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The Backstory to Carbon Pricing: The Most Important Number You’ve Never Heard Of

by Regina Ostergaard-Klem, Ph.D., Hawai‘i Pacific University Professor

I’ve been teaching ecological economics at HPU for the past eleven years. Ask my students at the end of the semester, and they should be able to competently argue the pros and cons of putting a price on carbon. Do you know what does putting a price on carbon mean and how do I argue the pros and cons of putting a price on carbon. I find it helps to kick off with its backstory, one that is focused on “the most important number they’ve never heard of” – the social cost of carbon (SCC). Perhaps you are already familiar with this story or maybe it is new to you; either way, I hope that you will also find it helpful towards increasing your and others’ understanding of carbon pricing, particularly given that related topics like carbon taxes are currently such hot topics.

The social cost of carbon

Remember that article or blog post you read somewhere saying that the price on carbon is approximately $40 per metric ton? That figure represents what is called the Social Cost of Carbon (SCC or SC-CO2). It’s a catchphrase of a comprehensive multi-year interagency US government effort, using cutting edge modeling, incorporating a variety of assumptions, and spurring tons of debate, but which uses the best available science. In economics-speak, the SCC is the net present value of the monetary costs from future damages of an additional metric ton of carbon released into the atmosphere. It’s best to think of the SCC as constrained by uncertainty and complexity, of the damage costs that future society members will bear due to a metric ton of carbon that was released currently. Or, on the flip side, costs of extra ton or carbon now in order to avoid those damages in the future.

So the $40 per metric ton of carbon is by no means a hard, steadfast number. In fact, that figure draws a lot of criticism because it is the US government’s central value across three different models and for three different scenarios of climate change. So, there isn’t one number, rather, anywhere from $1 to $105, depending on the models, the assumptions, and which way the political breeze is blowing. The related complexity and uncertainty has led to quite a bit of debate, but it is not that the good the models get and the data become. However, assigning a low or no number is little more than affixing a price of zero on the impacts of carbon, essentially zeroing on either the benefits of mitigation or the costs of adaptation.

Calculating the SCC

A variety of factors – socioeconomic, earth systems/climate, damage functions, and discounting – all entered into the SCC. Future pathways in both demographics (population) and economics (GDP) are assumed to influence carbon dioxide emissions. Armed with projected emissions, climate models analyze how variables, such as temperature or sea level, will change. Estimated monetary damages, depending on the model, could include property damages from flooding along coasts, increased human health risks, etc. Last but not least, discounting brings in the critical element of time...

The element of time

Unlike other pollutants that cause impact on human and environmental health soon after exposure, the latent impacts of excess carbon dioxide in the atmosphere take place far into the future and over a very long time frame. This element of time further complicates this scenario because those impacts will be experienced by us but by future members of society.

Unless the models to calculate SCC incorporate a way to back up present reductions in carbon and it is assumed to influence carbon dioxide emissions. This element of time is accounted for by choosing a discount rate for those calculations can be seen as having a headline impact.

The most important number you’ve never heard of

The social cost of carbon has been referred to as “the most important number you’ve never heard of” for good reason. It already played a role in regulatory impact analysis of proposed carbon analogs and energy efficiency and motor vehicle standards. Although not required by the government, some in the private sector are using SCC to inform their investment decisions. Moreover, any attempt at carbon legislation and choices of policy instruments like carbon taxes. Economists point to the role of the SCC for influencing the SCC.

The SCC is far from perfect, Greenstone and Sunstein, the originators of the SCC in the Obama administration, call it a “necessary guidpost” to balance costs to today’s economy with damages coming in the future damages: bit.ly/discount. And, as climate scientist Myles Allen suggests, it can “clarify where data ends and society and political choices begin.” So that explains why the SCC is such an important number, now let’s make sure that everyone hears about it!

Other Resources on SCC:
Native Forests are Crucial to Achieve Hawai‘i’s Climate Goals
by Leah Laramée, DLNR-DOWA Natural Resource Manager

Carbone is a hot topic. With news of the largest polar ice shelf about to break from the Arctic, I mean this literally. Closer to home, Governor David Ige has pledged that Hawai‘i will be a net carbon sink state by 2045. This means that Hawai‘i will absorb more carbon than it produces. The world has eyes on us to see how this will be accomplished. The Hawai‘i Greenhouse Gas Emissions Report for 2015 projects that in 2025 Hawai‘i will produce five times more carbon dioxide than Hawaiian forests can remove. Renewable energy and clean transportation will help Hawai‘i reduce carbon emissions but it is generally agreed that a complete zeroing out of carbon emissions is not possible. To be carbon neutral, we have to increase carbon sequestration in our islands.

That is a lot of pressure on our ‘āina, but it is up for the challenge with the right support. Our native forests are multi-layered and diverse, with thick canopies and dense understories that make our mauka mesic wet forests perfect for collecting water for our aquifers and protecting our reefs from eroding. Hawai‘i’s soils are also excellent at storing carbon. In their “Baseline and projected future carbon storage and carbon fluxes in ecosystems of Hawai‘i,” Selmanats et al. 2017 shows that native wet mesic forests have the highest capacity to store carbon compared to any other natural landscape. However, through historical deforestation for unsustainable lumber harvests and sugarcane plantations, as well as ongoing land degradation by wild non-native ungulates such as cows, deer, goats and pigs, Hawai‘i’s forests—one of our most valuable assets against climate change—are rapidly losing their ability to store carbon.

Hawai‘i’s government, as well as many private entities, are currently looking into innovative financing mechanisms to sequester more carbon through reforestation and watershed protection. If we are able to take these non-native grasslands and return them to a native plant community, we can increase the overall carbon sequestration of the state. This is the reason why our native forests are so special. They are our carbon sinks.

Our next projects are April 6 planting trees in the Akupu enclosure, April 14 at Ala Mahamoe for tree maintenance, and April 21 at Pālehua for tree maintenance. Several years in the enclosure’s restoration. The Akupu Enclosure is in Pālehua, above Makakilo. It is part of The Nature Conservancy, and the Garden Club of Honolulu, Professor Camilo Mora and the Akupu Enclosure. The Ala Mahamoe site, in Moanalua, was received help from 200 volunteers to plant the trees in a single day.

The clock is ticking on Hawai‘i’s ambitious and commendable goal of greenhouse gas neutrality by 2045, and as the most devastating impacts of climate change draw near, is it finally time for soil to shine? There is more carbon residing in soil than there is in the atmosphere and all plant life combined, however much of the historic soil carbon has been released into the atmosphere from years of unsustainable land use and agricultural practices worldwide. With the right management practices implemented on Hawai‘i’s working lands, we can build healthy, carbon-rich soils that return some of that lost carbon to its rightful place. What is “healthy soil,” and why does soil carbon matter?

Healthy soils are rich in carbon, the building block of organic matter which gives soil its structure, fertility and water holding capacity. If your soil is healthy, it will likely contain more biological life than there are humans on the planet. Just as we are learning about the impact of microbial life in our guts, we are also learning about the function of biological life in soil. When this life is in balance, we see soil pests better kept in check, nutrients properly cycled and healthier plants as a result. A soil is said to be healthy when the chemical, physical and biological properties of soil are working optimally. This supports soil to function as a vital living ecosystem that sustain plants, animals, and humans. What this means for the farmer is higher yielding crops that require less fertilizer and are more resistant to pests and disease; for our aquifers, higher groundwater recharge due to the soil capacity to retain and filter more water; for our streams, oceans and fraglie reef ecosystems, less potential for soil and nutrient runoff. Healthy soils provide ecosystem services that reach far beyond the farm and can help Hawai‘i mitigate the stressful impacts of climate change from mauka to makai.

Our unique and beautiful islands boast nearly all of the soil types and microclimates found in the world. Some of our soils have incredibly high organic matter and carbon content, while others are depleted through years of intensive cultivation. A recent University of Hawai‘i study at a Maui ranch highlighted the immense amount of carbon tied up in their soils from excellent management of their grazing lands. Their use of best management practices were able to not only maintain the natural state of carbon in the soil, but likely increase soil carbon content over time through pasture management. With nearly 900,000 acres of land in ranching in Hawai‘i, there is a large amount of soil carbon stored in these lands that is maintained and providing, at times unrecognized, ecosystem services for the state. Some of Hawai‘i’s farmlands reside on soils naturally lower in organic matter content, and in some cases very depleted of soil carbon from years of intensive tillage. However, these same soils possess immense potential to sequester carbon with the use of best management practices such as covering the soil with short- or long-term cover crops, agroforestry plantings, the use of compost, minimizing soil tillage and disturbance, and grazing management. We support farmers and ranchers in their use and agricultural practices worldwide. With the right management practices on their lands that sequester carbon, build soil health, and reduce greenhouse gas emissions. Through their participation they receive free soil testing to quantify the impacts of their management on soil carbon and soil health, technical assistance, and an honorarium to support the good work they are doing. The more we are able to help our farmers increase their bottom line, the more resilient their operations and in turn our food system becomes.

The Hawai‘i Greenhouse Gas Sequestration Task Force, funded through June 2019 at the time of writing this, is another group of diverse individuals from various government and private organizations tasked with determining how to sequester carbon and reduce greenhouse gases on working lands. Currently they must ask for funding each year from the Legislature in order to hold meetings and develop plans to meet the State’s greenhouse gas neutrality goals. Long-term funding for this task force can help support their efforts.

There are many organizations both public and private engaging with farmers, ranchers, and landowners to manage watersheds, restore native forests, and protect vulnerable reefs and nearshore resources. These organizations efforts combined support healthier ecosystems that are more resilient to climate change, and the common denominator we all share, either directly or indirectly, is soil.
Food Choices Are Key to Saving the Planet
by Doorae Shin, Hawai’i Chapter ExCom Member

If we really want to save the planet, we have to talk more about our food choices.

We have relied on the United Nations Food and Agriculture Organization, that 44% of greenhouse gas emissions come from industrial animal agriculture. Additionally, nearly 1/3 of Earth’s fresh water is used for animal agriculture. 1/3 of Earth’s arable land is used to grow food for animals, and 26% of Earth’s ice-free land is used for grazing.

Nearly half of all global greenhouse gas emissions from human activity are from large-scale animal agriculture alone, so a bigger part of our conversation to address climate change should be around food choices. Especially given that livestock primarily contributes to emissions in the form of methane, which is roughly 30 times more potent than carbon dioxide as a heat-trapping gas.

From an agricultural perspective, producing meat is extremely inefficient and challenging because of the sheer amount of food and water animals require to survive. This is what leads to the shocking amounts of food and water associated with producing meat, dairy and other animal products. It is important to also note that about 90% of GMO soy and corn grown in the United States gets fed directly to factory farmed animals.

Overpopulation?
A growing population continues to be a stress on our planet, but the crisis is not in overpopulation per se, but in the overpopulation of the animals we raise for food. We kill an estimated 70 billion land animals per year to produce food products. It’s tough to wrap your head around how much food, water and land that goes into raising and slaughtering 70 billion animals per year.

And the issues that come solely from the wastewater management – or lack thereof – in these operations, are clear. Improperly managed runoff from farms with livestock often pollutes our streams, rivers, and ocean with an array of antibiotics, hormones and pesticides. Look at the recently failed Big Island Dairy: it was turned into a factory farm and then sued for illegal dumping and pollution of cow waste into the low streams. It was subsequently fined severally and finally shut down.

Water
When I found out that one burger requires over 600 gallons of water to produce, that one gallon of milk requires 1,000 gallons of water to produce, and that plant-based foods require only fractions of the water that animal foods require, it was a big shock. Up until then, I was told to take shorter showers and fix leaky faucets to conserve water—eating less meat and animal products is actually a way more effective use of my time and energy to try to save our precious planet. With 1/3 of our planet’s freshwater used in agriculture, it is clear that eating less meat is crucial to saving water.

What about Grass-fed?
Though plant-based eating is a growing movement, there is still much to be done in conscious meat-eating. With this, it is imperative we talk about grass-fed beef and other forms of meat marketed as sustainable. Meat from grass-fed animals, though it is likely healthier than the GMO-fed, antibiotic-filled meat from factory farms, still does not prove its supposed sustainability when you look at the greenhouse gas emissions. Sure, its a plus not having to grow and ship monocropped animal feed, but the methane and greenhouse gases from the animals continue to contribute harmful emissions into our atmosphere—especially when soil health is not maintained to sequester a portion of the animal’s emissions. In terms of greenhouse gases, grass-fed beef just does not pencil out for the planet.

Accepting and Embracing
As humanity finds itself at this planetary crossroads with the impacts of climate change happening already, we must make a choice. Improving waste management, upgrading animal feed, advancing pasture and soil management in commercial systems can reduce emissions but cutting the amount of meat and animal products we consume will have a greater, more meaningful impact on climate change.

So the question remains, do we stay in our comfort zone, only making incremental steps to change, or do we decide to be bold and honest about the urgent shifts we must make in our habits, our lifestyle, and our economy to save our planet?

The Biggest Carbon Sink of All—the Ocean
by Tanya Dreizin, Hawai’i Chapter Office Manager

For most of us, when we think about carbon sequestration, we think about trees, forests, and maybe soil. We have been reminded of its importance in previous articles on pp. 5-9. The ocean doesn’t come to mind for many of us. Although often overlooked as a carbon sink, the oceans’ systems serve as vast natural carbon sinks and are crucial in regulating the Earth’s temperature and CO2. Since the Industrial Revolution, the oceans have absorbed approximately one-third of human-emitted CO2 (Khatiwala et al., 2011), storing it in algae, vegetation, and under the sea. Unfortunately, as the oceans warm and coastal marine ecosystem degradation continues to occur, this affects the overall efficacy of the ocean as a carbon sink.

How it works
It’s estimated that the ocean contains 50 times more carbon than the atmosphere—and the deep sea may be considered the largest carbon sink on the planet. There are two main natural systems that transfer carbon between the atmosphere and the ocean: the physical chemical and the biological pump. The superior of these is the physical pump, which allows for about nine tenths of the atmospheric carbon dioxide to be transferred to the ocean. When exposed directly to surface seawater, carbon dioxide is dissolved into the ocean and then transported by the currents into the ocean’s deep layers. Once carbon is in the deep ocean’s reservoir, it has “sequestered” it out of contact with the atmosphere. When seawater is cooled, it takes up more carbon dioxide, and then, when the water is warmed, it loses carbon dioxide into the atmosphere. This physical process is called vertical deep mixing—this circulation is why cold water fills the deep ocean and why the ocean can store such an enormous amount of carbon.

The biological pump works when carbon dioxide is first “fixed.” Autotrophs, such as plants, algae, phytoplankton and bacteria, absorb the carbon via photosynthesis. As these autotrophs eat, defecate, die and decompose, they become organic matter known as marine snow, which then begins sinking to the ocean floor. Once deep enough, this bacterial decay releases carbon dioxide and other nutrients, making it available to be used again by another organism. Finally, carbon is stored in the deep ocean, usually where it is either transported via currents or captured and buried by sediment and rocks. Once carbon is in the deep ocean’s reservoir, it is out of contact of the atmosphere. The biological pump is sensitive to disturbances and relies on a healthy ocean ecosystem to work properly.

Threats to the Ocean Carbon Sink
To also understand why ocean systems are so important in their role as climate change mitigators, as they rely on capturing carbon for their development. Coastal wetlands, such as mangroves, salt marshes, and seagrass beds, store about ten times more carbon than continental forests, yet cover a relatively small area of the planet. Despite their environmental and socio-economic importance, these coastal ecosystems have been greatly impacted by coastal development, urbanization, and exploitation for recreation and industry (Nichols et al., 2018). Carbon sequestration and their role in climate change mitigation are just a couple of the many reasons to work for policies and actions that promote the protection of marine coastal ecosystems.

There is also a lot of unknown variability in how climate change affects carbon sinks. As carbon emissions continue to grow at a rapid pace, it is unknown how much more carbon natural sinks, including the ocean, can take on. One article by McKinley et al. (2011) notes that the North Atlantic has already showed signs of reducing its carbon uptake, pointing to global climate warming trends and consequently, oceanic warming—as the cause. Corinne Le Quéré, chair of the Global Carbon Project, states that “research suggests that if the ocean and forest sinks can’t keep pace with rising greenhouse gas emissions, then the extra carbon staying in the atmosphere could increase warming by 5 to 30% (from what it would be).”

Although the planet has relied on natural processes to regulate carbon for millennia, anthropogenic emissions over the past century may significantly alter these processes and cycles with unknown and potentially devastating consequences. While it is important to continue working towards carbon sequestration, it is even more important to cut CO2 emissions as much as possible, in order to maintain the earth’s natural equilibrium and combat climate change.

To learn more about the ocean’s role in mitigating climate change, check out ocean-climate.org.
Gas is Part of the Past
by Sierra Club of Hawai'i Staff

In a big victory for Hawai‘i’s clean energy goals, the Environmental Court ruled in February that the Hawai‘i Department of Business, Economic Development, and Tourism was wrong to grant nearly all requests for variances from the Solar Water Heater Mandate. By issuing thousands of variances, the agency has reinforced Hawai‘i’s reliance on fossil fuels—to our collective peril—instead of empowering residents to move to clean, renewable energy sources that will reduce their energy costs.

Hawai‘i is already seeing the impacts of climate change: eroding beaches and coastal roads, rain bombs and detrimental flooding, and rising sea levels and temperatures. These impacts can no longer be ignored and we are now at a critical time where we must massively reduce fossil fuel emissions. Hawai‘i has some of the most progressive clean energy goals in the nation. In order to reach these goals, Hawai‘i as a whole—including our state agencies—must take all the right equitable steps to move away from dirty energy sources. The Solar Water Heater Mandate is part of that progress, requiring that all new single family homes install solar water heaters instead of gas. The recent ruling upholds the original intent of the Solar Water Heater Mandate and means there is no longer any reason to build gas pipelines in the islands.

The court ruled in favor of the Hawai‘i Solar Energy Association and the Sierra Club of Hawai‘i, citing the “wholesale” nature of variances issued by the agency. Advocates for the mandate pointed to the legislative intent in the bill that made clear the gas appliance variance “...will be rarely, if ever, exercised...”

Since the mandate’s implementation in 2010, nearly 99% of the 7,000 variances applied for have been approved by the agency—over one-third of all newly constructed homes. This includes subdivision developments, even though they are not actually eligible for this variance. The Department of Business, Economic Development and Tourism granted most requests as long as the applicant indicated that a second gas appliance was to be installed in the residence.

It is estimated that Department of Business, Economic Development and Tourism’s failure to properly screen variances from the Solar Water Heater Mandate has cost the solar industry $36 million so far, and would have likely been granted for over 15,000 new homes in sunny Ho‘opili and Koa Ridge on O‘ahu. Constructing new subdivisions dependent on natural gas, locks residents into relying on fossil fuels for the long term instead of facilitating their transition to clean renewable energy. This dependence—in a time when fossil fuel use should be minimized and in places with an abundance of sun—undermines the mandate’s environmental benefits and unnecessarily raises energy bills for thousands of new homeowners.

A month after the court’s ruling, Hawai‘i’s Gas filed a request to intervene with the Environmental Court so the company can reopen the decision. Hawai‘i Gas is the sole provider of gas in the Hawaiian Islands and exclusively benefits from the thousands of variances granted. The court must first decide whether the company should be allowed to intervene in the case based on factors like whether the company has an interest in the lawsuit and whether that interest was not adequately protected by existing parties. The court is expected to decide on the intervention in the next month.

Burning fossil fuels is not ‘clean,’ nor is it ‘cheaper’ for consumers or the state, especially with climate change threatening everything we love about Hawai‘i. It’s time for Hawai‘i Gas to stop fighting the future and evolve to a business that doesn’t put profits over people and the planet.

-Marti Townsend

Mahalo Earthjustice for representing the Sierra Club of Hawai‘i and Hawai‘i Solar Energy Association on this case.

And thank you to all those who have supported this fight against new, large-scale gas infrastructure in our islands.

Letter from the Chair: Our Climate Choices
by Colin Yost, Hawai‘i Chapter Executive Committee Chair

It’s a bleak thing to say, but the international scientific assessment of the climate crisis feels like a cancer diagnosis. I wake up every morning with the knowledge that the diagnosis hasn’t changed and that our planet is one day closer to catastrophe. It’s easy to feel intimidated by the unprecedented individual and collective change and action that will be necessary to fix or at least meaningfully mitigate the problem.

Thankfully, sources of inspiration are everywhere, and one of mine these days is Greta Thunberg, the 16-year old Swedish activist who—by herself—started picketing for climate action about seven months ago in front of the Swedish Parliament. She then became the catalyst for a global student movement and has been nominated for the Nobel Peace Prize. Amazing!

There’s no way Greta could have predicted the international ripple effect of her individual choice to picket Parliament, but even her extraordinary effort will not be enough. It will take millions more individual actions to lead to big, fundamental global changes. Other articles in this Mālama discuss ways to increase Hawai‘i’s carbon sequestration and reduce your own carbon footprint. Some life choices will be easier than others, but making greener choices now will greatly impact the next generation’s climate. And your choices may inspire your family, friends, and neighbors to do the same.

Many of us already power our homes with solar and drive electric cars or ride bikes but there are still more things that each of us can do to make a difference. So I’m using this article as a personal pledge to make five new significant changes and to solicit your feedback by asking you for five things you will do for our planet (see the cut-out response form below). I’ll compile the responses and report back on the best ideas in the next edition of the Mālama.

Here are my 5 things:

1. Research, choose and invest in a carbon offset program to make my family carbon neutral or carbon positive, and then inspire 10 friends to follow the same program for their families. There are so many to choose from—I am currently looking at Carbon Fund, Native Energy, the Nature Conservancy, and Carbon Buddy.

2. Get rid of the second fridge in my hot garage. There will be some family resistance on this one, but it must be done.

3. Finish the Marie Kondo home cleansing process that my wife and I started a month ago. This has been great.

4. Finally start a real garden in my backyard and grow a significant amount of delicious vegetables.

5. Plant 100 native trees in a place where they are likely to thrive.

Your turn!

I encourage you to think about what changes you can make for a brighter climate future. Share your five choices below and send them back to me: Colin Yost, Sierra Club of Hawai‘i, P.O. Box 2577, Honolulu, HI 96803. You can also share your choices with me online at bit.ly/SCH-419.

1. ____________________________________________________________________________________________

2. ____________________________________________________________________________________________

3. ____________________________________________________________________________________________

4. ____________________________________________________________________________________________

5. ____________________________________________________________________________________________

Name: __________________________________________ Email address: __________________________________________
A Bridge To Nowhere
by Kirsten Fujitani, Hawai‘i Chapter Communications Manager

For years, we were fed messages about the benefits of using “natural gas as a bridge fuel” to help us get off those dirty energy sources like coal and oil and ease our way into clean renewable energy. Fracked gas, known to most as “natural gas”, was sold to consumers as a cleaner alternative, better for the environment and the changing climate. We’ve seen through the smoke screen—put up mostly by the fossil fuel industry themselves—and there is not much that is natural about fracked gas.

It’s not too much different than coal or oil—it is still a fossil fuel and it is still non-renewable. Although it burns cleaner at power plants, fracked gas still emits greenhouse gases, typically in the form of methane which is much more powerful at trapping heat in the atmosphere than carbon dioxide. Not to mention the detriment that comes with the practice of fracking. Fracking splits open formations in the Earth with high-pressure streams of water, chemicals, and sand, opening the rocks, allowing gas to escape to be stored or transported. This extraction extreme amounts of water, produces highly toxic radioactive water and causes earthquakes in areas that are not typically subject to quakes. It is incredibly dangerous and detrimental to not only the the environment but to public health. Communities near fracking industries often face contaminated water resources, terrible air quality, atypical earthquakes, and water scarcity.

It should alarm us all that fracking is exempt from most environmental and public health laws, including the Clean Water and Clean Air Acts. It should alarm us all that fracking is exempt from most environmental and public health laws, including the Clean Water and Clean Air Acts. It should alarm us all that fracking is exempt from most environmental and public health laws, including the Clean Water and Clean Air Acts.

Yet despite Hawai‘i’s renewable energy goals, special interests and local institutions keep us invested and reliant on dirty energy imports. Hawai‘i Gas Co. continues to explore increasing the amount of liquified natural gas it imports to the islands, instead of investing in local renewable energy projects. All the while, trying to reopen the gas loophole in the Solar Water Heater mandate they have been profiting off for years. Other investments, like Bank of Hawai‘i’s recent investment in an oil refinery in Tacoma, Washington and First Hawaiian Bank’s previous investment in the Dakota Access Pipeline work against our clean energy goals and continue to fund projects that have irreversible impacts on the environment, communities adjacent to those projects, and our shared atmosphere.

Hawai‘i fought off NextEra Energy’s $4.3 billion takeover of Hawaiian Electric in 2016 that would have left us more dependent on fossil fuels with little hope for a clean energy future. The last coal plant in the islands is set to close by 2029. 50% of Kaua‘i’s energy is produced by renewables. We are on track to reach our renewable energy goals, rid ourselves of coal, and reduce our greenhouse gas emissions to equal or below 1990 levels by next year. We must remain diligent to ensure that there is no new large-scale gas infrastructure built, that special interests don’t lock us into new dirty investments, and that policies are passed to incentivize clean energy for homeowners and businesses. The Sierra Club of Hawai‘i, and our allies, will continue to fight for a clean and equitable energy future for the islands—with no gas and oil imports, more accessible renewables, and greener investments.
O‘ahu Group Outings

SEE PAGE 12 FOR GENERAL OUTINGS INFORMATION

View the latest hike listings and online registration options at bit.ly/SCH-Oahu-Hikes.

Unless otherwise stated in the outing description, participants meet at 8am at the back porch of the Town of Kāne‘ohe, 2310 Bingham Street, Honolulu. Do not leave your car in the church parking lot.

Classification of outings: (E) Educational/Interpretation, (C) Conservation, (F) Family/Fun, (S) Service

Saturday, April 6
Pālehua Elepaio Enclosure “Akapu” Service (S) Reservations required at least one week prior. Contact Randy for reservations. Space is limited as we will be working in a sensitive area where the endangered native ‘elepaio is nesting and there are some native plants already growing which we don‘t want to disturb or damage. We will probably hear and see some native ‘elepaio as we work in the area, and there may be some sand/gray, or snak and definitely mosquito repellent. Bring gloves and hand tools for weeding alien plants in the enclosure. Leaders: Randy Ching, makikirandy@yahoo.com, 942-0145; John Shimogawa, 227-9925; Susan Tom

Sunday, April 7
Sandy Beach Cleanup (S) We will clean up along highway and coastal areas until 10am. Bags and gloves provided. All participants under 18 must have a waiver signed by their legal guardian. No one under 18 will be allowed to clean on the highway and will spend their time cleaning the beach and park area. Closed-toe shoes only. No slippers or sandals of any sort. Meet at 8am at the Sandy Beach Rathona at eastern side of the beach park (the bathroom closer to Makapu‘u). Call Tred 394-2898 for information. Leader: Deborah Blair, 392-0481

Saturday, April 13
MCBH Kāne‘ohe Bay Service Project (S) Reservations required. Due to new MCBH regulations, all participants must register with DBIDS one week before outing to secure access to base. Contact Dan Anderson at 480-1659 or danderhi@gmail.com. We will be working with the Environmental Division helping clear wetlands of mangrove plants to create habitat for Hawai‘i’s endangered waterbirds. Because MCBH is a secured military facility, we must provide your name to the base in advance. We‘ll send you a waiver which you must bring with you. Leaders: Deborah Blair, 392-0481

Saturday, April 13
Sierra Club/DLNR Ka‘ena Point NAR Service Project (S) Sierra Club members only. We will meet at 8:30am in Mokule‘ia with DLNR personnel and drive to the reserve. All participants must have a valid DLNR permit and wear rubber shoes and mosquito repellent. More information provided to registered participants. Reservations required by April 7. Leader: Colleen Soares, csoares8@y00.com

Tuesday, April 16
Pālehua Service Project-Recyclers & Waste Processors Tuesday morning outing. Contact Colleen for reservations. Meet at Kapolei Hale in Kapolei at 8:30pm. We will board a bus for this rousing tour, “The Tour of Trash is a collaborative event, coordinated by the City and County of Honolulu and supported by island businesses engaged in recycling. The recyclers and waste processors tour follows the path of our ‘ōpala collaborative trail to view green, blue, and gray carts to their respective sorting, composting, and waste-to-energy facilities. This tour is a great introduction to the City’s solid waste programs and starts off with a visit to the City’s H-POWER waste-to-energy facility, where all of O‘ahu’s trash is incinerated to generate electricity.” More at: bit.ly/tdt-416. Leader: Colleen Soares, csoares8@y00.com

Saturday, April 20
Photography Hike: Lyon Arboretum (E/F) Reservations required at least one week prior. Contact Curtis for reservations. The pace of photography hikes is extremely slow. Meet at the Church at the Crossroads at 9am. $5 suggested donation to Lyon Arboretum. Learn about native and tropical plants. Bring raingear and insect repellent. Leaders: Curtis Kawamoto, curtis968t@gmail.com; John Shimogawa, 227-9925; Clyde Kobashigawa, clydekobashigawa@hawaii.rr.com; Stan Oka, 429-9814

Sunday, April 28
Wildlife Taxidermy Seminar War‘alae Iki, moderate/5 miles, ridge This project is for those interested in becoming an outings leader or those who want to learn about the outings programs. Leaders will describe how outings work, the Club’s mission, what’s required to become an outings leader. Participants will help with trail maintenance. Leaders: Ed Mersino, mersino@hawaii.edu; Randy Ching, makikirandy@yahoo.com

Saturday, April 5
UH Shidler Native Hawaiian Garden Service Project (S) Help maintain the Hidden Gem at Shidler College of Business. There are approximately 80 species of native Hawaiian plants; most of which are endangered. We will be planting new seedlings, spreading mulch, and pulling weeds. Meet at noon. Call Susan to make reservations. Leaders: Susan Tom, 733-0931; Clyde Kobashigawa, clydekobashigawa@hawaii.rr.com; John Shimogawa, 227-9925; Randy Ching, makikirandy@yahoo.com

Saturday, May 11
Pālehua Service Project-Trail Clearing (S) Reservations required at least one week prior—contact John. Space is limited due to parking and as we will be working along an existing trail that is not used very much and to also develop it as a fire break. Pack a lunch and/or snack and lots of water. Bring gloves, pruning saws, pruning shears, loppers, mosquito repellent, and lots of enthusiasm! The area is known for beautiful scenic panoramas from the ridge overlooking Nanakuli Valley. You may also hear and see some native birds, so bring a camera too. Meet at 8:30am. Leaders: John Shimogawa, 227-9925; Clyde Kobashigawa, clydekobashigawa@hawaii.rr.com; Susan Tom; Curtis Kawamoto

Sunday, May 19
Pāpukēa–Paumalu Pāpukēa, moderate/8.5 miles, contour This loop hike through the Pāpukēa–Paumalu Forest reserve will take us through a former cattle ranch to pillo boxes with views of the North Shore. Leader: Gwen Sinclair, gsinclain@gmail.com, 753-0928

Saturday to Monday, May 25–27
Hakalau National Wildlife Refuge, Hawai‘i Island (S) The U.S. Fish and Wildlife Service manage this refuge. They have created makai–mauka corridors of native vegetation across areas which native forest birds use in their migrations up and down the slopes of Mauna Kea. The service projects usually involving planting native species or working in the greenhouse. Accommodations are at a well-equipped cabin at the 6,200-foot elevation with electricity, running water, a flush toilet, a hot shower, kitchen, and bunk beds with mattresses. Participants will need to bring their own sleeping bags. At this high elevation, cold wet weather is always possible, so warm clothing, footwear and good quality raingear are necessary. Rain gear can be borrowed from the refuge. The free time activity may include a hike in a koa forest to observe native forest birds, some of which are on the endangered species list. Leaders: Clyde Kobashigawa, clydekobashigawa@hawaii.rr.com; John Shimogawa, 227-9925

Sunday, June 2
Family Hike: Hau‘ula Loop of Hau‘ula–Papali Trail (F) Hau‘ula, easy/3.2 miles, 630 ft elevation gain This short hike takes us to a ridge overlook for a snack break. Kids are welcome – we’ll teach them about hike leading. If not old enough to complete the hike, a parent must be prepared to backpack them. Reservations required. Meet at 10pm. Leaders: Reese Liggett, wlliggett@tccw.com; Jean Fujikawa, jean.fujikawa@gmail.com

The Sierra Club outings are conducted according to Club policy and under the direction of certified Outings Leaders. Our outings group activities, and all participants are expected to follow leaders’ instructions and to remain with the group for the entire outing. We welcome all the Sierra Club members, non-members, and visitors on most of our outings; however, certain outings may be restricted to members. Firearms, pets (unless specifically allowed); and audio devices with or without headsets are prohibited. Smoking is permitted only at breaks and then only if the smell of smoke cannot be detected by other hikers. Outing Leaders may prohibit smoking if, in their judgment, a fire hazard exists.

Bring with you: a liter of water (2 liters for strenuous hikes), lunch, sunscreen, insect repellent, raingear/jacket, and dark sunglasses. Boots: waterproof with traction. Gloves: no loafers or tabs are required. Unless otherwise noted, no bare feet or sandals of any type will be allowed.

You will also need to sign a liability waiver. If you would like to read a copy of the waiver prior to the outing please see content.sierraclub.org/outings/local-outdoors/resources or call 415-977-5630.

In the interest of facilitating the logistics of some outings, sometimes participants make carpooling arrangements. The Sierra Club does not have insurance for carpooling arrangements and assumes no liability for them. Carpooling, ride sharing, or anything similar is strictly a private arrangement among participants. Participants assume the risks associated with this travel.

For specific islands, each group may have its own outing policy. Please check at each group’s page or website for more specific information on where to meet or what to bring with you.
Saturday, June 8
MCBH Kāne‘ohe Bay Service Project (S)
Reservations required. Due to new MCBH regulations, all participants must register with DBIDS one week before outing to secure access to base. Contact Dan Anderson at 489-1695 or danderhi@gmail.com. We will be working with the Environmental Division helping clear wetlands of mangrove plants to create habitat for Hawaii’s endangered waterbirds. Because MCBH is a secured military facility, we must provide your name to the base in advance. We’ll send you a waiver which you must bring with you. Leader: Deborah Blair, 392-0481

Saturday, June 8
Photography Hike: Pālehua-Paleikua (E)  
Kahaluu, moderate, 2-3 miles, ridge reservations
Reservations required at least one week prior. Contact Clyde for reservations. Space limited, so make your reservations early. The pace of photography hikes is extremely slow. Pack a camera, lunch and/or snacks, and water. Not for those uneasy about heights. Due to safety concerns, only adults will be accepted. Native plants, native fish, and native tree snails are the attraction in this preserve. Leaders: Clyde Kobashigawa, cydekobashigawa@hawaii.rr.com; John Shimogawa, 227-9925; Susan Tom; Curtis Kawamoto; Stan Oka

Saturday, June 22
Photography Hike: Koko Crater Botanical Garden (E/F)  
Haleakalā National Park, Maui (S)
No accommodations for the weekend are Kapalaoa Cabin, in the center of Haleakalā Crater. The work will be eradicating California telegraph plant and plantago. This service trip is for hikers in good physical condition and for those who don’t mind “roughing it”. We have a 7-mile hike in via the Sliding Sands Trail the first day and will exit via the Halema‘u trail. Participants will have to deal with clouds, fog, and rain. The cabin was built in the 1970’s by CCC workers and is rustic. There are no washroom or shower facilities, but there is an outhouse. We have a 2-burner gas stove top and a wood burning stove to cook and keep warm. The reward is spending the weekend in a beautiful National Park trying to keep the native flora flourishing. Leader: Clyde Kobashigawa, cydekobashigawa@hawaii.rr.com; John Shimogawa, 227-9925; Curtis Kawamoto; Stan Oka

Wednesday, June 19
Pu‘u Māke‘elii Hike (Temple Valley, moderate, 3 miles)
Moderate 3-mile hike with scenic views of Kāne‘ohe Bay. We will have our dinner when we reach the top at the pillbox. The trail is rooty, has low branches, and is steep in some areas. A hiking stick/pole is recommended. Meet at Temple Valley McDonald’s parking lot. Leaders: Susan Tom, 752-0313; Clyde Kobashigawa, cydekobashigawa@hawaii.rr.com; John Shimogawa, 227-9925

FUTURE NEIGHBOR ISLAND SERVICE TRIPS

In addition to the Hakalau trip in May, we have several other neighbor island service trips planned in 2019. Please check them out, save the dates, and make your arrangements!

Thursday, Sunday, August 15-18
Kahaulau’s Natural Area Reserve System (NARS) Service Project, Hawaii Island (S)
We will be eradicating NARS clearing main mahi‘ai ginger. We will access the area via Volcanoes National Park where it is an easy 1/2 mile hike from Thurston Lava tube to the work site. This is a relatively new NARS site that is dominated with the alien mahi‘ai ginger and a great way to see how it evolves into a truly native Hawaiian Natural Area Reserve. There are native birds above in the native (endemic) forests. Trees to remove are mostly in the house in Hilo at the NARS base yard. This trip requires a Thursday evening departure to the Big Isle. Leader: Clyde Kobashigawa, cydekobashigawa@hawaii.rr.com

Monday to Wednesday, September 2-4
Haleakalā National Park, Maui (S)  
Our accommodation for the weekend is Kapalaoa Cabin. We will be working with NARS clearing main mahi‘ai ginger. We will access the area via Volcanoes National Park where it is an easy 1/2 mile hike from Thurston Lava tube to the work site. This is a relatively new NARS site that is dominated with the alien mahi‘ai ginger and a great way to see how it evolves into a truly native Hawaiian Natural Area Reserve. There are native birds above in the native (endemic) forests. Trees to remove are mostly in the house in Hilo at the NARS base yard. This trip requires a Thursday evening departure to the Big Isle. Leader: Clyde Kobashigawa, cydekobashigawa@hawaii.rr.com

County’s Proposed Fence at Lepeuli (Larsen’s Beach)  
May Impact Historic Trail
A segment of the historic coastal Ko‘olau trail may become blocked by a county fencing project that is still inching forward since 2014 when it was first proposed. In December, the Kaua‘i Group obtained the State Land Use Commission’s October 2018 approval for a survey map of Boundary Interpretation No. 18-09, the map, prepared by the County Public Works Division and landowner Waialu Corporation delineates the Conservation District Boundary for the entire Lepeuli ahupua’a coastline. But, there were no photographs taken of this boundary delineation to provide a clear visual of its location related to the juncture of several beach access trails, including the historic lateral trail along the Lepeuli hillside above Larsen’s Beach.

In anticipation of the County Special Area Management Permit application for fencing, the Kaua‘i Group wrote to the Planning Director requesting that the boundary be pinned or staked by a licensed surveyor and photographed, with the Sierra Club present at the site with the survey team. This would help ensure that if the fence is correctly sited mauka of the Conservation District and about 50 feet of the historic trail.

There are additional concerns about this unnecessary fencing project. Special Management Area Minor Permit rules state that: “Analysis of potential impacts to endangered/protected species and habitats must be conducted. The application will include a thorough assessment of impacts to the known albatross nesting colony. A 2015 video (shown to the County Council and Public Works division heads) revealed that the previous fence thwarted multiple attempts of an albatross to launch. These birds need “a runway” with...
Kaua‘i Group Report & Outings

ample room to take off and land. Therefore, the U.S. Fish and Wildlife Service must be consulted because any disruption to these federally protected species is a “take” under the Migratory Bird Treaty Act.

Despite more than a decade of the Kaua‘i Group’s advocacy, efforts to survey the historic trail have been hampered by landowner opposition and the state’s inaction. Now that Mark Zuckerberg owns adjacent coastal properties to the north, the trail is in greater danger of being privatized despite the state’s authority to claim ownership of ancient trails, enacted in the Highways Act of 1892 which prescribes that all roads, trails, bridges, and other forms of public access that can be verified to have existed before 1892, continue to be owned in fee simple by the state.

The county fencing project is another attempt to obstruct perpetual public access along this historic, cultural, and recreationally important trail.

Fencing for “directional assistance” is unnecessary; trailheads are less than 200-feet from the parking area along a straight, hard-packed dirt path.

The county fencing project is another attempt to obstruct perpetual public access along this historic, cultural, and recreationally important trail.

Koke‘e State Park, very strenuous/11 miles, +/-2000 feet
A serious hiker’s dream, these Koke‘e ridge trails take you to the most incredible vistas. A real endurance challenge.

Leader: Lee Gately, 661-373-4834

Saturday, April 13
Kualo Ridge Trail (C/E/F)
East side, easy to moderate/3 miles, +/-280 feet elevation
A gentle steady walk on a wide path with sweeping view of lush valleys and Mount Wa‘ale‘ale and Makaleha Mountain Ranges. This trail offers great rewards without a lot of effort. Glorious views and ever-present bird songs reward you along this trail. Hike to bridge and picnic tables for lunch.

Leader: Vivian Hager, 808-652-3234

Tuesday, April 16
Māhā‘ulepū Coastal Hike (C/E/F)
Po‘ipū area, moderate/4 miles, mild elevation change Spectacular coastal walk with breathtaking views along this magnificent coastline!

Leader: Lee Gately, 661-373-4834

Friday, April 19
Sunset to Full Moon: Wailua to Nukoli‘i Beach Walk (C/E/F)
East side, easy/1.5 miles
We’ll meet at Lydgate Beach Park in the late afternoon and set off on a lovely walk along a pristine beach with no development in sight for miles. Learn how this beach was saved from being destroyed by a 6-foot high, 3/5th mile long sea wall frontal Wailua Golf Course that the County attempted to build in 1996. Before setting off on our walk, we’ll have a picnic dinner (not a potluck – bring your own food) at Lydgate. Leader: Judy Dalton, 808-482-1129

Sunday, April 21
Wai Koa Loop Trail (C/E/F)
North Shore, easy/4.5 miles, +/-200 feet elevation
We’ll pass through the Kīlauea Forest and then the largest mahogany plantation in North America. Then, the trail opens up and we’ll enjoy impressive views of the Mount Namahana, which means “the twin branches”. Leader: Julio Magalhães, 650-906-2594

Saturday, April 27
Kualo Ridge Trail (C/E/F)
East side, easy-moderate/3.5 miles, +/-280 feet elevation
A gentle steady walk on a wide path with sweeping view of lush valleys and Mount Wa‘ale‘ale and Makaleha Mountain Ranges. This trail offers great rewards without a lot of effort. Glorious views and ever-present bird songs reward you along this trail. Hike to bridge and picnic tables for lunch.

Leader: Vivian Hager, 808-652-3234

Saturday, May 4
Nāwiliwili Coastal Hike (C/E/F)
Easy/3 miles
Walk along the coast through lagoons and back to Kalapaki Bay.

Leader: Vivian Hager, 808-652-3234

Monday, May 7
Kalēpe Ridge (C/E/F)
East side, intermediate/8 miles, +/-1000 feet elevation
Enjoy sweeping coastal and valley views along the ridge which continues the Sleeping Giant range from Wailua River to Hanāmā‘ulu.

Leader: Julio Magalhães, 650-906-2594

Friday, May 17
Sunset to Full Moon Coastal Walk (C/E/F)
East Shore, moderate/4.5 miles one way
We start off in the late afternoon meeting at Kapa’a’s Library to shuttle our cars to Donkey Beach starting our walk from there and ending back at the library as we watch the moon rise over the ocean. Learn how the Planning Commission was legally challenged to assure increased building setbacks along the ridge to preserve the views on and along the coastline. We’ll have a picnic dinner (not a potluck – bring your own food) at the lookout at Donkey Beach.

Leader: Judy Dalton, 808-482-1129

Saturday, May 18
Honopū Ridge (C/E/F)
Koke‘e State Park, strenuous/4 miles
Hike through beautiful native forests on unmarked Honopū Trail to a spectacular lookout of the Honopū Valley, overlooking the famed Nāpali Coast.

Leader: Ken Fasig, 808-346-1229

Sunday, May 19
Po‘oma‘u Canyon Vista Hike (C/E/F)
Koke‘e State Park, intermediate/5.5 miles, +/-900 feet elevation
We will explore lovely panoramic views of the lovely Po‘oma‘u Canyon from both sides of the canyon.

Leader: Julio Magalhães, 650-906-2594

Saturday, June 1
Makaleha Trail (C/E/F)
East side, intermediate/2.5 miles, +/-900 feet elevation
This hike is a lovely view of several waterfalls as the trail makes its way along and through the Makaleha Stream. Often cited as one of the top two hikes on Kaua‘i but perhaps for an adventure on a wild trail that may require improvising.

Leader: Julio Magalhães, 650-906-2594

Saturday, June 8
Nīwiiwili Lighthouse Coastal Walk (C/E/F)
Moderate/3 miles
Hike from Kalapaki Beach to Nīwiiwili Lighthouse, then along the coast to Hanāmā‘ulu Bay with shuttle to return. Enjoy views along the rugged coast.

Leader: Ken Fasig, 808-346-1229

UPCOMING OUTINGS:

SEE PAGE 12 FOR GENERAL OUTINGS INFORMATION

Join us on one of these great outings to discover the natural treasures of our island. Mileage is total miles.

Outings focus on: (C) conservation/interpretative, (E) educational, (F) family/fun, and (S) service.

Requested donation for members and participants under 18 is $5. For all others: $5.

Saturday, April 6
Descent into Waimea Canyon: The Kukui Trail (C/E/F)
Intermediate/5.5 miles, +/-2900 feet elevation
We will hike from the rim of Waimea Canyon down to its base and admire the majesty of this canyon along the way. Leader: Julio Magalhães, 650-906-2594

Thursday, April 11
Nu‘uanu & Awa‘a‘apahi Grand Loop (C/E/F)
Walk along the coast through lagoons and back to Kalapaki Bay.

Leader: Vivian Hager, 808-652-3234

Tuesday, June 11
Māhā‘ulepū Coastal Hike (C/E/F)
Po‘ipū area, moderate/4 miles, mild elevation change Spectacular coastal walk with breathtaking views along this magnificent coastline!

Leader: Lee Gately, 661-373-4834

Saturday, June 15
Sunset to Full Moon: Wailua to Nukoli‘i Beach Walk (C/E/F)
East side, easy/1.5 miles
We’ll meet at Lydgate Beach Park in the late afternoon and set off on a lovely walk along a pristine beach with no development in sight for miles. Learn how this beach was saved from being destroyed by a 6-foot high, 3/5th mile long sea wall frontal Wailua Golf Course that the County attempted to build back in 1996. Before setting off on our walk, we’ll have a picnic dinner (not a potluck – bring your own food) at Lydgate. Leader: Judy Dalton, 808-482-1129

Sunday, June 16
Okoelohao Trail (C/E/F)
North Shore, intermediate/5.5 miles, 1500 feet elevation
We will explore lovely panoramic views of the North Shore by following this ridge trail above the Hanalei Valley.

Leader: Julio Magalhães, 650-906-2594

Saturday, June 22
Māhā‘ulepū Coastal Hike (C/E/F)
Po‘ipū area, moderate/4 miles, mild elevation change Spectacular coastal walk with breathtaking views along this magnificent coastline!

Leader: Vivian Hager, 808-652-3234

Thursday, June 27
Ma‘ili’s Samurai Boardwalk (C/E/F)
Koke‘e State Park, very strenuous/8 miles, 950 feet elevation change
The Alaka‘i is a primeval habitat made accessible by boardwalks. The Alaka‘i, one of the world’s wettest spots, is not a swamp but a mountain rainforest rising 4,500 feet above the Pacific. A variety of native plants and birds can be seen only on this trail. Panoramic view of the North Shore and Pu‘u Lawa‘wa, when the clouds cooperate. Leader: Lee Gately, 661-373-4834

Saturday, June 29
Nounou Mountain: East & West (C/E/F)
East side, intermediate/5 miles, 1000 feet elevation change
Nounou Mountain, which is also more popularly called “Sleeping Giant”, offers spectacular panoramic views of the East Side of Kaua‘i. We will explore the mountain on several trails. Leader: Julio Magalhães, 650-906-2594
Maui Group Report

Mākena Resort

Mai Pono (formerly A&B) sugarcane plant, has a vague farm plan but wants the lion's share of state land for another 7 years with no safeguards, threatening the area's history, public access to the shoreline, historic roads and trails, as well as opportunities for affordable housing. Recent months have focused on finding a Cultural Manager for the 47 acres of historically significant lands above Mākena Landing.

Wailea 670

As part of a 2016 legal settlement, Maui Group representatives and allies attended a site walk of the proposed 134-acre preservation area on the Wailea 670 land in March and submitted comments asking for many changes to the project’s Archaeological Preservation Plan. Regular access and service projects continue on the land organized by the Maui Group.

East Maui Streams

Mahi Pono, the new owners of A&B sugarcane lands, have a vague farm plan but want the lion’s share of public East Maui streamwater and are supporting bill HB1326 which extends their temporary leases on 23,000 acres of state land for another 7 years with no safeguards, monitoring or sharing with downstream residences, flora and fauna.

Action: Ask your State Senator to vote NO on the bill, unless it’s amended to address community concerns. Sign the petition at mauisierraclub.org.

Nā WaiʻEhā (Central Maui)

The streams of Central Maui have flowed fully this year due to the high rains, but our allies are still concerned that A&B is applying to the Water Commission for permits to divert over 46 mgd of Nā WaiʻEhā waters, even though the water is only needed to irrigate 4,000 acres.

Lahaina Wastewater Suit

An appeal by Maui County seeks to avoid needing a permit to dry sewage into pellets and provide electricity for the wastewater operations. The Sierra Club, together with Maui Tomorrow, finds the Environmental Impact Statement prepared by the company to be woefully inadequate and misleading. Among other things, it only accounts for withstanding a 30-foot tsunami rather than a 50-foot tsunami that recent studies advise (this is right on the shoreline where nothing new should be developed). The plant will cost taxpayers considerably more than almost any other energy alternative, it puts an end to Maui’s composting program for green waste, and it doesn’t fully evaluate the impact on the surrounding air and water. We are asking the County to end the contract and to expedite plans to replace the plant with several smaller plants located safely away from the coast.

Reforestation Projects

The warnings from climate scientists on the rate and consequences of wide ranging climate change impacts continue to get more dire and more urgent. Hawai‘i is more vulnerable than many other parts of the world to rising sea levels, extreme weather events, and higher than average temperatures. Much needs to be done at the political level to eliminate fossil fuel extraction and burning but we can all contribute to a better future for our islands by helping plant native trees to bind carbon, improve the soil, and reduce stormwater runoff. Check out the Outings Schedule in this and future editions of Mālama for opportunities!

Annual Meeting

Members and friends gathered at the Pā‘ia Community Center on February 24 to hear a presentation by world renowned ecological restoration pioneer Art Medeiros about what is at stake and what we need to do about it. Awards were presented to several Maui residents that have made exceptional contributions to protecting and enhancing our natural and cultural environment. Members and supporters also heard a summary of what the Maui Group has been working on the past year, met the 2019 Executive Committee, enjoyed fabulous donated and potluck food, and got to know other people on the island who also care deeply about the ʻāina.

UPCOMING OUTINGS:

SEE PAGE 12 FOR GENERAL OUTINGS INFORMATION

Please register for all hikes with the leader listed in the description. Bring lunch, water, raingear, sunscreen, and appropriate footwear. Hiking boots are recommended for longer hikes. A donation of $5 ($3 for Sierra Club members) is requested of hikers over age 14 except where otherwise indicated.

Hike description key: (C) conservation focus, such as discussing how to conserve this land for future generations to enjoy; (E) educational, such as visiting and learning about archeological sites and naming the plants and flowers; (S) service outing (no donation requested); (D) round trip hike distance.

We always welcome more hike leaders! Contact sierraclubmauigroup@gmail.com if you are interested.


If the hike description states an EMI waiver is required:

East Maui Irrigation Company (EMI) allows access to their trails as long as each hiker has a waiver. An EMI waiver is absolutely required for EMI hikes. Call in your waiver request at 579-9516 well in advance to make an appointment to sign it. Then go to EMI’s Pā‘ia office at 497 Baldwin Avenue to sign the waiver. It is open Monday 11am-3pm and Friday 8am-1pm. Waivers cannot be mailed, faxed, or emailed. Please be considerate of EMI staff time and pick up the waiver 5 days in advance whenever possible. The waiver must be brought on the hike and shown to the hike leader.
Mai Group Outings

Friday, April 12
Wailea 670 Hike (C/E)
South Maui, 3-4 miles
Walk the bushes near the proposed 134-acre Wailea 670 preserve. Rugged terrain. Closed shoes/boots, long pants, and good balance a must. Bring water and a hiking stick. Meet 7:30 pm at Kauki Rd in Wailea. Limit 18. Leader: Lucienne de Naie with guidance by Hawaiian cultural practitioners, laluzmaui@gmail.com or 214-0147

Saturday, April 13
Honokōhau Ditch Trail (C/E)
West Maui, 4.5 miles
This is a 4.5 mile round trip, pedestrian paved, mostly flat walking trail that leads to a stream. Great views but fully exposed. We will carpool meeting at Mā'alaea at 8am. For those who do not want to carpool: coming into Lahaina, from the highway turn right on Kai Hele Ku St. and come up, around a rotary till you see some parking spaces on the right across from a small shady picnic area. On the left you will see the ditch trail sign. This is the Launipoko neighborhood. About a 2 hour hike. Leader: Kalei Johnson, kalei1908@gmail.com or 344-0006 (no text)

Saturday, April 13
Mā'alaea to McGregor Point Coastline (C/E)
West Maui, 3 miles
Explore lovely hidden coves below Honoapiilani Hwy. Some uphill/downhill. Coastal views. Bring water and snacks. Meet at 9am at McGregor Point parking lot. Limit 18. Leader: Lucienne de Naie, laluzmaui@gmail.com or 214-0147

Saturday, April 13
Hāmākua Mālama Day (C/E/S)
Ha'ikū, 4 miles
Monthly community service outing to remove trash and keep coastal trails open on 267 acres of Hāmākua lands purchased by Maui County. Bring gloves, hand tools, water, hat, lunch, sturdy shoes. Meet 9am at Ha'ikū Community Center. Limit 15. Leader: Lucienne de Naie, laluzmaui@gmail.com or 214-0147

Saturday, April 13
Kūa'au Bay (C/E)
North Shore, 4 miles
Moderate, some uphill. Historically rich, dazzling hidden gem along Ha'ikū coastline. Valley has had restoration work to traditional agriculture by Waikēkēa Foundation. Limit 18. Meet 9am Ha'ikū Community Center. Leader: Rob Weltman, robw@worldspot.com

Sunday, April 14
Kanaio Road (C/E)
Kanaio, 4 miles
Mostly dirt road, walking gently uphill all the way with great views, but not much shade. This road is just 5 min past the winery, it forks to the left off of Hwy 31. We will carpool from Puukalani Aee parking lot, meet at 9am. There is a meadow for lunch and for the whole outing, plan on 4 plus hours. Leader: Kalei Johnson, kalei1908@gmail.com or 344-0006 (no text).

Sunday, April 14
Holomua Rd, Old Maui High (C/E)
North Shore, 4-6 miles
This is a road walk up to the lovely historical buildings of the old high school. It can be done as a 4 or 6 mile round trip. Take the first right turn off of Hāna Hwy after passing Māna’s Fish House and it is a gentle uphill walk all the way. Very nice views. Park on the side of the road. Hike leader will be waiting there not too far off the highway. Meet there at 9am. Leader: Kalei Johnson, kalei1908@gmail.com or 344-0006 (no text)

Saturday, May 25
Hāmākua Mālama Day (C/E)
Ha'ikū, 4 miles
Monthly community service outing to remove trash and keep coastal trails open on 267 acres of Hāmākua lands purchased by Maui County. Bring gloves, hand tools, water, hat, lunch, sturdy shoes. Meet 9am at Ha'ikū Community Center. Limit 15. Leader: Lucienne de Naie, laluzmaui@gmail.com or 214-0147

Saturday, June 1
Wailea 670 National Trails Day Special (C/E)
South Maui, 2-3 miles

Sunday, June 2
Mākena Shoreline Hike (C/E)
Mākena, 3 miles
Moderate, pleasant walk on “fisherman’s trail”, road, sandy beaches, rocky beaches with uneven ground past tidepools to Keoneula (Black Sand Beach). Beautiful views. Hiking stick useful. Meet 9am in public parking lot for Polo Beach, near entrance. Almost entirely exposed, so bring sun protection. We’ll stop to eat anything we have with us at Keoneula. Limit 15. Leader: Rob Weltman, robw@worldspot.com

Saturday, June 8
Kōkua Day at Fleming Arboretum, Pu'u Mahoe (C/E)
South Maui, 3-5 miles
Help maintain the Fleming Arboretum at 2600 feet in ‘Ulupalakua, sanctuary to many endangered native dry land forest plants. Awesome views of La Perouse (Keeve‘o'o) coast and Kaho‘olawe. Bring a light jacket, lunch, and gloves. Meet 9am at the ‘Ulupalakua Bread Store. Estimate 3 hours of work. Refreshments available. A BYO lunch will be at the Fleming cabin with a great view of South Maui. Limit 20. Leader: Rob Weltman, robw@worldspot.com

Sunday, June 9
Hana‘ula Ridge Service Outing & Hike (C/E)
East Maui, 4 miles
Visit beautiful streams, pools, and waterfalls along this EMI trail beginning in Nahiku. Involves crossing trestles. Bring 2L water, raingear, lunch, and water tolerant shoes. Meet 8am at Ha‘ikū Community Center. EMI waiver required, see above. Limit 15. Leader: Lucienne de Naie, laluzmaui@gmail.com or 214-0147

Sunday, June 16
Hana‘ula Ridge Service Outing & Hike (C/E)
East Maui, 4 miles
Visit beautiful streams, pools, and waterfalls along this EMI trail beginning in Nahiku. Involves crossing trestles. Bring 2L water, raingear, lunch, and water tolerant shoes. Meet 8am at Ha‘ikū Community Center. EMI waiver required, see above. Limit 15. Leader: Lucienne de Naie, laluzmaui@gmail.com or 214-0147

Mai Group Outings

Friday, April 12
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Walk the bushes near the proposed 134-acre Wailea 670 preserve. Rugged terrain. Closed shoes/boots, long pants, and good balance a must. Bring water and a hiking stick. Meet 7:30 pm at Kauki Rd in Wailea. Limit 18. Leader: Lucienne de Naie with guidance by Hawaiian cultural practitioners, laluzmaui@gmail.com or 214-0147

Sunday, April 14
Honokōhau Ditch Trail (C/E)
West Maui, 4.5 miles
This is a 4.5 mile round trip, pedestrian paved, mostly flat walking trail that leads to a stream. Great views but fully exposed. We will carpool meeting at Mā'alaea at 8am. For those who do not want to carpool: coming into Lahaina, from the highway turn right on Kai Hele Ku St. and come up, around a rotary till you see some parking spaces on the right across from a small shady picnic area. On the left you will see the ditch trail sign. This is the Launipoko neighborhood. About a 2 hour hike. Leader: Kalei Johnson, kalei1908@gmail.com or 344-0006 (no text)

Friday, April 19
Mā'alaea to McGregor Point Coastline (C/E)
West Maui, 3 miles
Explore lovely hidden coves below Honoapiilani Hwy. Some uphill/downhill. Coastal views. Bring water and snacks. Meet at 9am at McGregor Point parking lot. Limit 18. Leader: Lucienne de Naie, laluzmaui@gmail.com or 214-0147

Saturday, April 20
Hāmākua Mālama Day (C/E/S)
Ha'ikū, 4 miles
Monthly community service outing to remove trash and keep coastal trails open on 267 acres of Hāmākua lands purchased by Maui County. Bring gloves, hand tools, water, hat, lunch, sturdy shoes. Meet 9am at Ha'ikū Community Center. Limit 15. Leader: Lucienne de Naie, laluzmaui@gmail.com or 214-0147

Sunday, April 21
Kanahā Beach Ramble (C/E)
North Shore, 3 miles
We'll go along the ocean but not walking on the beach. We will be in the trees seeing some historical features like the remnants of a crashed aircraft and bunkers from WW2. About a 3 mile jaunt, nothing difficult and we can extend the distance if desired. Meet at the Kanahā Beach Can pavilion at 9am. Leader: Kalei Johnson, kalei1908@gmail.com or 344-0006 (no text)
The 2% Land Fund was created by citizens to have a guaranteed source of funding to obtain matching parklands and cultural sites. The original proposal was to protect natural resources, watersheds, open space, trust doctrine in our State Constitution demands so.

Hawai‘i County has taken its first step toward the Kealakehe Wastewater Treatment Plant Upgrade and protect sustainable yields of our aquifers.

Kona has numerous failed water wells and using pond relies on an unproven technology are are unlikely to remove nutrients. This problem could be solved but a solution is not in the proposal.

Finally, the County proposes to spend million of dollars on the upgrade and then use percolation ponds for disposal. Again, ground water would carry that to the coast and the is no cost recovery with disposal. The proposed ponds rely on an unproven technology are unlikely to remove nutrients.

Hawai‘i County does not have staff trained in reuse and they have not sought out experts who have a business model to make reuse successful. Honolulu entered into a public-private partnership at no cost to taxpayers and has created a $25 million per year program that can be explored as it pays for itself through the sale of recycled water and fees put up potable water in the process.

Kona has numerous failed wells and using recycled water for irrigation really makes sense. Reuse would relieve pressure on drinking water supplies, keep groundwater water that support our coastal ecosystems, and protect sustainable yields of our aquifers.

Hawai‘i County needs a plan that will work and does not have disposal through ineffective percolation ponds as the final step. It is time to end decades of pollution in our recreational groundwater—the public trust doctrine in our State Constitution demands so.

Hawai‘i County’s 2% Land Fund is Under Fire by Debbie Hecht

The 2% Land Fund was created by citizens to protect natural resources, watersheds, open space, parklands and cultural sites. The original proposal was to have a guaranteed source of funding to obtain matching 2% of property taxes each year to have a guaranteed source of funding to obtain matching funds to acquire property.

A small group of citizens met in 2006 and formed the Save Our Lands Citizens’ Committee to run a petition initiative campaign. The group’s petitions were signed by 27,000 Hawai‘i Island voters, however, the County clerk disqualified more than 6,000 signatures stopping the petition. The County Council went on to put the 2% Land Fund on the ballot anyway. Then in 2008, Mayor McCartney halted deposits to the Land Fund as his first legislation. That is when the County realized it needed a charter amendment, so that the fund that could only be changed by a vote of the Charter Commission or a charter amendment. A charter amendment was approved in 2010 but the Charter Commission put it on the ballot at only 1%. In 2012, the charter amendment was on the ballot at the full 2%. Each time the Land Fund has been approved by 67% of voters—this is a citizen’s mandate.

The Great Success of the 2% Land Fund for Hawai‘i Island

Island residents have proposed 180 properties for acquisition with one 2,200-acre property in escrow. Since 2006 by resident proposals, 4,428 acres of land has been acquired and an additional 2,200 acres is in escrow.

Money Spent:
- Hawai‘i County 2% Land Fund $27,389,268
- Grants from Matching funds $8,764,083
- Private funds: $2,000,000

Funding:

In 2006, two percent of property taxes was $2 million and now has increased to $5 million per year. The highest and best use of 2% of land funds is to use the 2% Land Fund to get dollar for dollar matching funds from US Fish and Wildlife and State and Federal Land. There is public oversight of all the components of the 2% Land Fund Program by the Public Access, Open Space and Natural Resources Commission.

The Save Our Lands Citizens’ Committee is alarmed to see that unspent money is piling up in the Land Fund and that there may be a deliberate attempt to avoid acquiring property. Only 14 of the 180 properties proposed have been acquired and there is presently $19 million in the fund.

The funds may also be under threat. Mayor Kim has said that he wants to use the funds to make up for budget shortfalls. He has also said that he wants to sell the land so the County does not have to maintain it. However, the Citizens’ Committee has publicly reminded him that he needs a vote of the people to change the fund. Some Charter Commission appointees have proposed to cut the 2% Land Fund to 3/4%, use the money for disaster relief, and delete the perpetuity clause which prevents the County from ever taking ownership of these lands.

So far, the Citizens’ Committee has lobbied successfully to get these amendments voted down as part of the proposed Charter Commission review. However, the Citizens’ Committee has been disappointed that since the inception of the Maintenance Fund, only 9% of all expenditures have gone to the nonprofits caring for these lands, which was the intent of the amendment.

The Save Our Lands Citizens Committee has proposed several charter amendments to strengthen the 2% Land Fund Program:
- A full time employee to work only on the 2% Land Fund Program under the Department of Finance, who is paid from the 2% Land Fund.
- Improve the Maintenance Fund to fulfill the original intent of the charter amendment to empower the nonprofit organizations who are already caring for the 2% Land Fund acquisitions. Stewardship grants should be offered for organizations to build buildings, create habitats for the palila, and toilet facilities and to pay workers, whether employees or members of the board.

Hawai‘i is one of the most beautiful places in the world. We have 2 million acres of land should be protected for our keiki and grandchildren. If you would like to help or learn how to develop a Land Fund Program please contact them. Debbie Hecht, 432-9622, hecht.deb@gmail.com

For more information on the history, the process and the successes of the 2% Land Fund go to: bit.ly/debbiehecht

How can you help?

1. Attend Charter Commission meetings and testify, in person or by video at Hilo and Kona Council chambers on April 12th at 11am.
2. Attend public meetings. The Commissioners are salaried employees of the County and they have no votes. They have no right to vote. They are appointed by the Mayor and the people for whom Mauna Kea is part of their heritage. All Commissioners are appointed by the Mayor and the people for whom Mauna Kea is part of their heritage.
3. E-mail the Charter Commission and tell them your thoughts through charter.commission@hawaiicounty.gov

Debbie Hecht has been the Campaign Coordinator for the Save Our Lands Citizens Committee and the 2% Land Fund since 2006. She and Councilmember Brenda Ford have written the enabling legislation.

Update and Proposed Rules for Mauna Kea by Deborah Ward

The University of Hawai‘i is proposing administrative rules for the “UH managed lands” within the Thirty Meter Telescope (TMT) project area, which is the largest area of land set aside for Native Hawaiians and the people of Hawai‘i. Many island residents believe that the University does not have jurisdiction over these lands on leased land. While the proposed rules pertain to the public and commercial tours, they exclude all actions taken by the university, its students, or its agents. While the University has a non-exclusive license to use these lands, the County has a 200-year permit to use the summit, the rule would authorize the university to gate the road and charge fees for entrance, parking, and use. Any activity not on a designated trail without a permit would be prohibited above the visitor center. DNLR personnel, groups of 10 or more, would be required to consult with the president of the UH before entering. The president would have the sole discretion to select a hearing officer if the Dragonfly rules and fines were not followed. The County has also have sole discretion upon appeal. Public hearings on the rules will soon be announced.

The Thirty Meter Telescope board has yet to decide whether to build. The Department of Health is considering a request to discharge stormwater from the TMT construction site into streams and rivers that drain into Puna and Kea, both of which are in critical habitat areas for the pāli‘ā. Hawai‘i Island mayor Harry Kim spoke recently about Mauna Kea—he acknowledged both the science of modern astronomy and the soul, all I ask it that is that you do it with care, and above all, with compassion”. Public protests to the further industrialization of Mauna Kea are being held in Pasadena, where the TMT corporate headquarters is, and around the world to raise awareness on the significance of Mauna Kea to Hawaiians and to advocate for the protection of Mauna a Wākea. For more information go to maunakeaawarinessday.org.

The Hardest Day by Lisa Mason, Hawai‘i Island High School Hikers Outings Leader

“E olo o, e olo makū nei” was the blessing offered as we peered down at a freshly planted wiliwili tree. On Hawai‘i Island, this contemporary saying, rich in ancient wisdom, is widely taught to students and volunteers who visit the island. This contemporary saying, rich in ancient wisdom, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”, shares the relationship between kānaka and ‘āina”.
Cooperator on Hawai‘i island.

On February 9th, Hawai‘i Island High School Hikers attended the 8th annual Williwill Festival presented by the Waikoloa Dry Forest Initiative. We joined a tour of the Waikoloa Dry Forest Preserve and viewed reforestation sites from past years and could identify healthy looking ma‘o hau hele, ‘a‘ali‘i halape‘a, and a flowering specimen of the critically endangered uhalii. A couple of weeks later, on February 23rd, our club, alongside visiting students from Cornell University and community members from the neighboring town of Waikoloa volunteered for the Waikoloa Dry Forest Initiative’s community work day. Lush dry forests in Hawai‘i are highly threatened and projects like this are essential for rehabilitation. We arrived in the early morning to prepare our “tools”, a pickaxe, and cleaning the site. Resting neatly in their plastic trays were over 100 young halape‘a, native plants, including nine endangered species, have been reintroduced. Mahalo to Waikoloa Dry Forest Initiative and all the volunteers. The Sierra Club Moku Loa Group, Hawai‘i Island High School Hikers, and Christian Liberty Academy are pleased to be a part of this project’s legacy. È ola o, è o la mokau nei.

Disability Access! And Other Outings News by Diane Ware, Outings Chair

2018 was an eventful year, with the eruption, closure of Hawai‘i Volcano National Park, and storms. Due to these events, we had to cancel some outings. We are now back on the trails, and exploring changes to island landscapes. One recent outing to view Halema‘uma‘u from Crater Rim Road was well attended and included our first wheelchair participant. Check out our upcoming outings and please consider becoming a leader. Leaders have much freedom in choosing and planning outings to special places of their choices, including backpacking, beach hiking, hikes, or walks with different themes. There will be First Aid training on May 18, a great first step in leader certification. The written part, Outings Leader Training Certification can be completed online. To sign up call Diane at 967-8642.

SEE PAGE 12 FOR GENERAL OUTINGS INFORMATION

Requested donation for members and participants under 18 is $5. Donation for others: $5.

For most hikes, bring 2 quarts of water, rain gear, sturdy hiking shoes, hiking stick, hat, and lunch. For full descriptions and details go to: bit.ly/SCMLG-outings.

Classification of outings: (E) Education/Interpretation, (C) Conservation, (F) Family/Run, (S) Service (no donation required)

Saturday, April 13
Stewardship at the Summit (S/E/C)
Hawai‘i Volcano National Park, moderate/1-2 miles
We will be doing service in the park in conjunction with Hawai‘i Volunteer Week. Work consists of ginger cutting for 3 hours and requires up to 1 mile of hiking. This event is sponsored by HVNP. Wear hiking boots, bring water, gloves, raingear, and snacks or lunch. Leader: Diane Ware, 967-8642. Please register by April 5.

Saturday, April 13
Kalapana Coastal Day Hike (E/C/F)
Puna District, easy/ 6 miles
This hike begins at Kalapana. We will hike out to the beach at Kaimu, then explore the shoreline south of Kaimu over rough lava. In many places lava has changed the coastline. We will have lunch at a secret kīpuka and then return. Leaders: Michael and Sunny LaPlante, 964-5017.

Saturday, April 20
Kalōpā Nature Trail and Old Jeep Road and Gulch Trail (E/F)
Hāmākua District, easy/4 miles
First, we will start by visiting the kōlea, kōpiko, and ferns which were once abundant prior to the introduction of livestock and the lava flows of 1843 and 1935. A slow paced loop trail, constructed by the Youth Conservation Corps, encircles both crests of the hill. The trail provides an excellent opportunity to view native plants and birds which are once abundant prior to the introduction of livestock and the lava flows of 1843 and 1935. A slow paced hike suitable for photography, sketching, and relaxing with family and friends. Mothers are especially welcome. Leaders: Michael and Sunny LaPlante, 964-5017.

Saturday, May 18
Outing Leaders Training
First Aid and CPR at the University of Hawai‘i HIlo for leader certification. This is an all day class, so bring a lunch and water. The cost is covered by Moku Loa Group from donations collected on outings. New leaders are encouraged to come. Call Diane Ware to register if you are interested in becoming a leader, 967-8642.

Friday, June 7
Explore Pohoiki (E/F)
Puna District, moderate/ 3-4 miles
We will explore Pohoiki’s 2018 lava flow at Pohoiki, see new beach made, and hike up Mango Road for views of the area. Lunch will be on the beach. sturdy boots are required for traversing rough lava, wear sun protection, bring water, and swim gear is optional. Leader: Diane Ware, 967-8642.

Friday, June 21
Puʻu Makaʻala NAR (E/F/C)
North Hilo District, easy/mile
We will explore Puʻu Makaʻala NAR on Kona side. It is a well-known hike with great views and interesting geology. We can extend this outing with lunch or a loop hike around the NAR. Leaders: Linda Larish, 966-9337.

Saturday, April 27
Snorkel Puakō (C/E/F)
South Kohala District, easy/sea level
This beautiful bay and reefs near the Kohala resorts always holds surprises for those willing to get in the water. This outing is part of our series devoted to the appreciation of the marine life of Hawai‘i’s ‘Gold Coast’. We especially want to invite participation of experienced water persons with knowledge and memories of this special place. Together we will investigate and assess the richness of the reef and its marine ecology. Bring standard outings such as sun, water, protection, and snorkel as well as personal snorkel gear, fish ID cards, and an underwater camera if you have one. Leaders: Rob Culbertson, 805-316-1380 and Diane Ware, 967-8642.

Sunday, May 5
Escape Road to Puʻu Huluhulu (E/F)
Hawai‘i Volcanoes National Park, moderate/7.5 miles
We’ll do this as a car shuttle from the Devastation Trail parking lot to the Mauna Ulu parking lot. We will start out hiking in the beautiful rainforest, traverse a pahoehoe lava field and then climb Pu‘u Huluhulu where we can eat lunch. Leaders: Linda Larish, 966-6357 and Diane Ware, 967-8642.

Sunday, May 12
Puʻu Huluhulu Day Hike (E/F/C)
North Hilo District, easy/1 mile
On Saddle Road, by mile marker 27.7. A short double loop trail, constructed by the Youth Conservation Corps, encircles both crests of the hill. The trail provides an excellent opportunity to view native plants and birds which are once abundant prior to the introduction of livestock and the lava flows of 1843 and 1935. A slow paced hike suitable for photography, sketching, and relaxing with family and friends. Mothers are especially welcome. Leaders: Michael and Sunny LaPlante, 964-5017.
Invasive Insects Threatens Native Naio Plants Found on Oʻahu
by Erin Bishop, OISC Outreach Specialist

Myoporum thrips, Klambothrips myopori, also known as naio thrips, were detected on Oʻahu on November 23rd. Since then, multiple agencies and many private citizens came together to check 619 naio (Myoporum sandwicense) plants across Oʻahu. Only 42 plants were positive for naio thrips. Positive detections were found in Kaliihi, Moanalua, Pearl City, downtown Honolulu and Waikīkī.

Sites around these infested plants within the same watershed have been checked and are clear. These are isolated points within these watersheds, the whole watershed is not infested. Most importantly, significant natural sites such as Kaʻena Point and the Kaiwi shoreline do not show signs of thrips.

Native to New Zealand, naio thrips have caused widespread damage on the popular landscaping Myoporum plants in Southern California and in the San Francisco area. They were first detected on Hawaiʻi Island in March of 2009. Naio thrips can be found on many Myoporum species, but is especially noticeable on our native naio species Myoporum sandwicense. Larvae and adult insects feed on the leaves causing lethal damage. The damage is noticeable leaf curling and gall formation at the terminal ends of the plants and are noticed before any insects are seen.

In Hawaiʻi, this recent pest can potentially have devastating effects on our native naio trees which are an important component of lowland and coastal dry forest. The Oʻahu Invasive Species Committee is asking the public to report locations of any naio plants on Oʻahu and to send photos of any suspect damage. Please report locations and photos by emailing oisc@hawaii.edu, texting 808-286-4616, or online at 643pest.org.

Rapid ‘Ōhi‘a Death on Kaua‘i
by Kim Rogers, Kaua‘i ROD Outreach Specialist

In Hawaiian culture, the saying pōkī ki ka ua, ua i ka lehua translates to “the rain, like a younger brother, remains with the lehua.” It hints at the intimate connection between freshwater and ‘ōhi‘a.

Endemic to Hawai‘i, the ‘ōhi‘a lehua, Metrosideros polymorpha, is a flowering tree in the myrtle family. As an early colonizer after a new lava flow, it’s known as a keystone species of the Hawaiian forest and is considered critical to the function of Hawaiian ecosystems and the ecology of Hawai‘i. ‘Ōhi‘a produce a dizzying display of flowers, made up of an explosion of stamens that range in color from fiery red to bright yellow. The flower’s nectar provides sustenance to native honeycreepers like the vermilion-colored ‘Iwi. Its limbs provide nesting habitat to the critically-endangered ‘akīkī. And behind the ‘ōhi‘a’s scrappy bark, insects—many native—offer foraging opportunities for the ‘elepaio, a small, gray-brown flycatcher.

The ‘ōhi‘a, celebrated in hula and mo‘olelo, is also intricately tied to the Hawaiian culture. Its root ‘ōhi‘a relates to “gathering” or “collecting.” And this points to ‘ōhi‘a’s importance in gathering and collecting water for our watersheds.

Unfortunately, a fungal disease known as Rapid ‘Ōhi‘a Death (ROD) is killing Hawai‘i’s sacred trees. First detected on Hawai‘i Island more than five years ago, ROD has since affected more than 135,000 acres of ‘ōhi‘a forest on the largest of Hawai‘i’s islands.

In 2018, ROD was confirmed in four distinct locations on Kaua‘i—Molaa State Forest Reserve and on land behind Anahola Mountain; in Halelea Moku in the northern part of the island; and near the Līhu‘e-Kōlōa Forest Reserves on the south side. The diseased trees are found at elevations ranging from 550 to 1,600 feet above sea level. ROD ‘Ōhi‘a Death targets Hawai‘i’s sacred ‘ōhi‘a exclusively. It enters the tree by way of a wound and grows in the vascular system of the tree, blocking the flow of water. The ROD-causing fungi cannot be seen from the outside. External symptoms include the sudden browning of leaves on limbs or a tree’s entire crown.

Scientists at the U.S. Department of Agriculture have identified two different species of fungi that cause ROD, Ceratocystis huliohia and Ceratocystis lukuohia. Both species are new to science and both species have been detected on Kaua‘i.

The difference between the two pathogens is how they move through the tree and how quickly they kill. Whereas C. huliohia may take months to years to kill an ‘ōhi‘a tree, C. lukuohia can kill a tree in a matter of weeks.

The Kaua‘i ROD Working Group does not know exactly when or how the disease arrived on Kaua‘i—whether it was the result of human activity or whether it arrived on its own, perhaps blown in with the wind. Three of the four sites on Kaua‘i where ROD has been found are isolated points within native forests. The fourth site is the Waimea Falls area.

Kaua‘i’s rapid response team includes scientists and managers from DLNR/DOFAW, U.S. Fish and Wildlife, KISC, The Nature Conservancy, National Tropical Botanical Garden, Kaua‘i Watershed Alliance, and the University of Hawai‘i. The team is conducting aerial drone flights and helicopter surveys using digital mobile sketch mapping and has identified various areas on state and private lands with ‘ōhi‘a trees showing symptoms consistent with the disease. In order to confirm ROD, samples of the wood must be taken by trained technicians and tested in a laboratory to confirm the presence of the ROD fungi.

Kama‘aina and visitors can help prevent the spread of ROD by following these key five guidelines:

1. Keep your eyes open. If you see ‘ōhi‘a with a limb or crown suddenly turning brown, take a picture, and contact KISC via email at saveohia@hawaii.edu or phone 808-821-1490.
2. Avoid injuring ‘ōhi‘a. Wounds serve as entry points for the fungus and increase the odds that the tree will become infected and die from ROD. Avoid pruning, blazing trails, and scuffing roots wherever possible.
3. Clean gear and tools, including shoes and clothes, before and after entering the forest. Brush all soil off tools and gear, then spray with 70% rubbing alcohol. Wash clothes with hot water and soap.
4. Wash your vehicle with a high-pressure hose or washer if you’ve been off-roading or have picked up mud from driving. Clean all soil off tires—including mountain bikes and motorcycles—and vehicle undercarriage.
5. Don’t move ‘ōhi‘a wood or ‘ōhi‘a parts, including adjacent soil. The disease can be spread to new areas by moving plants, plant parts, and wood from infected areas to non-infected areas.
**BILLS THAT SURVIVED Crossover**

Crossover is often used as a halfway point in our legislative session, as bills that were introduced in the House “crossover” to the Senate and vice versa. Bills introduced in one chamber are now up for consideration in their non-originating chamber. Below is an update of our surviving bill priorities as of first crossover.

**Carbon Free Hawai‘i**
- **HB 1584** - University of Hawai‘i to conduct a comprehensive study of a statewide carbon tax.
- **SB 500** - Public Utilities Commission to study implementing Renewable Portfolio Standards for gas utility companies. Accelerates the renewable energy goals for 2030 and 2040.
- **HB 556** - State to adopt appliance efficiency standards.
- **SB 1323** - State to adopt appliance efficiency standards.
- **HB 307** - Broadens the definition of “renewable energy” to include other self-replenishing non-fossil fuel resources.

**Stream & Marine Ecosystems**
- **HB 1326** - Allows continuation of holdover permits for stream diversions.
- **HB 808/SB 489** - Prohibits and establishes penalties for any person who knowingly captures, possesses, abuses, entangles, or kills any shark within state waters. Expands the existing protection for rays within state waters.
- **HB 551** - Extends lapse date for a sewage contamination study in nearshore marine areas.
- **SB 696** - Extends life of cesspool conversion working group, provides funds for sewage contamination study in nearshore marine areas and completion of the comprehensive cesspool conversion plan.

**Waste & Recycling**
- **HB 762** - Prohibits providing straws unless requested.
- **SB 11** - Ban on polystyrene foam.
- **SB 367** - Single-use plastics ban.
- **SB 522** - Single-use plastics ban and establishes plastic waste reduction working group.
- **SB 630** - Repeals glass container program.
- **SB 893** - Recycling & 1 & 2 bottles with caps.

**Carbon Pricing**
- **HB 1586** - Establishes and transfers some state agency programs to a “Department of Environment”.

**Clean Energy**
- **HB 1586** - Establishes and transfers some state agency programs to a “Department of Environment”.
- **HB 1171** - DLRN-DOFAW operating budget bill that would provide $5M to programs including:
  - Hawai‘i Invasive Species Council prevention, early detection-rapid response, control, and outreach;
  - Rapid O‘hi‘a Death research and response; and
  - Wildfire response.
- **SB 923/SB 924/SB 1490** - DLRN operating budget bills including funding for HISC, ROD, Legacy Land Conservation Fund, and other DLRN priorities.

**Planning for Rising Seas**
- **SB 1126** - Requires seller disclosure in sea level rise exposure areas to ensure that new property owners/transferes understand the special hazards, requirements, and limitations that may affect the property.
- **SB 1339** - Requires a purchaser statement with the sale/transfer of vulnerable coastal real estate.
- **SB 1340** - Requires mandatory seller disclosures in real estate transactions within a sea level rise exposure area.

**Strengthening Coastal Zone Management Laws**
- **HB 549** - Requires new developments to plan for the impacts of projected sea level rise and prohibits development in areas significantly affected by projected sea level rise.
- **SB 393** - Prohibits development in areas significantly affected by projected sea level rise and requires new developments to plan for the impacts of projected sea level rise.

**Sea Level Rise Planning**
- **HB 461** - Requires the Hawai‘i Climate Change Mitigation and Adaptation Commission to work to address the impacts of sea level rise.
- **HB 765** - Requires sea level rise projections in all new plans and updates to existing state plans.
- **HB 1487** - Establishes pilot project to develop a plan to protect Honolulu from the acute impacts of climate change including sea level rise.
- **SB 944** - Requires the Hawai‘i Climate Change Mitigation and Adaptation Commission to prioritize nature-based solutions in climate change mitigation and adaptation efforts and promote investments in nature to reduce the risks of climate change.
- **SB 1054** - Requires the State and counties to incorporate sea level rise and other climate change hazards and mitigation opportunities into applicable plans, strategies, and mapping.

**Bill status at this session’s halfway point**
- **BILLS THAT DIED AT CROSSOVER**
  - **HB 289** - Requires the issuance of building permits for new single-family homes that are part of a development of twenty or more dwellings and do not include a rooftop solar energy generation system beginning in 2022.
  - **HB 1245** - Establishes a process for automatically preregistering public school-enrolled students who are at least 16 years old.
  - **TB 487** - Disallows dividends paid deduction for real estate investment trusts.
  - **HB 308** - Supplemental Nutrition Assistance Program beneficiaries to receive “double bucks” for purchasing Hawai‘i-grown produce.

**CLIMATE CHANGE**
- **SB 930** - Requires Hawai‘i Climate Change Mitigation and Adaptation Commission to assist the State and counties with implementing sea level rise adaptation plans and climate change mitigation efforts.
- **SB 690** - Implements recommendations of the Hawai‘i Sea Level Rise Vulnerability and Adaptation Report.

**STREAM PROTECTION**
- **HB 848** - Prohibits dispositions authorizing the diversion of water from streams unless certain conditions are met. Requires funds collected through disposition, to go into the Forest Stewardship Fund, after the Department of Hawaiian Home Lands and Office of Hawaiian Affairs each receive their constitutionally-entitled share.
- **SB 915** - Prohibits BLNR from approving dispositions that authorize the diversion of water from streams except under specified criteria. Deposits moneys collected via land dispositions that authorize the diversion of water from streams into the forest stewardship fund.

**DNR FUNDING**
- **SB 1068** - Appropriates funding to Na Ala Hele to improve access and maintain state recreational trails statewide and promote hiker safety and etiquette.
- **SB 1386** - Allocates one per cent of the revenues of the transient accommodations tax for deposit into the special land and development fund to develop a natural resources conservation goal action plan.

**COMMON GOOD COALITION**
- **HB 1217/SB 412** - Automatic Voter Registration for driver’s license and ID applications.
- **HB 1485** - Establishes a process for automatically preregistering public school-enrolled students who are at least 16 years old.
- **HB 275** - Establishes a process for automatically preregistering public school-enrolled students who are at least 16 years old.
- **SB 893** - Repeals glass container program.

There is just over one month left in the 2019 legislative session—plenty of time to have your voice heard on issues you care about. Learn about bills, upcoming hearings, legislative how-tos, and sign up for our email alert list at hawaiicapitolwatch.org
It’s Time to Retire The Red Hill Tanks

by Kirsten Fujitani, Chapter Communications Manager

The Honolulu City Council recently adopted Resolution 18-266 that urges the U.S. Environmental Protection Agency and the Hawai‘i Department of Health to not only reject the Navy’s proposal to maintain status quo at the Red Hill Bulk Fuel Storage Facility but to support the relocation of the tanks away from the aquifer if secondary containment upgrades are not feasible. By passing this resolution, the Honolulu City Council becomes the first legislative body to publicly support the relocation of the tanks. This marks incredible progress in our fight to protect O‘ahu’s drinking water and shows that our public pressure is working.

Here are some of the voices who helped make this big win possible:

Carol Fukunaga
Honolulu City Council Member

The City Council has steadfastly backed the Honolulu Board of Water Supply’s forceful arguments to protect O‘ahu’s precious and limited supplies of drinking water. I acknowledge that the Navy has expressed with confidence its proposed fixes. But the high degree of public information and outreach conducted by BWS is an important reason for continued skepticism over existing maintenance practices, as was testimony from concerned groups like the Sierra Club, in shaping the Council’s final decision. In the end, the Honolulu City Council agrees that relocation of the fuel tanks to alternative sites, or the higher cost of the double-lining solution, makes practical sense. Unlike fuel tanks, the aquifer is priceless and irreplaceable.

Jun Shin
Young Progressives Demanding Action

I am 19 years old. In 20 years, I will be 39. I cannot wait that long for water security. Whether it is growing our own food, diversifying our agriculture, or climate change mitigation, a vision for the future becomes visionless without water. By 39, I may have a family and kids of my own, and I don’t want to pass this issue along to them. For future generations, I have an opportunity to step up and do something about it right now so I’m going to do the best that I can to learn and help make a difference.

Ann Wright
Veterans for Peace

I served 29 years in the U.S. Army and Army Reserves. The Red Hill tanks have served the U.S. military for 75 years, more than twice as long as I did. I’m now 72 years old and have had a normal number of aches, pains, and surgeries. The storage tanks have had their own share of ache, pains, and repairs—which didn’t turn out well when a patch job caused 27,000 gallons of fuel to leak from a single tank. Those of us in our 70s know all about leaks—it’s a hazard of age. After 75 years of service, it’s time to retire the Red Hill Storage tanks.

Nate’s Adventures: Mölï Nesting Season

by Nate Yuen, Chapter Conservation Chair

After decades of severe decline, Laysan albatross, Phoebastria immutabilis, are coming back. Mölï are re-colonizing multiple sites across the Pacific and on O‘ahu. The first chicks to fledge on O‘ahu were at Ka‘ena Point in 1992. They also nest at Moku‘ëia, and Moku Manu. They are now nesting at Kahuku Point.

When I heard adults were nesting, I went to Kahuku Point to see. I was thrilled to see adults tending to their several days old chick. It was sweet to see the adult stroke the chick with its beak and fuss its down. Albatross adults are devoted parents and spend much of their time caring for their chicks.

Parents take 2 week shifts—one sits on the egg/chick while the other hunts for food at sea. When the adult flies back it regurgitates what it caught and feeds it to the chick.

Chicks grow quickly over the next few months where they lose their down and grow feathers. Here’s hoping many chicks fledge this year, and return to Kahuku Point in 5 years to re-establish the colony.

Explore, enjoy and protect the planet

Sierra Club Water Sentinels are the first line of defense of America’s waters. We live on the water planet. However, water is a finite resource with only about 1% of the world’s water actually being available for human consumption. Water pollution & over-use are threatening both the quality & quantity of our water resources at an alarming rate.

Keep our water safe. Join Sierra Club.
Supreme Court Ponders Maui’s Poop Water
by Marti Townsend, Chapter Director

For decades residents of West Maui have watched their once vibrant coral reefs brown and die. It took a dedicated team of concerned citizens and scientists to sleet out the cause. After decades of study and analysis, scientists finally pinpointed the cause of the mass reef die-offs and it is really gross when you think about it.

For decades, the County of Maui has been injecting partially-treated human wastewater into groundwater near the shoreline. That wastewater-filled groundwater flows toward the sea, likely through lava tubes, and then discharges into the ocean through a series of naturally occurring holes in the porous lava rock. Once in the ocean, this effluent deposits extremely high levels of nitrogen and phosphorous onto the reefs. This high nutrient load triggers massive algal blooms that in turn absorb all the oxygen in the area, suffocating almost everything living on the reef.

With incontrovertible evidence in hand, these tenacious advocates for the ocean begged and pleaded with county, state, and federal officials to stop injecting effluent into the groundwater because it was killing the reefs. They started to get action under the administration of Mayor Charmaine Tavares with promises to reuse 100% of the wastewater being injected, but impasse built upon impasse until nothing was happening; all the while, more coral reefs were dying and more surfers were coming down with staph infections and other illnesses.

So, the concerned citizens took their evidence to federal court and they won. Their argument is that the Clean Water Act requires the county comply with the National Pollution Discharge Elimination System when it injects wastewater into underground injection wells. In lieu of paying hefty federal fines, the County agreed to a negotiated settlement with the concerned citizens that called for investment in water re-use facilities.

Instead of immediately investing in better methods of wastewater management and water reuse, the County of Maui decided it would appeal the court’s decision first. The County has spent at least $4 million in taxpayer dollars on attorneys from the continent to fight against protecting Maui’s ocean. Taking this position has also put the County of Maui in league with a long list of polluting industries that have weighed in on the County’s side, including the American Iron and Steel Institute, American Petroleum Institute, National Association of Manufacturers, National Mining Association, and the Fertilizer Institute.

As a result of the County’s appeal, later this year, Hawai‘i Wildlife Fund v. County of Maui will be heard before the U.S. Supreme Court.

In the meantime, we continue to plead with the County of Maui to stop paying for fancy lawyers on a losing lawsuit and instead invest in good wastewater treatment and water re-use facilities.

Sincere mahalos to all the dedicated individuals and organizations that have seen this fight all the way through, including: Hawai‘i Wildlife Fund, West Maui Preservation Association, Sierra Club Maui Group, Surfrider, and EarthJustice.

Hawai‘i Youth Climate Strike

On Friday, March 15, 1.4 million students across 2,233 cities and 128 countries walked out of school to demand climate action, in hopes of gaining the attention of local legislators and world leaders. This movement was prompted by Greta Thunberg, a 16-year-old Swedish student who is speaking out about climate change inaction, including skipping school to protest outside the Swedish parliament. Students all over the world have followed her lead to encourage their own government to enact legislation that will work towards more carbon-neutral societies.

Here in Hawai‘i, over 400 people gathered at the State Capitol to demand climate action from officials. Scientists, activists, legislators, and, most importantly, students spoke about their climate goals and called on lawmakers to work towards a more sustainable future. Much has been done in Hawai‘i to address the threat of climate change, but there is still so much more we can do.

Greta Thunberg’s message was shared throughout the world. Youth must stand up for their future and demand action from legislators. On that same day, in response to the day’s demonstrations, UN Secretary-General Antonio Guterres announced that a climate action summit would take place later this year. The youth were heard!

-Arctic Ocean

“Cherish the Earth”

A Quarterly Journal of the SIERRA CLUB OF HAWAI‘I

MĀLAMA I KA HONUA “Cherish the Earth” | A Quarterly Journal of the SIERRA CLUB OF HAWAI‘I | APRIL-JUNE 2019

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Aloha! My name is Kawika Pegram and I was the lead organizer for Hawai‘i’s Youth Climate Strike! It was an honor to organize this very widespread event. However, it would not have been possible without our wonderful co-sponsors: 350 Hawai‘i, the Sierra Club of Hawai‘i, Local 5, and the Surfrider Foundation. Our event featured speeches, open-mic, sign-waving, and chanting—all in an effort to show our legislators that there is massive support for new and unprecedented climate legislation.

A big message we wanted to send was that we only have 11 years until a lot of climate change impacts become irreversible, and the only way to limit the effects is to decrease our current greenhouse gas emissions to 50% by 2030. To do this, requires an unprecedented amount of support and action for climate science from both our state and national legislators. This is not possible without our lawmakers knowing that there is broad support behind them. So, that’s why tens of thousands of students from the U.S. and over one-million students worldwide went out on March 15th to show their support for new pro-climate legislation.

Our event specifically focused on the students and youth of today, and what we can do in order to push our agenda. We had state representatives from across party lines urge the youth that there’s something to be done, and that they’re all for it. We had a climate scientist tell us about a future which we could never have imagined otherwise, and that we all need to start today. We also had youth speakers from as young as 11 tell us that we can do it; that the goals we have in our minds are entirely possible and we need to start today.

Though this was a big event across the world, we are not even close to done. The youth of today, tomorrow, and the next 100 years will work towards bringing back our ‘aina to its former, beautiful glory. And we will only be able to do this if we, people of all ages, work together to lower our greenhouse gas emissions, decrease our plastic use, and encourage everybody to think with the future in mind. Mahalo nui loa for reading this, and have a prosperous tomorrow.

-Kawika Pegram, Waipahu High School Junior

STRIKE
Andrew's Priory Senior -Olivia Stoetzer, St. Andrew's Priory Senior