

"If Winter comes, can
Spring be far behind?"
-Percy Bysshe Shelley

Photo by Al Matta

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UPCOMING EVENTS:

LEGO for Pre-schoolers and Seniors
Thursdays: March 2,9,16,30

10am-12noon - Nature Center

FSJMCP/CCC Nature Center Trail Clean-up
Saturday, March 11 at 9am

FSJMCP/CCC Spanish Nature Class (Winter Session)

Wednesdays: March 1, 8, 15 10am - Noon - Nature Center

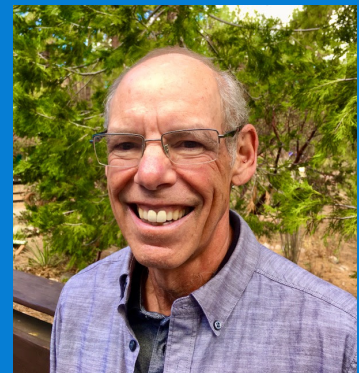
Spring Session Starts Wednesday,
March 22, 10am-12 noon - Nature Center

*Registered Volunteers are welcome to assist at events.
Please email bod@fsjmcp.org if interested in volunteering.*

A Message from Roger Lasken
President, FSJMCP Board of Directors

**Winter Membership Drive and
Fundraiser**

By Roger Lasken



Hello Friends,

This month we are starting a Winter Membership Drive and Fundraiser. Covid-19 slowed us down over the past 2 years with some of our favorite events cancelled. You can help us build back better than ever by being sure to renew your FSJMCP memberships or purchase a new membership.

Please visit our web site (<https://fosjmcp.org/members/>) where you can join by credit card (\$25 for individuals, \$40 for couples and \$60 for families). Members park for free. You can also purchase memberships at the Nature Center Museum and park for free that same day.

You can also make a special donation to support our exciting new educational program. We had a lot of fun this winter developing science and nature classes for families. Lots of our new volunteers, along with some favorite old-timers, joined in to bring the fun of science to kids.

FSJMCP teamed up with Anna Maruca, founder of Creative Connections Community (CCC, <https://www.creativeconnectionscommunity.org>), a local nonprofit foundation that is dedicated to developing innovative educational programs. CCC is a community of families that work together to provide educational workshops, events and field trips. We are also very pleased that Anna has joined the FSJMCP Board of Directors and will be contributing her great talents to our programs and events.

The Science Club had three sessions on chemistry led by Peter Kindfield. The kids built ball and stick molecular models to make glucose from water and CO₂ as plants do during photosynthesis. Each child got a chemistry model kit to take home.



We took our program on the road to have this microscope class at the Idyllwild Libraries' wonderful homeschool STEAM program.



Our new handheld microscopes let the kids see fabrics and news print up close



Legos, art projects and a catapult building contest were part of the indoor fun on a snow day at the Nature Center

FSJMCP and CCC are now offering educational classes at the Nature Center and other locations around Idyllwild (see "Upcoming Events"). The Science Club meets every Saturday and offers fun activities in science and art for kids and their families to enjoy. We have teamed up with the Forest Folk, our wonderful local nonprofit foundation that runs the Idyllwild Shuttle, to give free rides to families coming to the Science Club and LEGO Play. Please see Anna's article below to learn about our new class offerings and organizational partners. Your membership fees and generous donations help to fund these classes along

with the many Friend's volunteers who contribute their time. If you wish to make a donation, please send a check to FSJMCP, PO Box 1522, Idyllwild, CA 92549 and indicate on the check "Educational programs".

Please see Mary Rider's article below to learn about our volunteer program. We are seeking new volunteers to help out at events and educational classes. Do you have an interest in a technical field, nature studies, art or cultural studies? Please come to one of Mary's Activity Committee meetings and learn how you can help out. For those inclined, you can join our many volunteers who are leading classes. Or, if you have a favorite lesson for kids, you can volunteer to lead an activity, or co-develop lessons with our educational volunteers.

Hope to see you at the Idyllwild Nature Center sometime soon. I would love to hear any comments or questions from readers about our plans or how you might get involved. Please email me at roger@fosjmcp.org.

*You can now join or renew your membership online at:
<https://fosjmcp.org>*



Nature Center Snow Level and Warming Center - Sunday, February 26th.

The Friends Need You!

By Mary Rider, FSJMCP Vice-President

As Vice-President, I've temporarily resumed the position of FSJMCP President until Roger Lasken recovers from a back injury. The Board of Directors' primary focus is to increase engagement with potential, new, and loyal members of our nonprofit organization. The revenue generated from membership fees is essential to fulfilling the FSJMCP mission to assist and advance public



awareness and appreciation of the history, culture, and ecology of the San Jacinto Mountain area.

Our organization's second most important asset is the ecocentrism of our members and their interest and willingness to engage and educate Nature Center visitors regarding the wonders of the natural environment.

The new year has already begun with regularly scheduled science activities for children, collaboration with other nonprofits, and a resourceful and supportive new Idyllwild Nature Center Ranger. If you've ever considered becoming a FSJMCP volunteer, now is the time to try it out. There are many opportunities to participate, based on your willingness to follow the lead or take on more responsibility.

FSJMCP needs volunteers to help with scheduled children's activities, Story Time in the Forest sessions, and the Nature Center's annual events in May (Wildflower Show), June (Lemon Lily Festival), August (Butterfly Daze), and October (Trail of the Acorn). Ranger Sonny Waldron is also actively recruiting RivCo Parks volunteers to assist visitors in the museum or at the Idyllwild Nature Center kiosk on the weekends, maintain the botanical gardens, feed the live animals, or lead youth groups on nature hikes.

The FSJMCP Activity Committee is seeking members who have an interest and expertise in a topic related to the ecology, history or culture of the local area or the skill to provide a Do-It-Yourself building project, (bird and bat nests, etc.). Please contact me by text message (619-518-6605) or email (bod@fsjmcp.org) if you would like to discuss sharing your enthusiasm and knowledge with others. The FSJMCP Activity Committee is eager to provide the community and weekend visitors an opportunity to expand appreciation and understanding of the history, culture, and ecosystem of the San Jacinto Mountain environs.

Think about expanding your horizons while enjoying being out in nature and being of service to the local community and visitors to the Nature Center. I look forward to hearing from you.

Mary





UPDATE FROM ANNA J. MARUCA *FSJMCP Board of Directors*

It's been a busy month at the Nature Center!

Our *Invierno* (winter) session of Spanish Nature class has been a fun mixture of songs, vocabulary, *lotería*, art and lots of learning! We studied *coniferos* (conifers) and *copos de nieve* (snowflakes) and learned about *animales que hibernan* (hibernating animals). The next few weeks we will be covering *etapas de la luna*, *planetas y constelaciones* (moon phases, planets and constellations). Our *primavera* (spring) session starts Wednesday, March 22 (10 am - noon) at the Nature Center. This program is geared for ages 5 and up.

Our first session of LEGO Play (preschoolers and seniors) brought together many local moms with young children and reinforced the need for more early childhood programs. We are working on developing a Spanish based toddler class to provide additional space for young families to meet. We are also developing a series of Community Art classes that include our local seniors to add to our inter-generational programs. LEGO Play meets every Thursday at 10 am and FREE shuttle rides are available through Forest Folk, Inc.



Science Club has also been a success, and we are expanding it to include a broader range of topics focusing on sustainability and environmental studies. Through our partnership with CCC, we have leased a garden bed at the Idyllwild

Community Garden and will begin hosting monthly educational workshops there, along with participating in the classes provided by the Idyllwild Garden Club.

We have also adopted a trail at the Nature Center (there are 2 more available, if interested), and will develop lessons and workshops to incorporate it into our programs. Our first trail cleanup will be on Saturday, March 11th at 9 am.

And lastly, we have formed two new committees to help finance, develop, and implement our education programs. If you are interested in participating in our fundraising efforts, or joining our educational programs committee, please email bod@fosjmcp.org to let us know!

If you would like to make a donation to directly support our Education programs, you can do so here: <https://fosjmcp.org/donate/>

Thanking you in advance for your support. I'm looking forward to seeing you soon!

Anna

Watershed Class at the Nature Center

by Pamela Mayfield

On February 1st I stopped by the Nature Center to take photos of Anna Maruca's Watershed class. I was very impressed by what Anna and her associate, Teresa Halliburton had set up. There were lots of posters, books, handouts, and supplies for the children and their parents to create their own watershed model using plastic tubs, cardboard, brown paper, craft supplies for trees and terrain, colored sprinkles and of course, water. Everyone had a good time with this subject, here are a few of my photos



Climate Change and the Future of California's Water

California's Mediterranean climate – with its hot, dry summers and cool, wet winters – makes managing water a challenge. A complex system of dams and aqueducts stores and distributes water to help protect communities from floods and provides a reliable supply of water throughout the year. However, this system is at risk from climate change. Increased temperatures, reduction of the Sierra snowpack, and sea level rise are already impacting water supply and demand, and the impacts are expected to become more pronounced in the coming decades. Understanding why climate change is happening, how it will impact our water resources, and what we can do to minimize its effects is essential for managing our water resources and protecting our future.

What Causes Climate Change?

When we burn fossil fuels such as coal, oil, and gas to power our homes, factories, and cars, we release carbon dioxide (CO₂) into the atmosphere. CO₂ is a heat-trapping gas. Regular CO₂, released through the carbon cycle helps the atmosphere act like a blanket, keeping the Earth warm enough to live on. However, burning fossil fuels releases additional CO₂ into the atmosphere. This compound CO₂ causes the atmosphere to act like a thicker blanket, which traps too much heat and disrupts the climate.



Changes to Atmospheric CO₂



Source: www.noaa.gov/data/air_data/gdp/ghcn_ghcnm2. Shows the increase from about 315 ppm in 1958 to about 390 ppm in 2013, and predicts future change.

What Climate Change Means for California

Future Flooding with Sea Level Rise



Source: www.noaa.gov/data/sea_level_rise/sea_level_rise_visualization. Shows the projected sea level rise by 2100 for different scenarios. The map shows the extent of flooding for 10, 20, and 30 feet of sea level rise.

Sea Level Rise

As the oceans warm, sea level rises and ocean surges threaten regions. These both contribute to rising sea levels. In California, sea level rise threatens coastal communities with flooding and poses risks to groundwater resources and the health and quality of the Sacramento-San Joaquin Delta – the primary source of fresh water for 27 million Californians from the San Francisco Bay Area to San Diego. www.water.ca.gov/sea_level_rise

Reduction in Snowpack

The Sierra snowpack acts as a frozen reservoir that, as it melts, provides water during the hot, dry summers. Warming temperatures, leading to less snow, have already reduced the snowpack by 20 percent in the last 40 years. Climate models indicate snowpack will continue to decline in the 21st century. This loss, combined with earlier and later melting, decreases how much water we have during our hot, dry summer months. www.water.ca.gov/snowpack

Changes to California's Snowpack



Warmer Temperatures

Warmer temperatures increase our water supply demand, and the longer we can grow, the more water we need. Water is harder to come by in warmer temperatures and less available in groundwater. Increasing the temperature in California, agricultural production, increasing the number of people who live in California, and other factors will increase our water demand. www.water.ca.gov/water_supply

Warmer Winter Temperatures Mean Less Snow



What You Can Do About Climate Change

Our climate future is our hand. Some amount of climate change is already happening. But reducing CO₂ can slow the speed and severity of climate change and help protect our water resources. We need to engage in efforts to reduce the impacts of climate change and take steps to reduce our contribution to the levels of CO₂ in the atmosphere.

People in California and throughout the world are working together to take action and protect our future. Teachers and other young adults are wonderful parts of the solution. We'll tell you and your friends too!

Conserve Water

Conserving water helps us adapt to and mitigate climate change. Reusing, recycling, and saving water, and using water wisely, are all better prepared for the dry, hot, and sunny days we're seeing more often. Conserving water is a key to protecting our water resources. Conserving water also saves energy. Wasting water can generate clean energy. U.S. households use about 100 billion gallons of water every day. Conserving water can save energy. www.water.ca.gov/water_conservation

Talk to Others

Talk to your parents, siblings, neighbors, and friends about climate change. Make an effort to reduce your own carbon footprint and encourage others to do the same. You can make a difference. www.water.ca.gov/climate_change

Work with Your School

Helping water plant gardens and trees, installing water-saving programs, including water audits and systems, taking a walk, or making other water-saving programs in school, and making water-saving projects at home are all ways to reduce our carbon footprint. www.water.ca.gov/water_conservation



For help to schools, visit www.water.ca.gov/schools or call 1-800-953-5877. www.water.ca.gov

Groundwater: *An Essential Part of California's Water Budget*

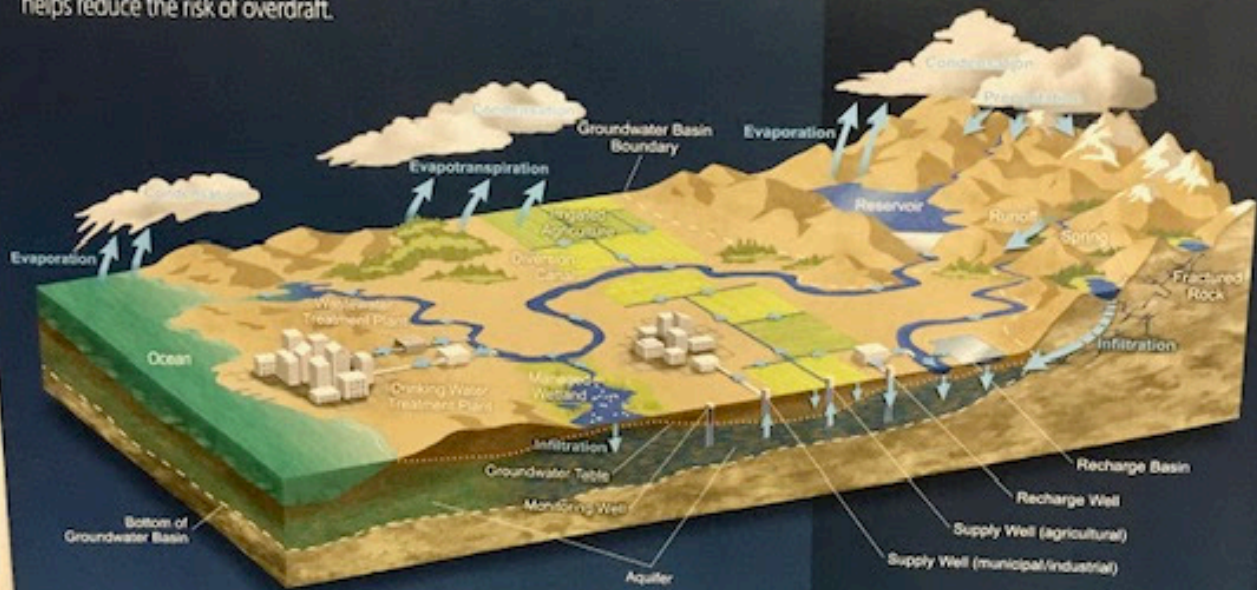
Groundwater is an essential part of California's economy and environment. Statewide, groundwater provides about 40-60% of our water supply. Some communities rely on groundwater for 100% of their water needs.

Responsible management of groundwater today helps ensure that enough remains for future generations. Excessive groundwater extraction – overdraft – lowers the water table, making it more difficult and expensive to pump and more susceptible to land subsidence and contamination. Conserving water helps reduce the risk of overdraft.

The (Ground)Water Cycle

Groundwater is an integral part of the water cycle. When precipitation falls, a portion infiltrates into the ground and moves downward through the soil, pooling in porous layers, until it reaches a layer that is saturated or impermeable.

From here, the water can take many paths. Groundwater may remain underground for hundreds or even thousands of years, quickly discharge into streams, or be pumped by wells for agricultural, industrial, or municipal uses.



Groundwater Vocabulary

Basin: Underground geologic formation that stores water in the open spaces between rocks, sand, and gravel.

Condensation: The process by which water vapor (gas) in the air is changed into liquid water. Condensation is the part of the water cycle responsible for the formation of clouds.

Discharge Canal: A constructed waterway, concrete or earthen, that carries water from its natural source.

Evapotranspiration: The process by which liquid water moves from water bodies, soil, and other surfaces (evaporation) and plants (transpiration) to a gas or vapor form in the atmosphere.

Groundflow: Flows in rock that allow water to move underground and provide storage for groundwater.

Groundwater: The water found beneath the Earth's surface that fills spaces between rocks or water tables.

Groundwater Basin: An alluvial aquifer, or a stacked series of alluvial aquifers, with reasonably well-defined boundaries.

Groundwater Table: The upper surface of the saturated zone where groundwater lies. The area below the water table is the aquifer.

Infiltration: The process by which water on the surface soaks the soil.

Irrigated Agriculture: Agricultural crops that receive controlled amounts of surface water or groundwater, essential for farming in dry regions where rainfall cannot serve as a consistent source of water.

Managed Wetland: Wetland areas managed for specific purposes, for example, wastewater treatment.

Monitoring Well: Well used to monitor groundwater levels or quality.

Oasis: Any body of water that covers more than 70 percent of the surface of our planet and holds over 97 percent of the Earth's water.

Overdraft: A situation that occurs when the amount of water withdrawn by groundwater pumping exceeds the amount of water that recharges the groundwater. Increased extraction rates, used for soil deepening or replacement, land subsidence, poor water quality and environmental impacts.

Precipitation: Water in the form of rain, snow, sleet, or hail that falls to the ground, means of replenishing groundwater levels.

Recharge Well Basin: Constructed features to introduce water into the ground as a means of replenishing groundwater levels.

Reservoir: A natural or artificial lake used as a source of water, flood control, and recreation.

Runoff: Precipitation that does not infiltrate but runs freely across the Earth's surface.

Spring: A site where groundwater emerges on the ground surface.

Supply Well: Well used to supply groundwater for agricultural, municipal, or industrial uses.

Treatment Plant: Facility used to remove contaminants from drinking water and wastewater.

Water Cycle: A cycle of processes – including evaporation, condensation, and precipitation – through which water (in various states) between the Earth's oceans, atmosphere, and land.

For further information

DEIR Groundwater Introduction:
<http://www.water.ca.gov/groundwater/>

Basic Groundwater Concepts (DEIR Bulletin 118, 2004):
http://www.water.ca.gov/groundwater/bulletin_118/bulletin118_chapter1.pdf

Basic Groundwater Concepts (DEIR Bulletin 118 Update 2014):
http://www.water.ca.gov/groundwater/bulletin118_update_2014/

Water Data Library (Groundwater Levels):
<http://www.water.ca.gov/groundwater/levels/>

USGS, California Water Science Center:
<http://cwa.water.usgs.gov/>

Water Cycle:
<http://www.water.ca.gov/groundwater/levels/watercycle/>

Distribution of the World's Water:
<http://water.usgs.gov/dw/earthwater/earthwater.html>



THE Water Cycle



Where do you think the last raindrops you saw traveled from?



Water's Magical Travels

Did you know, all of the water on the Earth is all that has ever been here? The water that you'll never disappear and no new water is EVER created. Like a magical trick, water travels around the world through a process called The Water Cycle in three physical states: liquid, solid, and vapor.

The Water Cycle has four main phases that occur over and over again - Precipitation, Accumulation, Evaporation, and Condensation. During precipitation, water falls from clouds to the earth as rain, snow, hail, or sleet. After it falls, the accumulation stage begins and the water flows to creeks, storm drains, rivers, lakes, and oceans. Some of the water percolates into the soil and accumulates underground in aquifers. Evaporation happens when the sun warms water molecules and causes them to rise up into the air as vapor. When vapor releases into the air from plants it is called transpiration. Once high in the air, the water molecules eventually cool down and condense into new clouds that start the process all over again.

The Water Cycle can happen within a short time span or over very long periods. For example, melting snow on grass usually experiences the same day, while water trapped in ice caps, glaciers, or aquifers can take thousands of years to move on to the next step.

California Waterways Map





Nature Center Museum Update

By Ranger Sonny Waldron

I have some exciting news to share with you all. Thanks to a generous donation from the Galizio family we have just installed three new kids activities stations at the Nature Center. The stations will complement the theme of each wing of the museum they are positioned in. We have one table in the Cahuilla room to encourage children to draw their own message using traditional Native American pictographs. Children will be able to write/draw what they see from the examples, but are also encouraged to create their own pictograph and assign it meaning. They will be encouraged to think critically about how we communicate today using emojis in technology. Are we going backwards? This is an important piece of human communication evolution to see where we came from to where we are now.

The second table was placed in the animal display room with crayons and rubbing plates depicting animals, insects, and plants. Children can choose their favorite or favorites to take home with them. Bonus activity they can create a food chain and

think about how one species impacts the other and to think about what would happen if one of them went extinct. Understanding the roles of predator prey and the food chain will give them a better view of the ecosystem. This highlights the importance of environmental conservation.



The third table was placed in the history wing and will be utilized by children to build their own "log cabin" using the classic toy Lincoln logs. This is a playful and fun way for children to learn about how homes used to be constructed, and the important role Idyllwild played in the logging industry. This form of play encourages creativity and helps children understand the relationship between form and function in a 3D space.

Also, these tables can be easily moved around and have the activities changed up to keep the center fresh and engaging to encourage repeat usage. As we move forward with these activity tables I welcome your thoughts for future activities to be placed at the tables.

Ranger Sonny



A Note From the Editor

*Pamela Mayfield
BOD FSJMCP*



*"Where there is great love there are always miracles."
Willa Cather*

Greetings from an amazing Winter Wonderland! What a treat to see such beauty in the occasional break in the snowfall these past few days. I write this on Saturday, 2/25, more snow is expected through Wednesday - Incredible!

While all the snowfall has its drawbacks and dangers, personally experiencing a 4-hour power outage when a tree fell on a power line, (thank you, SCE workers for repairing it in the dark and in 22F weather!), I am loving the soft white wet powder that Mother Nature has provided. Even while removing the 2' of snow from atop my car and shoveling away the drifts from the sides, I felt invigorated by being active for 2.1/2 hours outside in the hushed quiet that the snowfall brings. I counted my blessings for having grown up in the countryside, helping my parents dig in the vegetable garden with a spade, and for knowing how to handle a snow shovel properly. I was inspired to build a snow-person, but it

started to snow again right as I finished putting my car to a more sheltered spot. There will be future opportunities to allow my inner-child to play in the snow, I'm sure. I hope you have taken the time for some snow play time yourselves. The Nature Center is a special and safe place for a "Snow Play Day". Your FSJMCP membership allows you in at no charge, non-member visitors are charged a \$10 entry fee. Mary Rider came up with a great idea of having a "Warming Center" for snow play visitors on "Snow Days" in the Community Room attended by FSJMCP volunteers offering warm drinks and snacks. The weather was too severe this Saturday for the Nature Center to have a "Snow Day". I'm hoping people stayed inside in the safety of their homes and off the roads during this unusually heavy storm.

A big "Thank you" to the contributors of this newsletter, your time and efforts are very much appreciated. Thank you, too, to the Friends Board members and Activity Committee members plus other volunteers, for stepping up to bring wonderful new activities for the community and visitors to the hill! You are awesome!! I'm especially thankful and grateful to our two newest Board members, Jeff Galizio and Anna J. Maruca for all that they are contributing.

In leaving the Board of Director's meeting on 2/18 on the way to my car, I came across first time visitors to the Nature Center. This lovely family had traveled from Huntington Beach to play in the snow for the day. The three young boys had just finished snow sledding and were building miniature snowmen atop a tree stump - adorable. Closer to my car I noticed a cute snow character that I also have to share with you =). Enjoy!

*Love and blessings,
Be safe out there,
Pamela*



Pamela A. Mayfield, Editor
Nature Center Newsletter Committee
FSJMCP Board of Directors
pammayfield@verizon.net



Volunteer Opportunities!

We offer a variety of volunteer opportunities and try to match the volunteer with the activity they most enjoy. You can pick up a volunteer packet at the Nature Center at [25225 Hwy 243, Idyllwild, CA 92549](#).

For current COVID information visit:

<http://rivco.org/covid-19>

Friends of San Jacinto Mountain County Parks MISSION STATEMENT

To assist, promote, advance and develop the historical, scientific, educational and cultural aspects pertaining to the Idyllwild Nature Center and Idyllwild Regional Park Campground.

25225 Highway 243
Idyllwild, CA 92549
(951) 659-3850



