

NCC Quarterly

FIRE WATCH – Preventing Wildfire in Orange County

The drought stricken and parched state of vegetation throughout the wildlands of Orange County present a heightened risk of wildfire. When you pair these dry conditions with high winds, low humidity and elevated temperature, the probability of a catastrophic wildfire event which may threaten homes, schools, and open space becomes increasingly plausible.

One of the unique defenses the OC community has against the spread of wildfire is a program known as Fire Watch, which is comprised entirely of community-minded volunteers. Understanding most local fires are started by human activities and most ignitions occur near roads or other points along the wildland urban interface (WUI), it makes great sense to have a watchful eye on locations which are at high risk of fire during extreme weather conditions, especially Santa Ana winds.

The Fire Watch Program works by deploying trained community volunteers at trailheads, fire prone open spaces, and at fire towers. The volunteers typically report for duty on days when there is an elevated risk for fire, such as "Red Flag Warning Day." Once in the field, volunteers visually scan the open space landscapes and quickly report smoke and flames. Volunteers also serve a critical role in communicating safe behaviors at recreational trail facilities and serve as a deterrent to dangerous or suspicious activities commonly associated with the onset of a wildfire.

A variety of agencies collaborate to deliver the Fire Watch Program throughout Orange County. This includes OC Parks, City of Irvine, City of Newport Beach and the Orange County Fire Authority. Since its establishment in 2006, the Fire Watch Program has been managed by the Irvine Ranch Conservancy, with volunteer training coordinated through both the Orange County Fire Authority and Irvine Ranch Conservancy. On a given fire risk day, there are 36 locations across the County where volunteers report to. These



locations have been determined by fire history data, fire spread capabilities, and participant safety criteria.

As Fire Watch is one of many mechanisms administered to prevent the onset of wildfire, the Orange County Fire Authority embraces the Fire Watch Program as an important and valued service. Deputy Fire Marshal Jennifer Bower said, "Having additional boots on the ground during wind events is invaluable. Whether it's spotting smoke early in the field, being a high-visibility presence in remote areas to prevent and deter negative human action, or monitoring roads and trails to keep them clear for first responders, the partnership with this team of people is instrumental in keeping Orange County residents safe."

At the present time, there are more than 300 volunteers participating in the Fire Watch Program, but as risk for wildfires has grown, there is a need for more volunteers. Tony Pointer, IRC Fire Watch Manager, strives to create a

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meaningful and rewarding experience for every volunteer. Pointer indicated many people, including couples, have been with the program since its inception in 2006 and some have taken on additional volunteer responsibilities with the Conservancy. Pointer humbly stated, “there’s no way we could do this without the volunteers.”

Those who may be interested in being a Fire watch Volunteer are urged to call (714) 508-4700, email firewatch@irconservancy.org or visit <https://letsgooutside.org/activities/fire-watch/>



Monarch Butterfly

Populations Start to Bounce Back

The April 2021 NCC Quarterly Newsletter included a story about the monarch butterfly population in California. The sad conclusion was 86% of the monarch butterfly population rapidly declined between 2018 and 2019. It was also noted that native milkweed habitat, the only host plant for monarch caterpillars, had been significantly reduced by habitat loss and degradation, pesticides and climate change.

Fast forward to spring 2022, things are starting to look a little brighter for the monarch. Per the recent article, “California launched a high-stakes plan to save its monarch butterflies. Scientists say it’s working,” author Tara Duggan shared a few thoughts why monarch populations may have seen a rebound. A \$1.2 million state-funded project to rescue the Western monarch was launched and included the planting of 30,000 milkweeds and other flowering native species. In addition, the Xerces Society for Invertebrate Conservation kicked off its Western Monarch Call to Action. The call to action inspired immediate conservation actions to help the monarch population bounce back from its critically low overwintering size.

The western monarch’s population numbers over time tell the story. In 1997, the annual Thanksgiving Day count conducted by the Xerces Society was 1,235,490. In 2017, the count was reduced to 29,418. In 2020, the count fell to less than 2,000. In what appears to be a successful response to the call to action, financial investment and extensive work among multiple conservation agencies, the monarch population count grew to 250,000 in 2021.

According to Isis Howard, Endangered Species Conservation Biologist for the Xerces Society, “This year’s total



is a step in the right direction, but still indicates a severe population decline. Now more than ever, we have an opportunity to double-down on our conservation efforts. Acting quickly to harness the momentum of this upswing is our best chance at preventing western monarchs and other at-risk butterflies from being lost forever.”

Some of the ways people can help increase the monarch population are by planting flowers which are attractive to monarchs and other butterflies. Another way is to plant native milkweed, especially species which emerge earliest and are already at the seedling or transplant stage. This includes the woollypod (*Asclepias eriocarpa*), California (*Asclepias californica*), and heartleaf (*Asclepias cordifolia*) milkweeds. While there are other plants available in local nurseries and big box home improvement stores, make sure that you are planting the native milkweeds listed above. People can also help by spreading the word on social media by using the hashtag [#SaveWesternMonarchs](https://www.facebook.com/hashtag/SaveWesternMonarchs) on Facebook, Twitter and Instagram to raise awareness.

Click here for a copy of the Xerces Society Call to Action. (<https://www.xerces.org/western-monarch-call-to-action>)

Recreation Ecology and the Nature Reserve of Orange County

Since 2017, the Natural Communities Coalition has funded a research team to carefully study recreation ecology within the Nature Reserve of Orange County. Recreation ecology is defined as the scientific study of environmental impacts resulting from recreational activity in protected natural areas. It includes the research and monitoring assessments of biophysical changes, studies to determine influential factors of carrying capacity, and investigates the efficacy of educational, regulatory, and site management actions designed to minimize recreation impacts.

Recreation ecology is a scientific tool which enables land managers to understand the impacts to a protected resource. These impacts are commonly referred to as being “loved to death.” The outcomes of recreation ecology work (and the NCC study) help establish ecological understandings of the environmental impacts of outdoor recreation which ideally inform future management actions.

The ongoing recreation ecology work conducted within the Nature Reserve of Orange County is led by a Christopher Monz PhD, from Utah State University and Ashley D’Antonio PhD, from Oregon State University, and their team of research scientists. On June 8, 2022, the recreation ecology research team delivered a presentation to NCC landowners, partners and stakeholders. The presentation focused on four key themes, which were identified as follows: Understanding visitor perceptions, motivations and judgments;

- 1 Assessment of biophysical resource conditions;
- 2 Use intensities and spatial distributions, and;
- 3 Park planning and management collaboration.
- 4 Some of the notable findings of the recreation ecology study are included below:

Visitation and Visitor Demographics

It was reported that 3.2 million individuals visited the Nature Reserve of Orange County in 2018.

A 2017 trail head survey revealed more than 65% of use of the Reserve was by users reporting their ethnicity as White. The second largest user at 19% was the Hispanic/Latino population. In 2021, use of the Reserve among the Asian, Black, Pacific Islander, and other populations grew. The Hispanic/Latino percentage of use dropped by nearly 3% and the Caucasian population dropped by 8%.

Visitor Motivations

The two most significant motivations for Reserve use was its appeal as an outdoor exercise venue and as a means for interacting directly with nature.

User Conflict

Survey data showed trail use conflicts between mountain bikers and hikers noticeably rose in 2021 when compared to 2018. It is believed that the increased evidence of conflict is largely attributable to the increase in Reserve visitation associated with the pandemic.

Perceptions of Overuse

The crowding index, which indicates the number of people seen at one time by users was tested. When visitors perceive a location to be crowded, this often impacts the quality of the user experience. For hikers, surveys showed the number of people seen at one time which compromises the quality of the experience is 13. For mountain bikers, the surveys revealed the number is 8.

These numbers suggest scheduling group use of the Reserve (such as events or programs) during peak use periods may actually reduce the satisfaction of the experience for self-directed users.

Trail Width

Excessive trail width is often viewed negatively by visitors to natural areas, but on the Reserve, there was greater acceptance of wider trails, as much as six feet in width. This was based on information gleaned from a series of photos of a hypothetical trail.

Invasive Species Management

Surveys of trail users reflected invasive species management as the least understood aspect of local ecological awareness.

Habitat Analysis

Habitat analysis revealed birds are extremely sensitive to human movement. Recognizing two of the three NCCP/HCP target species are birds (cactus wren and gnatcatcher), the concept of minimizing human movement or activity in occupied and habitat rich areas has merit.

Preparedness and Safety

The 2018 Visitor Safety/Preparedness Responses indicated 80%-90% of recreational users are aware of and take precautions to meet their personal needs to offset dehydration, and other effects resulting from sun, heat exposure, and physical exertion. Approximately 70% responded they were prepared for encounters with plants and wildlife.

Those who were unprepared or under prepared relating to safety measures point to the continual need to educate Reserve users about personal safety and ways to access emergency help if needed.

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Degradation/Landscape Change

The presentation included a powerful graphic of landscape degradation at Top of the World in Aliso and Wood Canyons Wilderness Park. Recognizing the location as one of the most highly utilized recreational spaces in the Reserve, its potential as a restoration site may be worthy of future discussion.

NCC staff and Reserve landowners will continue to analyze and digest the findings with the help of the research team. The knowledge gained will contribute to a better balance between the ecological goals of the reserve and providing for high quality recreational user experiences. A copy of the Recreation Ecology PowerPoint presentation can be accessed at <https://occonservation.org/recreation-management/>

Understanding the Term “Take” and its Implications

One of the more technical terms and processes as it relates to the Natural Community Conservation/Habitat Conservation Plan (NCCP/HCP or Plan) is a concept known as “take”. In the context of wildlife and conservation laws, “take” is a regulatory term which means to engage in any conduct that may harm, kill, or destroy wildlife.

We will discuss the concept of take and how it relates to conservation land management in this and the next NCC Quarterly Newsletter. For this newsletter, we will review how take is regulated by the Endangered Species Act. The second part of the series will articulate the relationship of take to the NCCP/HCP Implementation Agreement,

The United States Endangered Species Act (ESA) and California Endangered Species Act (CESA) exist to prevent the extinction of our most at-risk animals and plants, increase their numbers and effect their full recovery — eventually leading to their removal from the endangered list. As described in the Citizens Guide to the Endangered Species Act, (https://earthjustice.org/sites/default/files/library/reports/Citizens_Guide_ESA.pdf) the ESA, “Provides common sense and balanced solutions for government agencies, landowners, and concerned citizens to protect and restore endangered species and their habitat. It is based on three key elements—listing species as threatened or endangered, designating habitat essential for their survival and recovery, and ultimately restoring healthy populations of the species so they can be removed from the list.”

To limit impacts to threatened and endangered species, the ESA and CESA prohibit take of these species without a permit or consultation with the US Fish and Wildlife Service or California Department of Fish and Game. Through permitting or consultation, these agencies work to ensure that take of threatened and endangered species is adequately minimized and mitigated. ESA and CESA permits are most commonly issued for construction, utility, transportation, and other infrastructure-related projects.

The potential for take is often identified during assessments required by the California Environment Quality Act (CEQA). With some exceptions, this State law requires that all public and private projects in California be evaluated to assess the potential for environmental impacts, including take of threatened or endangered species.

In summary, the regulation of take under the ESA and CESA is intended to ensure that authorized take is adequately minimized and mitigated and that projects do not negatively impact species survival and, ideally, contribute to their recovery.

