Redding's Clear Creek Wastewater Treatment Plant on June 16 led by City employee Tim Conley. The treatment plant is located on Clear Creek where it enters the Sacramento River of about 100 acres of land including all of the collecting basins.

In dry weather the treatment plant treats 4.7 million gallons of wastewater per day (gwd) and in wet weather up to 40 million gwd due to stormwater incursions into manholes, sewer mains, etc.

Redding has 432 miles of sewer lines, 8,255 manholes and they clean out over 400 miles of sewer lines each year. One of the major problems they have is people throwing baby wipes or other objects in the toilets and pouring kitchen grease down the drain. This can cause blockages in certain areas of sewer lines such as turns, roots or flatter lines. The baby wipes do not dissolve and must be removed at the treatment plant and taken to a landfill. The greases build up on the sides of the drains.

At the start of a tour, Tim showed us a short video, and an overview of the operation and answered a lot of questions! Then we started the walking tour with the first processing of sewage as it enters the plant. Here the sewage is cleaned of various things people throw down the toilet, especially the baby wipes which have to be taken out. Baby wipes are the worst culprit in the operations as they cannot be decomposed and can clog up sewage pipes. During the Covid lockdown and toilet paper shortages, people started using rags which clogged up sewer drain lines in certain neighborhoods.



Early input for aerobic bacteria

From here we went to the various treatment areas where sewage is broken down using the two types of bacteria. Anaerobic bacteria treats the sewage first with water heated to 98 degrees, then it is sent to an Aerobic Basin where the aerobic bacteria, supplemented with oxygen, breaks down the remaining organic waste which is referred to as Bio-solids. All of the bio-solids are currently being taken to the landfill. In California the deadline to stop sending bio-solids to the landfill is in 2025. The plant is currently in the process of getting a pyrolysis unit online that will break down and heat the solids to 98% dry and hauled off by a third party.



Walkway across treatment plant

To heat the water to a temperature for the anaerobic bacteria to remain active to decompose the sewage they use methane gas, a by-product of the anaerobic bacteria. The plant recycles about 70% of the methane produced by the bacteria, the rest is flared off as currently they do not have a process to use it.

Finally after being filtered a final time, the water is treated with chlorine to kill any remaining bacteria or viruses. With a final dechlorination, the water is returned to the river meeting all EPA standards. The plant has an onsite lab and technician to provide a continuous assurance that all processes are working correctly and water released is safe. In his parting comments, our tour guide Tim said he is an avid fisherman and outdoors advocate and appreciates being able to insure the water released into the Sacramento River is safe for fish and wildlife. For a short video about the operation of the plant and protecting what goes into our storm drains go to this YouTube video

<https://www.youtube.com/watch?v=FKOLzk7Abk>



Treated water ready for filtration and chlorination steps.

SEA Receives Grant from the Kimball Fund

The Patricia L. Kimball and David T. Kimball Fund awarded SEA a very generous \$20,000 grant that will allow us to further our mission of protecting the environment of the Sacramento River watershed. This grant was a complete surprise to SEA as we did not apply for it, but an anonymous trustee who appreciated SEA recommended we receive it. The grant is administered by the Community Foundation of the North State and we can use it for general expenses but it must be spent in the next 12 months. SEA is now studying the best way to put these funds to work. **Thank you to the Kimball Fund!!!**

Redding Tree Ordinance Call to Action

It has been almost sixteen months since the Redding City Council directed the Redding Planning Department to come up with some options to the current ordinance and *nothing* has happened!

Reasons for the delay: the Development Service Director suddenly quit his job; four months later the City hired a new Development services director who also quit after a few months.

On June 2 the City hired Jeremy Pagan as the new director who had been interim director for several months and Planning has hired two new Planners. Ironically last months the Planning Department did have time to bring to the City Council a proposal for encroachments to setbacks close to riparian areas, mainly along the Sacramento River. It was not voted on by the council on advice of City Attorney Barry DeWalt.

Tree Ordinance (Cont.)

As the new director has only been in the job a short time, the delay in bringing the Council alternative to the tree ordinance cannot be blamed on him. However with elections coming up in November, and some of the candidates not looking promising for our environment and Redding's trees, it is time to get Planning to come up with a new tree ordinance. SEA President David Ledger and Board Member Jim Milestone will be meeting with Pagan in mid-July.

SEA will be sending out an Action Alert on this the Tree Ordinance and we will be asking everyone to attend the July 19 Council meeting and send emails to the council asking for action by the Planning Department on a new Tree Ordinance that actually saves trees or mitigates for their removal. The current one does neither.

Vote on Wind Farm Ban Postponed

Recently the California legislature passed a law placing state control on all wind farms over 50 MW, so it is likely the Wind Farm ban in Shasta County will have to go back to the Planning Commission. SEA or NSCA will send an Action Alert as details are confirmed. The Board of Supervisors were scheduled for a hearing on July 21. The proposed ordinance would ban ordinance all commercial wind farms in Shasta County while allowing small scale operations where most of the wind energy would be used on site such as the Walmart Distribution Center south of Red Bluff. The ordinance originated at the Planning Commission which approved it on a 4 to 1 vote.

Supervisors to Vote on Tierra Robles

On July 21 the Shasta County Board of Supervisors will have a hearing on the Tierra Robles project of 166 home subdivision in Bella Vista. Local residents have been protesting this for several years because of more urban sprawl, limited escape routes from wildfire and habitat destruction among other reasons. At a Planning Commission hearing, the Bella Vista Water district stated that it does not have the water available to service the subdivision. The Planning Commission still voted to approve the project and send it to the Board of Supervisors. If you want to comment on this project, you can attend the hearing or send written comments to clerkoftheboard@co.shasta.ca For more information on the project, go to <https://shastapatrol.org/>

Chris Harvey suffers back injury

Chris Harvey has suffered a serious back injury and will be laid up for a few months or more unable to lead the many field trips and volunteer work he has done for the Shasta Lant Trust, the Shasta Chapter of California Native Plant Society, the Trails and Bikeways Council of Redding and SEA. He has been a great supporter of SEA, financially as well as helping on our oak seedling and watering projects and going on our field trips. We wish Chris a speedy recovery and look to find him on one of our field trips soon!

Meet new SEA Board Member Kat Camplin



Kat Camplin is a certified professional dog trainer who moved to Redding to continue her bachelor's degree in Natural Resources with a specialty in Behavioral Ecology through Oregon State University. She has served on the Board of Directors for non-profit theater and canine

obedience organizations and volunteers her time helping rescue dogs. In her spare time she enjoys wildlife photography, native plant gardening, and hiking with her dogs and she also has a podcast about training dogs.

Kat is currently designing a new website for SEA, which we hope to have done by the end of July. She is a real asset to the SEA board and we thank her for her volunteerism! <http://www.howdoyoutrainthat.com/>

Cedar Basin Field Trip Mt. Shasta Area Saturday, July 16, 8 am

This will be a five-mile roundtrip moderate to difficult hike with an 800-foot elevation climb to two small glacial lakes. This is a US Forest Service research area and has five species listed on the CNPS rare and endangered species list. There are many Port Orford cedar trees, Klamath manzanita (discovered in 1982), roundleaf sundew, and there California pitcher plant along the trail. The trail is also featured in Michael Kauffmann's Conifer Country. The area is 14 miles west of Mount Shasta. Bring water, lunch, and adequate hiking footwear. No dogs, please. To reserve a space and for more information, email walk leader David Ledger david@ecoshasta.org.

Fieldtrip: Panther Meadows to Gray Butte Saturday, July 23, 8 am

This joint SEA – CNPS 4-mile moderate difficulty hike which will start at Panther Meadows on Mt. Shasta and continue to the top of Gray Butte which overlooks the upper Sacramento Valley. This is an exciting area because of its botanical diversity, beauty and great views. Bring water, insect repellent, lunch, and gas money. No dogs, please. For more information, email walk leader David Ledger at david@ecoshasta.org. Due to Covid, for carpooling bring your vaccination card and a CDC approved mask.

Join Shasta Environmental Alliance



Join Shasta Environmental Alliance for only \$25, or more, and show your support with this 3" x 7" removable bumper sticker. It is available for free to all new members and anyone who has contributed to SEA in the last year. Just let us know at ecoshasta@gmail.org and we will be happy to mail you one at no charge.

Please consider making a donation to Shasta Environmental Alliance, we can use your support for future actions. Go to our website at www.ecoshasta.org You can also donate to SEA by mail at PO Box 993777, Redding, CA 96099.

Shasta Lake Approves Tree Mitigation Fees

On July 5, the Shasta Lake City Council approved mitigation fee for the removal of oak trees during development. Their tree ordinance requires the planting of trees on a 3 to 1 ratio for every oak tree removed on lots over 20,00 sq. ft. The replacement trees must be planted on site and if there is not room to plant them on site, there would be a mitigation fee of \$1467 for each tree over 10" diameter. This is not the ideal mitigation as it is the same fee regardless of whether the removed tree is 10" or 20" wide, however it is a step in the right direction which can be raised in the future.