

2021
STATE OF
DONNER LAKE
MARCH 2022



DIPS
DONNER LAKE
INTERAGENCY
PARTNERSHIP FOR
STEWARDSHIP

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State of Donner Lake

Purpose

Baseline to assess the environmental and economic health of Donner Lake, identify information gaps, and provide the scientific basis for long-term stewardship planning



Photo: cbec

Overview of Data Collection

Ecological	Community
<ul style="list-style-type: none">• Global Water Center, University of Nevada at Reno• Inconsistent past data• Data collection starting in 2021• Ongoing• Preliminary conditions and recommendations	<ul style="list-style-type: none">• DIPS Core Team• Limited past data• Data collection starting in 2021• Ongoing and expanding• Preliminary conditions



Ecological Conditions

- Sampling Sites
- General Attributes
- Chemistry
- Biology
- Findings and Recommendations



DONNER LAKE INTERAGENCY PARTNERSHIP FOR STEWARDSHIP

DIPS

2021 Assessment of Donner Lake's Ecological Condition

Zach Bess, M.Sc. and Dr. Sudeep Chandra

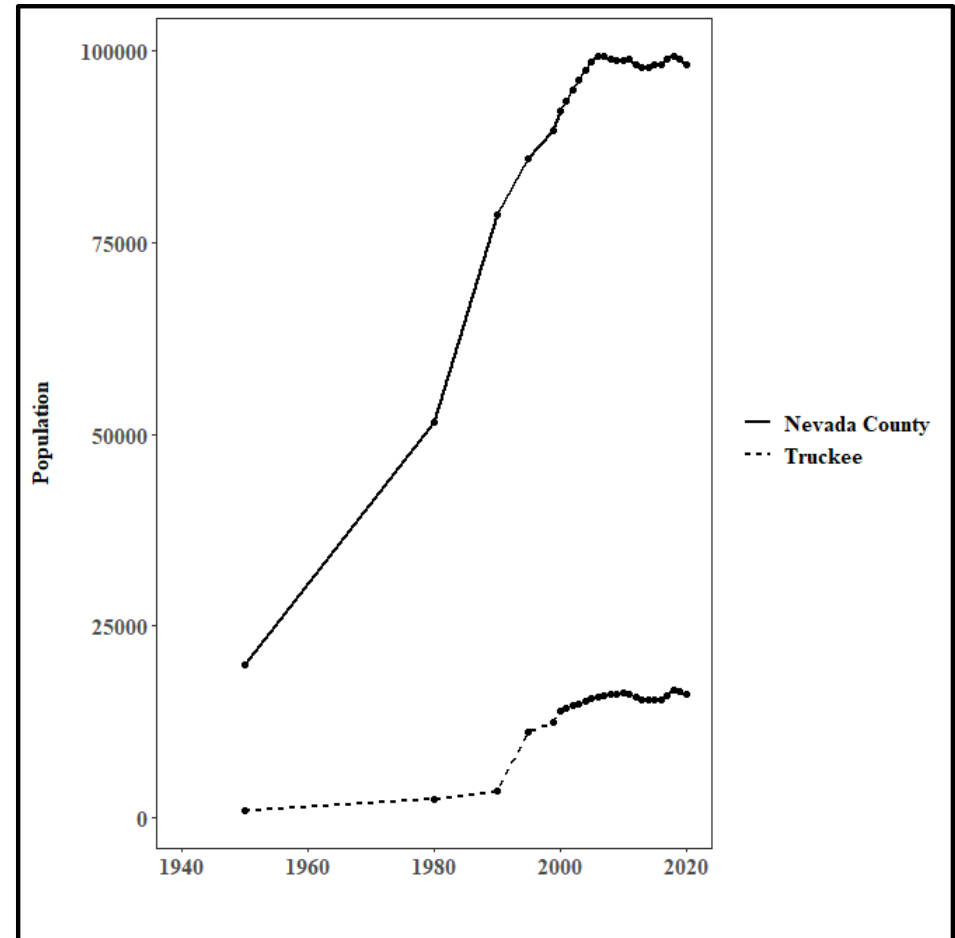


Ecology, Evolution, and Conservation Biology
Interdisciplinary Graduate Program

**Prepared for the Donner Lake Interagency Partnership for Stewardship
March 23, 2022**

Population growth in Truckee and Nevada County since 1950

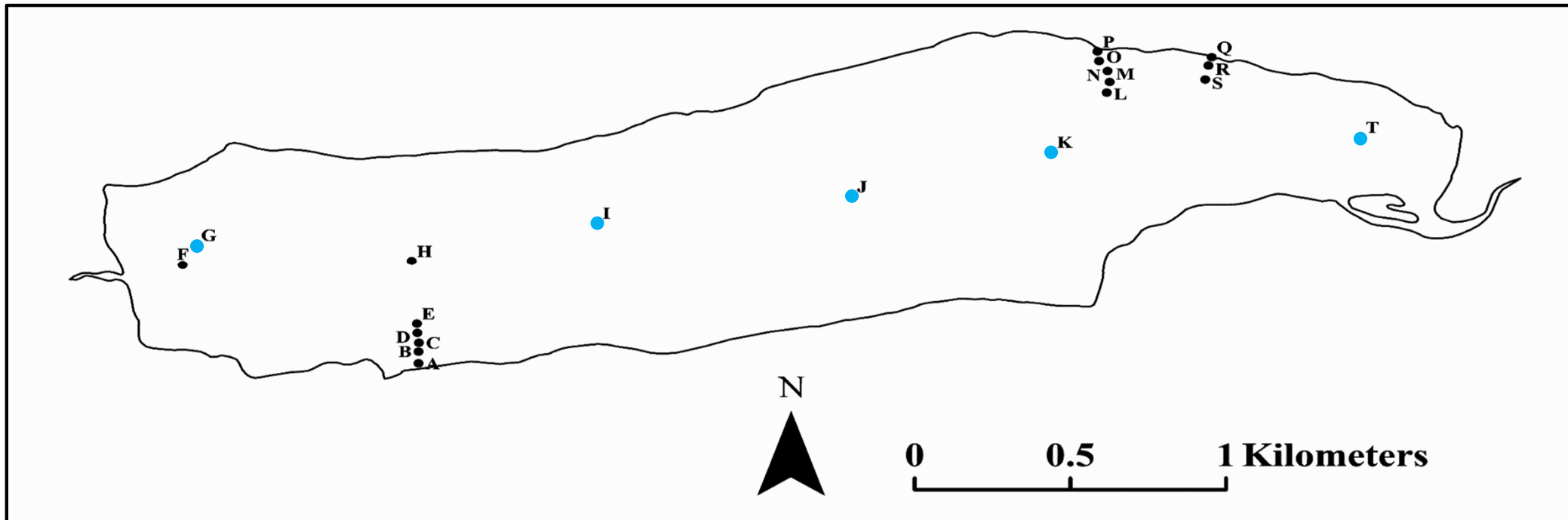
- Population in Nevada County grew significantly from ~1980 to 2005
- Population in Truckee grew significantly from ~1990 to 2005
- Therefore, it is interesting to compare data from Donner Lake from the 1980s-1990s to the present



Data from mynevadacounty.com

(<https://www.mynvadacounty.com/378/Demographic-Information-About-the-County>)

Sampling Sites



Lake Area: 3.4 km²

Shoreline Length: 12.5 kilometers

Max Depth: 71 meters (July 2021)

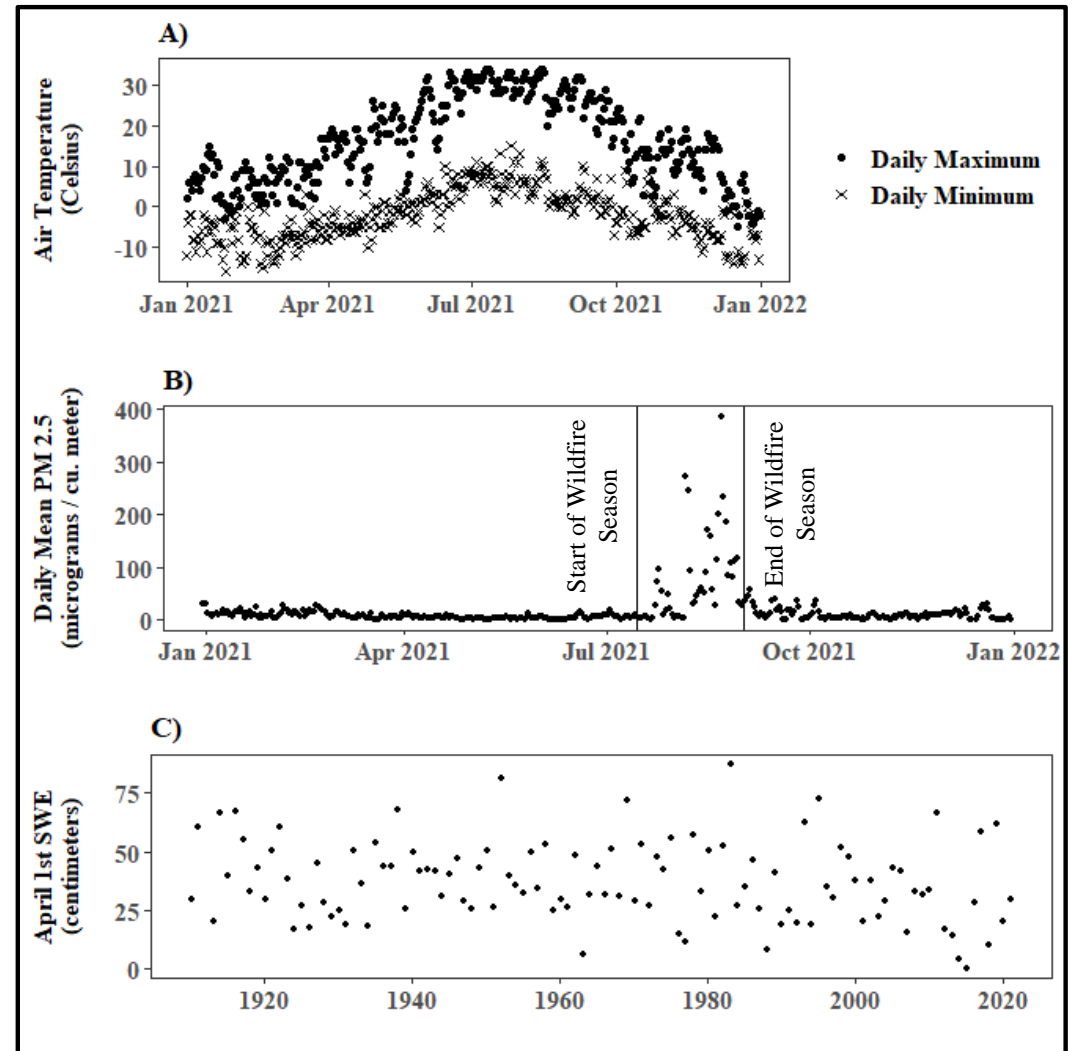
- 2021 sampling sites
- 2021 & historic sampling sites

2021 Sampling Sites

Site	Sampling Activities
A	Nearshore temperature, nearshore oxygen, benthic invertebrates (3 meters depths)
B	Benthic invertebrates (10 meters depth)
C	Benthic invertebrates (20 meters depth)
D	Benthic invertebrates (30 meters depth)
E	Benthic invertebrates (40 meters depth)
F	Gill nets (~20 meters depth)
G	Gill nets, mysid collections in 1978-1980 and 2021 (~40 meters depth)
H	Light profile, secchi depth, nutrient profile, temperature profile, dissolved oxygen profile, chlorophyll <i>a</i> profile (~70 meters depth)
I	Mysid collections in 1978-1980 and 2021 (~60 meters depth)
J	Mysid collections in 1978-1980 and 2021 (~40 meters depth)
K	Mysid collections in 1978-1980 and 2021 (~50 meters depth)
L	Gill nets, crayfish sampling (30 meters depth)
M	Crayfish sampling (20 meters depth)
N	Crayfish sampling (15 meters depth)
O	Crayfish sampling (10 meters depth)
P	Crayfish sampling (3 meters depth)
Q	Air particulate concentration (PM _{2.5}), surface radiation
R	Nearshore temperature, nearshore oxygen (~3 meters depth)
S	Gill nets (~20 meters depth)
T	Mysid collections in 1978-1980 and 2021 (~15 meters depth)

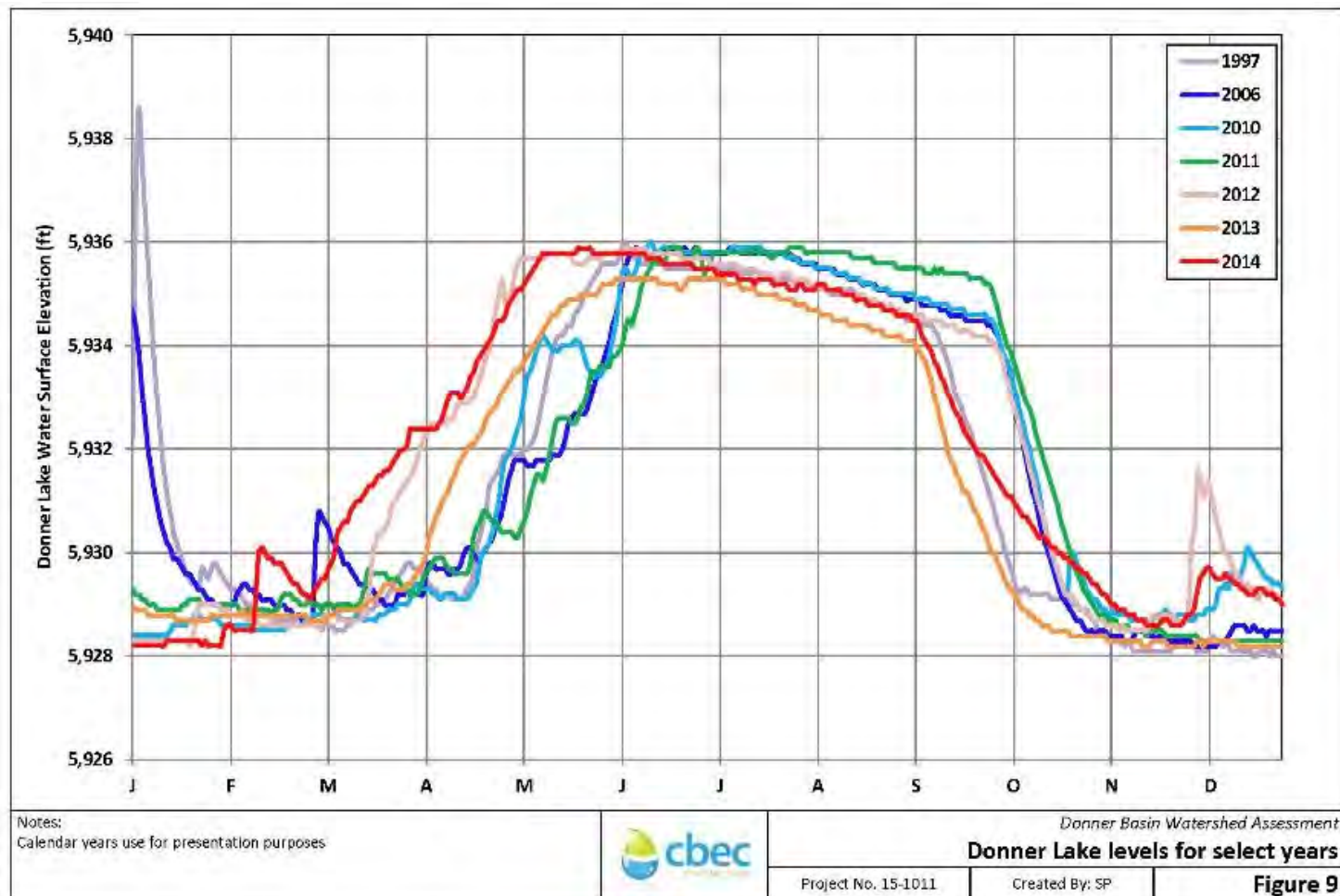
Regional Climate

- **Air temperatures at the Truckee-Tahoe Airport in 2021**
 - Daytime maximum = 34°C
 - Daytime minimum = -5°C
- **Air particulate concentration (PM2.5) spiked during the wildfires of 2021.**
- **April 1st snowpack—snow water equivalent (SWE)—at Donner Summit have not changed significantly since 1910**
 - Maximum = 221.5 cm in 1983
 - Minimum = 1.3 cm in 2015



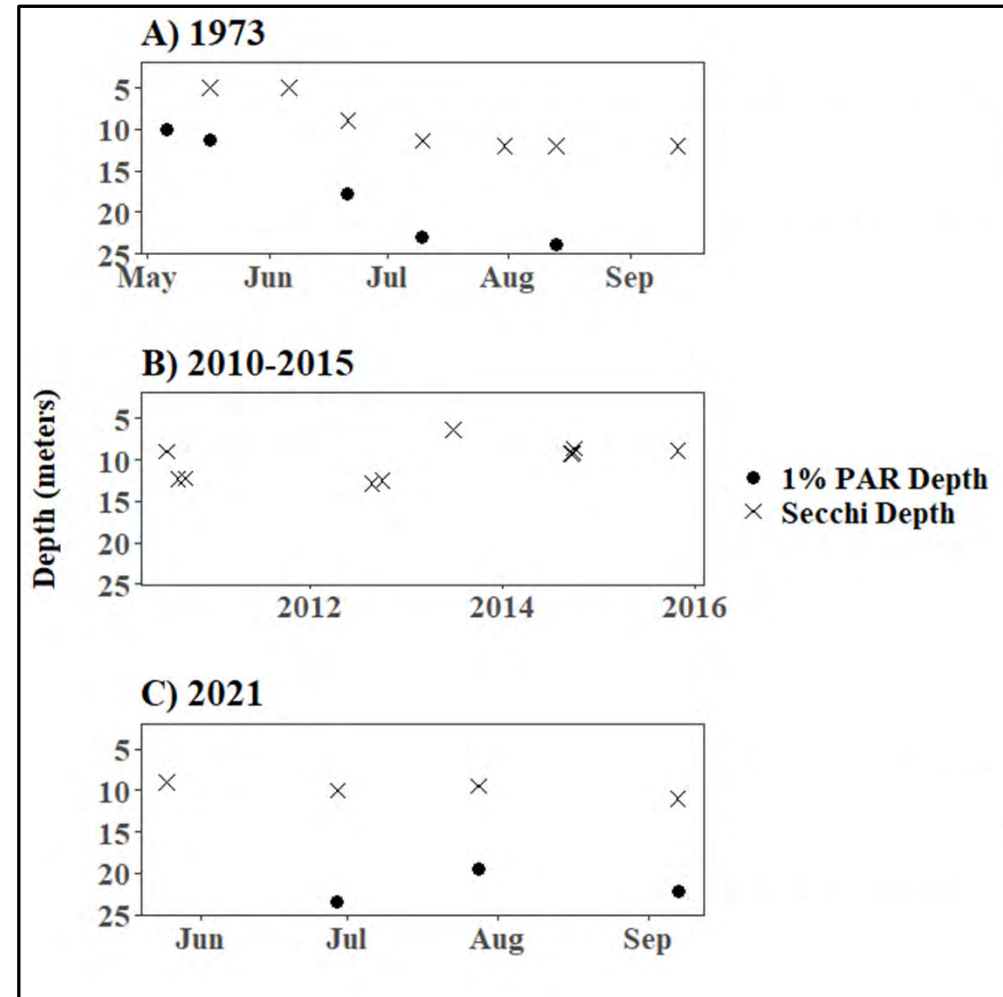
- Temperature data from KTRK site at mesowest.utah.edu
- SWE data from USDA
(https://wcc.sc.egov.usda.gov/reportGenerator/view/customSingleStationReport/monthly/start_of_period/20K10:CA:SNOW%7Cid=%22%22%7Cname/POR_BEGIN,POR_END/WTEQ::value?fitToScreen=false)

Donner Lake Levels Are Dam-Regulated

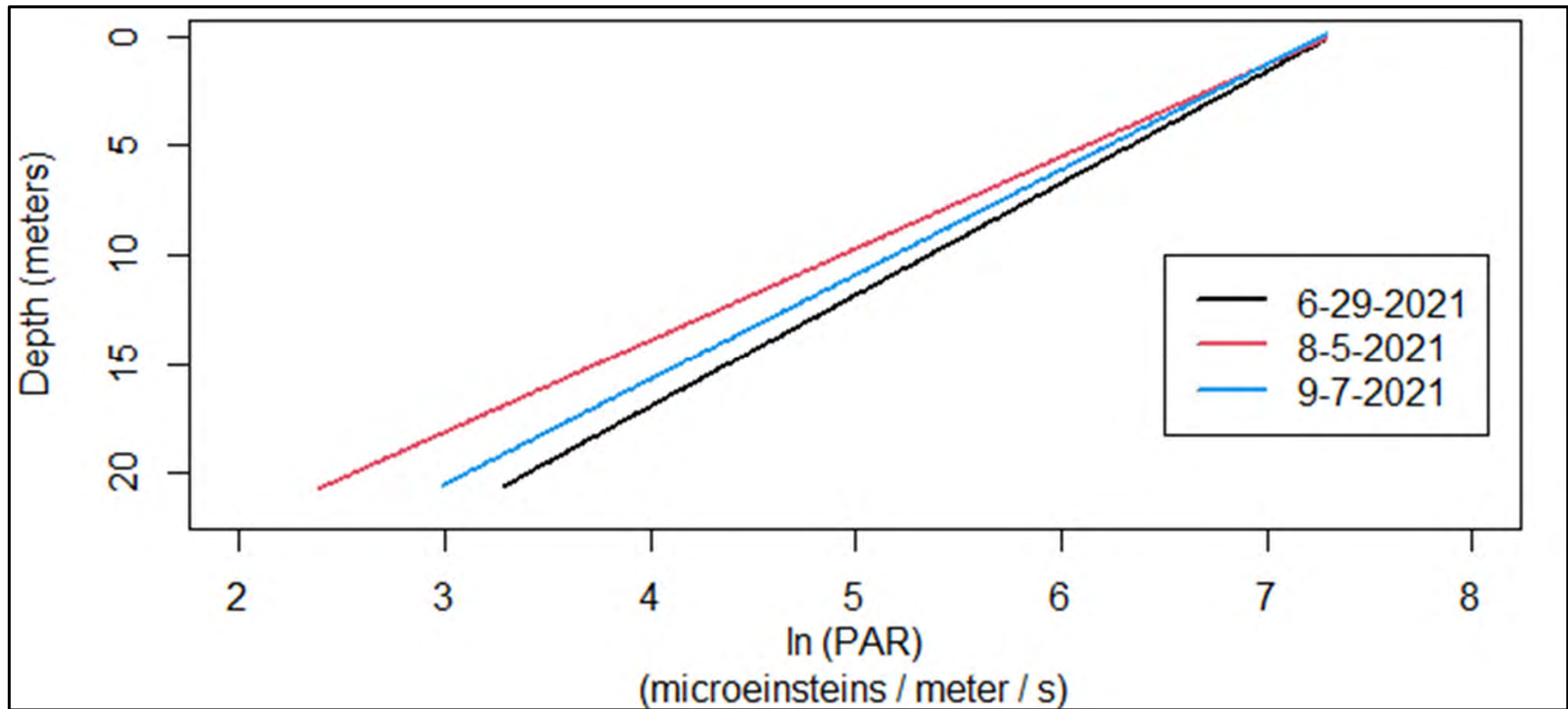


Light Conditions have been stable since 1980s

- **Summer 2021**
 - 1% Photosynthetically Active Radiation (PAR) Light Depth: Secchi Depth Ratio for Donner Lake ~ 2.0
 - Generally 1.8 - 2.5 for inland waters
 - Secchi depths (depth at which a disk lowered into the water can no longer be seen from the surface) ranged from 9 to 11 meters in summer 2021
 - 1% PAR depths (maximum depth at which algae may grow) ranged from 19 to 22 meters in summer 2021
- **Early 1973 show degraded condition**

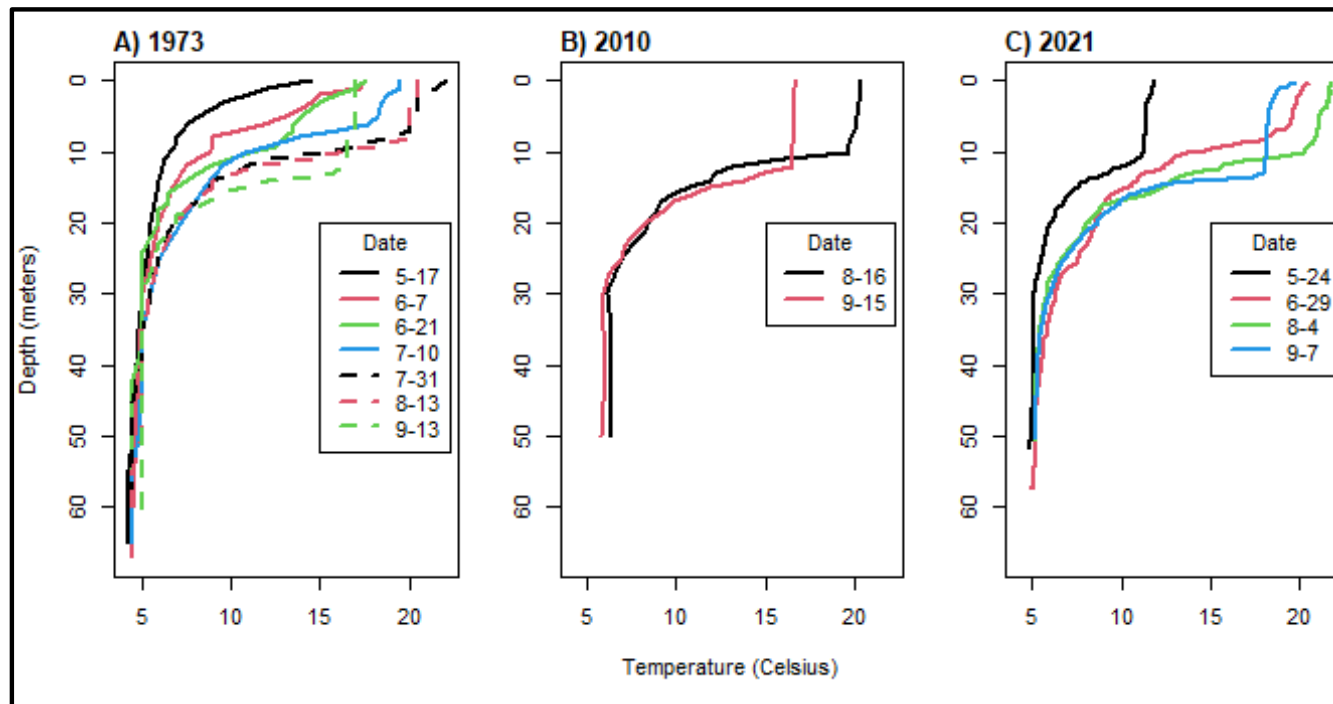


Light Conditions shift more by season than year (Results summer 2021)



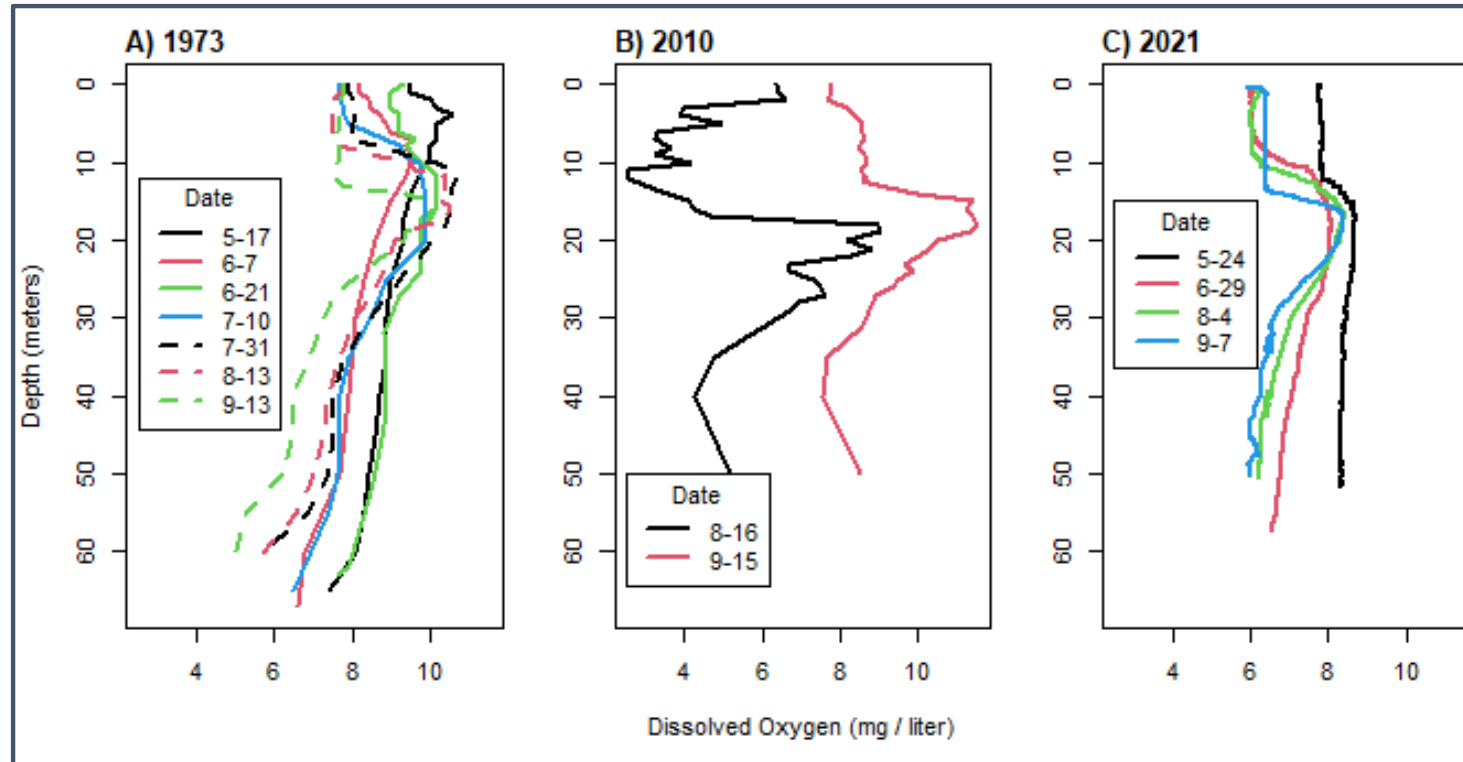
Water temperature conditions – as expected

- Little interannual variation in summertime water temperatures between historical (1973, 2010) measurements and today (2021)
- Upper water column temperatures reach a high in late July/early August
- Bottom water column temperatures are consistently $\sim 5^{\circ}\text{C}$



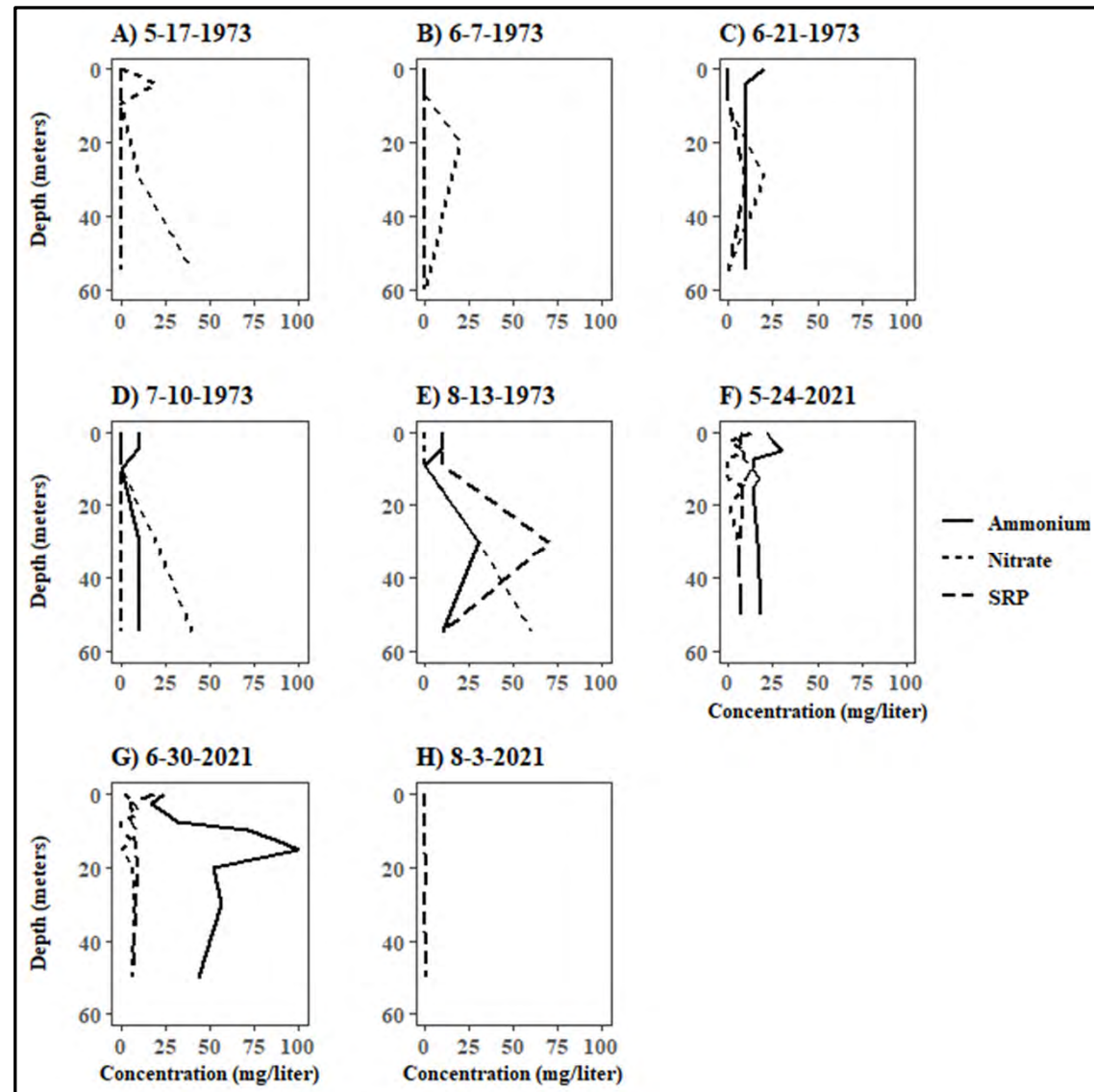
Oxygen conditions – as expected

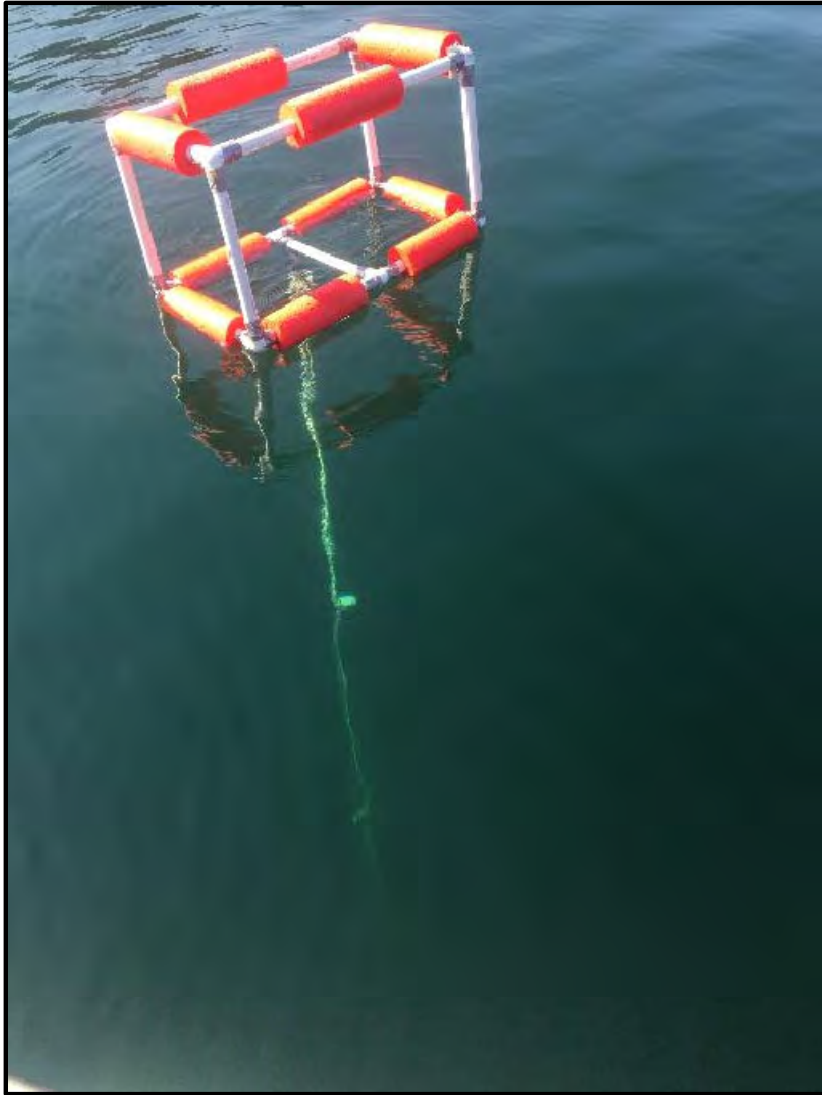
- Dissolved oxygen profiles indicated the lake is well oxygenated towards the lake bottom
- Highest concentrations near the thermocline (where water temperatures change rapidly and algal growth is likely dominating)



Nutrients – *mostly* as expected

- Nutrient concentrations are generally highest near the thermocline, but concentrations are highly variable throughout the year
- Slightly low in 2021

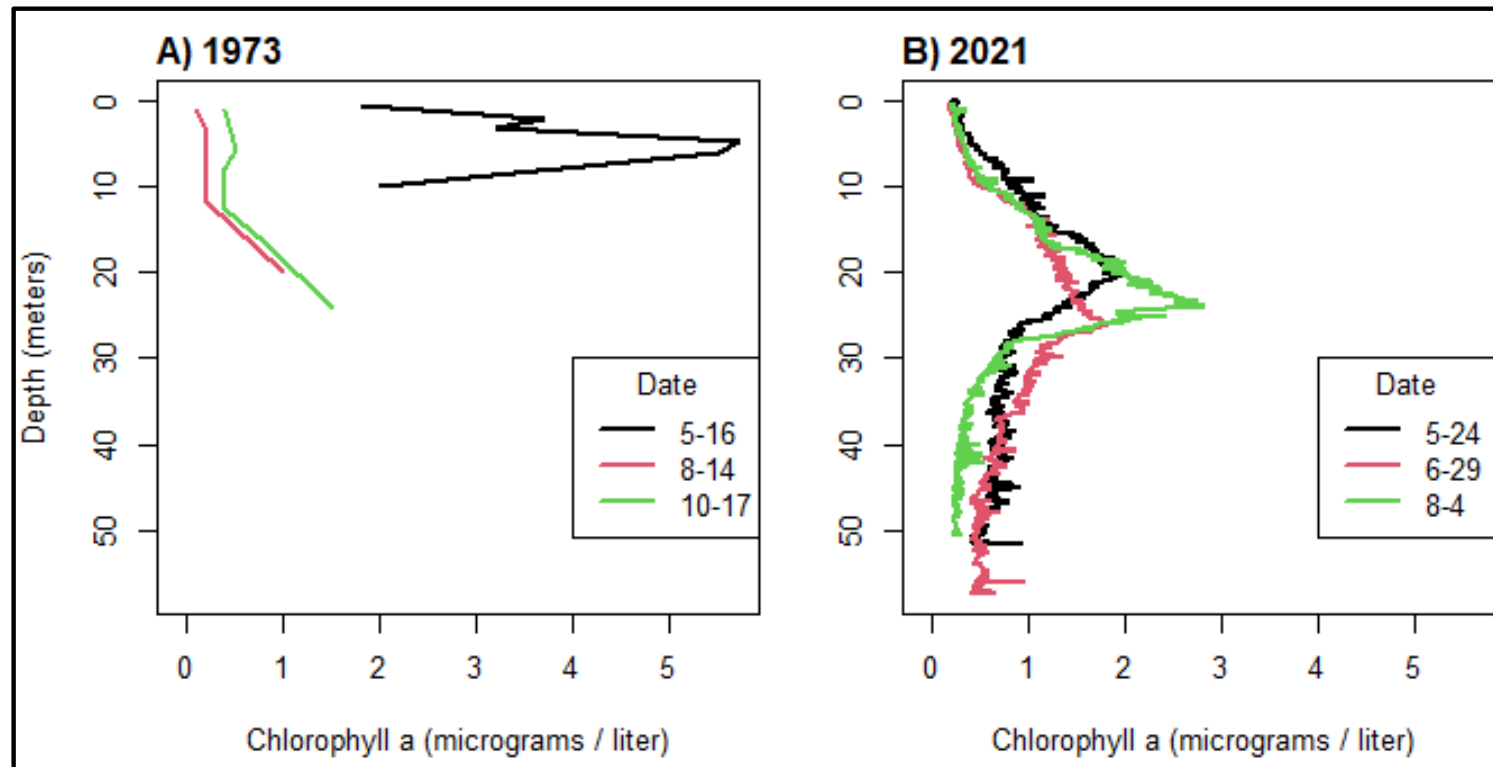




Profile chain deployed on 9/7/2021 to measure algal primary productivity at the lake

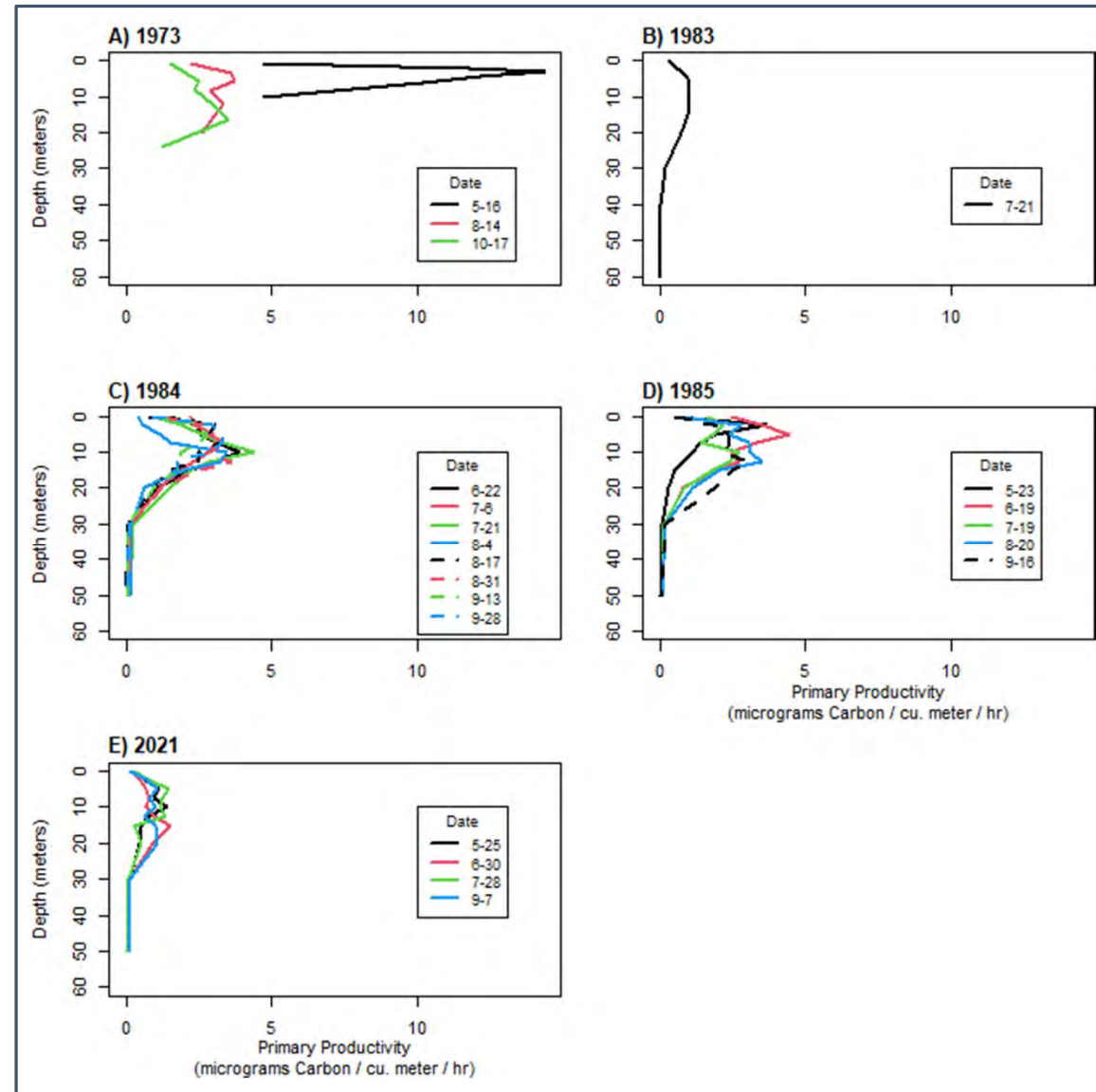
Phytoplankton Biomass (Algae) – as expected in 2021

- Deep chlorophyll maxima occur at 20-25 meters depth
- The deep chlorophyll maxima in summer 2021 ranged from ~2 to 3 micrograms/liter and occurred below the thermocline, as is typical for mountain lakes



Phytoplankton Productivity (Photosynthesis) Shows Improved Water Quality Over Time

- Phytoplankton productivity at 5-15 meters depth in summer 2021 was 50% lower than in summer 1984 & 1985, indicating a general improvement in water quality conditions compared to the historical condition
- High productivity in May 1973 corresponds with high phytoplankton biomass (previous slide) and low water clarity

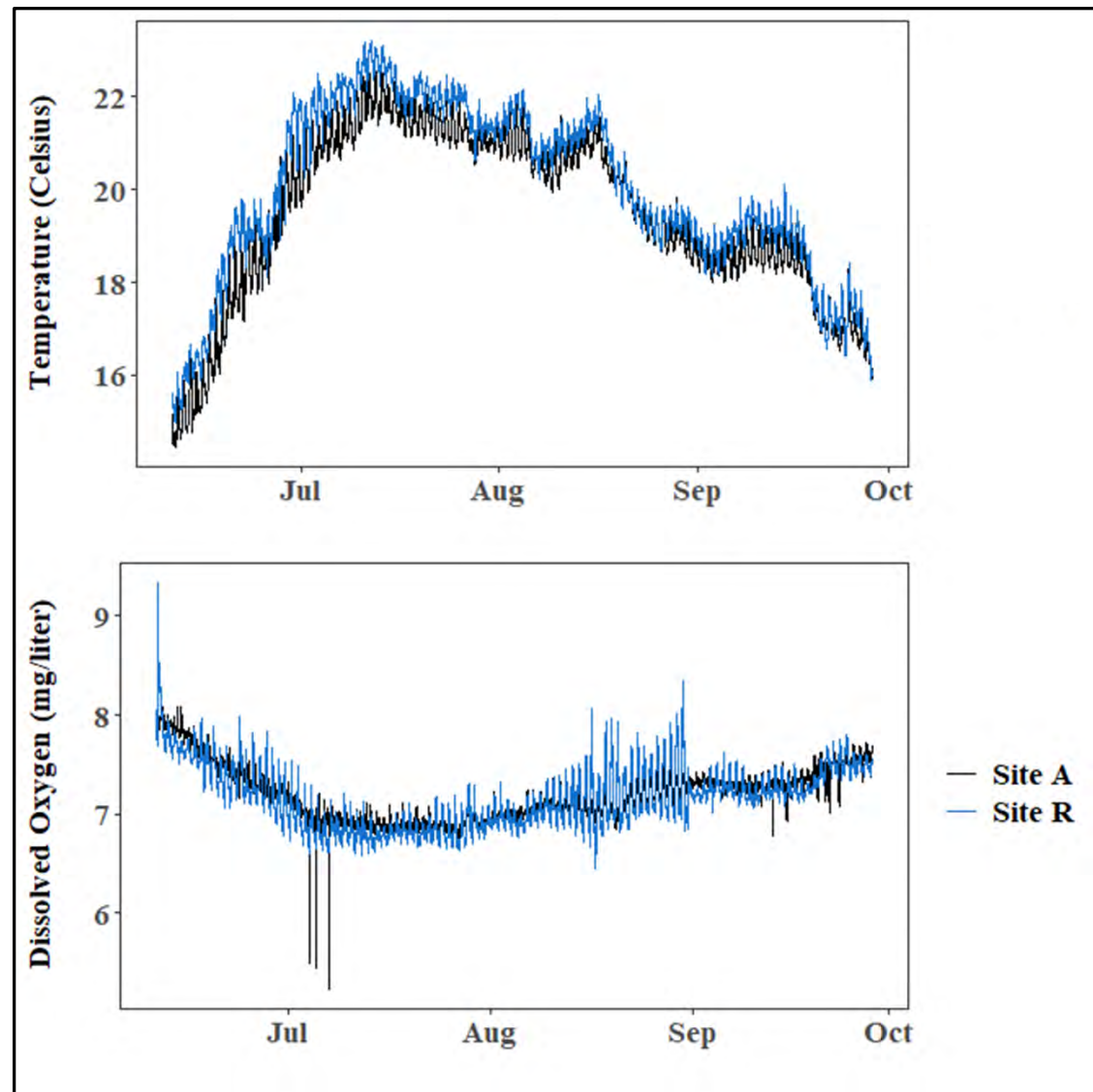




**Retrieving nearshore
sensors in September
2021 along the lake's
northern shore**

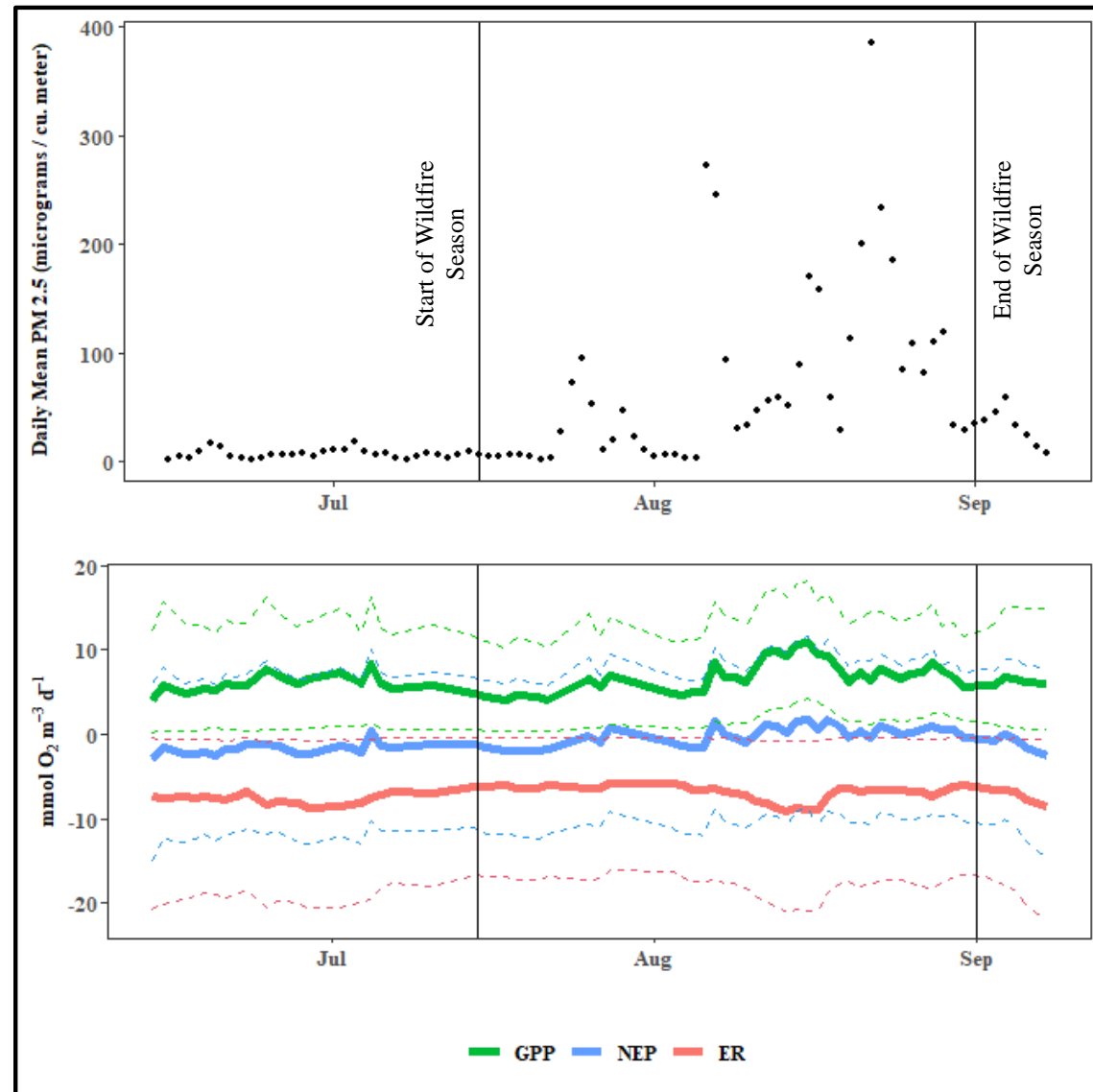
Nearshore Oxygen and Temperature – as expected

- Nearshore temperatures reached a high of 22.5 °C on July 12th at site A and a high of 23.2 °C at site R
- Maximum nearshore water temperatures and maximum air temperatures were both recorded on July 12th
- Nearshore dissolved oxygen concentrations mirror temperatures, reaching a low in the second week of July
- Site A = SW side of lake
- Site R = NE side of lake



Wildfire season impacts Nearshore Productivity in 2021

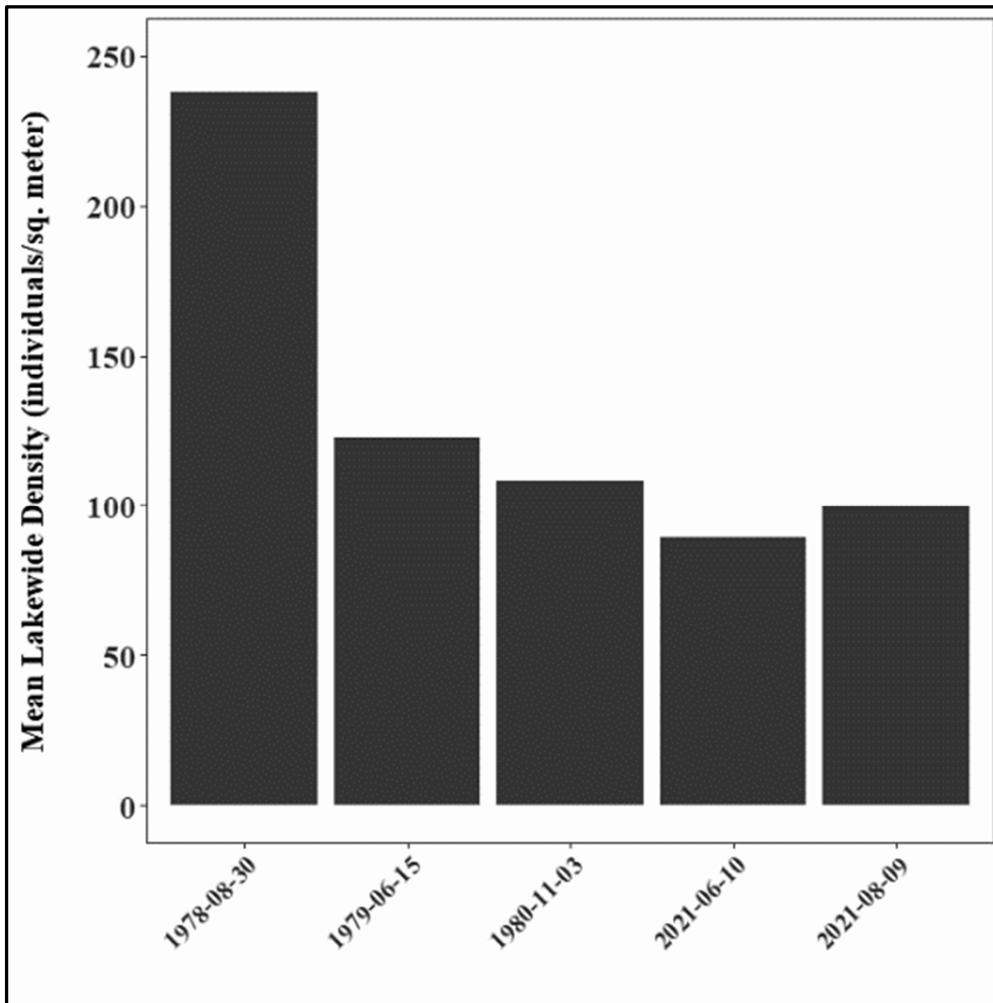
- Increases in nearshore Gross Primary Productivity (GPP) and decreases in Ecosystem Respiration (ER) correspond with increases in smoke during wildfire season



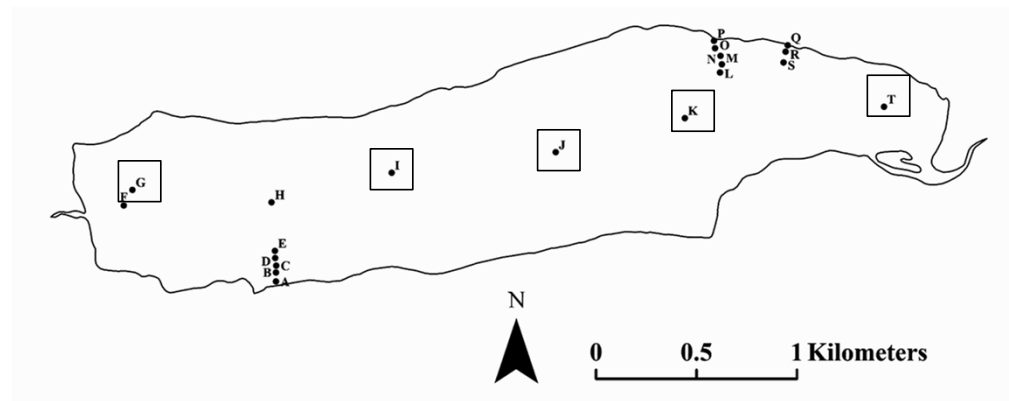


Collecting mysids at Donner Lake during fire season

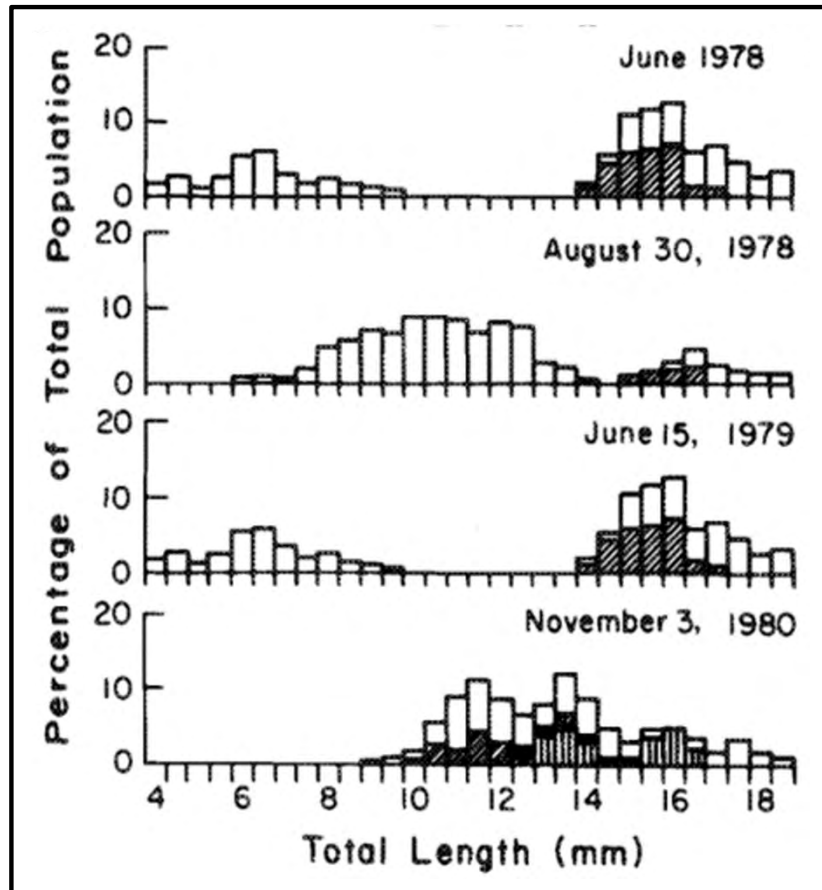
Invasive mysid shrimp density consistent since 1979



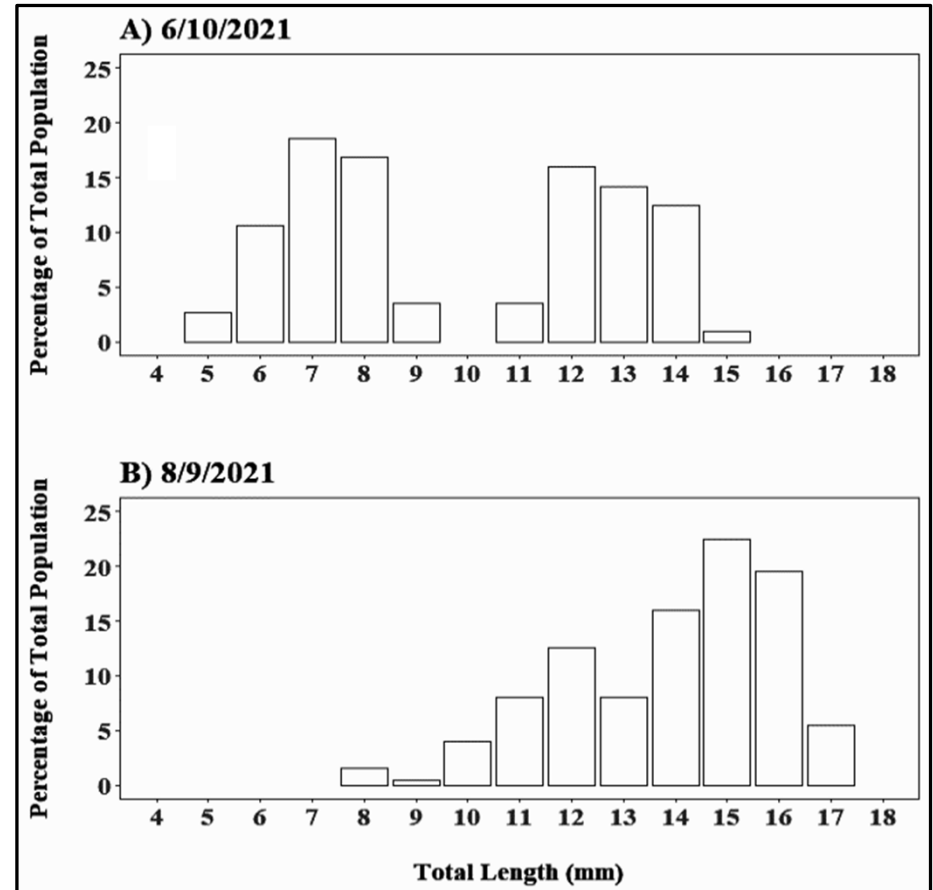
- Mysids were sampled at 5 sites in 1978, 1979, 1980, and 2021.
 - Sampled at Sites G, I, J, K, & T
- The densities observed in summer 2021 agree with the densities seen in June 1979 and November 1980 but are significantly less than what was seen in August 1978



Invasive adult mysid shrimp were smaller in 2021 than 1978, 1979



Morgan 1981



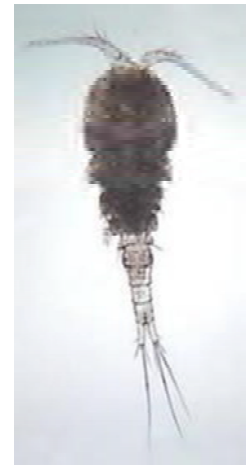
Native Zooplankton



Daphnia



Copepodite



Cyclopoid



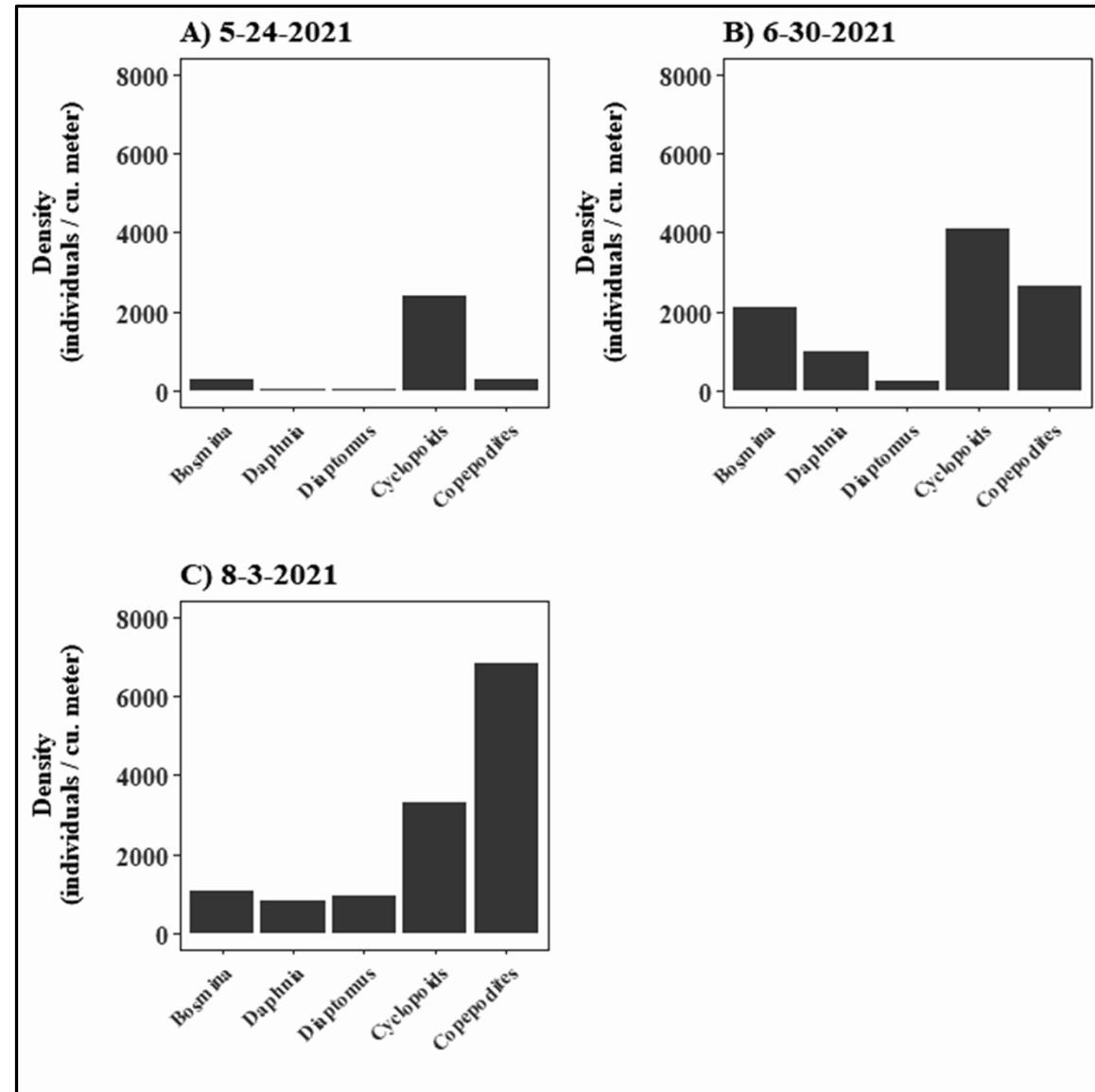
Bosmina



Diaptomus

Daphnia rebounded since 1981, Unexpected co-existence with Mysid

- Zooplankton densities generally increased throughout the summer
- The macrozooplankton community is dominated by two cladoceran taxa (*Bosmina* and *Daphnia*) and two copepod taxa (*Diaptomus* & Cyclopoids)
- Juvenile copepods (copepodites) made up a significant portion of the community in summer 2021.
- The last published zooplankton sampling from the lake (1981) found no *Daphnia* in the lake



Benthic Invertebrates



Caddisfly



Fly larvae



Oligochaete



Stonefly



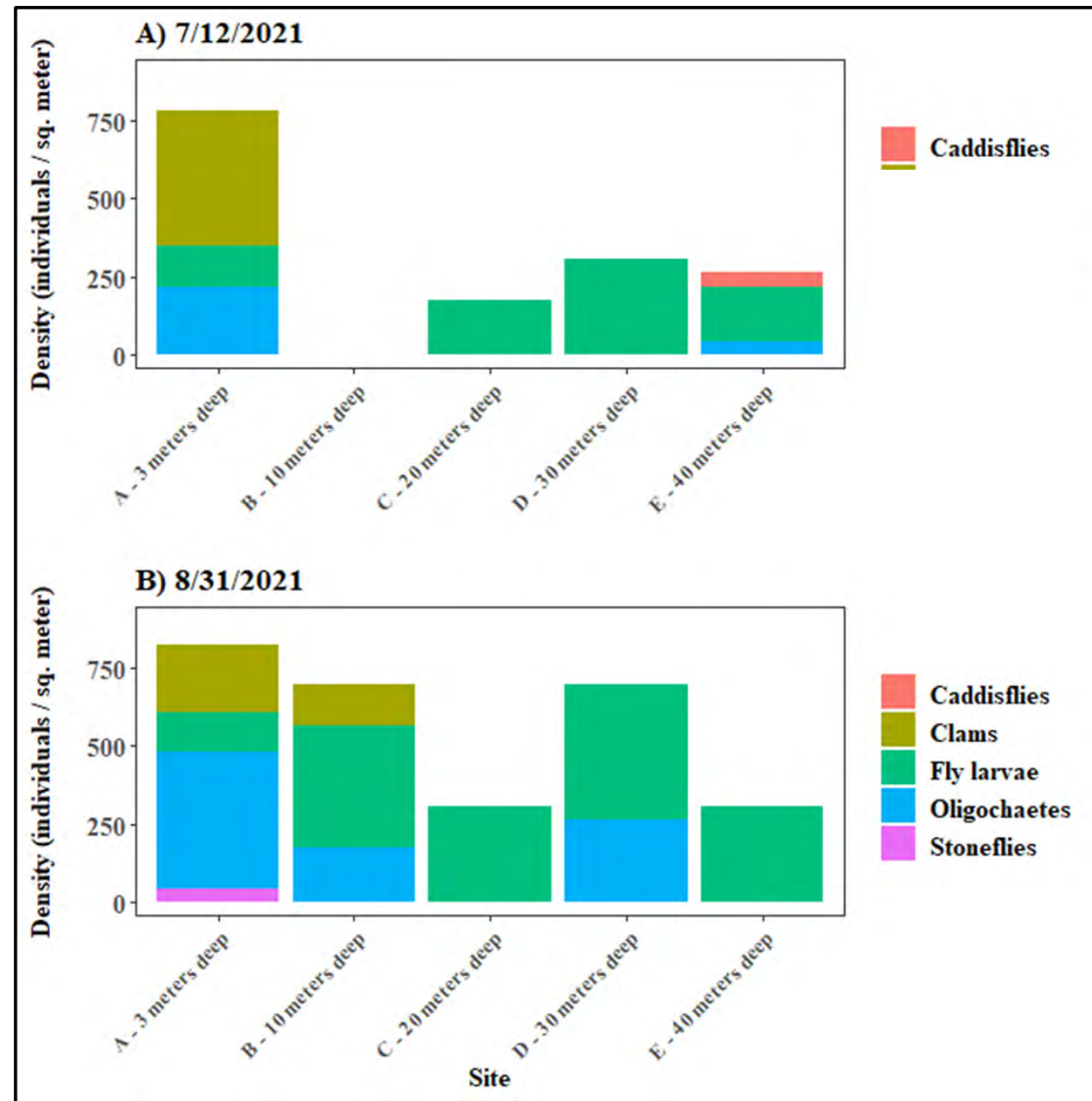
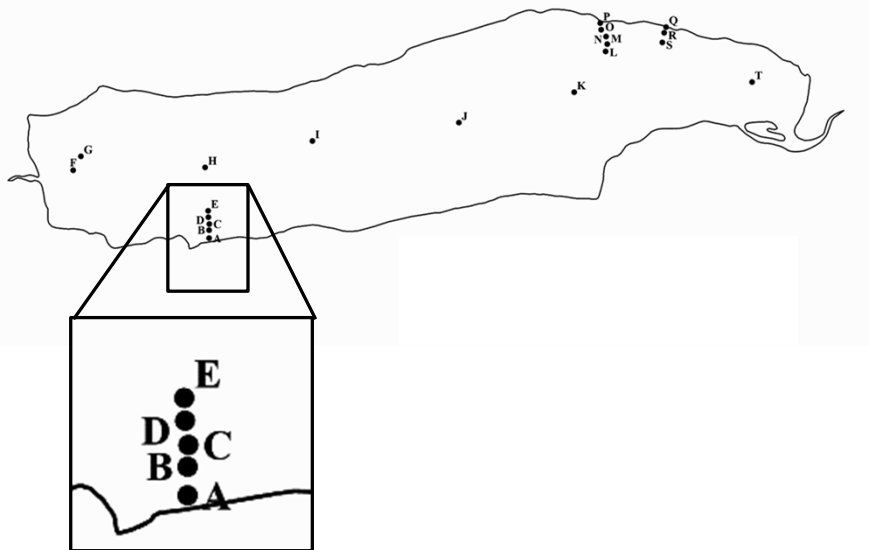
Invasive Asian clam



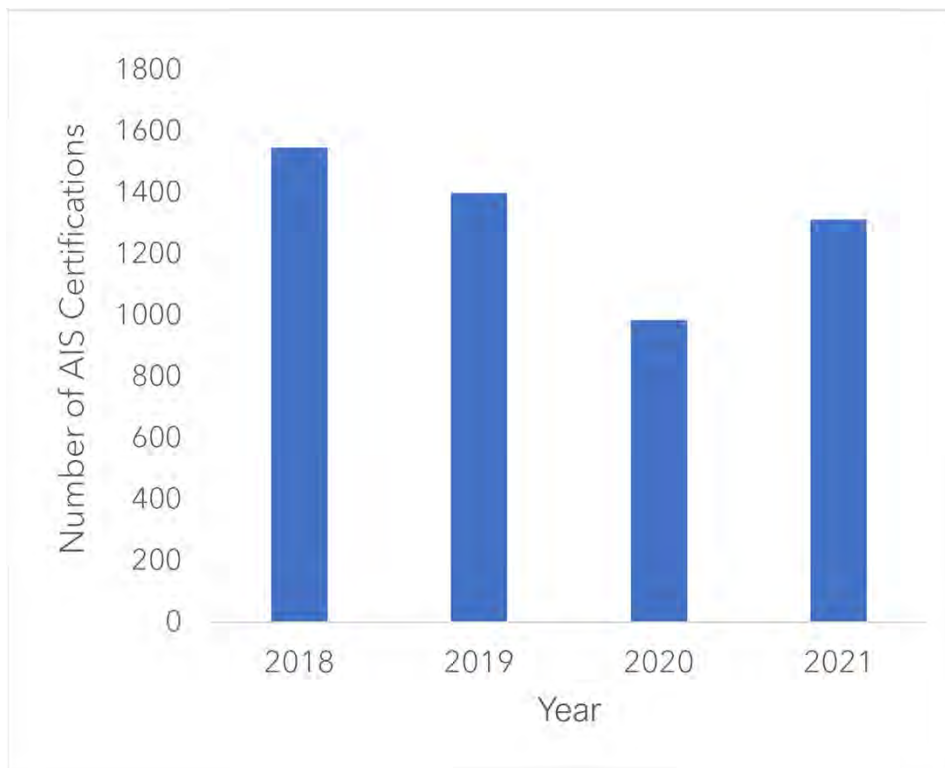
Native *Pisidium* clam

Caddisflies and stoneflies are less abundant than other Benthic Invertebrates

- The benthic invertebrate community along the lake's southeast shore consists of clams, fly larvae, and oligochaetes.
- Both invasive Asian clams and native *Pisidium* clams are in Donner Lake



Watercraft inspection certificates by year

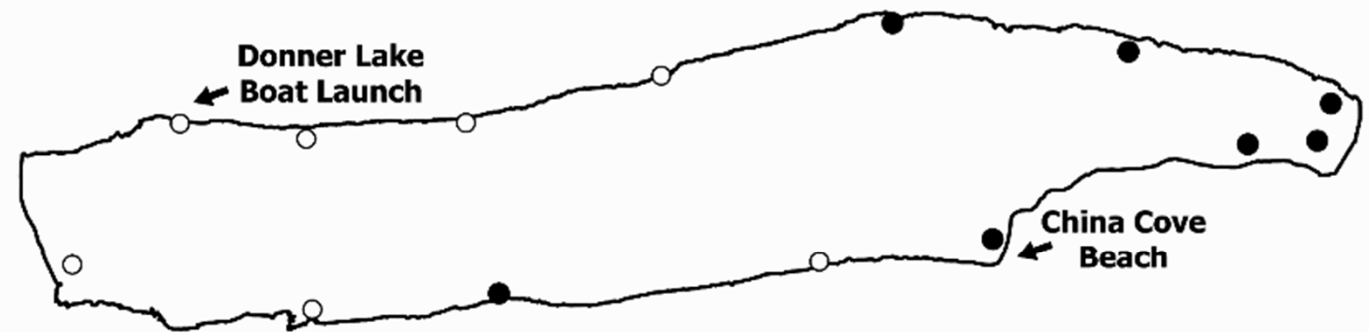


Year	Number of AIS Certifications
2018	1,548
2019	1,400
2020	985
2021	1,314

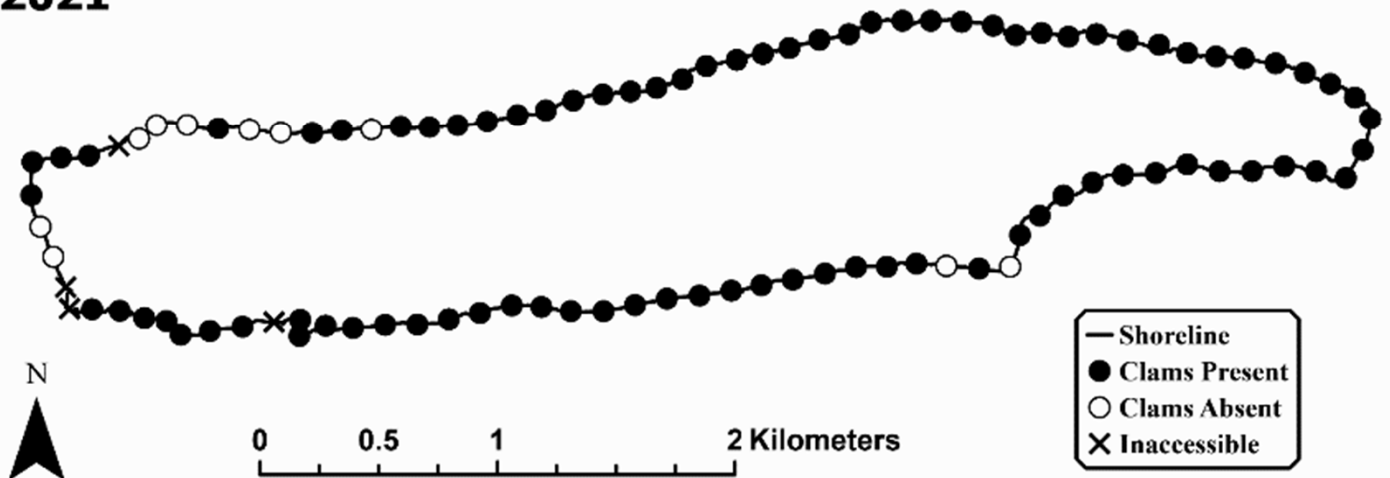
Data from Truckee Police Department, Truckee
Regional Aquatic Invasive Species Prevention Program

**Invasive Asian
clams have spread
significantly over
the past decade.**

2011

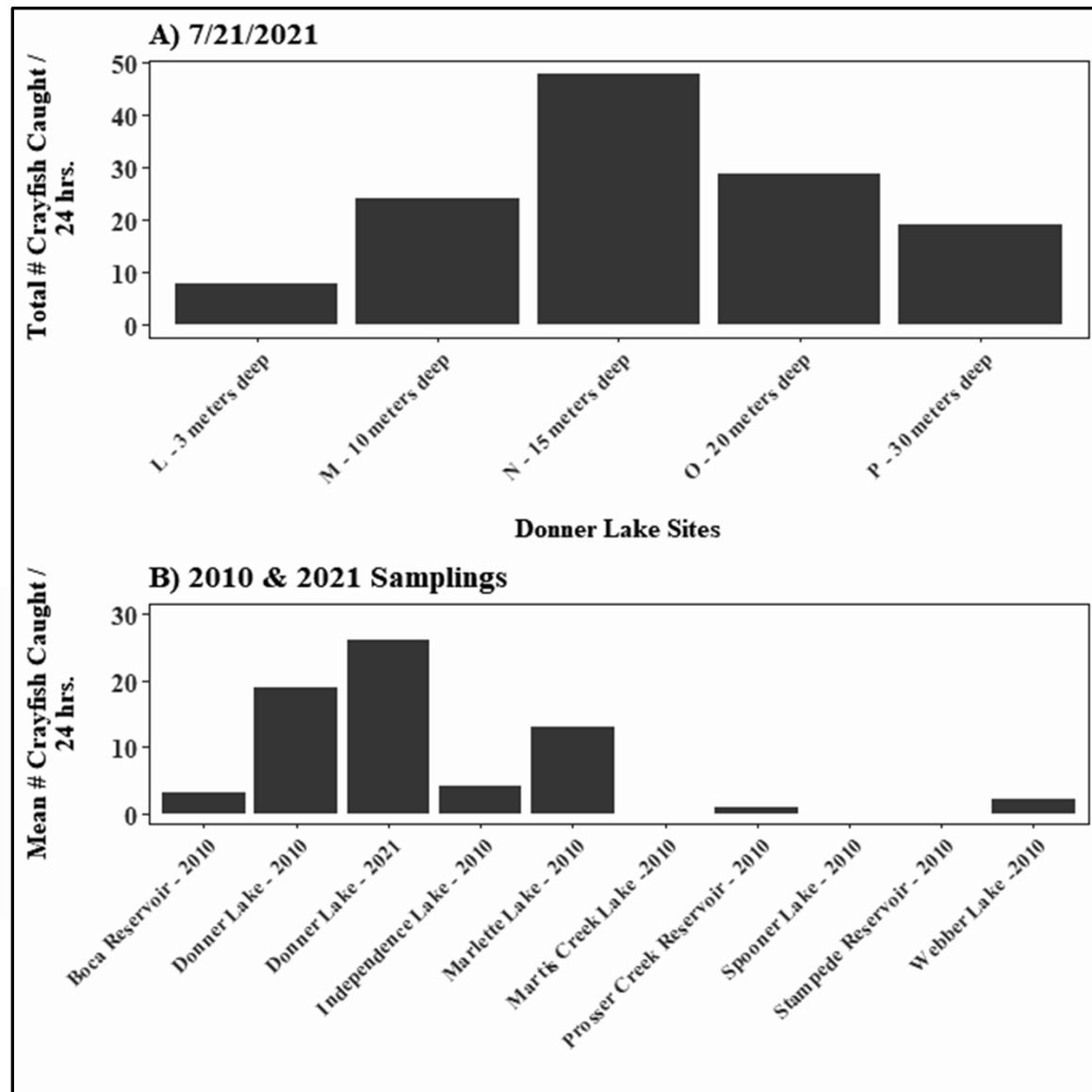
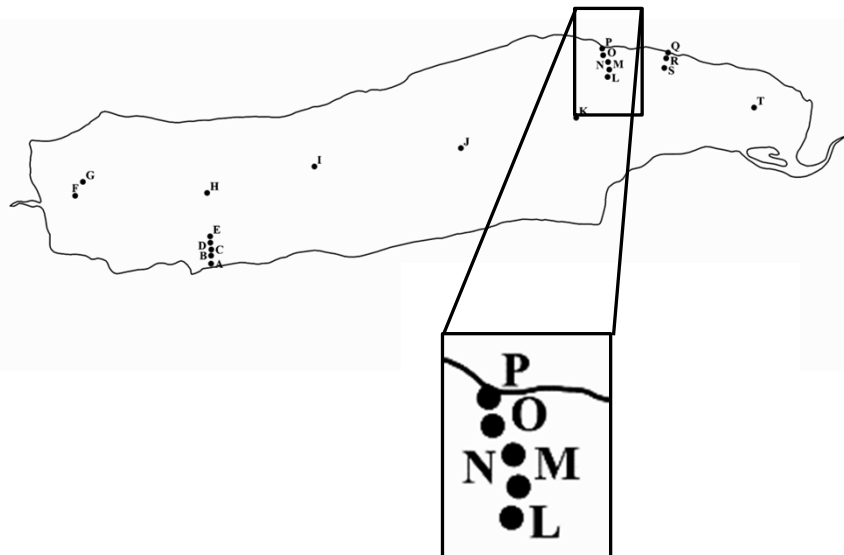


2021



Donner Lake has more Invasive Crayfish than neighboring lakes

- Crayfish reach their highest densities at 15 meters
- Densities in summer 2021 were higher than in summer 2010 and other lakes in the region



Fish



Non-native Kokanee salmon
Spawning (top); Non-spawning (bottom)



Native Tahoe sucker



Non-native brown trout



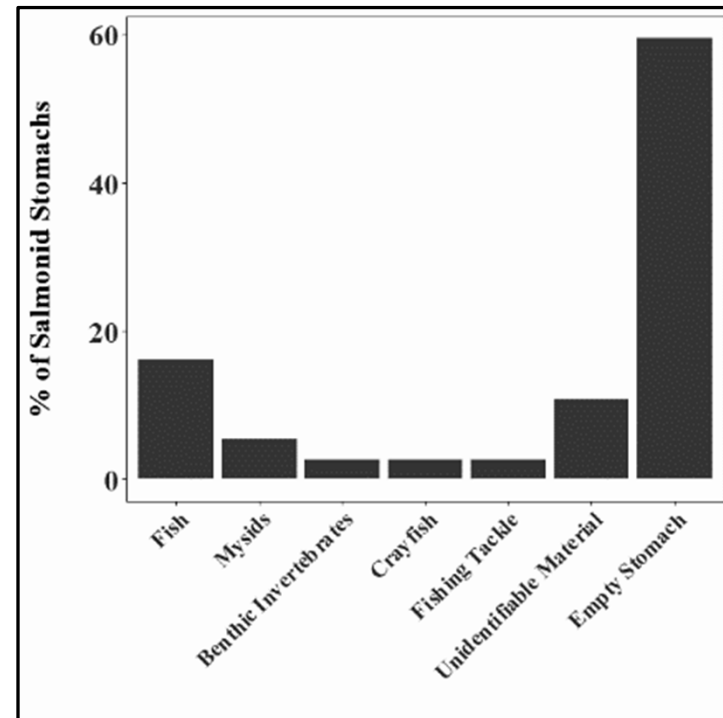
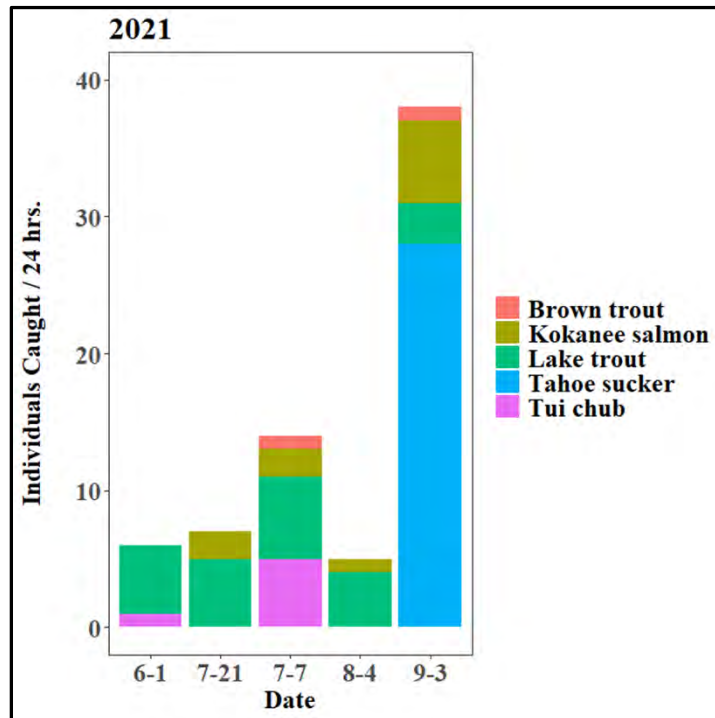
Native tui chub



Non-native lake trout (“mackinaw”)

2 species of native fish are missing from Donner Lake – Why?

- Gill nets deployed at Sites F, G, L, & S returned fish taxa similar to those found in Lake Tahoe and historically found in Donner Lake
 - Native – Tahoe suckers, tui chubs
 - Non-native – brown trout, Kokanee salmon, lake trout
- *BUT would expect to see Paiute sculpin and Mountain whitefish*
- Majority of fish stomachs were empty, but some contained fish, mysids, benthic invertebrates, and crayfish.



Summary of Findings and Recommendations for Donner Lake

- 1) Water quality in the **NEARSHORE** habitat is degrading. Changes in the nearshore habitat are influenced by the changes in biological structure (e.g. invasive species, runoff, and internal mixing dynamics in lakes).
 - Invasive Asian clams have spread throughout the nearshore zone of Donner lake over the past decade. Clams are known to influence the water quality in Lake Tahoe and Lake George (New York).
 - The timing of runoff from snowpack is sensitive to changes in climate and should influence nearshore water quality.
 - Wildfires will increase under current climate conditions

RECOMMENDATIONS:

- Establish a nearshore water quality and biological monitoring program.
- Water quality and production can be determined using high frequency oxygen/ temp probes, a weather station, and collections of water quality samples for nutrients in the sediments and water column.
- Biological monitoring would include an assessment of invasive species (crayfish and clam densities) at the end of summer around the lake.

Summary of Findings and Recommendations for Donner Lake (cont.)

- 2) Water quality in the **OFFSHORE**, open water habitat seems to have improved since historical collections were made in Donner Lake.

RECOMMENDATION:

- Establish a primary water quality station in the center of the lake.
- Deploy a water quality sonde with a suite of sensors that can profile at the center of the lake for temperature, oxygen, conductivity

Summary of Findings and Recommendations for Donner Lake (cont.)

- 3) **BIOLOGY** has changed. Two native fish species (mountain whitefish and Paiute sculpin) were not observed in the lake. The native zooplankton like *Daphnia* have returned to the lake since the most recent samplings in the late 1970s and early 1980s. This indicates that *Daphnia* and mysids are able to coexist in Donner Lake, while in other lakes (e.g. Tahoe) mysid predation has led to the near elimination of native *Daphnia*. This "coexistence" may change over time depending on the water quality conditions and changes in the growth rates of plankton.

RECOMMENDATIONS:

- Establish a biological monitoring program for fishes, mysids, and zooplankton (2-3 times per year (late spring, early summer and summer))

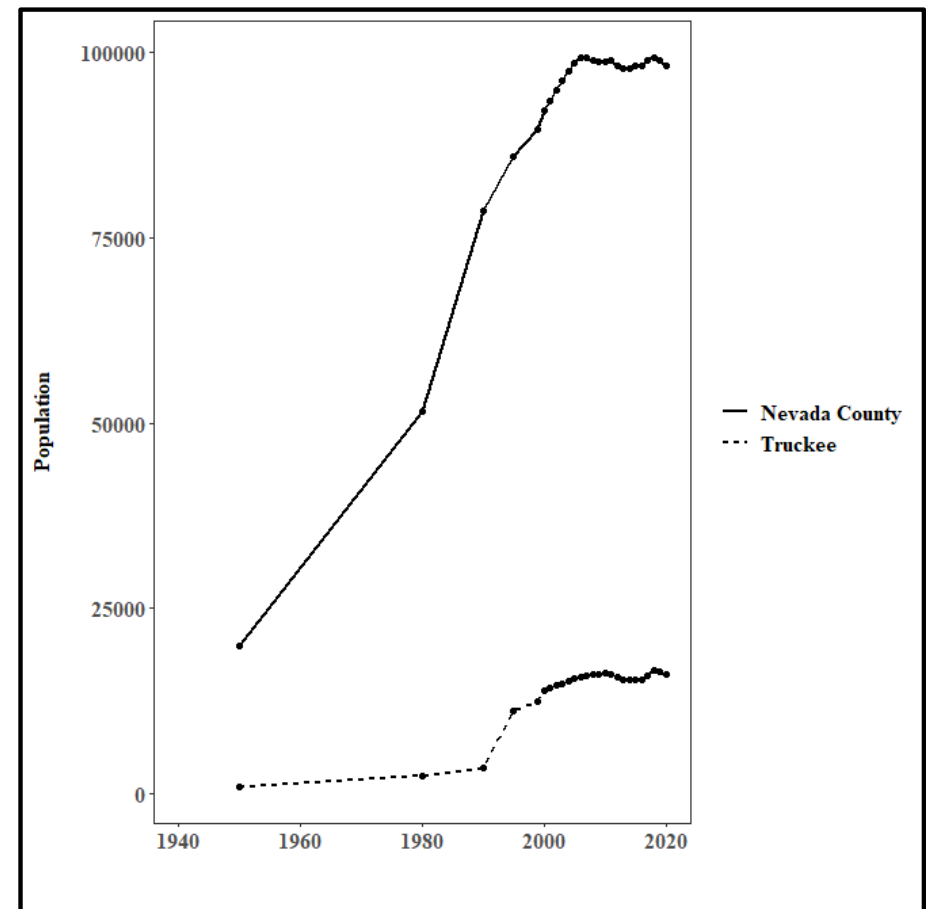
Community Conditions

- Local population growth
- Facilities and Infrastructure
- Recreational Use
- Other



Population growth in Truckee and Nevada County since 1950

- Population in Nevada County grew significantly from ~1980 to 2005
- Population in Truckee grew significantly from ~1990 to 2005



Data from mynevadacounty.com (<https://www.mynvadacounty.com/378/Demographic-Information-About-the-County>)

Facilities and Infrastructure: Zoning

Table. Total acreage of land zoned for each generalized purpose.

Zoning Group	Total Acreage
Commercial	33
Forest	1,780
Recreation	481
Residential	1,047
Lake	834
Other	594
Total	4,769

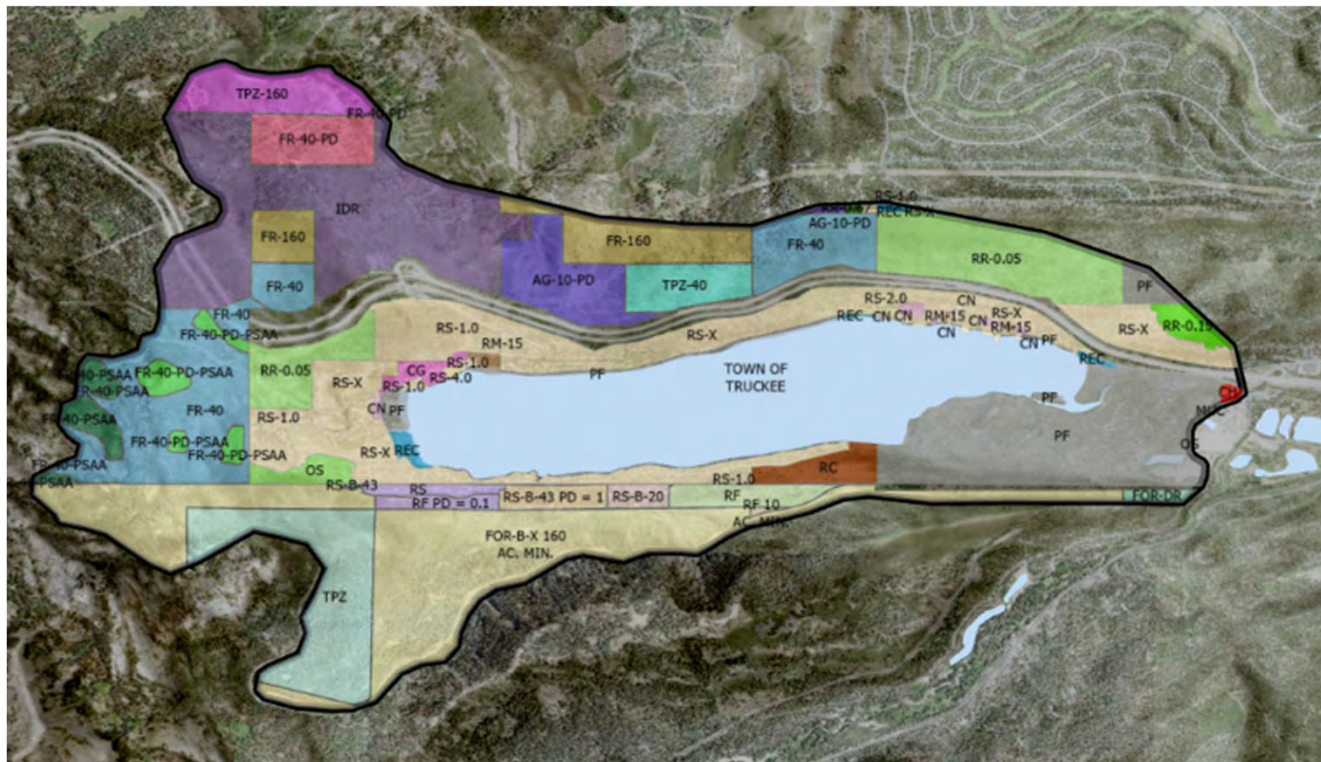


Figure. Nevada County, Placer County, and Town of Truckee combined zoning classification map. See appendix for zoning codes.



Facilities and Infrastructure: Housing Supply

Table. Total available housing stock by type of dwelling as of 2022.

Type of Dwelling	Number of Housing Units
Apartment	12
Condo	105
Multi-Family Residential	8
Single Family Residential	883
Unknown	6
Miscellaneous Residential	42
Total	1,056

Source: Town of Truckee as of 3/3/2022

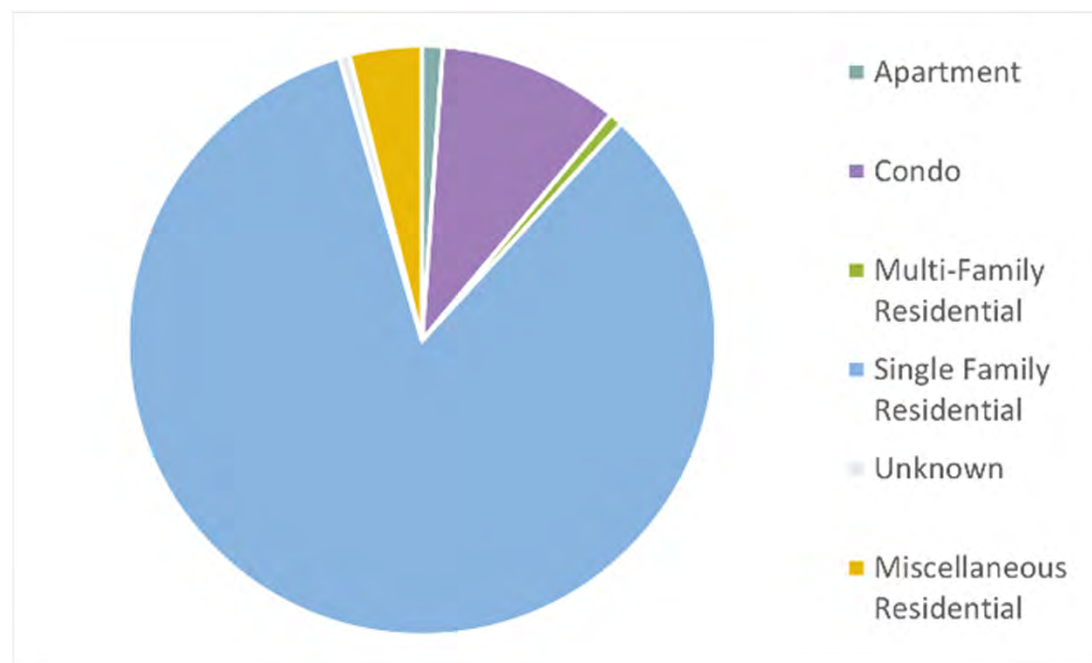


Figure. Proportion of available housing stock by type of dwelling as of 2022.



DIPS

Facilities and Infrastructure: Public and Private Docks

Table. Number of docks by private versus public owner.

Owner	Total
Truckee Donner Rec and Park	37
Private	225
Total	262

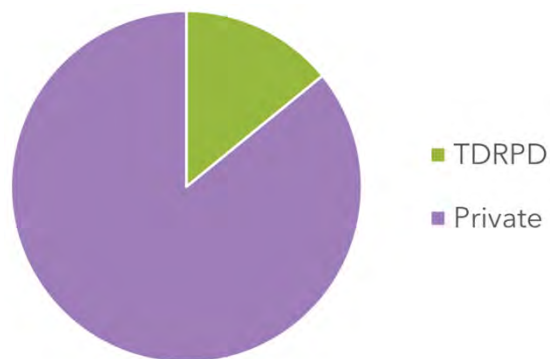


Figure. Proportion of total docks that are private versus public.



Figure. Private and public docks within the Donner Lake study area.

Source: TDRPD, Town of Truckee as of 3/3/2022



Facilities and Infrastructure: Roads and Bridges

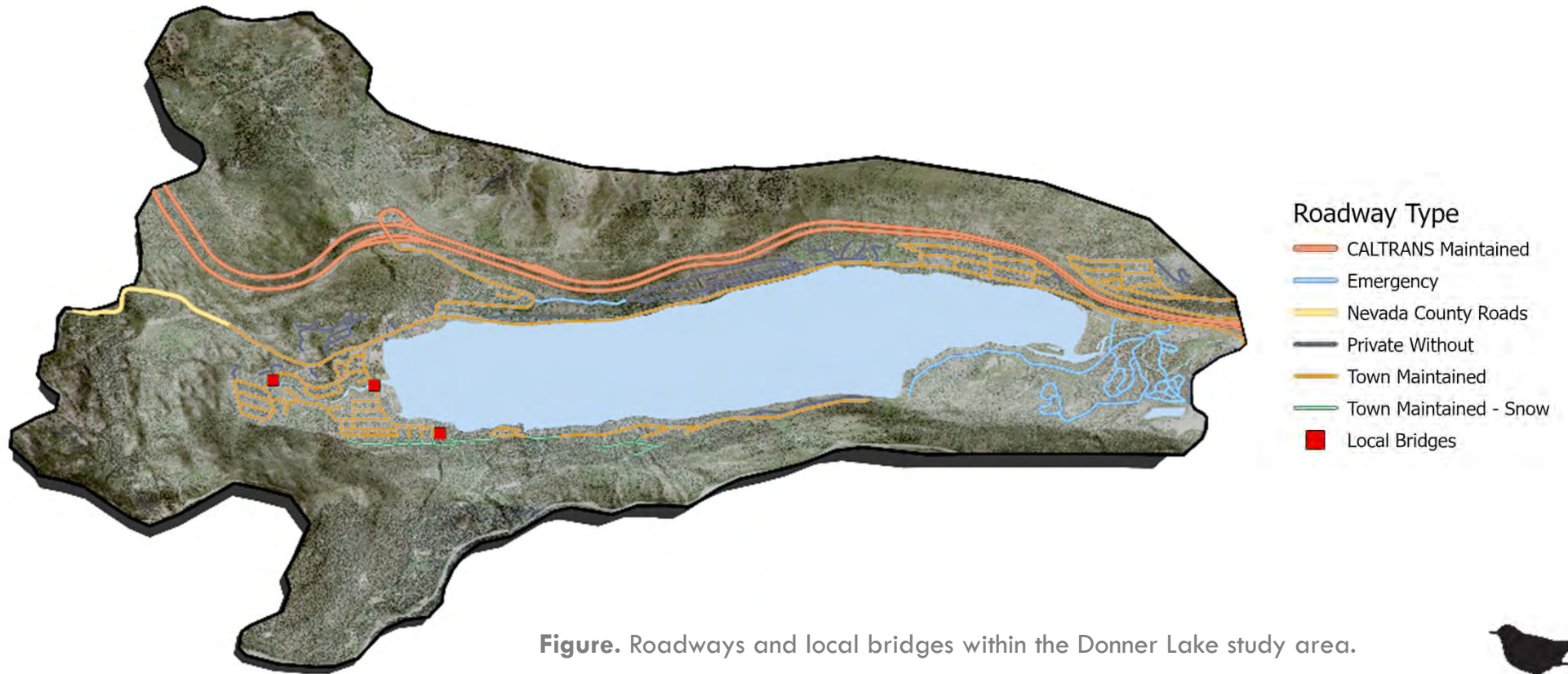


Figure. Roadways and local bridges within the Donner Lake study area.

Source: Town of Truckee as of 3/3/2022



Facilities and Infrastructure: Impervious Surfaces

Table. Acres of impervious surface by type of surface.

Type of Impervious Surface	Total Acreage
Structures	67
Paved Driveway	36
Paved Parking	14
Paved Road	151
Total Acreage of Impervious Surfaces	201

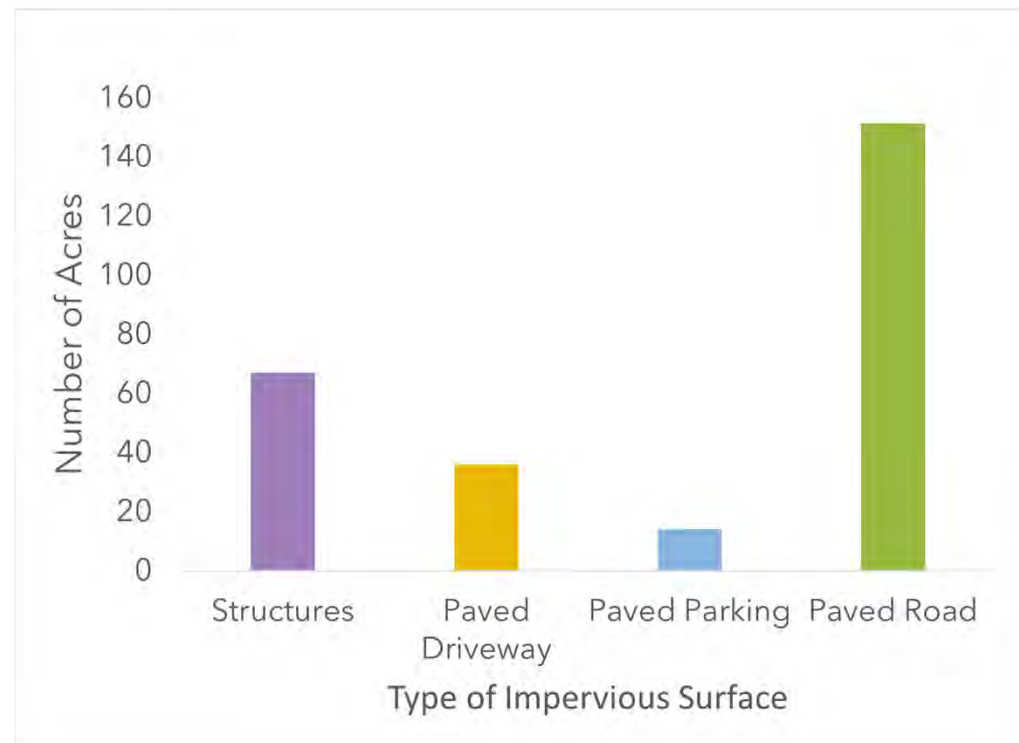


Figure. Acres of impervious surface by type of surface.

Source: Town of Truckee as of 3/3/2022



Facilities and Infrastructure: Impervious Surfaces

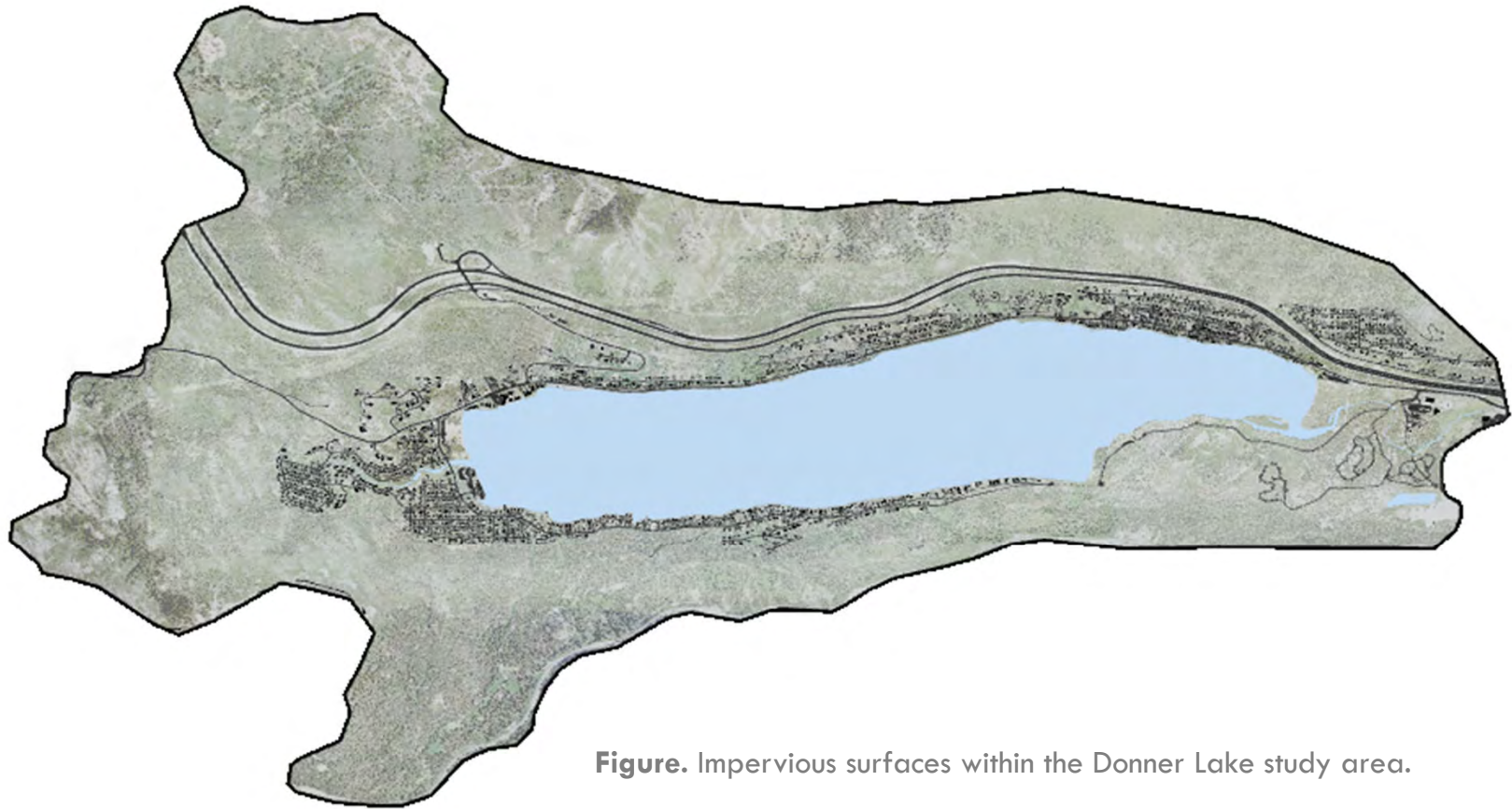


Figure. Impervious surfaces within the Donner Lake study area.



Facilities and Infrastructure: Unpaved Roads

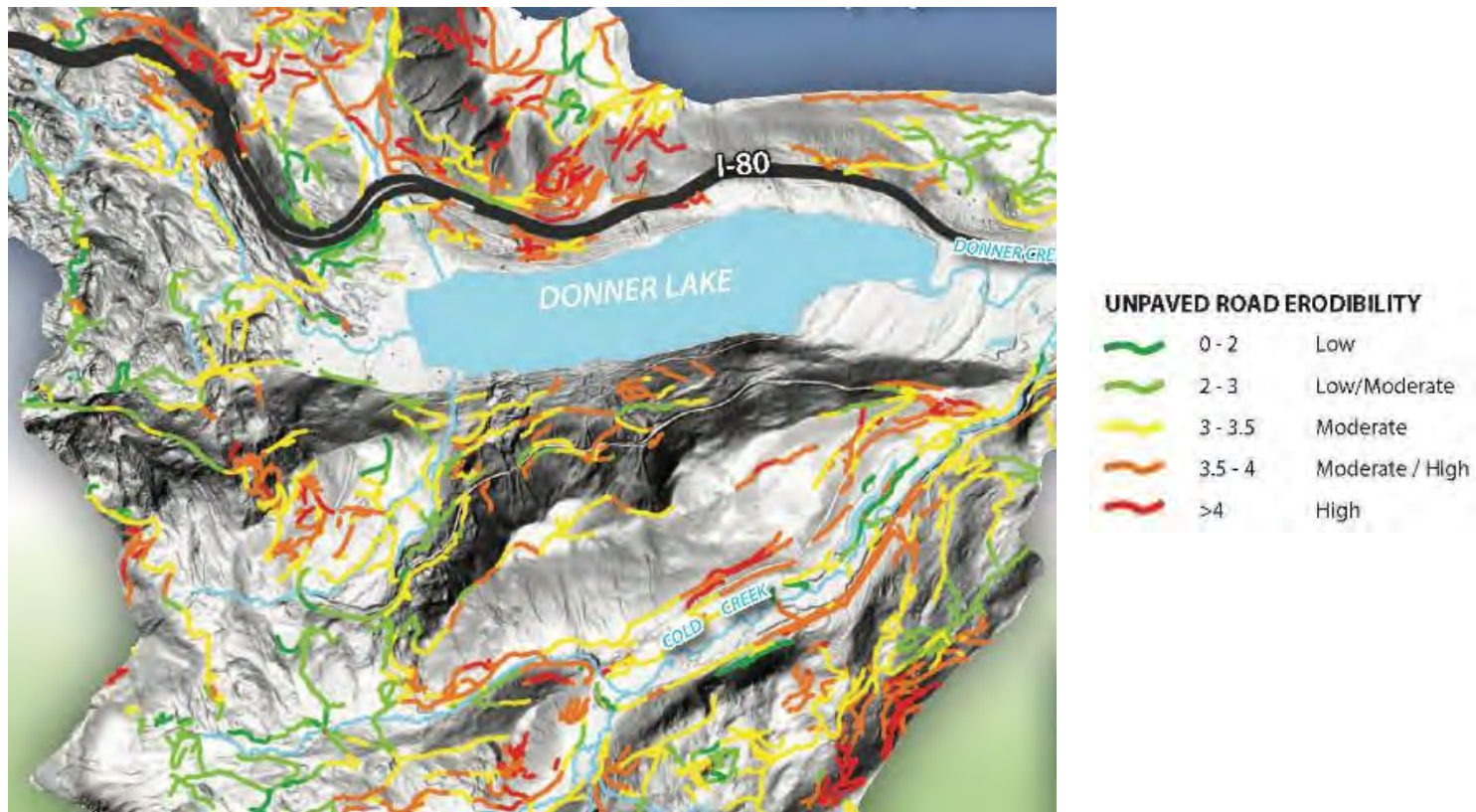


Figure. Unpaved roads within the Donner Lake study area.

Source: Donner Basin Assessment, 2018



Facilities and Infrastructure: Stormwater

Table. Donner Lake Basin stormwater infrastructure total count, linear feet, and square feet.

Stormwater Infrastructure	Count	Linear Feet	Square Feet
Outfalls	156		
Storm Manholes	9		
Inlets	221		
Culverts (includes driveway culverts)	711	31,650	
Ditches	652	81,882	
Large Detention Basins (includes I-80 basins)	11		86,000

Source: Town of Truckee as of 3/3/2022



Facilities and Infrastructure: Stormwater Points of Diversion

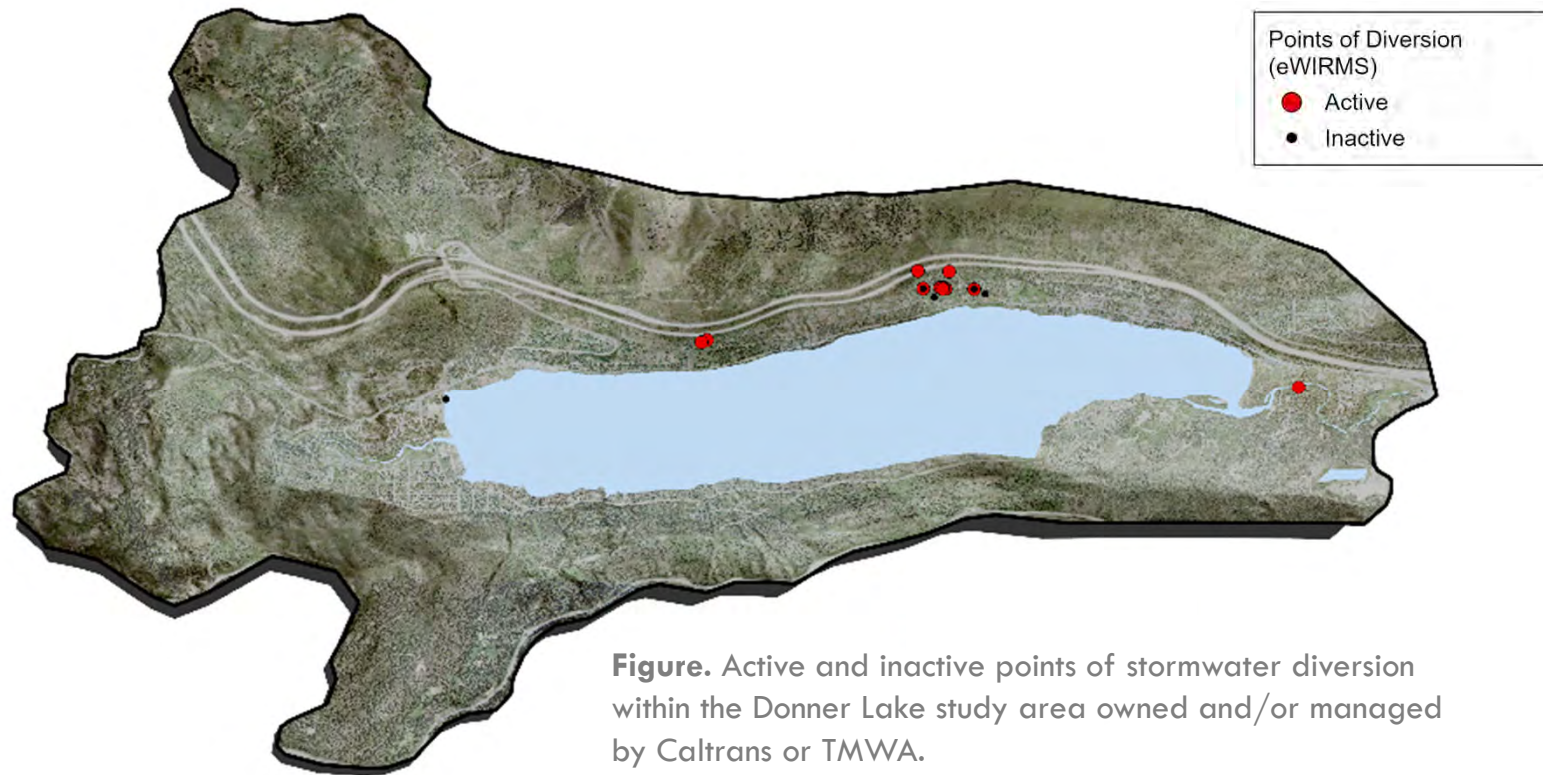


Figure. Active and inactive points of stormwater diversion within the Donner Lake study area owned and/or managed by Caltrans or TMWA.

Source: Town of Truckee as of 3/3/2022



Facilities and Infrastructure: Of Major Land/Water Rights Owners

Table. Existing infrastructure in Donner Lake study area by land and water rights owners.

Organization	Existing Infrastructure
California State Parks	High Sierra Crossing Museum; Administrative Offices; Pioneer Monument; 2 residential duplexes; 2 residences; 2 developed trailer pads; 1 undeveloped trailer pad; 1 mobile home site; 2 maintenance buildings; 18.5 miles of non-motorized trails; 4.4 miles of paved roads; 24 miles of unpaved roads; 1-mile lakeside interpretive trail; 1.5 miles of frontage on Donner Lake and Donner Creek; 78 picnic sites (3 ADA); 3 comfort stations at day use areas (1 ADA); 147 campsites (12 ADA); 6 comfort stations or restroom/shower buildings for campers (5 ADA); Campfire center; 60 car parking lot at Visitor Center (3 ADA); 15 car parking lot at China Cove (1 ADA); ~75 paved parking spaces (2 ADA) and 75 roadside/dirt parking throughout Day Use area; 5 bridges (1 vehicle public, 1 vehicle operations/pedestrian, 1 pedestrian, 2 in Lakeview Canyon);
Tahoe Donner Association	2 small sheds, boat house building, boat storage/camp building, check-in kiosk, dumpster storage structure adjacent to boat house; 11 boat and trailer parking spots, 34 regular parking spots, boat launch, storage racks to accommodate 150 kayaks and SUPs, 3 floating docks (1 fishing, 1 boat dock, 1 swim dock) secured with chains to lakebed
Truckee Donner Land Trust	Johnson Canyon info kiosk and dog waste station, Donner Summit Canyon dog waste station, Creekside Woods dog waste station
Truckee Donner Recreation and Park District	37 public piers; 2 boat lane-wide boat ramp; fish cleaning station; parking lot (undetermined number of spots); all-access fishing pier (Shoreline Park); West End Beach: tennis court, boat storage, pavilion, entrance gate, staff building/restrooms, basketball court, beach volleyball court, playground, picnic areas, horseshoe pits, parking lot (# spaces unknown)
Truckee Meadows Water Authority	1 dam
Truckee Sanitary District	7 main lift stations convey sewage from South Shore Drive, through 11,200' of force mains, clockwise around the lake to discharge at Deerfield Dr., wetwell for sewage collection, drywell with two independent pumps, 10,000 gallon overflow tanks

Facilities and Infrastructure: Planned Improvements

Table. Planned improvements in Donner Lake study area by major land and water rights owners.

Organization	Planned Improvements
California State Parks	Road and Trail Management Plan: Improve 10 mi, decommission 2.5 mi, remove 3.3 mi of “volunteer”, convert 4 mi, construct 9.1 mi of new, align with Donner Lake Rim Trail, new trailhead at Coldstream Valley Rd, improve connection between Summit and Lakeview Canyons
Tahoe Donner Association	Deck expansion in the near future
Truckee Donner Land Trust	Forestry and wildfire resilience and restoration work Billy Mack Canyon (Summer 2022/2023) and Creekside Woods (Summer 2022); Discussion of parking lot and bathroom at Johnson Canyon, Completion of Donner Rim Trail no planned dates
Truckee Donner Recreation and Park District	Boat ramp improvements: \$2.1 million from State - ramp extension on both ramps, new bathroom, parking lot paving, ADA upgrades potential for Fall 2022; Pier Renovations - piers #15, 17, and 23 Fall 2022
Truckee Meadows Water Authority	Money allocated within next 5 years to assess need to dredge Donner Lagoon - may not be used; no additional dam repairs anticipated in near future
Truckee Sanitary District	Capital Improvement Plan to upgrade the plumbing (FY 2025) and electrical components (annually for 5 years) at the stations, Cathodic protection coatings (annually for 5 years) to reduce structural corrosion of the dry wells, increasing capacity at lift station 1B (FY 2023-2024)

Recreational Use: Paid admissions

Table. Total paid usership of recreation facilities.

Organization	2018	2019	2020
TDA	41,852	36,614	42,586
TDRPD	54,863	55,641	56,307
State Parks*	190,115	208,700	233,313
Total	286,830	300,955	332,206

* State Parks user estimates based upon day use, overnight use, and annual passes. Does not include non-paying walk-ins which are estimated to make up a significant proportion of usership.

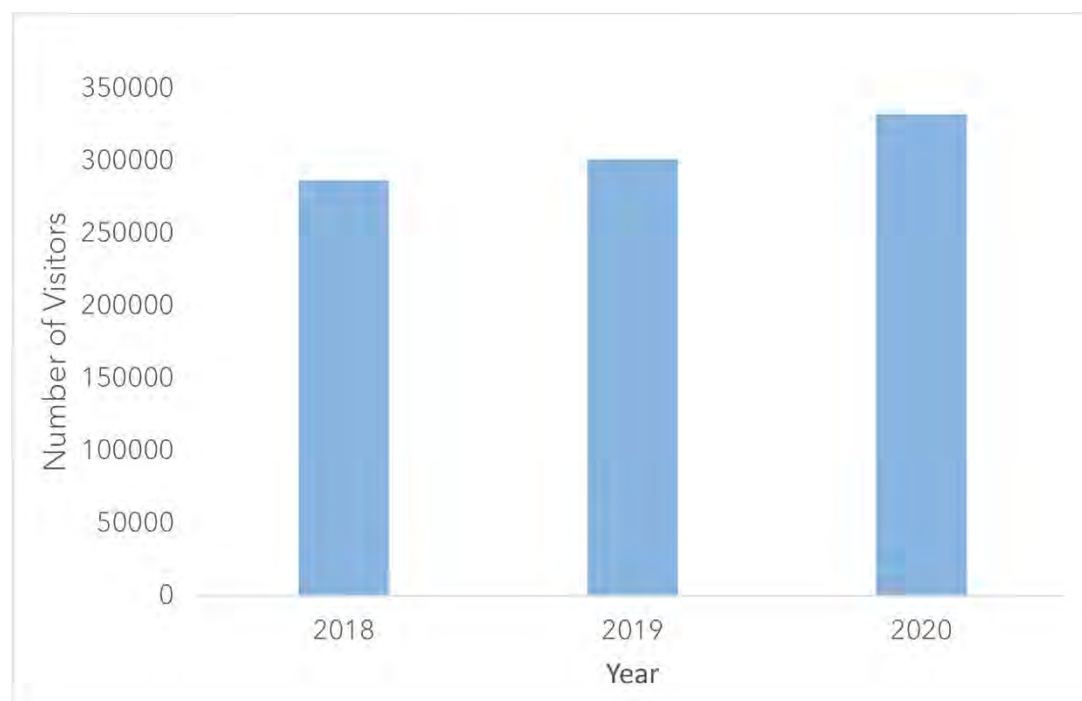


Figure. Total paid usership of recreation facilities.

Source: TDA, TDRPD, State Parks as of 3/18/2022



Recreational Use: Paid admissions by month

Table. Total number of paid users by month between 2018-2020 for TDA, TDRPD, and State Parks*.

Month	2018	2019	2020
May	12,782	11,446	16,170
June	54,975	56,923	54,399
July	112,724	106,045	109,673
August	72,422	89,025	102,110
September	33,842	37,358	48,652

* State Parks user estimates based upon day use, overnight use, and annual passes. Does not include non-paying walk-ins which are estimated to make up a significant proportion of usership.

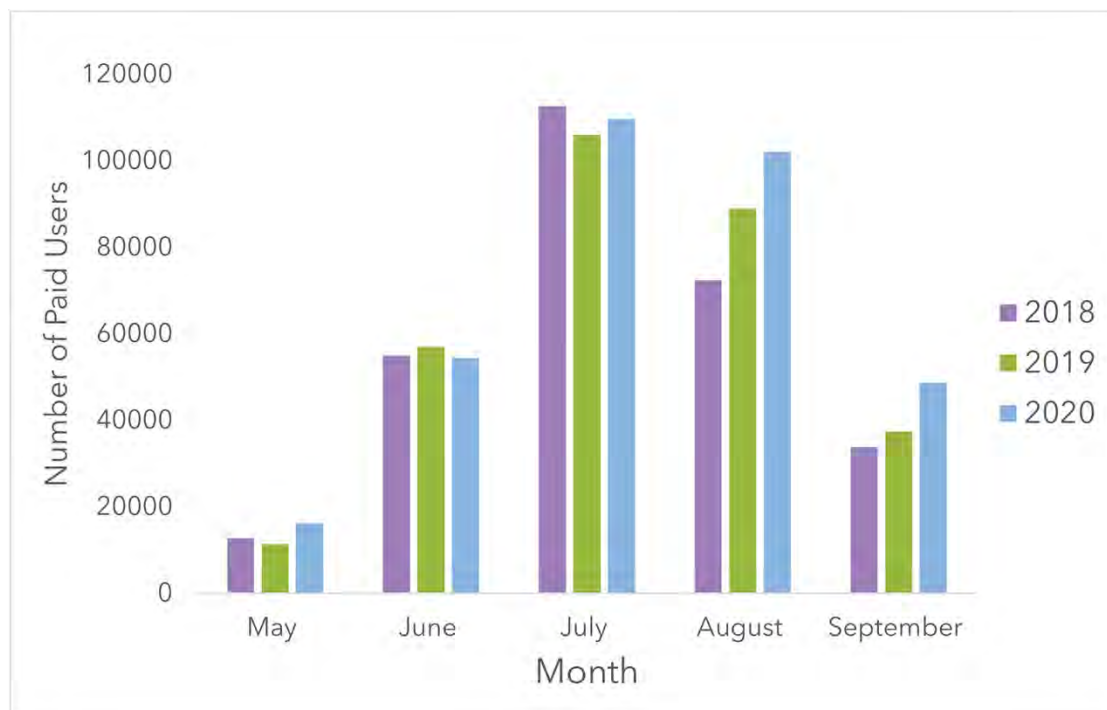


Figure. Number of paid users by month between 2018-2020 for Tahoe Donner Association, Truckee Donner Recreation and Parks District, and California State Parks.

Source: TDA, TDRPD, State Parks as of 3/18/2022



Recreational Use: Boat Launches at Boat Ramp

Table. Total number of boat launches at TDRPD boat ramp.

Month	2018	2019	2020	2021
May	0	16	305	162
June	351	538	402	589
July	692	527	1064	830
August	516	448	571	760
September	448	571	446	458

* TDRPD Data – combined pass holder, drop-in, and commercial boat launches

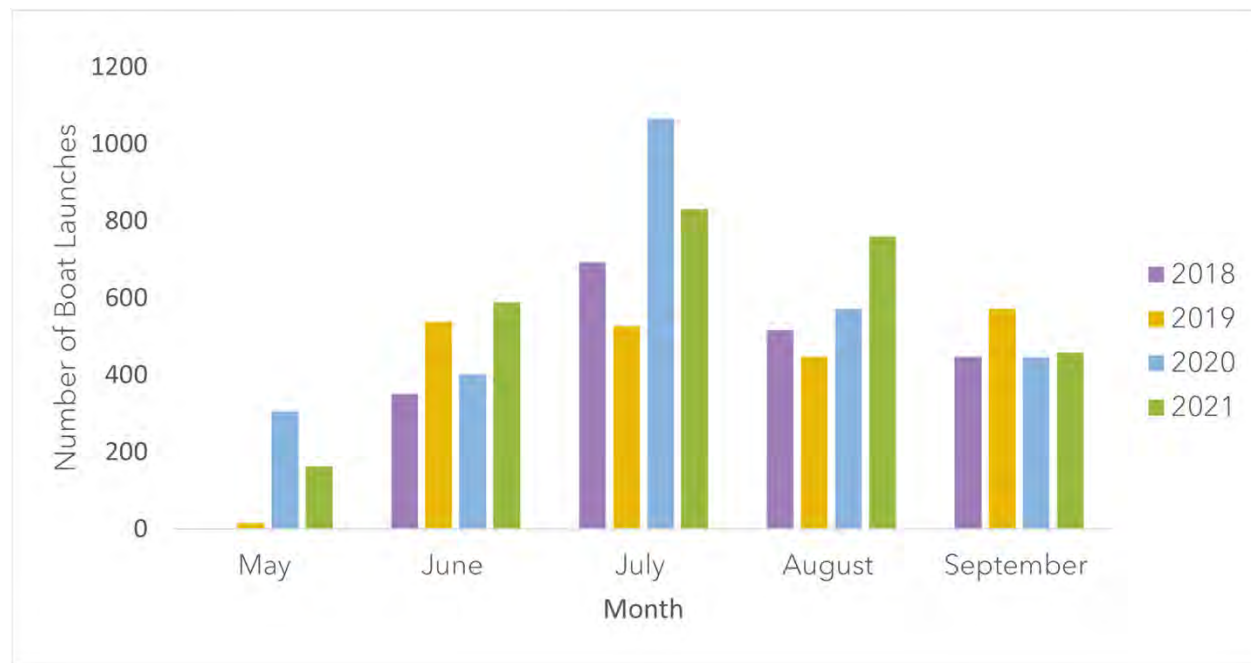


Figure. Total number of boat launches at TDRPD boat ramp.



Recreational Use: Watercraft rentals

Table. Total number of watercraft rentals by year.

Organization	2018	2019	2020
TDA	5,784	4,883	1,821
TDRPD			
Donner Lake Marina (in State Parks)			
Donner Lake Marina			

* Watercraft rental data only provided by TDA

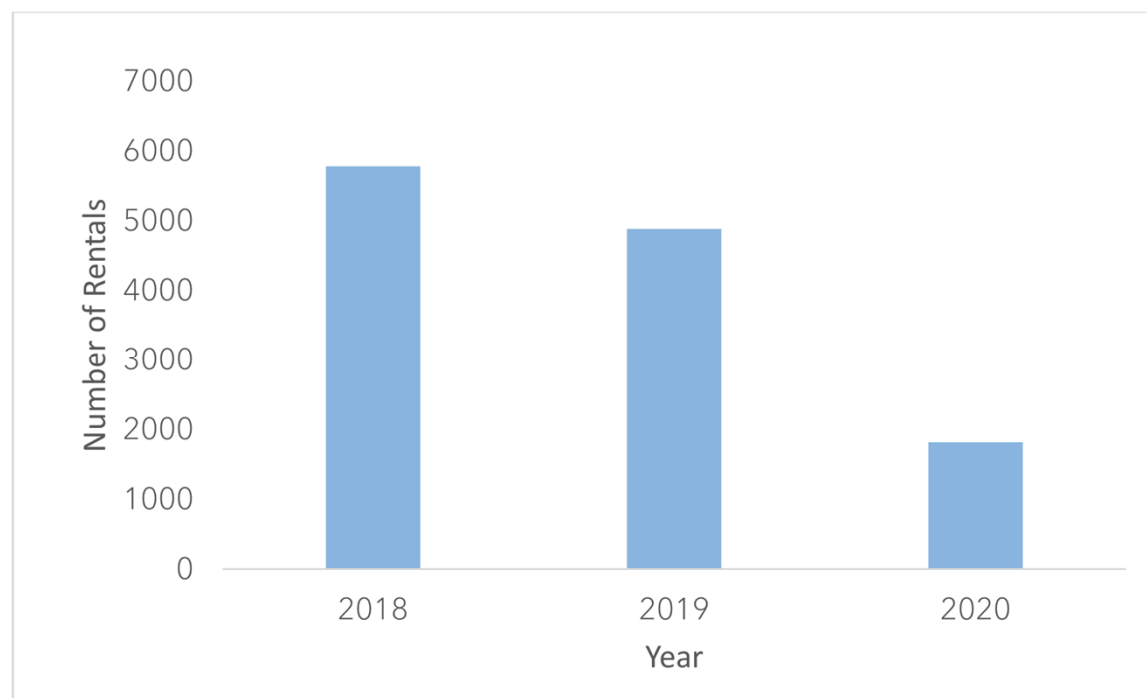


Figure. Total number of watercraft rentals by year.



Recreational Use: Large events

Table. Events in the Donner Lake study area by year.

Year	Event	Organizer	Date	Location
2018	July 4th Fireworks	Truckee Donner Rec and Park	7/4/2018	West End Beach
	Donner Lake Triathlon	Big Blue Adventure, LLC	7/21-22-2018	Donner Lake
	Donner Lake Swim	US Masters Swimming Club Asst, Custom Inc.	8/11/2018	Donner Lake
	25th Anniversary Picnic and Photo	Multiple	9/8/2018	West End Beach
2019	Fourth of July Celebrations and Fireworks	Truckee Donner Rec and Park	7/4/2019	West End Beach
	Donner Lake Triathlon	Big Blue Adventure, LLC	July 20-21, 2019	West End Beach
	Donner Lake Swim	Jessie Kiltz	8/10/2019	East and West End Beach
2020	NONE			
2021	Donner Lake Triathlon, Swim, Run, Paddle	Big Blue Adventure, LLC	July 24-25, 2021	West End Beach
	Donner Lake Open Swim	Sierra Nevada Masters	August 14, 2021	Donner Lake

Source: Town of Truckee as of 3/3/2022



Other: Sewage Flows

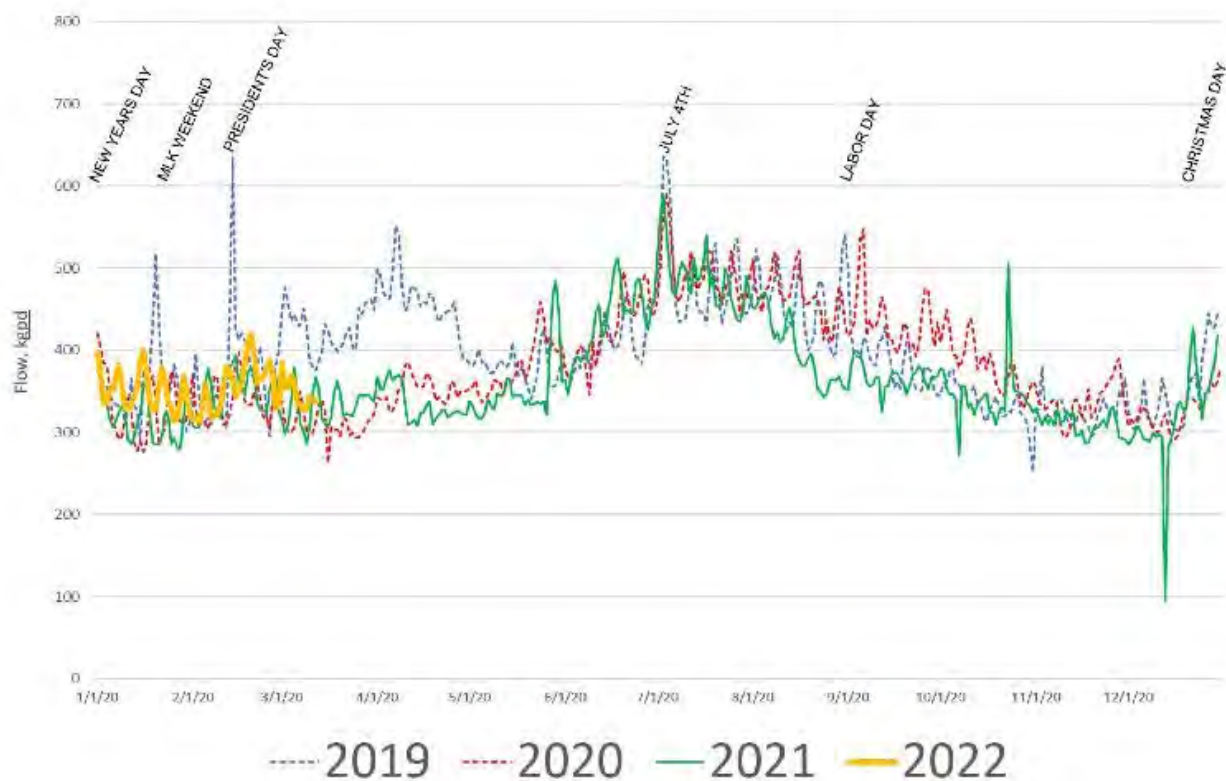


Figure. TSD daily sewage flows within the Donner Lake study area.

Source: TSD as of 3/21/2022



Other: Calls for Service

Table. Calls for Service from Donner Lake area to Truckee Police Department by year and cause for call.

Cause for Call	2018	2019	2020	2021
Boat	41	60	36	34
Parking	76	57	60	80
Noise	51	59	53	58
Total	168	176	149	172

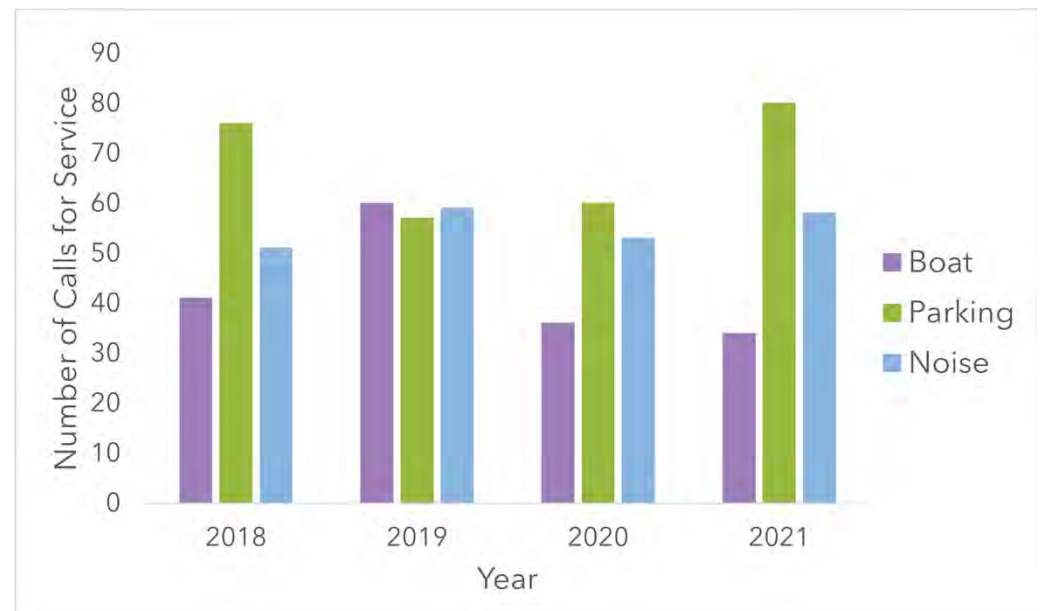


Figure. Calls for Service from Donner Lake area to Truckee Police Department by year and cause for call.

Source: Town of Truckee as of 3/3/2022



Other: Short Term Rental Supply vs Complaints

Short Term Rental Location	Units	Complaints
Donner Lake	130	56
Town of Truckee Outside of Donner Lake	956	151
Total	1,086	207

Figure. Proportion of available number of short term rentals within and outside of Donner Lake study area.

- Registered STRs in Donner Lake Study area
- All Other Registered STRs in Town of Truckee

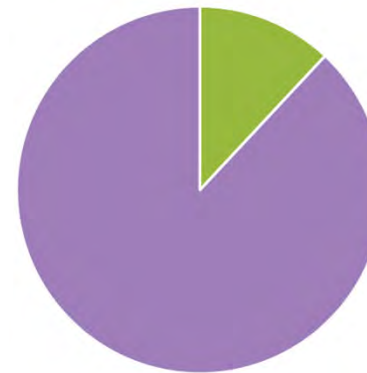
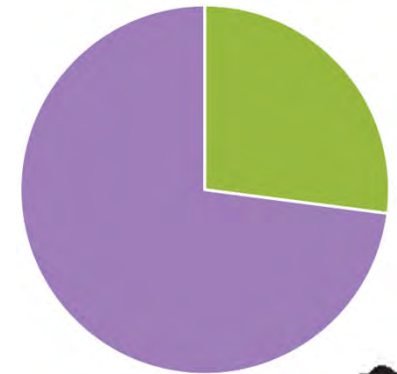


Figure. Proportion of complaints made towards short term rentals within and outside of Donner Lake study area.



Source: Town of Truckee as of 3/3/2022



Other: Public Transit Route

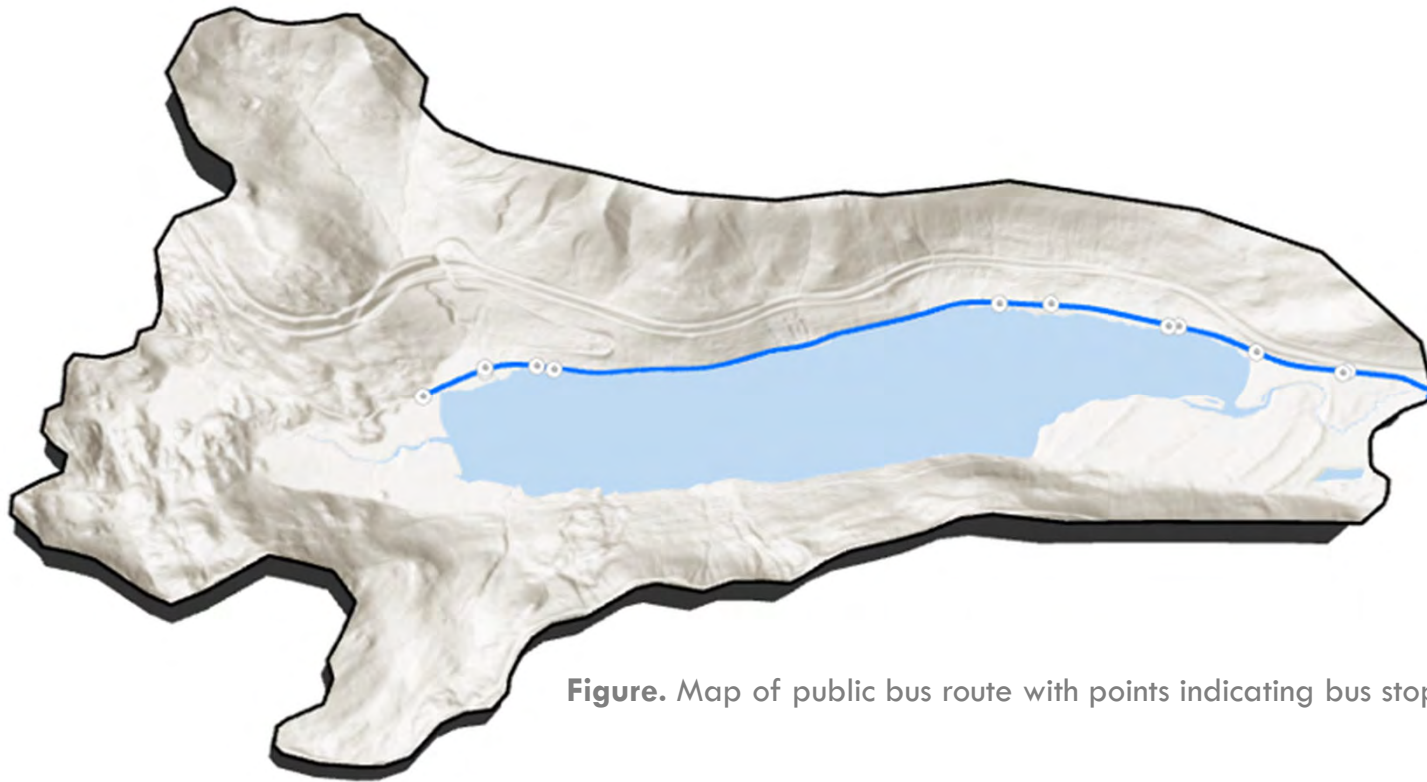


Figure. Map of public bus route with points indicating bus stops.

Source: Town of Truckee as of 3/3/2022



Other: Transit Ridership

Table. Number of bus riders onboarding and offboarding within the Donner Lake study area by year (July-June).

Year (July-June)	Onboard	Offboard
2018-2019	2,499	2,221
2019-2020	1,772	1,677
2020-2021	1,307	2,478

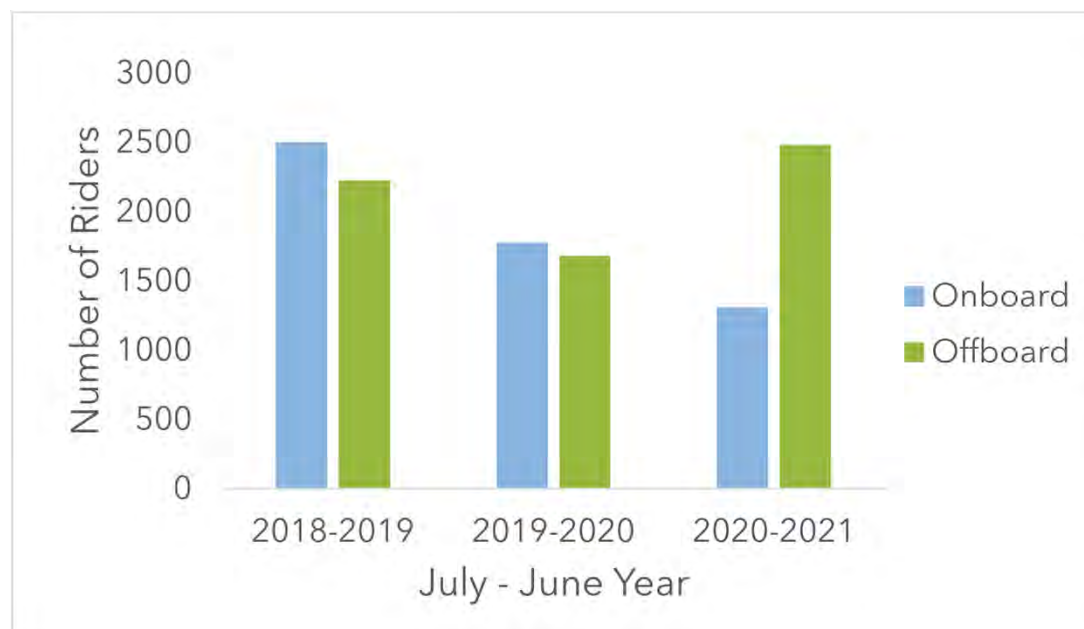


Figure. Number of bus riders onboarding and offboarding within Donner Lake study area by year (July-June).

Source: Town of Truckee as of 3/3/2022



Other: Businesses and tax revenue

Businesses As of 2022

- Donner Lake Realty, Inc.
- Donner Lake Inn B&B
- Donner Lake Village
- Truckee Donner Lodge
- Donner Memorial State Park
- Loch Leven Lodge
- Pub at Donner Lake
- Donner Lake Marina
- Donner Lake Kitchen
- Donner Lake Gift Shop
- Little Truckee Creamery
- McCarthy Sign Shop
- Stick's Market
- Truckee Overhead Door
- Richards Motel

Table. Donner Lake study area Business and Industry tax revenue.

Fiscal Year	Town of Truckee 0.75% Sales Tax Revenue
FY 20/21	\$3,620.00
FY 19/20	\$2,741.00

* July 1 – June 30 fiscal year reflective of Business and Industry in Donner Lake Area (4 businesses)

Source: Town of Truckee as of 3/3/2022

Other: Development Permits

Table. Total development permits issued by type for 2018-2020.

Type of Permit	Count
New Commercial	2
Deck	49
Demolition	17
Driveway	5
Grading	13
Residential Addition	21
Residential - New Other	4
New Single-Family Residence	26
Dwelling Conversion	2
Total	139

Source: Town of Truckee as of 3/3/2022

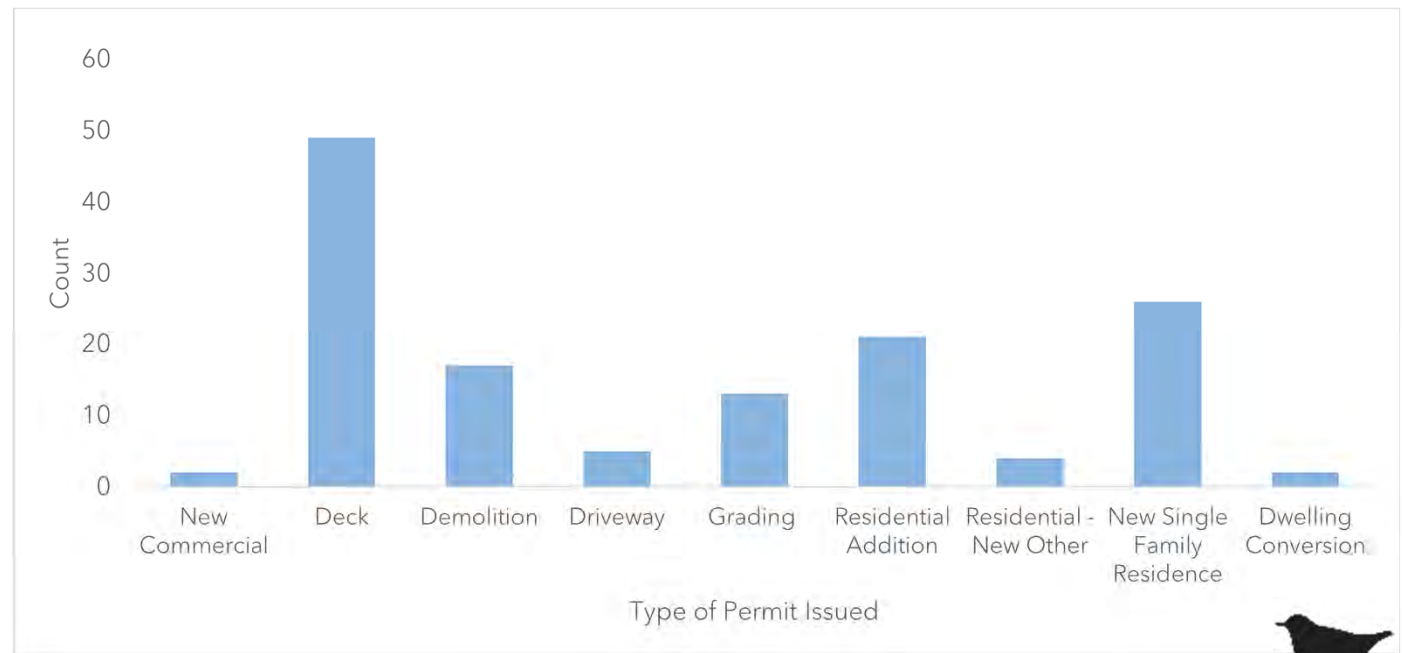


Figure. Total development permits issued by type for 2018-2020.



DIPS

DONNER LAKE INTERAGENCY PARTNERSHIP FOR STEWARDSHIP

Other: New Initiatives

- Sustainable Truckee Ambassadors: Implemented Summer of 2021 to connect with and provide information to visitors and residents and monitor use in highly trafficked areas including Donner Lake public piers
 - Sponsored by Truckee Trails Foundation, Visit Truckee Tahoe, Town of Truckee, Nevada County, and others
- Improved alternative transit: Starting in 2021, exploring opportunities to decrease traffic through peak period shuttles, micro-transit, bike share, etc.
 - Sponsored by Town of Truckee, Tahoe Donner Association, and Tahoe Truckee Area Regional Transportation
- Underwater cleanup and monitoring: In 2022, repeat circumnavigation of Donner Lake to collect trash and monitor invasive species and algal blooms
 - Sponsored by Clean Up The Lake



Recommendations for future data collection

- Continue to collect trending data (annually)
 - Recreational use: paid admissions, boat launches, watercraft rentals
 - Sewage flows
- Collect more stable data periodically (as needed, 5-10 years)
 - Population
 - Facilities and infrastructure: zoning, unpaved surface condition
 - Housing supply
 - Development permits
- Look to improve data collection
 - Economic indicators
 - Stormwater infrastructure and water quality monitoring
 - Transit



Appendices

1. Acronyms and Abbreviations
2. Zoning Codes

Appendix 1 Acronyms and Abbreviations

Caltrans	California Department of Transportation	Town	Town of Truckee
State Parks	California Department of Parks and Recreation, Sierra District, Donner Memorial State Park	Truckee PD	Truckee Police Department
DIPS	Donner Lake Interagency Partnership for Stewardship	TRWC	Truckee River Watershed Council
HOA	Homeowners Association	TSD	Truckee Sanitary District
TART	Tahoe Area Rapid Transit	TTF	Truckee Trails Foundation
TDA	Tahoe Donner Association	TTSD	Tahoe Truckee Sierra Disposal
TDLT	Truckee Donner Land Trust	UPR	Union Pacific Railroad
TDRPD	Truckee Donner Recreation and Park District	USFS	U.S. Forest Service
TMWA	Truckee Meadows Water Authority	VTT	Visit Truckee Tahoe



Appendix 2 Zoning Codes

Zoning Type	Town of Truckee	Acreage	Nevada County	Acreage	Placer County	Acreage
Commercial	CG (General Commercial)	19.2				
	CH (Highway Commercial)	4.06				
	CN (Neighborhood Commercial)	9.84				
Forest	RC (Resource Conservation)	44.02	FR (Forest)	722	FOR (Forest)	623.36
			TPZ (Timberland Production Zone)	168	TPZ (Timberland Production Zone)	222
Other	MUC	0.23	AG (General Agriculture)	122		
			IDR (Interim Development Reserve)	472		
Recreation	PF (Public Facilities)	435.62				
	OS (Open Space)	28.59				
	REC	16.61				
Residential	RS (Single Family Residential)	606.5			RF	69.09
	RR (Rural Residential)	289.03			RS	75.79
	RM (Multi-Family Residential)	6.67				
Lake		834.4				

