



Creature Comforts
Photo Essay and Outcomes
of
The Nevada County California
Climate Change Agents Retreat 2023



Photo Highlights



Top Left: Merry Byles-Daly, representing Sierra Foothills Audubon, led a Tribute Trail hike, to expand students' research on the comfort zones and changing habitats of specific indicator species. They also researched carrying capacities and anthropogenic impacts on habitat. Participants made a land management blueprint based on articles and observations.



Top Right: Change Agents explored controversies over rancher easements versus Nisenan land rights.



Center Left: Logan spoke with Star Carrol, of the Red Bud Society, who identified native plants on the research hike, while Logan cited the group's input on goals, outcomes, and policy recommendations for Fish & Wildlife,

Center Right: Audubon team Don Rivenes and Rudy Darling discussed

bioaccumulation and habitat needs of specific owl species before leading an owling expedition.



Below: Sierra Forest Legacy director Sue Britting gave insights into trajectories for linking science and advocacy and described the history of her trailblazing research on behalf of the California Spotted Owl research.



Top Left: Based on the habits-of-heart, Creativity and Consideration, the Innovator group explored inventions that led to compostable shipping materials.

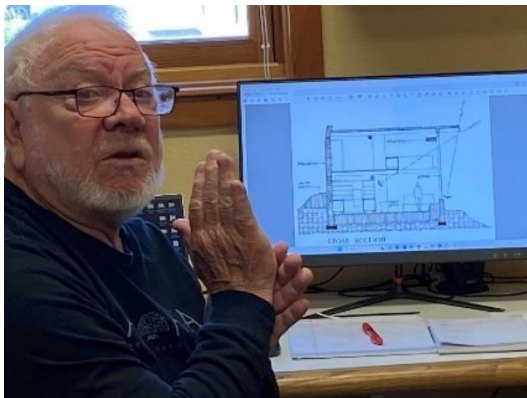


Top Right: The Renovators practiced Circular Design in using household objects to inspire product designs.



Lower Left: Renowned green architect David Wright explained how his work in the developing world initiated passive solar design and other climate-responsive features.

Lower Right: Change Agents offered their own green building blueprints for him to evaluate before honoring him for Creativity that considers carbon as well as creature comforts.





Top Left: Change Agents posed with choreographer Laksmi Greenberg at the lodge.



Top Right: Laksmi's mother, Dava, assisted at rehearsals.



Center Left:
The Children's Festival audience gathers to hear the Change Agents.



Center Right: The group speaks and performs under the trees at the festival.



Left: Taj dressed as the Earth when the group performed at the farmers' market, the picnic, and the festival.



Top Left: Using the uniqueness of the human thumbprint as inspiration, the Change Agents each designed mosaic tiles incorporating spirals.



Top Right: Mosaic artists Pam Hodges and Susie Steinbarth (left to right) helped them apply mortar.

Below: Hospitality House Director Nany Baglietto received a sign for the homeless senior center currently being remodeled. Homeless people and elders feel some of the greatest impacts of climate change and yet deserve comfort and beauty as a human right.





Top Left and Center Right: The Change Agents performed and offered tours of their exhibit at the farmers' market, to motivate new practices and creative, considerate ideas among guests such as this couple, who learned more about passive solar. The youth also studied career paths that advance sustainability and social justice. They featured creative questions that focus on the purpose of their life choices and actions.

Below: Their thumbprint art communicated a message about leaving an imprint based on collective action and unique perspectives. The art went to guest presenters and educators.



Outcomes Report

Setting the Context: June 2023 went down as earth's hottest month on record. A month later, a cadre of local youth found ways to sustain hope, focus on creative solutions, and consider the comforts and health of all species as the creative challenge of their summer. The Climate Change Agents Retreat theme this year was "Creature Comforts," and the habits-of-heart were Creativity and Consideration. The youth celebrated evidence of these traits in one another and pursued group projects to put the theme into practice.

On a warm July morning, Nevada County's Climate Change Agents began their 2023 retreat by studying their own thumbprints under a magnifying glass. How different was each unique imprint from the next? How do its fractal patterns replicate those in a tree stump, a piece of metal, a weather system? (For example, does a Hadley cell replicate the spiral shape in a thumbprint?)

The Change Agents used the thumbprint's pattern to make symbolic spiral art that honors both the uniqueness of individuals and the connecting of individual imprints for a greater collective impact on the well-being of species.

This year's theme challenged them to innovative and renovative, to maintain a comfortable existence for living beings while committing to the process of climate change mitigation and adaptation. The projects they pursued expanded their thinking about the role of creativity in considering the needs of species.

Multiple outcomes of the five-day overnight retreat helped them address these goals:

1. Climate Justice for the Vulnerable

To make comfort and beauty accessible to those most affected by the impacts of climate change, such as homeless people, elders and infants, and people in the developing world, the Change Agents pursued these initiatives:

- a. **For Species:** The Change Agents clarified the role of indicator species in evaluating healthy habitats for diverse species. They discussed symbiotic relationships, read journal articles, and applied their observation skills in the forest to detect changes in related to weather extremes and human presence. They illustrated prime habitats of four species (goshawk, fox, bear and owl) and created a composite illustration of a habitat that meets the comfort needs of all. They wrote a group Rengu poem* as a gift for Sue Britting, who advocates for the California Spotted Owl.

- b. For Indigenous People: Teams of Change Agents considered the complexities of protection and preservation. They resolved hypothetical issues around easements and land-back decisions. They wrote a policy recommendation for Fish & Wildlife, with a central goal, four objectives and seven resulting policy recommendations. **
- c. For Homeless Seniors: The Change Agents created unique mosaic and spiral designs to decorate a sign for Hospitality House's Sierra Guest Home, currently under reconstruction. The organization's director, Nancy Baglietto, liked the design so much that she has asked the architect to incorporate the mosaic's color and design themes into all aspects of the renovation project. To prepare for the project, we commissioned a sign by Grass Valley Sign. David Langness bolted on metal trays. Mosaic artists Susie Steinbarth and Pam Hodges assisted with the mortaring and placement recommendations of the student's tiles.
- d. For Children: In response to the vulnerability of children to climate change, the Change Agents learned from Dr. Sarah Warner how to reduce food waste while also considering the needs of pediatric patients in trauma. (Dr. Sarah reduces food waste by using donated fruit to make the pies that help fund the Crisis KARE unit for children.) The Change Agents also distributed coloring books about forest creatures for pediatric patients at Chapa De and for other area children. The youth performed a dance at the Children's Festival to increase appreciation and awareness of the needs of local forest creatures.
- e. For Wisdom Exchange Partners: Students in Kenya recently conducted food security projects to alleviate hunger stemming from desertification and increasing temperatures. They planted trees and crops for people living off carcasses. The local Climate Change Agents acknowledged their resiliency and created videos to exchange the most relevant information they had gleaned about using creative designs to respond to the challenges of building homes and tools to combat the heat. The videos will also be sent to eight other countries that have faced similar challenges.

2. Land Management Policies that Consider Broad and Specific Needs

- a. Seeing the Interconnectedness of Impacts: The group made recommendations to the Department of Fish and Wildlife about contingencies for protected public lands. Preceding their policy statement, the Climate Change Agents worked in small groups to evaluate local habitat for the plants and food sources that support creature comforts for their designated species. They evaluated regional indicator species and

carrying capacities. They noted the impacts of years of climate extremes and made predications about habitats in Nevada County. They considered the potential impact of the land-back movement on future ecosystems stressed by climate change. The Climate Change Agents combed through research articles about the species in question. They considered habitat features that create comfort for diverse species and identified the most common habitat needs of the collective group of species. They illustrated these comparisons for their policy report.

- b. Balancing Wonderment and Protection: The youth sought inspiration on a nature hike with Merry Lynn Byles-Daly (from the Education Committee of Sierra Foothills Audubon) and Star Carrol (an aficionado from the Red Bud Society). These hike leaders not only challenged them to increase their wonderment and curiosity on the trail but pointed out signs of species that support habitat for indigenous species and the relevance of these features in the thriving of a healthy forest, especially for the assigned species. They discovered seldom-seen plants on the Tribute Trail, such as tiger lilies and California harebells, presumably sprouting due to this year's increased rainfall. The teams also looked for signs of human presence as a deterrent to animals making homes on trails or homesites. They discussed how to balance land management decisions to encourage advocacy while protecting creature comforts.
- c. Asking Questions: Reinforcing the effort, Audubon officers Rudy Darling and Don Rivenes expanded the discussion of human presence and bioaccumulation as it relates to owl populations. For one of only two times in a decade, efforts to call an owl into camp did not succeed. This, in itself, sparked days of speculation not only about anthropogenic climate change but also the potential human impacts on owl behavior, especially that of the shy California Spotted Owl.
- d. Seeing Science as Informed Advocacy: Sue Britting, the executive director of Forest Legacy and an acclaimed scientist and advocate, shared her method for researching the habitat needs of the threatened California Spotted Owl. She also discussed her own history and the process of matching research goals and life pursuits in consideration of the needs of communities of living beings.

3. Creative Consumer Considerations

- a. Circular Produce Design: Discussing the attributes of circular design helped the change agents identify materials and ideas for prototypes based on everyday objects. The designs and material selection had to

ensure durability, eliminate redundancy and encourage. For example, because bamboo grows quickly and is plentiful, rather than cutting old-growth trees and making random clearcutting decisions in a forest, designers can use bamboo without as much environmental impact. Thus, bamboo socks were added to the Hospitality House gift bag, and items such as strainers and meat thermometers inspired products that address climate change. The strainer inspired a device for reducing rocks and preparing soil for planting in an area experiencing desertification.

- b. Shopping and Shipping Choices: The discussion of product designs extended to thinking more deeply about how consumer goods reach us. The Innovator team experimented with cornstarch versus Styrofoam popcorn used in shipping containers. The cornstarch version proved biodegradable—and therefore, compostable—whether immersed in water or acetone, compared to Styrofoam.
- c. Nature as a Resource: David Wright, the premier green architect whose work inspired the term “passive solar,” told about the value of his service and travels abroad in helping him devise energy sources for buildings that took advantage of nature rather than utilizing fossil fuels or other fuels for heating and cooling. He offered many examples of the adaptability of this concept to homes in the developing world or to custom homes in Northern California. The students asked him to evaluate and improve on their own green blueprints, and they honored him for his many textbooks and buildings that have informed the industry, through consideration and creativity.
- d. Packaging Awareness: Each year the change agents shop for portions of a meal and prepare it together. Some years, their challenge involves transportation miles of foods or water used to process it and get it to market. They also have evaluated the amount and type of plastic in the packaging. This year they strived for sustainable packaging for each course of the meal. Back at camp, they cooked and served their portion of the meal and showed the packaging for their food groups. After dinner, they evaluated the biodegradable materials used for each course.

4. Inspiring New Life Goals

The Change Agents evaluated potential career choices that enhance sustainability and/or social justice. They read about the requirements and preparation associated with their potential field of study. They each asked a creative question, incorporating consideration of others into their basic life plan. Sample questions included these three, among others:

- a. How can I make mass transit more affordable?
- b. How can I contribute to or advocate for a healthy ecosystem that also enhances life for humans?
- c. How can I create art that uplifts the human spirit?

The Change Agents were challenged to conduct individual initiatives this year to share with the group when they return. Meanwhile, the students layered their wisdom in many ways throughout camp, constructing projects and outcomes better than the sum of their parts. They gave canvas “thumbprint” bags and/or coasters (made from construction waste) to elders who shared knowledge and assistance. They recognized one another for acts of consideration and creativity. They practiced service to others as a reward. They identified one another’s positive qualities and contributions when they wrote in each participant’s journal.

5. Broader Community Impact

Together, this year’s Change Agents work enhanced the lives of approximately:

75 children in local families and in pediatric waiting rooms

40 homeless seniors

At least 500 peers addressing climate change impacts
across 8 developing nations

Untold creatures affected by new policy recommendations

The 2023 Climate Change Agents’ commitment not only to advocacy but to one another made their experience complete. As one participant said years ago, climate change means not only shifting our perceptions about science but changing the *social* climate, (starting right here at camp).

We thankfully acknowledge all those who contributed to these outcomes:

- a. Co-Sponsors NC-CAN, Sierra Foothills Audubon, Full-Circle Learning, the Department of Fish & Wildlife, and Earth Justice Ministries, with additional in-kind support from Sopa Thai and Nevada City Retreats
- b. Honored Presenters Rudy Darling, Don Rivenes, Merry Byles—Daly, Star Carrol, David Wright, Sue Britting and Sarah Warner
- c. Artists Susie Steinbarth Pam Hodges
- d. Field trip chaperones Debbie Gibbs, Chris Newsom and Carol Nimick.

- e. Homeless Sign Post-Project Coordinators Nancy Baglietto and David Langness
- f. Dedicated Teachers Lily Ning and Laksmi Greenberg
- g. Counselors Logan House Tanner Delgado, and Lian Trowbridge
- h. Change Agents Eryn Miller, Jessica Rivenes, Taj Daunch-Greenberg and Savannah Delgado

(Footnotes on next pages)



***Whoo's Missing?**

(Could it Be the California Spotted Owl?)

Owl, where are you?

Oh, we miss you very much!

Are you okay, Sir?

The forest is now silent.

Where could the owl be now?

We searched high and we searched low.

The owl was nowhere seen.

Oh owl, where did you go?

Please return to your once-home.

Authors: Savannah Delgado, Eryn Miller, Jessica Rivenes, Tanner Delgado

**** Recommendations to the Fish & Wildlife Commission of Nevada County**

Goal: It has come to our attention that land, whether public or private, that may be granted a protective status will have to play a crucial role in our fight against climate change. To make sure that we make the most of land receiving a protected status, we must have policies and processes in place that will assist in climate change mitigation, enhancing biodiversity and providing reconciliation to the land's original inhabitants.

Objective #1: Lands receiving a protected status should be able to support carrying capacities of diverse indigenous species, with a focus on indicator species.

Objective #2: Land receiving a protected status should take into consideration the needs of human populations, along with species' needs and environmental needs.

Objectives #3: Land receiving a protected status should be monitored in order to see how the land withstands the impacts of climate change.

Objective #4: Land that originally belonged to the indigenous peoples should be returned and their land use and conservation practices studied, in order to see where these practices could be used with other lands.

Policy Recommendations

Policy #1: Land receiving a protected status that contains understory and meadows consisting primarily of indigenous plants which support other indigenous species should be considered for preservation due to their benefits to the overall environment.

Policy #2: Land receiving a protected status that allows for people to access it (e.g., parks and campgrounds), should have proper facilities (e.g. bathrooms and trash cans) in order to minimize human-made waste that leaks into the environment.

Policy #3: Land receiving a protected status should undergo long-term weather and climate studies; any decisions involving said protected land should take these studies into consideration.

Policy #4: Land receiving a protected status that at one point belonged to the indigenous peoples should be considered for reparations, and if land is returned, the Commission should work with and study indigenous practices (e.g., prescribed burning) to see if any of these practices can be applied to commission-managed lands.

Policy #5: Land receiving a protected status that contains environmentally sensitive areas (e.g., recovering ecosystems or environments with endangered or threatened species) should be made into preserves that forbid all human contact except for human contact that has been deemed absolutely necessary (e.g., for monitoring the environment).

Policy #6: Land receiving a protected status that contains certain plants and animals that can assist in monitoring various ecosystems should have their behavioral patterns (e.g., eating habits and mating rituals) tracked and studied in order to see how a given ecosystem is doing.

Policy #7: Land receiving a protected status that contains some sort of pre-existing structure(s) (e.g., decommissioned mine infrastructure and facilities) should undergo studies to determine whether rehabilitation of the land is feasible or not; if the land is approved for rehabilitation, best practices should be used during this process.

Lead Author: Logan House

Supporting Researchers: Eryn Miller, Jessica Rivenes, Taj Daunch-Greenberg, Savanannah Delgado and Tanner Delgado

(Minor proofreading implemented to improve punctuation and readability)