

COEUR D'ALENE RIVER OBSERVATIONAL STUDY

JULY 18 – JULY 25, 2019 | SUMMARY REPORT

PUBLISHED: NOVEMBER 4, 2019



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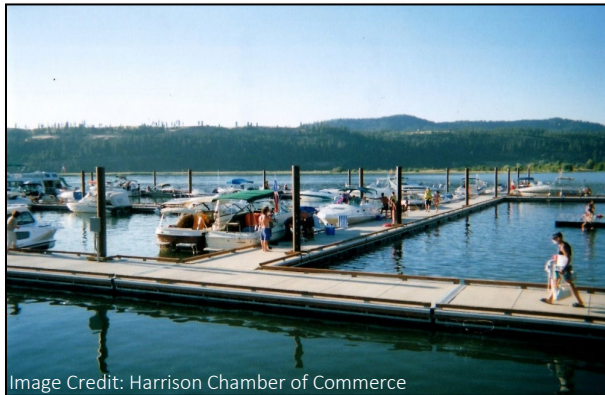


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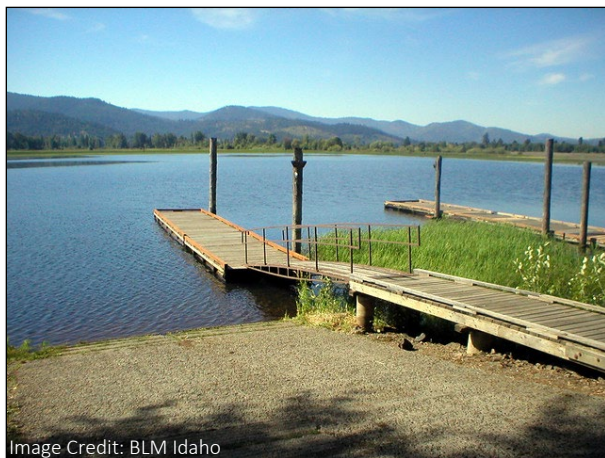


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Prepared for the Restoration Partnership, Basin Environmental Improvement Project Commission, and Panhandle Health District



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TABLE OF CONTENTS

Introduction	1
Purpose	1
Summary Findings	1
Protocol	2
Results	4
Visitor Summary	4
Vehicle Summary	5
Recreation Summary	6
Handwashing Stations	7
Visitors on Bare Soil and Grass	7
Study Site Summaries	7
Airport Rd. Park	8
Cataldo Boat Ramp	9
IDFG Rose Lake Access	10
East Rose Lake Coeur d'Alene River Access	11
USFS Rose Lake Access	12
Killarney Lake Access	13
Rainy Hill Boat Launch	14
Medimont Boat Launch	15
Harrison Marina	16
Anderson Lake & Thompson Lake Boat Launches	17
Discussion	19
Outreach	19
Survey Administration	19
Acknowledgements	19
Supplementary Materials	20
Observation Form: Route 1	21
Observation Form: Route 2	23

INTRODUCTION

PURPOSE

The Coeur d'Alene River Basin (Basin) is a popular destination for year-round recreationists, but decades of mining contaminated the Basin with toxic metals. Extensive remediation efforts have helped to clean thousands of residential and commercial properties in the Basin, providing long-term barriers to prevent direct exposure. While clean-up efforts are ongoing, airborne lead issues have been reduced and the visible signs of contamination in the soil and water have been largely eliminated. Yet contamination remains, and environmental health organizations are working to educate local and non-local recreationists about the associated risks.

Environmental lead (Pb) contamination is a primary concern due to the negative health effects associated with Pb exposure, especially for children. Water-based recreationists are one population subgroup in the Basin associated with elevated Pb exposure risks. Pb can still be encountered along river banks, shorelines, and recreation sites near the Coeur d'Alene River. To better understand recreation activity on the Coeur d'Alene River, an observational study was conducted at 11 river access points and recreation sites over an eight-day period.

Our guiding questions for this study include:

1. How many visitors use each of the eleven river access points and recreation sites? Of visitors at these locations, how many children are present? Where are these visitors from?
2. Which recreational activities do visitors engage in?
3. How often are visitors on bare soil or grassy areas of river access points and recreation sites, where they may be at increased risk for lead exposure?
4. How often are visitors using hand-washing stations?

The report is intended for use by members of the Coeur d'Alene Restoration Partnership, Panhandle Health District, Basin Environmental Improvement Project Commission, and other interested stakeholders. This work will also be instrumental in the development of a survey of recreational users that will be conducted during the summer of 2020.

SUMMARY FINDINGS

- ❖ Recreation activity increases throughout the day and during the weekend
- ❖ Most visitors are Idaho and Washington residents
- ❖ The most popular recreation activities are camping, motorized watercraft use, and fishing
- ❖ Only one visitor was observed using a hand-washing station

PROTOCOL

Two researchers made observations at eleven river access points and river-adjacent recreation sites between July 18 and July 25, 2019. Each researcher was assigned to a route (Table 1). Route 1 began at Airport Rd. Park near Smelterville, ID and ended at Killarney Lake Access (Figure 1). Route 2 began at Rainy Hill Boat Launch and ended at Thompson Lake Boat Launch (Figure 2). Researchers travelled along their assigned route three times a day during a two-hour sampling shift (Table 2). All sites on each driving route were sampled within each shift.

Table 1. Pre-determined driving routes; the two routes were completed three times a day.

Driving Routes	
Route 1 (6 study sites)	Route 2 (5 study sites)
Airport Road Park	Rainy Hill Boat Launch
Cataldo Boat Launch	Medimont Boat Launch
IDFG Rose Lake Access	Harrison Marina
East Rose Lake Access	Anderson Lake Boat Launch
USFS Rose Lake Access	Thompson Lake Boat Launch
Killarney Lake Access	

Table 2. Timing of the three sampling shifts completed for the two driving routes.

Sampling Shifts	
Morning	5:30 AM – 7:30 AM
Afternoon	11:30 AM – 1:30 PM
Evening	5:30 PM – 7:30 PM

The researchers alternated between the first and last site on their route for each sampling shift. For example, the researcher assigned to Route 1 started at Airport Rd. Park for the morning shift, moved to Killarney Lake and Boat Ramp for the afternoon shift, and returned to Airport Rd. Park for the evening shift. This method optimized the researcher's time and limited excessive driving, while ensuring the study sites were sampled at a variety of times.

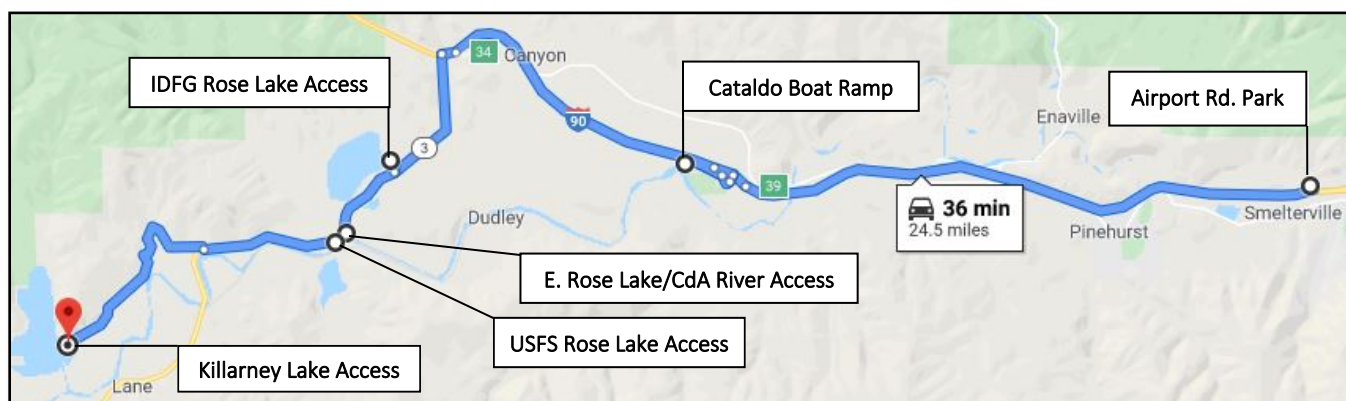


Figure 1. Driving Route 1, including from right to left: Airport Rd. Park, Cataldo Boat Ramp, IDFG Rose Lake Access, E. Rose Lake Coeur d'Alene River Access, USFS Rose Lake Access, and Killarney Lake Access.

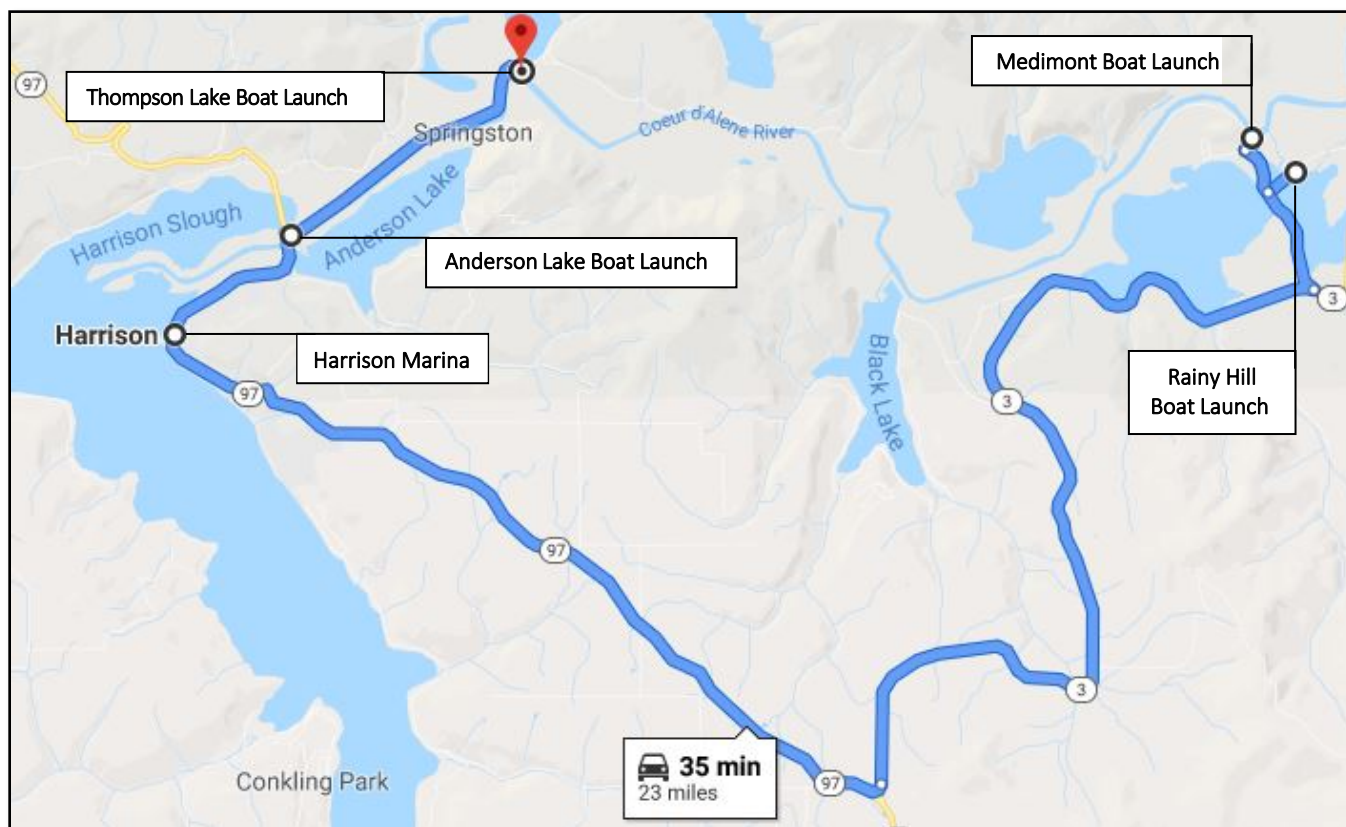


Figure 2. Driving Route 2, including Rainy Hill Boat Launch, Medimont Boat Launch, Harrison Marina, Anderson Lake Boat Launch, and Thompson Lake Boat Launch.

The researchers used paper forms to guide observations in the field (see Supplementary Materials). Two versions of the form were created to account for the two driving routes. For each study site, the researcher recorded visitation and recreation counts. Visitation counts included actual counts of the number of individuals present, in addition to individuals on bare soil or grass or using hand-washing stations. Recreation counts were recorded based on presence or absence of the activity and did not record the quantity of individuals participating. The researchers also made note of any additional information that could not be captured in the form. As a result of data collection method, it is likely visitors were double counted throughout the observation period. Data were entered and prepared in an Excel spreadsheet.

VISITATION COUNTS

- ❖ Adults and children
- ❖ Vehicles (categorized by license plate location) and boat trailers
- ❖ Visitors on bare soil or grass
- ❖ Visitors using a handwashing station (where applicable)

RECREATION COUNTS

- ❖ Recreation activities including fishing, swimming, boating, dirt-biking, and picnicking
- ❖ Additional activities not included in above list

RESULTS

VISITOR SUMMARY

The researchers recorded 931 visitors during the observation period and 40% of the visitors were children (Figure 3). Whether or not a visitor was counted as an adult or a child was subjective based on the best judgement of the researcher. Thus, total counts of children versus adults may not be completely accurate. Double counting of visitors is also likely to have occurred. Harrison Marina was the most visited access point (448 visitors) followed by Cataldo Boat Launch (111 visitors) and IDFG Rose Lake Access (108 visitors). The next most visited access points in descending order include: Killarney Lake Access (82 visitors), USFS Rose Lake Access (66 visitors), Medimont Boat Launch (36 visitors), Anderson Lake Boat Launch (23 visitors), Rainy Hill Boat Launch (22 visitors), and East Rose Lake Coeur d'Alene River Access (18 visitors). Thompson Lake Boat Launch (9 visitors) and Airport Rd. Park (8 visitors) were the least visited access points.

Total Visitors by Access Point

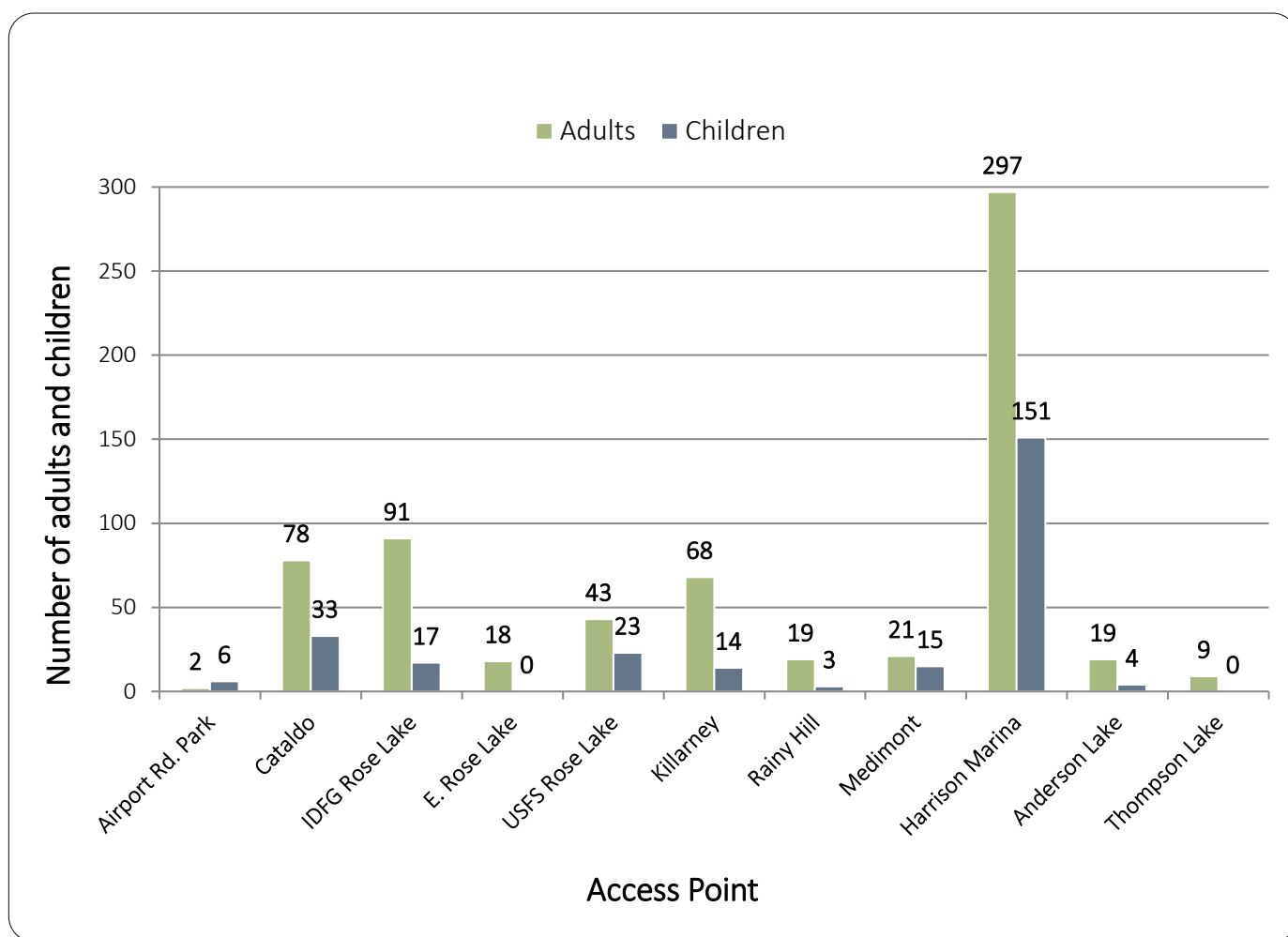


Figure 3. Total count of visitors recorded during the observation period, differentiated by adults and children.

The visitor summary table displays the total count of visitors during the observation period across all eleven study sites (Table 3). Results are arranged vertically by day and sample shift, and horizontally by study site. Shading has been utilized to aid in depiction of visitor volume. Where green denotes low visitor volume, red demonstrates high visitor volume. The intermediate light green, yellow, and orange shading shows volumes between low and high.

Table 3. Comprehensive visitor summary by access point across the eight-day observation period, including weekly totals and daily totals. These totals may include double counting. Shading from green to red demonstrates increases in visitor counts.

Visitor Summary																									
Access Point	7/18 (R)			7/19 (F)			7/20 (Sa)			7/21 (Sun)			7/22 (M)			7/23 (T)			7/24 (W)			7/25 (R)			Weekly Totals
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	
Airport Rd. Park	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	1	-	-	-	4	-	-	-	8	
Cataldo	-	1	-	-	9	2	1	6	9	-	21	22	1	1	8	-	1	12	-	3	-	-	5	9	111
IDFG Rose Lake	-	2	-	-	3	10	4	12	10	6	12	4	-	-	3	1	6	8	-	5	2	2	3	15	108
E. Rose Lake	-	-	-	-	-	-	2	-	-	-	1	4	-	-	2	-	9	-	-	-	-	-	-	18	
USFS Rose Lake	-	2	-	4	-	4	-	9	4	3	11	13	-	-	6	-	1	-	-	-	-	2	-	7	66
Killarney	-	-	6	-	1	4	2	10	10	2	12	-	2	3	1	-	1	2	-	3	5	2	6	10	82
Rainy Hill	-	2	1	-	2	4	2	-	-	2	3	-	-	-	1	-	-	-	-	-	-	5	-	22	
Medimont	-	-	-	-	3	2	1	2	-	-	4	8	-	4	4	-	4	-	-	-	-	-	4	36	
Harrison Marina	-	-	12	2	18	27	8	36	35	8	43	39	5	15	28	8	18	42	4	9	29	8	24	30	448
Anderson Lake	-	-	-	1	-	-	-	-	-	-	5	5	-	-	-	-	4	5	-	-	-	-	-	3	23
Thompson Lake				-	-	-	-	-	-	-	-	4	-	-	-	-	1	-	-	-	-	3	-	9	
Daily Totals	27			96			166			232			84			124			64			138			

VEHICLE SUMMARY

Researchers recorded 1,117 vehicles and 412 boat trailers during the observation period (Table 4). These counts may include double counted vehicles and boat trailers. Idaho (70.3%) and Washington (17.8%) were the most common license plate locations followed by Montana (3.7%), California (2.8%), and Texas (2.6%). The remaining 2.8% of license plates, in descending order of occurrence, included Canada, Oregon, Utah, Arizona, Minnesota, Colorado, New Mexico, Maine, New Jersey, and Nevada.

Table 4. Summary of license plate frequencies by location using common U.S. state abbreviations.

License Plate Summary															
Location	ID	WA	MT	CA	TX	Canada	OR	UT	AZ	MN	CO	NM	ME	NJ	NV
Count	785	199	41	31	29	8	6	5	3	3	2	2	1	1	1

RECREATION SUMMARY

The main recreation activities included on the observation form were fishing, swimming, boating, dirt-biking, and picnicking. Researchers were asked to record any additional recreation activities they observed. Certain recreation activity counts were categorized into groups for organizational purposes, but breakdowns of these categories are provided below.

The three most observed recreation activities during the observation period were camping (78), motorized watercraft use (61), and fishing (47). Counts of boating (57) were combined with jet-skiing (4). The recreation activities recorded with medium frequency include swimming (35), biking (33), picnicking (31), and non-motorized watercraft use (31). Use of non-motorized watercraft includes counts of kayaking (18), paddle-boarding (12), tubing (2), and canoeing (1). The least observed recreation activity is miscellaneous land activities (23). This category includes tanning and relaxing (18), ATV use (3), skateboarding (1), and birdwatching (1). Individualized recreation counts by study site can be found in Study Site Summaries.

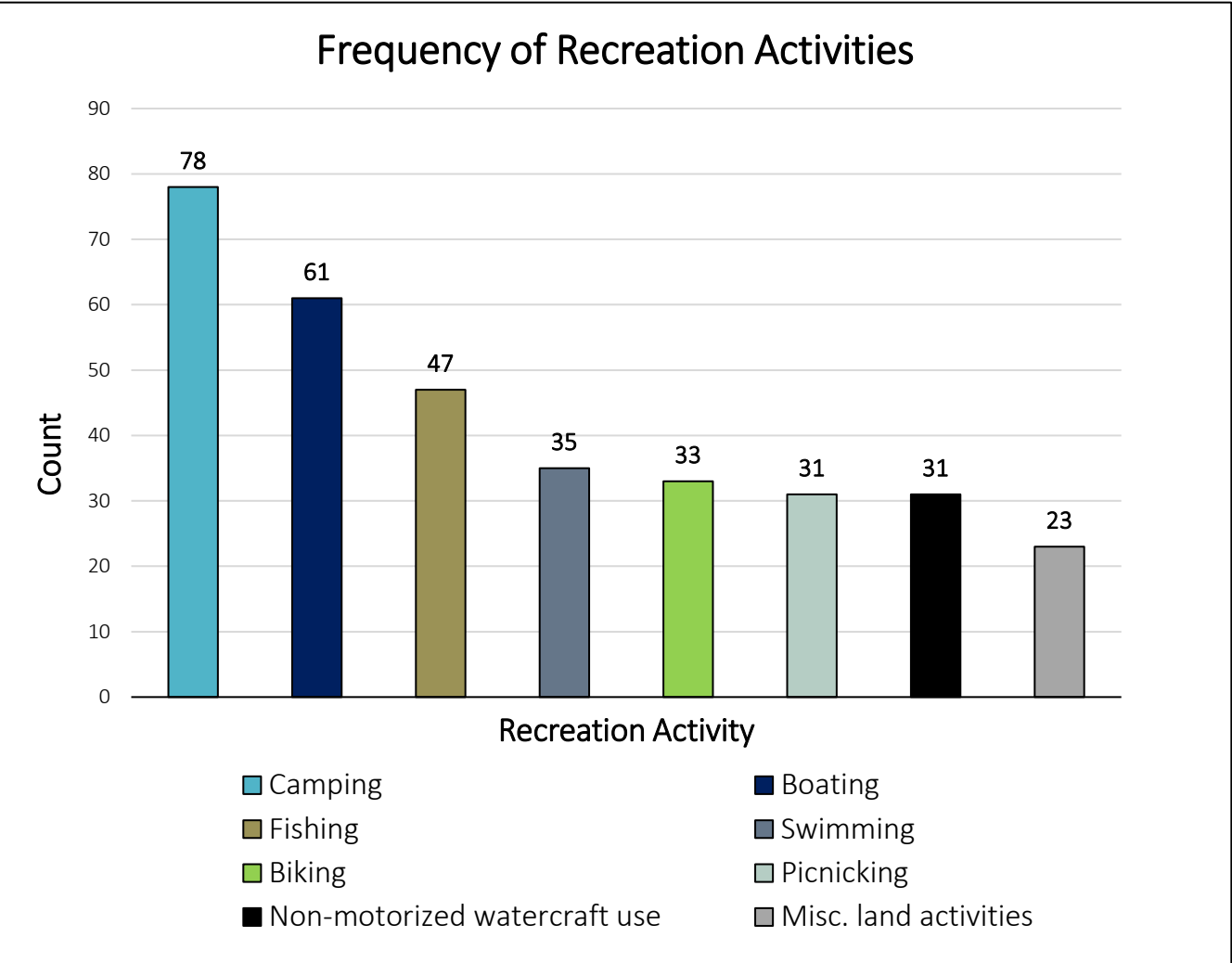


Figure 4. Comparison of recreation activity by frequency of occurrence.

HAND WASHING STATIONS

In 2019, The U.S. Environmental Protection Agency installed temporary hand washing stations at four of the eleven study sites: Cataldo Boat Launch, East Rose Lake Access, Rainy Hill Boat Launch, and Medimont Boat Launch. One visitor was observed utilizing a hand washing station at the Cataldo study site. The hand washing station at Rainy Hill had its soap dispenser removed. This information was reported to the appropriate source so that it could be replaced. Spending additional time observing at each study site would facilitate better understanding of hand washing station usage.

VISITORS ON BARE SOIL AND GRASS

While not all areas of bare soil and grass are contaminated, deviating from asphalt surfaces may increase recreationists' risk of exposure to contaminated soil. Visitors were observed on bare soil and grass at all sites except for the East Rose Lake Coeur d'Alene River Access, Thompson Lake Boat Launch, and Airport Rd. Park (Table 4). Researchers recorded 415 of 931 visitors (44.8%) on un-paved surfaces. Harrison Marina had the highest count of visitors on bare soil and grass, accounting for 87.7% of the 415 incidences. During nearly all sampling shifts at the Harrison Marina, visitors were observed on bare soil and grass due to the close proximity of the campground and public beach.

Table 5. Summary of visitors observed on bare soil and grass at the eleven study sites over the eight-day observation period.

Visitors on Bare Soil and Grass											
Access Point	Airport Rd. Park	Cataldo	IDFG Rose Lake	E. Rose Lake	USFS Rose Lake	Killarney	Rainy Hill	Medimont	Harrison Marina	Anderson Lake	Thompson Lake
Count	0	5	3	0	15	9	2	8	364	9	0

STUDY SITE SUMMARIES

Individual summary tables were created for the eleven study sites (Table 6-16). These tables include the total count of visitors (adults and children) and recreation activities. Results are arranged vertically by day and sampling shift, and horizontally by recreation activity. Weekly recreation totals are also included. Aerial images of the study sites are included in each site summary, including delineation of the primary area targeted by the researcher for observations (outlined in yellow). For water-based recreation activities, the researchers also observed the river and lakes. Furthermore, any recreation activity observed near a study site was also recorded and the approximate location was described to the best of the researcher's ability. All recreation activities were observed as present or absent. Activities that were observed but not categorized in the observation forms (see Supplementary Materials) are included in the written description.

AIRPORT RD. PARK

While the Airport Rd. Park is easily accessible from the highway, it received the least amount of use during the observation period (Figure 5). Eight visitors were observed at the study site, two adults and six children (Table 6). The recreation activities observed included swimming, kayaking, biking, skateboarding, and dog-walking. Most of the activity at this study site was conducted by unsupervised children. The site is located near an active rock quarry and in an underdeveloped activity with few recreation amenities. These factors may contribute to the site's relatively low usage.

Table 6. Summary of visitor (represented numerically) and recreation (symbolized with "X") counts for Airport Rd. Park. Visitor counts may include double counting.

Airport Rd. Park																									
Counts	7/18 (R)			7/19 (F)			7/20 (Sa)			7/21 (Sun)			7/22 (M)			7/23 (T)			7/24 (W)			7/25 (R)			Weekly Totals
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	
Adults	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	2
Children	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	6
Fishing	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Swimming	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	1
Boating	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Dirt-biking	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Picnicking	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0



Figure 5. Aerial image of Airport Rd. Park study site.

CATALDO BOAT RAMP

The Cataldo Boat Ramp is also accessible from the main highway and situated near the Old Mission State Park which is home to Idaho's oldest building, the Cataldo Mission (Figure 6). The site received relatively consistent use over the observation period, though the busiest day was Sunday. Researchers reported 78 adults and 33 children as well as several dogs (Table 7). The recreation activities recorded included swimming, fishing, boating, paddle-boarding, kayaking, jet-skiing, tanning, and picnicking. Garbage cans were overflowing on Monday, July 22, following increased weekend use.

Table 7. Summary of visitor (represented numerically) and recreation (symbolized with "X") counts for Cataldo Boat Ramp. Visitor counts may include double counting.

Cataldo Boat Ramp																									
Counts	7/18 (R)			7/19 (F)			7/20 (Sa)			7/21 (Sun)			7/22 (M)			7/23 (T)			7/24 (W)			7/25 (R)			Weekly Totals
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	
Adults	-	1	-	-	6	2	1	6	2	-	12	16	1	1	8	-	1	9	-	3	-	-	3	6	78
Children	-	-	-	-	3	-	-	-	7	-	9	6	-	-	-	-	-	3	-	-	-	-	2	3	33
Fishing	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	2
Swimming	-	-	-	-	X	-	-	-	X	-	X	-	-	-	-	-	-	X	-	-	-	-	X	X	6
Boating	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	X	X	3
Dirt-biking	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Picnicking	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	1



Figure 6. Aerial image of the Cataldo Boat Ramp study site.

IDFG ROSE LAKE ACCESS

The IDFG Rose Lake Access (Figure 7) experienced relatively consistent use across the observation period, with visitation concentrated during the weekend days. Researchers reported 91 adults and 17 children and a few dogs were observed (Table 8). The recreation activities observed included fishing, boating, swimming, kayaking, paddle-boarding, and picnicking. The presence of campers, tents, and recreational vehicles suggests overnight use.

Table 8. Summary of visitor (represented numerically) and recreation (symbolized with “X”) counts for IDFG Rose Lake Access. Visitor counts may include double counting.

IDFG Rose Lake Access																									
Counts	7/18 (R)			7/19 (F)			7/20 (Sa)			7/21 (Sun)			7/22 (M)			7/23 (T)			7/24 (W)			7/25 (R)			Weekly Totals
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	
Adults	-	2	-	-	3	6	4	8	9	6	12	4	-	-	3	-	5	7	-	4	2	2	2	12	91
Children	-	-	-	-	-	4	-	4	1	-	-	-	-	-	-	1	1	1	-	1	-	-	1	3	17
Fishing	-	-	-	-	X	X	X	X	X	X	X	-	-	-	X	-	-	X	-	-	-	-	-	X	10
Swimming	-	-	-	-	-	X	-	X	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Boating	-	-	-	-	X	-	-	-	X	X	X	X	-	-	-	-	X	X	-	X	-	-	-	X	9
Dirt-biking	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Picnicking	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	2

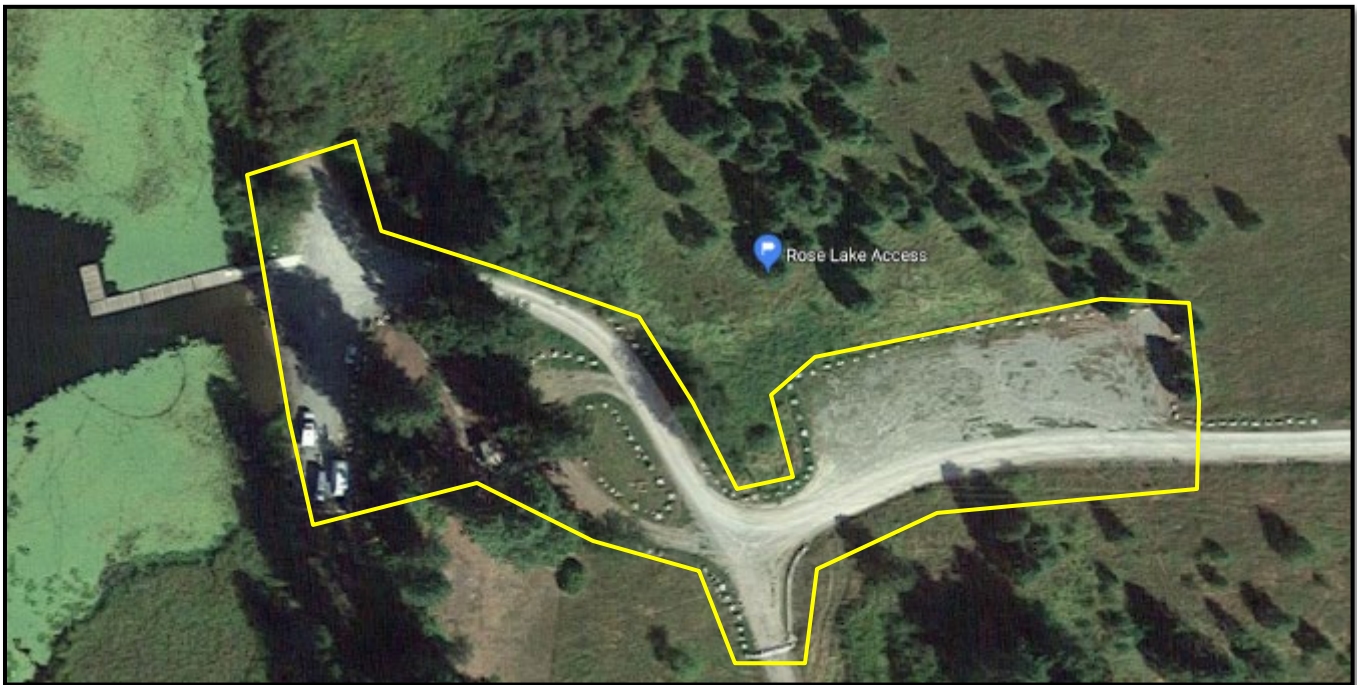


Figure 7. Aerial image of the IDFG Rose Lake Access study site.

EAST ROSE LAKE COEUR D'ALENE RIVER ACCESS

The East Rose Lake Coeur d'Alene River Access received inconsistent use that was not specifically concentrated during the weekend days (Figure 8). On certain days, the study site received no use at all. The visitor count included 18 adults and no children (Table 9). The recreation activities recorded included boating and fishing. Recreationists primarily used this location to put in at the river.

Table 9. Summary of visitor (represented numerically) and recreation (symbolized with “X”) counts for East Rose Lake Coeur d'Alene River Access. Visitor counts may include double counting.

East Rose Lake Coeur d'Alene River Access																									
Counts	7/18 (R)			7/19 (F)			7/20 (Sa)			7/21 (Sun)			7/22 (M)			7/23 (T)			7/24 (W)			7/25 (R)			Weekly
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	Totals
Adults	-	-	-	-	-	-	2	-	-	-	1	4	-	-	2	-	9	-	-	-	-	-	-	-	18
Children	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Fishing	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	1
Swimming	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Boating	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	X	-	-	-	-	-	-	-	2
Dirt-biking	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Picnicking	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0



Figure 8. Aerial image of the East Rose Lake Coeur d'Alene River Access study site.

USFS ROSE LAKE ACCESS

The USFS Rose Lake Access received concentrated use during the weekend days (Figure 9). Researchers observed 43 adults and 23 children (Table 10). The recreation activities recorded included picnicking, dirt-biking and all-terrain vehicle use, boating, and fishing. Two groups of visitors camped at this study site throughout the observation period.

Table 10. Summary of visitor (represented numerically) and recreation (symbolized with “X”) counts for USFS Rose Lake Access study site. Visitor counts may include double counting.

USFS Rose Lake Access																									
Counts	7/18 (R)			7/19 (F)			7/20 (Sa)			7/21 (Sun)			7/22 (M)			7/23 (T)			7/24 (W)			7/25 (R)			Weekly Totals
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	
Adults	-	1	-	1	-	1	-	6	2	2	11	10	-	-	3	-	1	-	-	-	-	1	-	4	43
Children	-	1	-	3	-	3	-	3	2	1	-	3	-	-	3	-	-	-	-	-	-	1	-	3	23
Fishing	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Swimming	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Boating	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	1
Dirt-biking	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Picnicking	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-	X	X	4



Figure 9. Aerial image of USFS Rose Lake study site.

KILLARNEY LAKE ACCESS

The Killarney Lake Access received consistent and repeated use (Figure 10). The visitor count included 68 adults and 14 children, in addition to several dogs (Table 11). The recreation count included fishing, boating, swimming, kayaking, and picnicking. Several groups of visitors camped in recreational vehicles and campers for most of the observation period.

Table 11. Summary of visitor (represented numerically) and recreation (symbolized with “X”) counts for Killarney Lake Access study site. Visitor counts may include double counting.

Killarney Lake Access																									
Counts	7/18 (R)			7/19 (F)			7/20 (Sa)			7/21 (Sun)			7/22 (M)			7/23 (T)			7/24 (W)			7/25 (R)			Weekly Totals
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	
Adults	-	-	4	-	1	4	2	8	9	2	10	-	2	2	1	-	1	2	-	3	3	2	6	6	68
Children	-	-	2	-	-	-	-	2	1	-	2	-	-	1	-	-	-	-	-	2	-	-	4	14	
Fishing	-	-	-	-	-	X	X	X	-	X	-	-	-	-	-	X	X	X	-	X	-	-	-	-	8
Swimming	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	2
Boating	X	-	-	-	-	-	-	-	X	X	X	-	-	-	-	-	-	-	X	X	-	-	-	-	6
Dirt-biking	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Picnicking	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	-	-	-	-	2



Figure 10. Aerial image of Killarney Lake Access study site.

RAINY HILL BOAT LAUNCH

The Rainy Hill Boat Launch received intermittent use, not specifically concentrated during the weekend days (Figure 11). Researchers observed 19 adults and 3 children (Table 12). Fishing and boating were the most recorded recreation activity at this study site, recreationists were also observed jet-skiing and canoeing. A visitor was observed relaxing and playing with a dog on a small dock near the boat ramp, and a bird watcher was recorded observing an osprey nest on Rainy Hill Rd.

Table 12. Summary of visitor (represented numerically) and recreation (symbolized with “X”) counts for Rainy Hill Boat Launch. Visitor counts may include double counting.

Rainy Hill Boat Launch																									
Counts	7/18 (R)			7/19 (F)			7/20 (Sa)			7/21 (Sun)			7/22 (M)			7/23 (T)			7/24 (W)			7/25 (R)			Weekly Totals
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	
Adults	-	2	1	-	2	4	2	-	-	1	3	-	-	-	1	-	-	-	-	-	-	3	-	19	
Children	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	2	-	3	
Fishing	-	-	X	-	-	X	X	-	-	-	X	X	-	-	X	-	X	-	-	-	-	X	-	-	8
Swimming	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Boating	-	-	X	-	X	X	-	-	-	-	-	X	-	-	-	-	X	-	-	-	-	-	X	-	6
Dirt-biking	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Picnicking	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	2



Figure 11. Aerial image of Rainy Hill Boat Launch study site.

MEDIMONT BOAT LAUNCH

This study site received inconsistent use during the observation period with increased activity during the weekend (Figure 12). The visitor count included 21 adults and 15 children (Table 13), with the same truck and boat trailer parked at the boat launch for three days in a row. The recreation activities recorded included swimming, boating, fishing, and picnicking. Four of the five counts of fishing were observed not at the boat launch, but at an unofficial access point on Medimont Rd. A pair of anglers park their vehicle on the side of the road and walk down the bank to fish on Medicine Lake. Another pair of recreationists were observed launching paddle boards into the lake at the same access point.

Table 13. Summary of visitor (represented numerically) and recreation (symbolized with “X”) counts for Medimont Boat Launch. Visitor counts may include double counting.

Medimont Boat Launch																									
Counts	7/18 (R)			7/19 (F)			7/20 (Sa)			7/21 (Sun)			7/22 (M)			7/23 (T)			7/24 (W)			7/25 (R)			Weekly Totals
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	
Adults	-	-	-	-	3	2	1	2	-	-	3	4	-	2	2	-	1	-	-	-	-	-	-	1	21
Children	-	-	-	-	-	-	-	-	-	-	1	4	-	2	2	-	3	-	-	-	-	-	-	3	15
Fishing	-	X	-	-	-	-	X	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	X	5
Swimming	-	-	-	-	-	-	-	-	-	-	-	X	-	-	X	-	X	-	-	-	-	-	-	X	4
Boating	-	-	-	-	X	X	-	X	-	-	X	X	-	-	-	-	-	-	-	-	-	-	-	-	5
Dirt-biking	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Picnicking	-	-	-	-	-	-	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	-	-	X	3



Figure 12. Aerial image of Medimont Boat Launch study site.

HARRISON MARINA

The Harrison Marina received the most consistent and highest levels of use during the observation period (Figure 13). The researcher recorded 297 adults and 151 children (Table 14), many of whom appeared to be staying at the RV park or in the camping site near the marina. The recreation activities observed include fishing, swimming, boating, picnicking, kayaking, and paddle-boarding. These counts are estimated because of the expansiveness of the site and high foot traffic. Visitation and activity level increased throughout the day.

Table 14. Summary of visitor (represented numerically) and recreation (symbolized with “X”) counts for Harrison Marina. Visitor counts may include double counting.

Harrison Marina																										
Counts	7/18 (R)			7/19 (F)			7/20 (Sa)			7/21 (Sun)			7/22 (M)			7/23 (T)			7/24 (W)			7/25 (R)			Weekly	
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	Totals	
Adults	-	-	3	2	12	17	8	23	28	8	27	18	5	9	17	6	14	25	4	7	22	8	15	19	297	
Children	-	-	9	-	6	10	-	13	7	-	16	21	-	6	11	2	4	17	-	2	7	-	9	11	151	
Fishing	-	-	-	-	-	-	X	-	X	X	X	-	X	-	-	-	-	-	-	-	-	X	-	X	7	
Swimming	-	-	X	-	X	X	-	X	X	-	X	X	-	X	X	-	X	X	-	-	X	-	X	X	14	
Boating	-	-	X	X	X	-	X	-	X	-	X	X	-	X	X	X	X	X	-	X	X	X	X	X	17	
Dirt-biking	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
Picnicking	-	-	X	-	X	-	X	X	X	-	X	X	-	X	X	-	X	X	-	-	X	-	X	X	14	



Figure 13. Aerial image of the Harrison Marina study site.

ANDERSON LAKE & THOMPSON LAKE BOAT LAUNCHES

Anderson Lake and Thompson Lake Boat Launches (Figures 14 and 15, respectively) received inconsistent use during the observation period. No activities were observed on several days. The researchers observed 19 adults and 4 children at the Anderson Lake study site (Table 15), in addition to several dogs. The researchers observed 10 adults at the Thompson Lake study site (Table 16).

No children were observed at Thompson Lake Boat Launch. The recreation activities recorded at Anderson Lake Boat Launch include swimming, boating, floating, paddle-boarding, and canoeing. The recreationists swimming and floating in the river were observed sitting on bare ground, as were their dogs. The recreation activities observed at Thompson Lake Boat Launch included fishing, boating, picnicking, kayaking, and paddle-boarding. An angler was also observed near the Thompson Lake Boat Launch, fishing directly from East Blue Lake Rd.

Table 15. Summary of visitor (represented numerically) and recreation (symbolized with “X”) counts for Anderson Lake Boat Launch. Visitor counts may include double counting.

[illegible]

Table 16. Summary of visitor (represented numerically) and recreation (symbolized with “X”) counts for Thompson Lake Boat Launch. Visitor counts may include double counting.

[illegible]



Figure 14. Aerial image of Anderson Lake Boat Launch.



Figure 15. Aerial image of Thompson Lake Boat Launch study site.

DISCUSSION

OUTREACH

Harrison Marina, Cataldo Boat Launch, Killarney Lake Access, and IDFG Rose Lake Access received the most use. These access points are suitable targets for increased outreach efforts. In particular, the Harrison Marina provides the best opportunity to reach a range of recreationists. Access points near campgrounds or that receive overnight use could also be a focus of future outreach efforts. While remediation efforts are ongoing, recreationists who stay at these access points for prolonged periods may be at a higher risk for exposure to environmental lead contamination. The USFS Rose Lake Property is an example of such a site, where recreationists camped for several nights and on potentially contaminated dirt and grass surfaces. At sites where overnight camping is popular, additional efforts to educate recreationists on proper hygiene behaviors to avoid exposure would be beneficial.

SURVEY ADMINISTRATION

We will conduct a survey in Summer 2020 targeting water-based recreationists. Broadly, we seek to better understand the differences between local and non-local recreationists. The information obtained from this observational study will be considered but may not be the sole criteria used to decide on surveying locations. For example, we may choose to proportionally survey across all sites based on visitation counts. Additionally, we are conducting investigations into the viability of surveying at boat check stations along the Coeur d'Alene River.

ACKNOWLEDGEMENTS

Many thanks to our contacts from the Restoration Partnership Basin Environmental Improvement Project Commission for their assistance in developing the observation protocol and offering feedback on the initial draft report. We would also like to thank Panhandle Health District for providing us with a tour of the eleven study sites prior to completion of this observational study and their continued support of University of Idaho research in the Coeur d'Alene Basin.

SUPPLEMENTARY MATERIALS

OBSERVATION FORM: ROUTE 1

Coeur d'Alene River Observation Form
Route 1

Date: July / ____ / 2019

Shift (please circle): Morning Afternoon Evening

Name: _____

Please document the time when you arrive at the access point. For visitation counts, write the number of total visitors, vehicles, boat trailers, and visitors on bare soil or grass. For recreation counts, mark an "X" if activity is observed or "N/A" if not observed. Use "Other" category to describe activities observed not included in the list. For Cataldo and IDFG Rose Lake Access, mark an "X" in note section if you see visitors using handwashing stations and "N/A" for no use.

Access Point	Arrival Time	Visitation Counts (note # of each category)					Recreation Counts (mark with X or N/A)					
		Adults	Children	Vehicles (categorize by state)	Boat Trailers	Visitors on Bare Soil/Grass	Fishing	Swimming	Boating	Dirt-biking	Picnicking	Other
Airport Rd. Park												
Cataldo Boat Ramp*												
Rose Lake Access*												
East Rose Lake/CdA River Access												
USFS Rose Lake Property												
Killarney Lake & Boat Ramp												
Additional Notes: <u>Handwashing counts</u> Cataldo: Rose Lake Access:												

OBSERVATION FORM: ROUTE 2

Coeur d'Alene River Visitation Count Form Route 2												
Date: July / ____ / 2019												
Shift (please circle): Morning Afternoon Evening												
Please document the time when you arrive at the access point. For visitation counts, write the number of total visitors, vehicles, boat trailers, and visitors on bare soil or grass. For recreation counts, mark an "X" if activity is observed or "N/A" if not observed. Use "Other" category to describe activities observed not included in the list. For Rainy Hill and Medimont, mark an "X" in note section if you see visitors using handwashing stations and "N/A" for no use.												
Visitation Counts (note # of each category)						Recreation Counts (mark with X or N/A)						
Access Point	Arrival Time	Adults	Children	Vehicles (categorize by state)	Boat Trailers	Visitors on Bare Soil/Grass	Fishing	Swimming	Boating	Dirt-biking	Picnicking	Other
Rainy Hill Boat Launch*												
Medimont Boat Launch*												
Harrison Marina												
Anderson Lake Boat Launch												
Thompson Lake Boat Launch												

Additional Notes:

Handwashing count:

Rainy Hill:

Medimont: