

LAKE BERRYESSA BOATER OUTREACH PROGRAM SUMMER 2020



**Solano Resource Conservation District
2020 Lake Berryessa Boater Outreach Interns
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PROGRAM ACKNOWLEDGEMENT



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INTRODUCTION

The Lake Berryessa Boater Outreach Program is managed by the Solano Resource Conservation District and focuses on boater education at Lake Berryessa. The reservoir provides drinking water for approximately 500,000 people in Solano County, irrigation water for agriculture, and is used by local businesses such as Jelly Belly and Anheuser-Busch. This report will cover the scope and accomplishments of the program for the 2020 season, which began in late June and concluded in late August. The team of three Lake Berryessa Boater Outreach interns conducted one-on-one educational surveys with boaters and recreational users at Lake Berryessa for three weekends, covering topics including hazardous waste disposal and precautions to help keep the water clean. Boater surveys were conducted primarily at the three busiest launch concessions: Markley Cove, Steele Canyon and Capell Cove. The data collected from surveys was managed by the interns and aggregated into weekly reports for the Lake Berryessa Watershed Partnership.

Due to the COVID-19 pandemic and California wildfires, this year's boater outreach program ended up being very different from previous years. Interns wore masks, maintained six-foot distance from boaters and sanitized their hands constantly. The interns conducted boater outreach from June 26th through July 12th until the county mandated the re-closure of non-essential businesses due to the number of COVID-19 cases tripling within the county. At that time, for the safety of the interns, it was decided that they would spend the rest of the summer removing trash from Lake Berryessa shoreline. The trash clean-up task was cut short due to the LNU Lightning Complex fires, which engulfed Lake Berryessa in late-August.

BOATER EDUCATIONAL OUTREACH

The goal was to administer surveys and educate boaters on clean boating practices. Interns conducted one-on-one surveys with boaters, encouraging them to install oil absorbent pillows in their inboard motor bilge. Interns also educated boaters on the correct disposal of used oil absorbent pillows, and educated boaters on the importance of Lake Berryessa as a drinking water source.



Photo 1: Intern Oceana Haaland conducting a boater survey at Capell Cove

Boater Kits and Premiums

After a boater completed the survey, they were given a free “Clean and Green” boating kit. Boating kits included a fueling bib to prevent gasoline spills while refueling, an oil absorbent sheet, a 15% off West Marine coupon, and an oil absorbent bilge pillow to prevent oil and hazardous contaminants from leaking into the lake. Useful information such as a map of Lake Berryessa, booklets about California boating and environmental laws, and information explaining clean boating practices were included in the boating kit. Fishing line containers were distributed to fishermen so that the fishing line could be collected and recycled safely.

If boaters installed an oil absorbent pillow after the survey, they received a premium gift. They could choose from a Lake Berryessa T-shirt, a metal canteen, or an orange ski flag. This year the most popular premium gift was the ski flag, with approximately 54% of installers choosing it as their premium gift.



Photo 2: Boater receiving a water bottle as a premium for installing an oil absorbent

Boater Survey Questions and Responses

Interns surveyed 391 boaters and each boater was asked for their zip code and their city of residence. Figure 1 shows the distribution of boaters surveyed who came from Solano County and Napa County. Of the boaters surveyed, 32.5 % were from Solano County and 11% were from Napa County.

Boaters by County

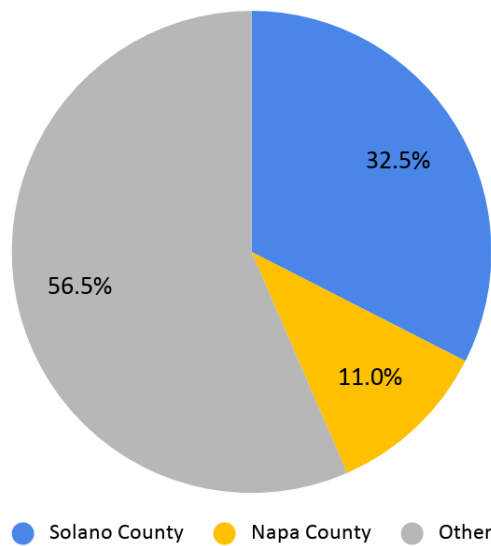


Figure 1: Summer 2020 Lake Berryessa boaters by county of residence

Of the Solano County boaters surveyed, most of the boaters came from Vacaville (37.8%), with Fairfield second (32.3%) and Vallejo and Dixon tied for third (11.0%), as shown in Figure 2.

Solano County Boaters

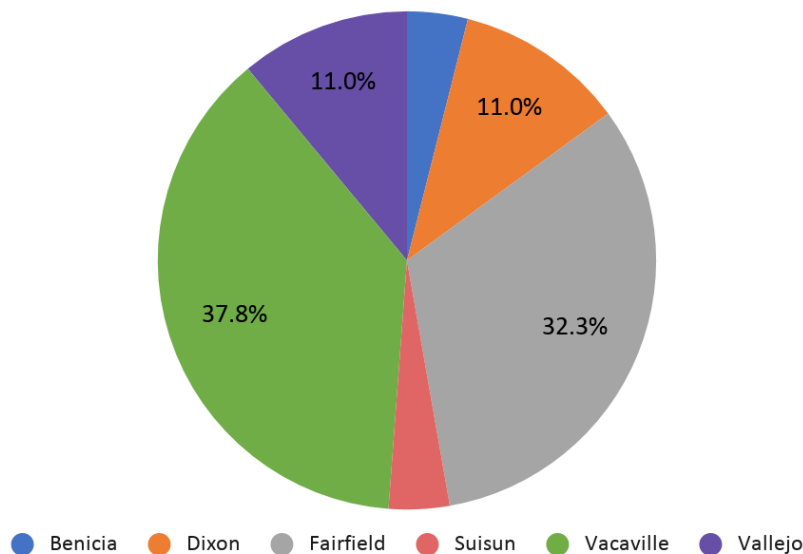


Figure 2: Distribution of boaters surveyed by cities in Solano County

Of the Napa County boaters surveyed, the vast majority of boaters came from Napa (83.7% of Napa County boaters surveyed), with American Canyon in second (9.3%) and Helena in third (4.7%) as shown in Figure 3.

Napa County Boaters

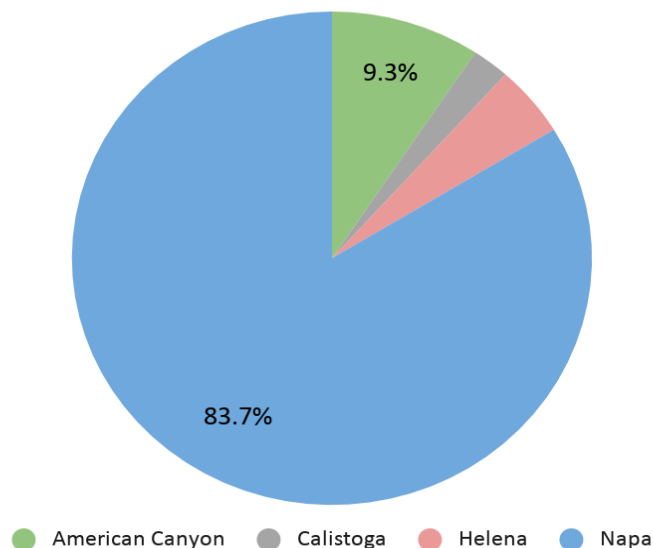


Figure 3: Distribution of boaters surveyed by cities in Napa County

After learning where boaters were coming from, questions were asked in order to collect insight on how well boaters understand various clean boating practices, as well as how Lake Berryessa is used as a drinking water source for Solano County Residents.

This year, 63.6% of boaters responded “yes” when asked if they think Lake Berryessa is a drinking water source, compared to 64.7% from the previous year. The overall trend seems to be that only about 60%-70% of boaters in any given year know that Lake Berryessa is a drinking water source, as shown in Figure 4.

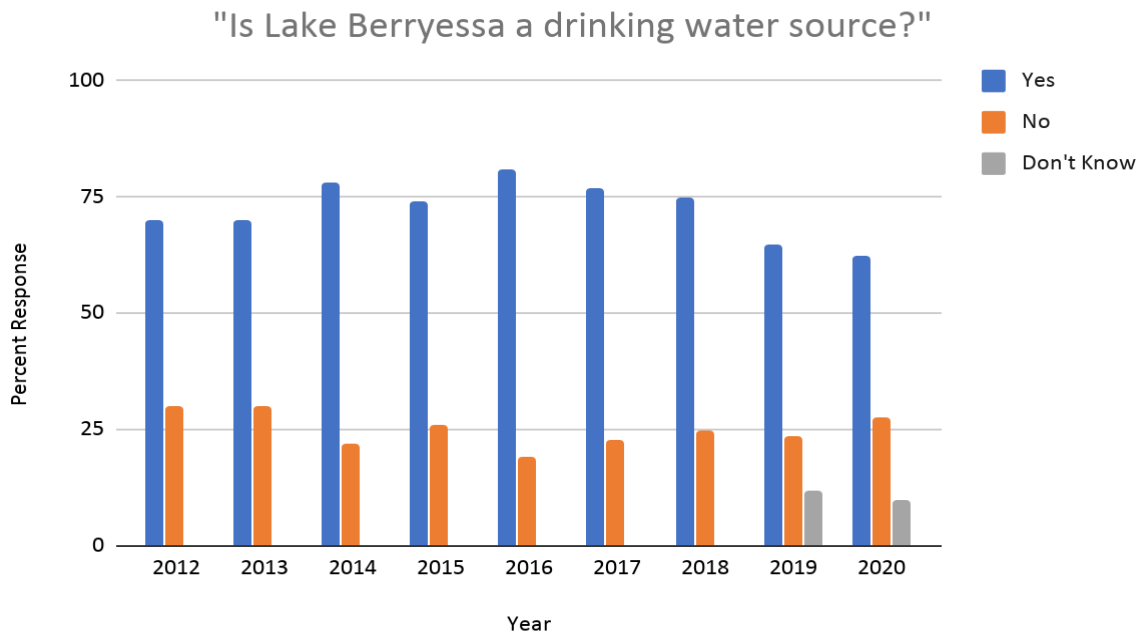


Figure 4: Percentage of boaters surveyed who answered “yes” when asked if they think Lake Berryessa is a drinking water source for the last eight years of the Lake Berryessa Boater Outreach program

After asking the boaters questions on clean boating practices, the boaters were asked whether or not they used oil absorbent pillows in their bilge compartments. Of those surveyed, only 38.0% of boaters have used an oil absorbent pillow in the past, as shown in Figure 6.

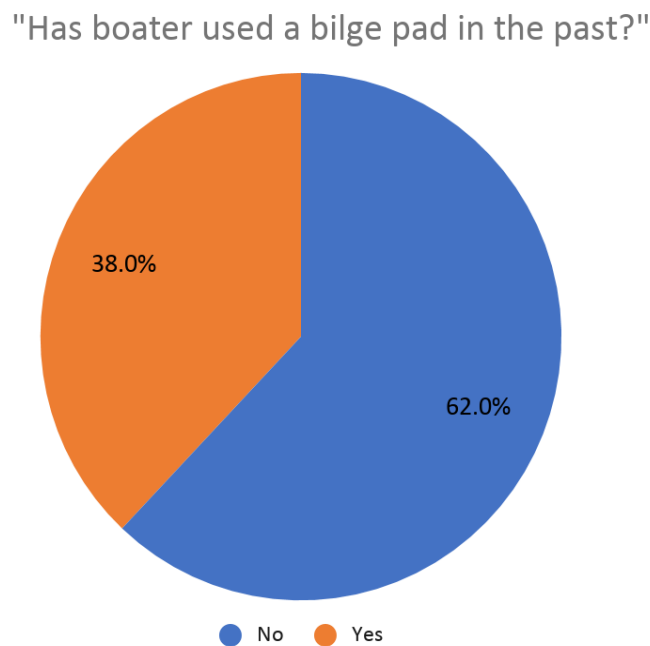


Figure 5: Percentage of boaters who had used an oil absorbent pillow in the past

Additional Boater Outreach & Bilge Pad Recycling

This summer we promoted Solano County's Clean and Green initiatives with our boater webinar and youth contest. At 5pm on July 30, we hosted a virtual Clean Boating Happy Hour presented by Vivian Matuk, the Environmental Boating Program Manager with CA State Parks and CA Coastal Commission. Solano RCD partnered with 15 businesses from Napa and Solano County who distributed our flier to their networks, which helped result in 60 confirmed registrations and 19 participants. We organized an additional Clean Boating webinar collaborating with Solano Yacht Club (Suisun City), Glen Cove Yacht Club (Vallejo), and Delta Marina Yacht Club (Rio Vista). This event was scheduled to take place in August, but was canceled due to low registrations because of the LNU Lightning Complex fires. We have postponed the event until the next boating season.

It was brought to our attention that a new hauler has been collecting the used oil absorbents at Lake Berryessa. We started exploring ways to ensure that the used oil is extracted from our collected bilge pads and the pad is then properly disposed of. In our research, we contacted 11 transporters in Solano County and 2 in Southern California. It was confirmed by a Southern California treatment, storage, and disposal (TSD) facility that used bilge pads can be recycled from Waste-to-Energy through full conversion with a closed system (no CO2 emitted). Due to regulations, used oil bilge pads are sent out of state to hazardous waste material processing facilities (MPF). We concluded our search by contacting Napa County with the information to consider contracting a company to transport our used bilge pads from Northern California to the nearest MPF.

RECREATOR EDUCATIONAL OUTREACH

Interns this year were unable to conduct recreator surveys due to health concerns related to COVID-19 guidelines regarding wearing the "Bilgee" costume and not being able to stay a six foot distance from recreators resulting in no recreator education or collection of data.

TRASH CLEAN UP PROGRAM

Due to an uptick in the number of positive COVID-19 cases in Solano County, in-person boater outreach education had to be ended early. Interns finished the season cleaning up litter and recycling from multiple sites around Lake Berryessa. Interns worked at the Steele Canyon and Markley Cove roadside pullouts, the Putah Canyon North End Trail, and Pope Creek Bridge. Trash was collected by starting from the road at each of these locations and then working down the various trails to the lakeshore. Interns were offered the use of skiffs and kayaks from Berryessa Water Sports to collect trash lakeside at the Markley pull-outs. The interns worked alongside the Bureau of Reclamation Rangers, as they provided garbage bags and assistance throughout the trash clean-up program.

Trash was collected from over 20 miles of shoreline. The interns collected a total of 1,287 pounds of garbage and 205 pounds of recyclables this summer. A majority of the garbage was micro trash consisting of mostly cigarette butts and bottle caps. The interns also found other larger items, such as old mattresses, car parts, inflatables, and old oil canisters. The recyclables that were collected almost exclusively consisted of beverage bottles.



Photo 3: 226 pounds of garbage collected in one day at Pope Canyon Bridge

CONCLUSION

The COVID-19 Pandemic and the August 16 lightning strike fires severely truncated the planned 2020 Lake Berryessa Boater Outreach program. In the three-week period, interns made contact with 771 people and conducted 391 boater surveys. Interns encouraged eligible boaters and jet skiers to install a total of 83 oil absorbents, each of which can absorb up to a quart of oil. Interns collected 1,492 pounds of litter from the lake during the period when person-to-person boater outreach was no longer safe. This summer's efforts provided meaningful education about oil absorbents, appropriate recycling locations and clean boating practices to keep Lake Berryessa one of the cleanest drinking water sources in California.

PROGRAM TOTALS

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020
# of interns	2	6	6	14	12	16	3	2	3
Total boater surveys	722	1568	1670	1195	1210	1115	825	878	391
Total recreator surveys	109	325	300	392	265	224	107	86	0
Oil absorbents distributed at exchanged stations	832	646	521	653	1100	606	822	778	257
Install rate*	45%	51%	50%	57%	50%	41%	48%	58%	28%

Table 1: Outreach program achievements by year

**Install rates based on compatible boats only*

PHOTOS



Intern Jack Geist picking up litter at Pope Canyon Bridge.



Dixon boater properly disposing of his used oil absorbent in a red canister at Steele Canyon.



Fairfield boater posing with an oil absorbent before installing it in his bilge compartment.



Interns Oceana, Jack and Isabell after collecting litter at Markley Cove pull-out locations.



Family from Berryessa Highlands displaying their 2020 boater kit at Steele Canyon.