

# River management during the COVID pandemic: A survey of river professionals



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Confluence Research and Consulting • May 2020

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## Acknowledgement

*We sincerely thank the many river managers and river users nation-wide who completed the survey, often including thoughtful written comments. You are the experts who know these special places, and the time you took in the midst of the COVID crisis reflects your unwavering commitment to caring for our nation's rivers. Confluence donated time and resources to collect, analyze, and report the data, and Risa Shimoda at the River Management Society provided the sampling list and web-based forums for inviting respondents and disseminating results.*

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## Executive summary / overall conclusions

Confluence researchers developed the following conclusions based on our analysis of survey responses; conversations over the past three months with dozens of people who care about river management; and involvement with COVID-related webinars, operating plans, and other documents sent to us by agency staff, outfitters, and others. **This conceptual summary is provided up front, followed by an introduction, study methods, and reporting of data and comments.**

### ***Interest in sharing***

A common narrative from the federal government regarding COVID guidance is that state and local jurisdictions should take precedence; a subsequent corollary is that national land managing agencies have not been collecting, disseminating, or assessing such information. Basic CDC guidance addresses interactions in outdoor settings, but specific and consistent protocols for public recreation use are absent. Some states are trying to fill this void, but ***most on-the-ground decision-makers are wading through these issues on their own*** as they open their rivers and figure out what guidance to provide. ***There is a clear imperative to share information*** – managers want to know about problems, who is doing what, and solutions that work. This survey can help start that process, but there is a need to follow through. We are unaware of any organized effort beyond the work donated for this study (by Confluence, RMS, and the river managers and users who completed the survey).

### ***It's early***

Many rivers are opening for the season as summer arrives, so they have not yet seen seasonal use increases. Others are opening as states begin to relax varying forms of COVID stay-home restrictions. While some have begun to develop COVID-related protocols for river use, few have much experience with new situations or how river users will respond to them.

### ***Diverse agency responses***

The “easy” choices are fully closed or fully open, but most rivers are in the more difficult territory in between, and there is inconsistency among responses. This may reflect state and/or local differences, but there is inconsistency across jurisdictions in the same area or on the same river, and even within agencies. This is confusing for river users, who are already challenged with learning new norms for how to conduct themselves on river trips.

### ***Asking for good behavior, rather than enforcing it***

For the most part, agencies are depending on social pressure and informal norms rather than enforcement. The focus is on educating river users about reducing densities, keeping distant, and practicing good sanitation. The open question is how well this works over time, as river users see a variety of behaviors and enforce informal social norms differently. In some places one might get sanctions for not wearing a mask, while in other places a mask might bring ridicule. As case rates change and people become comfortable in different settings, it is unclear what norms will be followed, and norms will probably vary by region.

### ***Sh\*t still happens***

As one comment noted, “As usual, it comes down to poop and litter.” Restrooms remain a major concern as possible vectors for COVID infections. If closed or un-stocked, visitors may vandalize facilities or create nearby human waste problems. If stocked, toilet paper or hand sanitizer may be stolen due to perceived shortages. Open restrooms may require more frequent cleaning by staff that require PPE or have other duties. A common response is leaving restrooms open, but encouraging visitors to bring their own TP.

### ***Crowding occurs at accesses, with fewer problems on the river***

Put-ins, take-outs, and associated parking lots are the pinch point. Common remedies are to block off some areas, suggest more organized queuing, and consider scheduling to flatten the peaks. Few have yet implemented the latter more intensive management options.

### ***Mixing households is challenging***

Commercial trips have avoided mixing households by separating groups into independent boats, or suggesting customers organize their own pods for charter trips. Shuttles are particularly problematic. Sanitizing buses is one issue, but it is hard to keep households distant within vehicles. Some outfitters are contemplating capacities of 15-18 in buses that pre-COVID carried 50. Others are planning to shuttle every household’s car – a boon for shuttle drivers if that is an industry. Private trips have similar challenges.

### ***Going forward***

This survey and report are the start of what should be a larger project. As the summer season progresses and COVID restrictions change, it’s important to document the changes in management and see what works and what doesn’t. Survey respondents have shown themselves to be a committed panel of river experts, and it would be great to follow up with them to share creative new ideas.

## Introduction

The COVID-19 pandemic has created a unique time in America's history, from national lock-down to subsequent re-emergence. We have fundamentally shifted our behaviors and how we interact, including the ways we conduct recreation on public lands and waters. As of May 2020, the US is moving towards opening states and/or areas within them, but the chances of a normal summer recreation season are slim.

Rivers are managed by many agencies across federal, state, and local jurisdictions, and there are no standards providing specific direction about how to adjust management in these unprecedented times. As one respondent put it, "It's everyone's first pandemic." Coupled with uncertainty about how COVID will progress in the coming months, it can be hard to see a way forward.

The River Management Society (RMS) sponsored a recent Confluence webinar on this topic; over 100 people signed up, representing federal/state/local agencies and NGOs/outfitters/private boaters from Alaska to Florida. Follow-up mailings, unsolicited operating plans sent by outfitters and managers, and a second RMS webinar with state river managers show continuing ***interest in best practices and good ideas*** from across the country. In the absence of national initiatives to assess COVID mitigations and reopening strategies, Confluence and RMS have worked to fill the void by systematically surveying river professionals about these topics.

The goal of the survey is to organize data about river management strategies such as closures, social distancing, and sanitation practices during the pandemic. Because of the rapidly changing environment, it was important to establish baseline information and document ideas before the summer season began, without waiting for funding or other action from agencies challenged by the COVID crisis.

## Methods

Questions focused on assessing river use, and documenting management decisions about issues such as parking and access, restrooms, distancing on ramps and on the river, commercial and private use, communication strategies, education/enforcement strategies, and compliance.

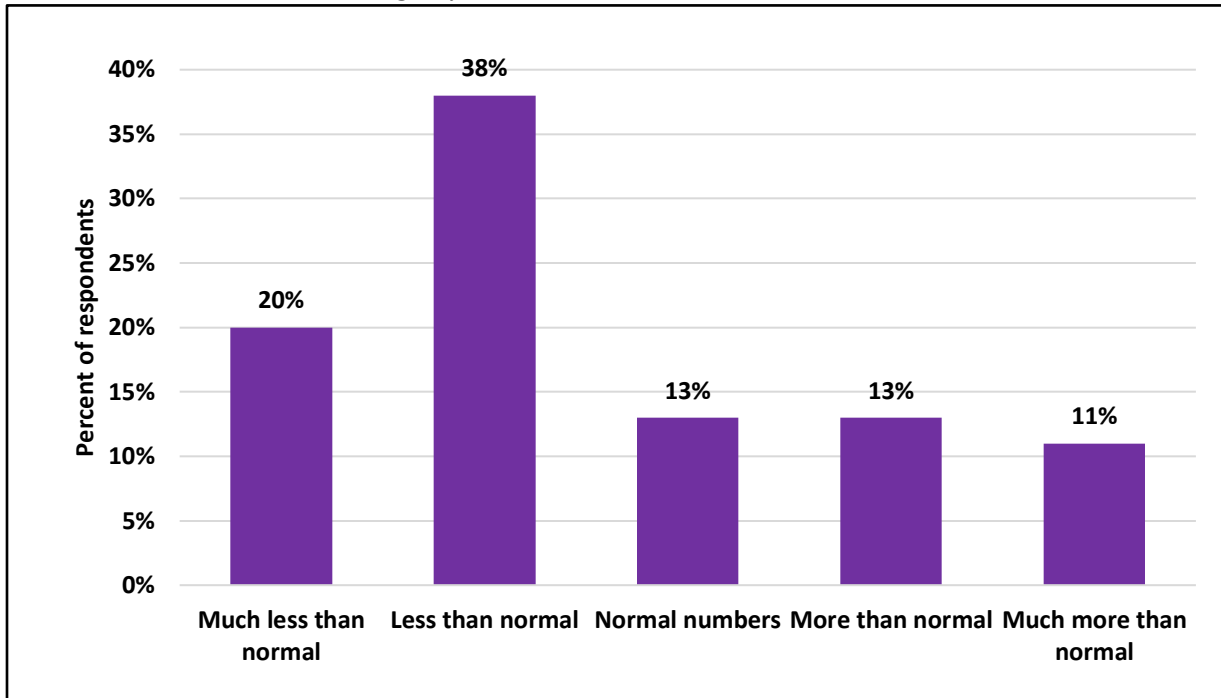
- The survey was initially sent on May 7, 2020, with reminder invitations on May 11, 18, and 20.
- The survey was sent to everyone on the RMS membership list; this includes staff in federal, state, and local agencies, staff at non-governmental (NGO) conservation or recreation advocacy organizations, academics, environmental consultants, and outfitters, private boaters, and anglers. 323 people clicked the link, and 76 of those (25%) completed the survey. Many respondents are in river management positions, although others were invited to report on rivers they knew. Respondents might best be characterized as an expert panel.
- Respondents were from 24 states and all parts of the country.
- Most respondents answered for river segments (68%) or groups of sites on a river (24%), a few for a single site (3%).
- Respondents reported on rivers managed by a variety of agencies, including several with overlapping jurisdictions (so totals below add to greater than 100%). Respondents were not representing official policies, but managing entities included US Forest Service (40%), Bureau of Land Management (36%), National Park Service (18%), counties (16%), cities/towns (13%), state parks (12%), state resource agencies (10%), non-governmental organizations (10%), US Fish and Wildlife Service (9%), and Bureau of Reclamation (1%).
- In addition to checking fixed-choice responses, many people typed in individual comments. Example comments are given to represent the range for each subject area.

**Question-by-question results are provided below.** For each topic we report simple frequency distributions and example comments from individual respondents. It is important to recognize that **the overall goal is to represent ideas about best practices.** Because the respondents are not a random representation of all rivers or river managers nationwide, **percentages in the different response categories should be viewed as roughly approximate** rather than definitive.

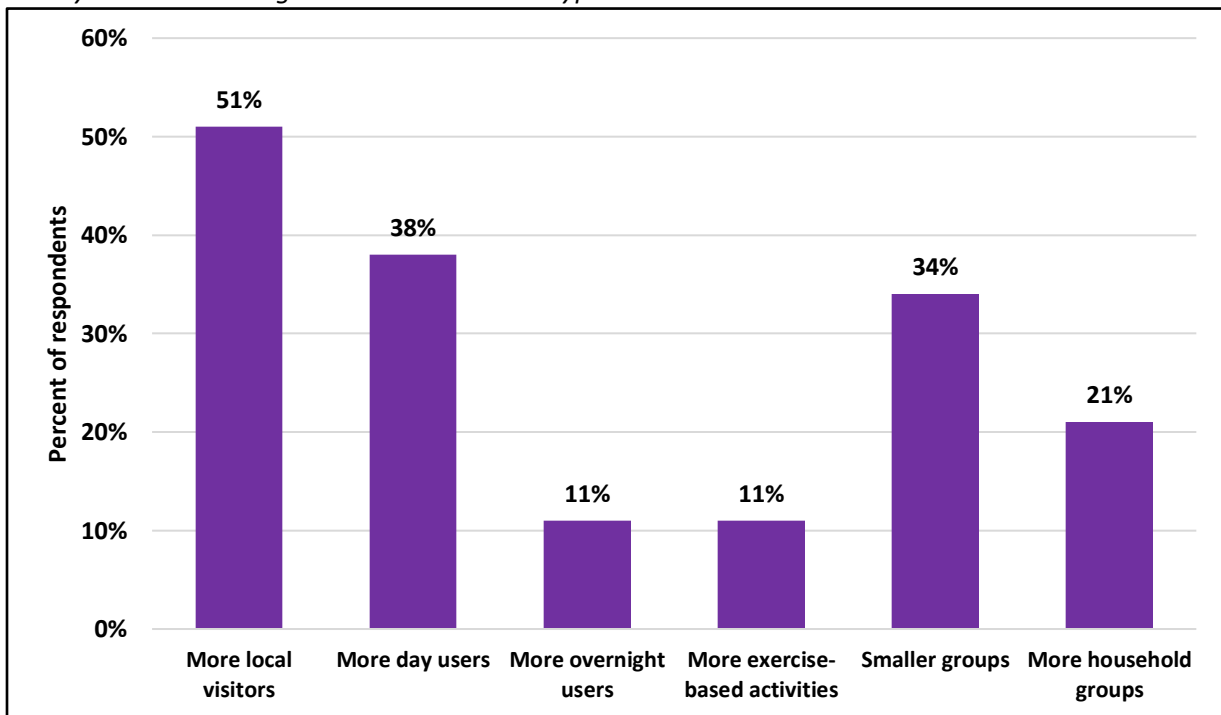
## Results

### Current use

*How much use has been occurring at your river since the COVID-19 outbreak?*



*Have you noticed changes in activities or user types since the COVID-19 outbreak?*

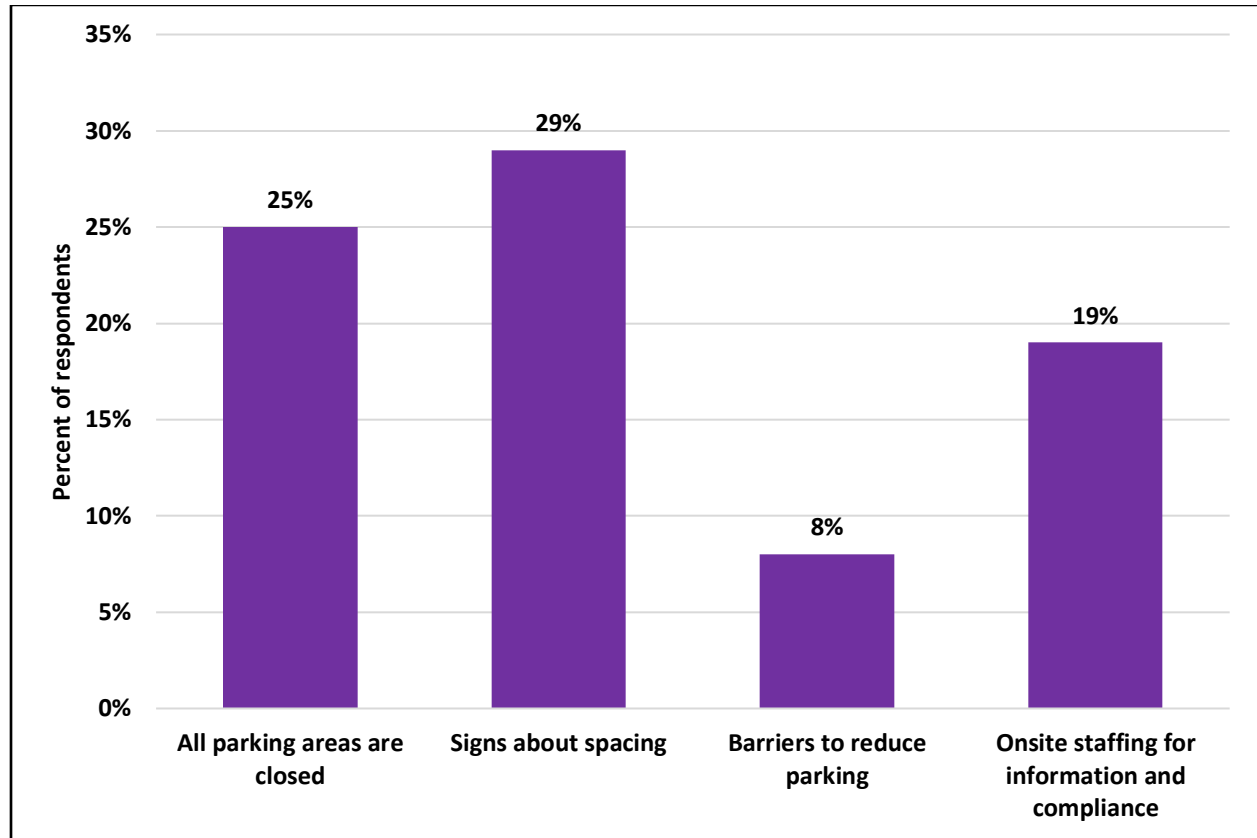


*Example comments from individual respondents about numbers and types of use:*

- TONS of recreational boaters from all over the state, but no commercial outfitters (this is typically high season).
- The high increase in use has been by hikers (hiking along the Appalachian Trail), not by boaters, however it has impacted our access areas.
- Much more than normal for hike-in fishing, less than normal for wilderness float trips.
- On-water activity has been typical for this time of year; much higher numbers of people walking and biking along the river.
- Developed sites are closed so use has been pushed to dispersed forest camping.
- Developed sites are closed so use has been pushed to dispersed forest camping. Boaters are going to boat. My general sense is that we're seeing normal or greater use for spring runs. Locals are doing more local runs on other segments.
- The state closed travel from out of state except for essential services. That leaves in-state only and mostly local users. This will likely change soon.
- We are still in our off-season so there is very little use of any kind.
- No outfitted use currently. Out of state and county not welcomed by locals. Poor behavior by locals on COVID behaviors.
- The rivers are just opening up for the season. We are expecting a small increase in local use and a decline in non-local use.
- Significantly more people running/walking/biking their shuttle.
- No commercial groups, but private boaters have been functioning about the same as a typical year.

## Parking at access areas

What parking actions have you taken at your river? Check all that apply.



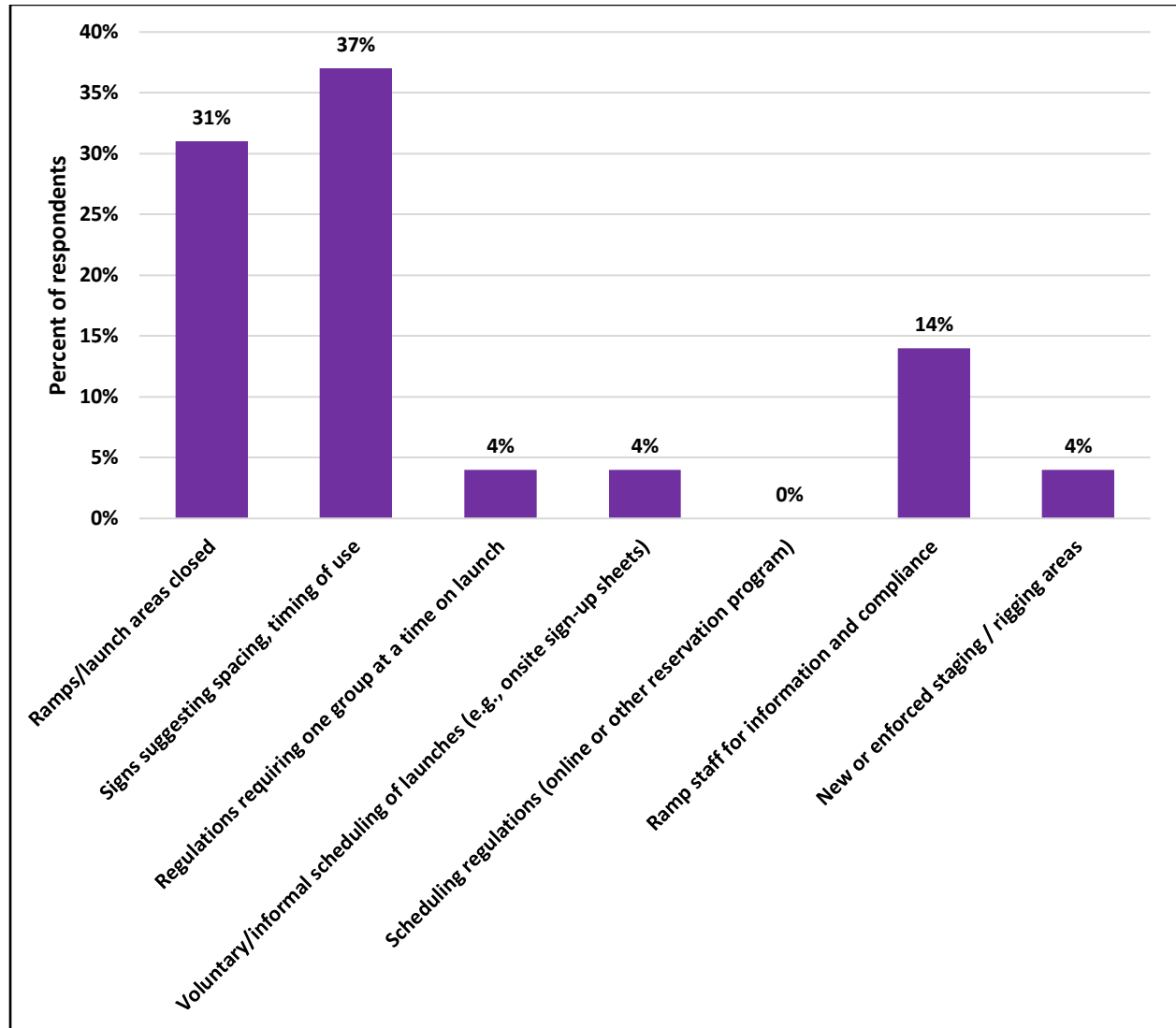
Example comments from individual respondents about parking:

- When on-site, field staff provide public information. Everything is open as usual, and mostly unstaffed as usual.
- Parking space is at premium in most of our developed boating sites. Crowded boat put-ins/take outs will be difficult to police. People will have to be courteous to each other. Unfortunately, I have seen poor behavior already with social distancing.
- Some parking areas closed (e.g. national forest, some state parks), but only those which are overcrowded.
- All parking areas are open and fully packed with overflow roadside parking at levels rivaling 4<sup>th</sup> of July.
- No major changes, but we do have some onsite staffing at the put-in to help limit the number of individuals at the boat ramp and in the parking areas at one time.
- Entries are dispersed enough that crowding, or even interactions, would be rare. Climbing area lots are fenced off and signed “closed.”



## Boat ramps

What actions have you taken at your river's access points? Check all that apply.



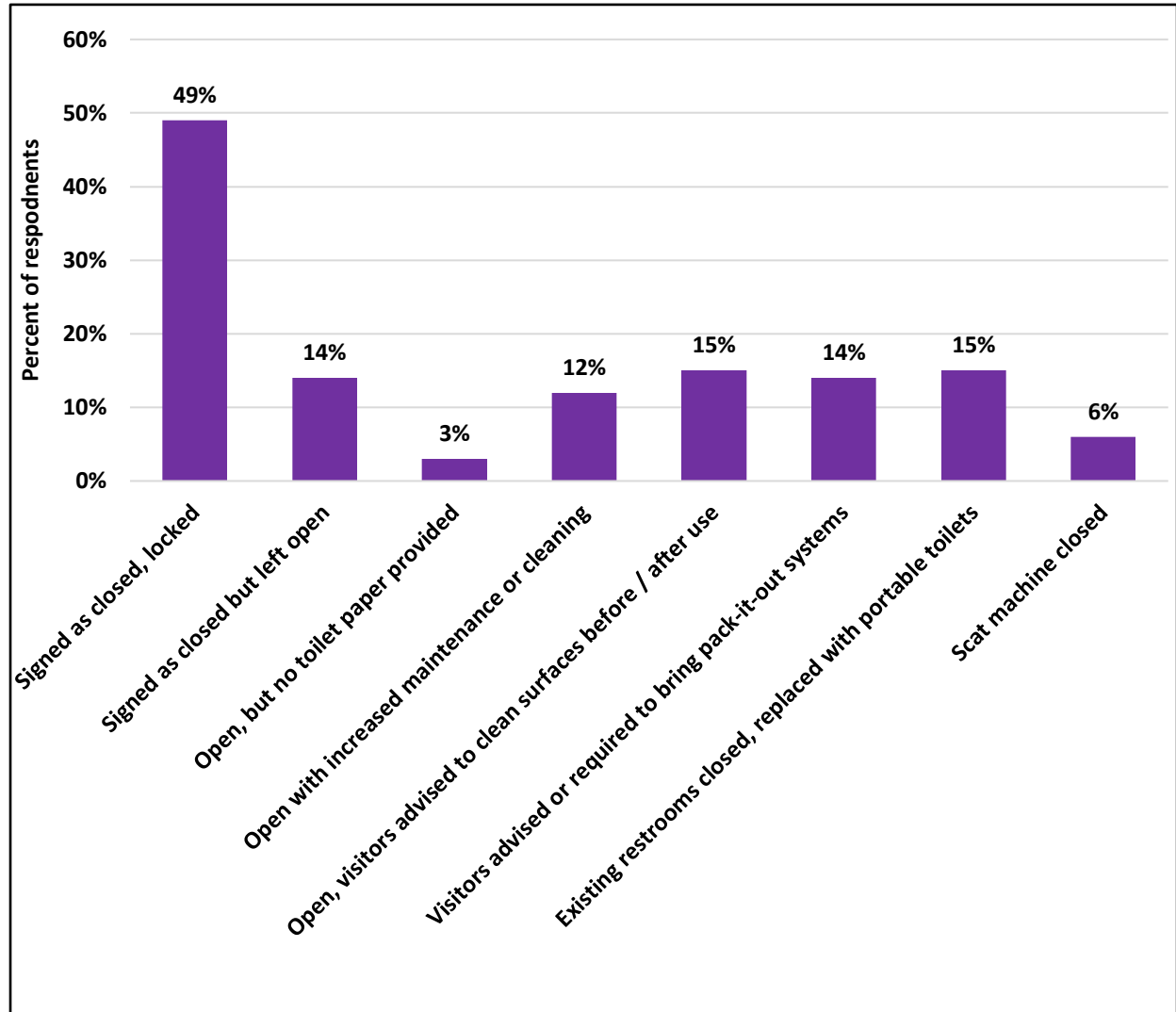
Example comments from individual respondents about boat ramps:

- Managing traffic will be challenging. Signs and advanced direction at check-in would be wise.
- Mostly the same, but if a seasonal dock is usually in place, they have not been put in the water yet. Staff is reduced for maintenance, help, etc.
- Again, very mixed bag across the state. As we enter reopening now, some ramps have modified parking, traffic and launch lanes, setting up rigging areas away from staging areas, etc. New signage noting social distancing is also in place in some areas.
- The take out is not staffed, so people are on their own to follow suggested spacing.
- Variable depending upon jurisdiction. During peak shutdown, certain ramps were over capacity on warm spring days.

- Up to the outfitter/visitor.
- With phased-in reopening, "household" groups can remain together, groups of 10 will be allowed in Phase 1 counties. Social distancing encouraged at beaches and gravel bars, but is not well enforced.
- We don't have any restrictions on physical distancing. We have posted signs on our kiosks regarding the Governor's guidance, but it's well known that folks don't read the signs we post or listen to the guidance provided by other agencies (they continue to travel out of state to recreate).
- No rafting of boats on waterways. Must remain underway at all time unless exigent circumstances or anchored for fishing.
- Use still not causing these kinds of problems, as far as I know.

## Restrooms

What actions have you taken regarding restrooms at your river? Check all that apply.



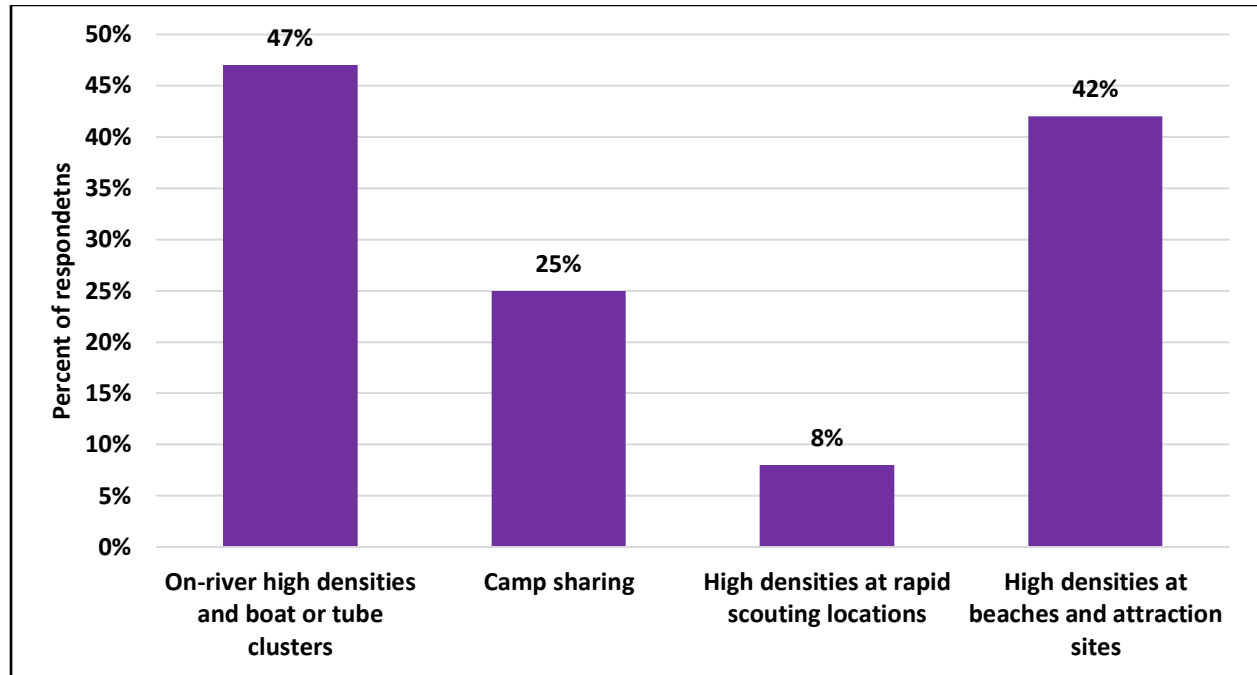
Example comments from individual respondents about restrooms:

- For double-vaults: one side closed; after 7 days we close the side that was open, clean the side that has been rested for 7 days; repeat every 7 days. For low-use single vaults: leave open until they become unacceptable, then close them for 7 days; after 7 days, clean and re-open.
- Due to additional cleaning requirements with CDC Guidelines, have used contractor to supplement cleaning.
- We've seen multiple approaches across the state, often depending on remoteness of facility. New direction is that toilets that will not receive twice-daily cleanings will be signed but remain open. Some counties have locked the restrooms but provided contracted portable toilets.

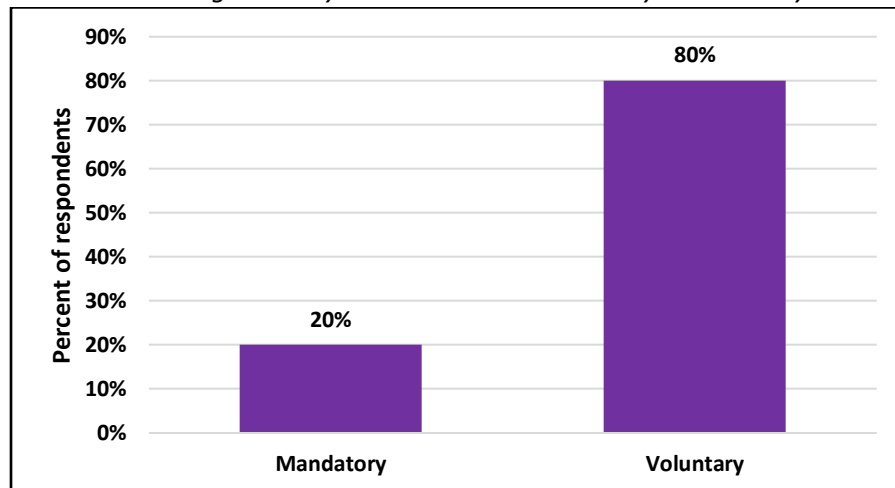
- Bathrooms by our office open/maintained. All bathrooms in adjacent segment closed/locked, no signage. Desperately need vault toilets to be open. Toilet paper litter around ramp area never seen before.
- There has been a lot of discussion on what to do with the restrooms. State leadership doesn't want to close any bathrooms. However, we are not allowed to clean the restrooms with the lack of PPE. So, we have our bathrooms open without TP--which has caused an increase in vandalism. Some sites have seen less activity since COVID (maybe folks are nervous to use public facilities).
- Toilet open but I'm not allowed to clean & supply TP. Other personnel may be doing this but I'm not in the info loop.
- Has depended on whether the bathrooms are on State, County, or City property.

## Distancing education/regulation

What physical distancing advice or requirements have you used at your river to avoid...



Are the distancing actions you listed above mandatory or voluntary?

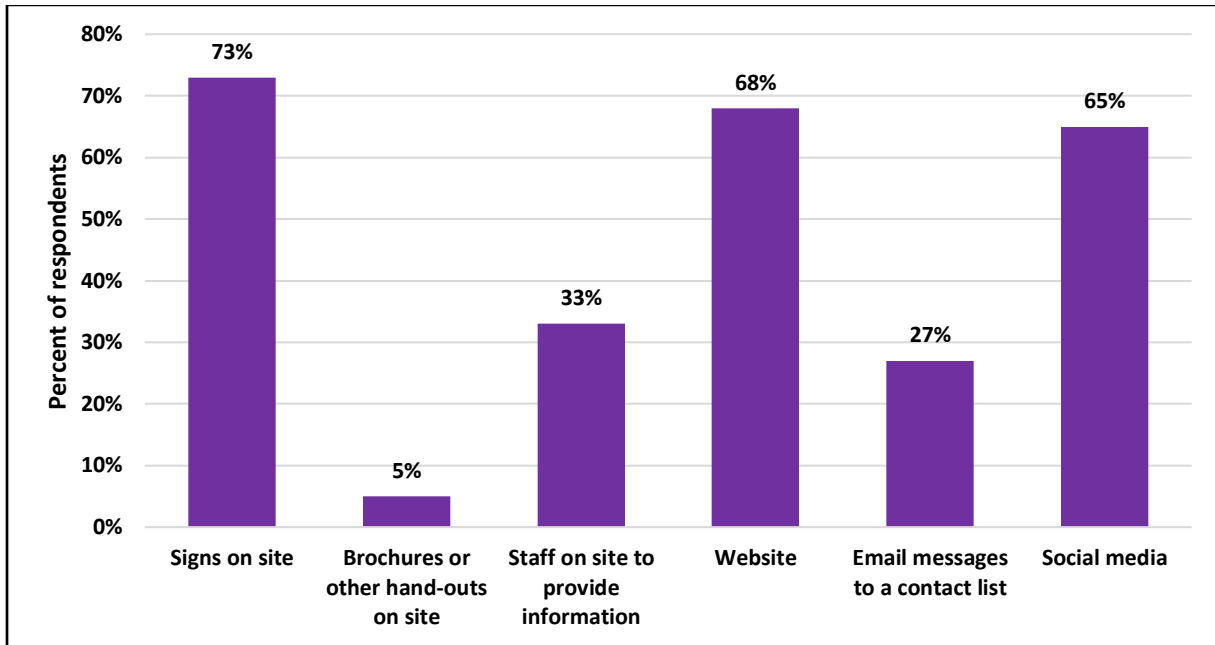


Example comments from individual respondents about distancing:

- Advise commercial outfitters that they are expected to follow state guidance.
- All freshwater beaches just now allowed to open; online payment required for those requiring a fee.
- Assigning launch times would help. Pushing down take-out instructions to the trip leader at the put-in will help at take-out.

## Communication approaches

What communication approaches are you using? Check all that apply.

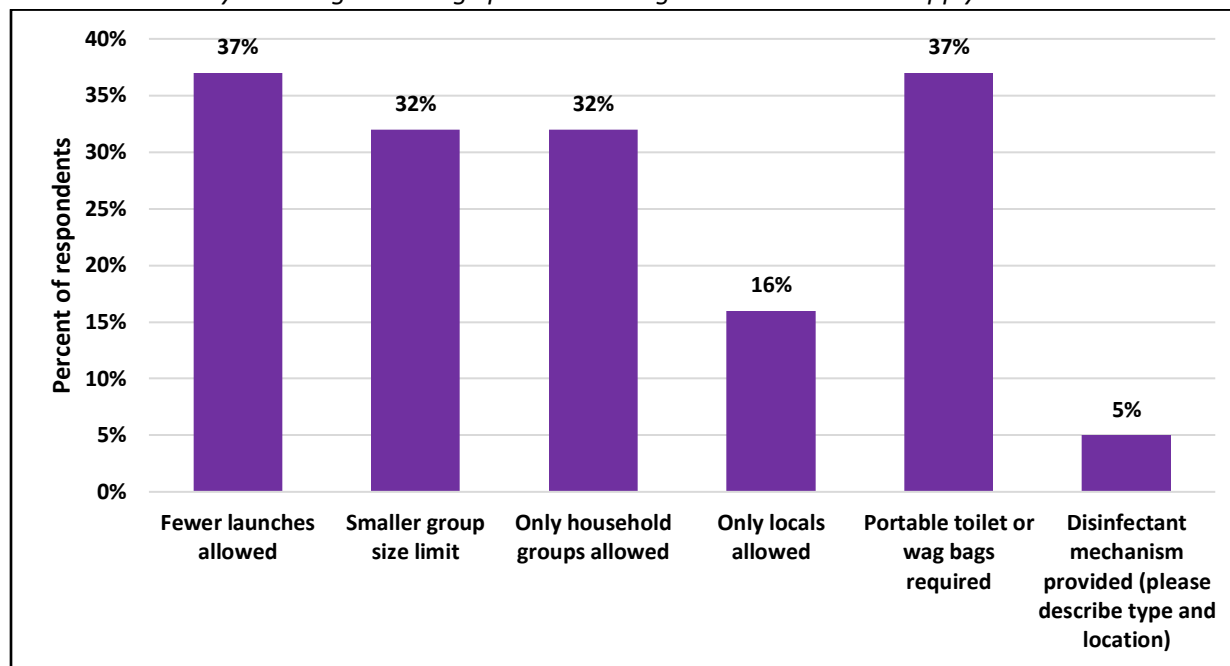


Example comments from individual respondents about communication approaches:

- All registrations, including payment, are now being conducted via phone, two days prior to their launch date.
- Flyers and video sent to customers of the outfitters giving the safety precautions.
- Folks have called our contact representative for information on recreation site availability. As previously mentioned, our sites are open to the public, but our contact representative has reiterated the governor's order on social distancing. Our agency's social media pages are encouraging recreation...even for out of state travelers.
- Some signing at ramps, but most not up to date regarding COVID. No staff presence.

## Private boater management

What actions are you taking to manage private boating use? Check all that apply.

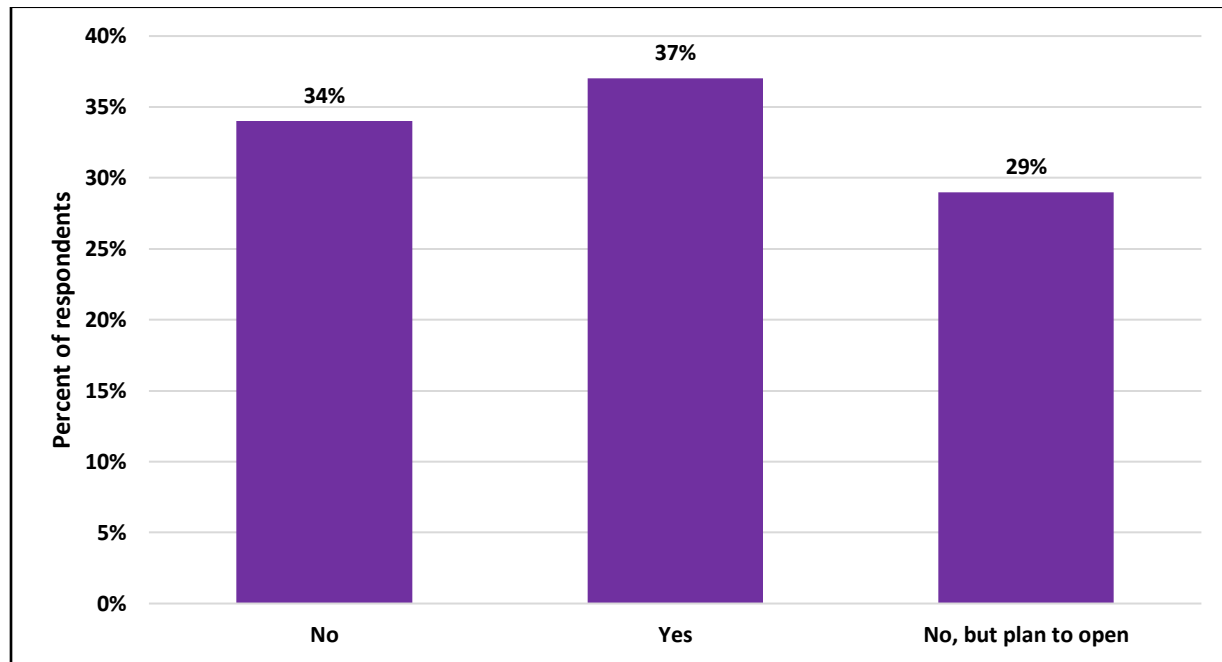


Comments from individual respondents about private boater management:

- All groups are encouraged to bring and use sanitizing products.
- Our river season begins in a couple of weeks. Most [private boaters] use a commercial horse packing service to get gear to the launch site, and the horse packer is not operating yet.
- No changes. Watch out for yourself.
- Family groups only.
- Only seeing private use, and very little due to mandatory state guidelines to shelter in place.
- Local private boater river use since COVID is extraordinarily high compared to past years. Local county resident boaters appear to be vast majority of users with apparently good compliance by other counties to stay home.
- I think it's going to be very difficult to enforce private use on the rivers. Our law enforcement ranger isn't allowed/encouraged to approach folks who are not social distancing/following guidance.
- Self-policed, strong social media presence.
- Will also include info with permit.

## Commercial use management

*Is commercial use allowed?*

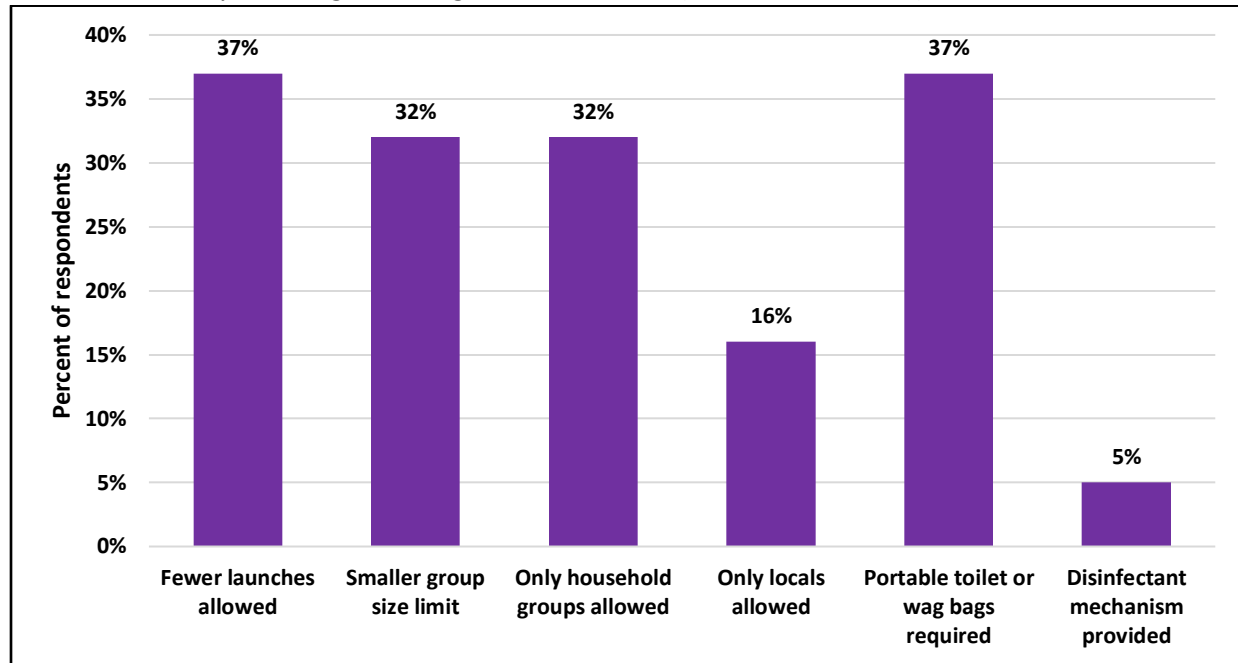


*Comments from individual respondents about when commercial use may be allowed to start:*

- When businesses are allowed to open.
- Will begin on May 9, which will be canoes/kayaks; tubing usually begins after Memorial Day.
- Depends on status of state stay-at-home order and outfitters' ability to meet state and local guidelines for transportation, food service, social distancing, size of gatherings, and sanitation. Also likely tied to ability to provide restrooms at river access sites and campgrounds.
- When we have direction and after outfitters submit risk management plans.
- Asking outfitters to submit addendum to operating plan stating how they will provide for social distancing and other CDC and state/local requirements.
- No in the National Park, yes on the county-managed reach, and probably soon on the Forest Service managed reach.



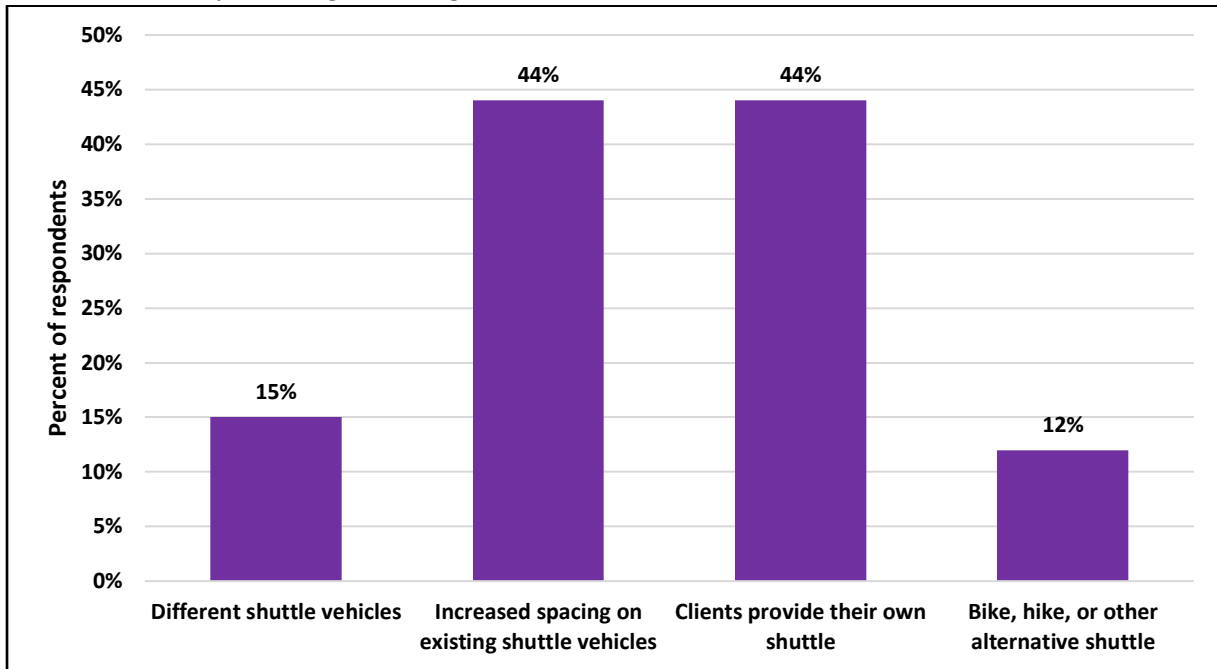
*What actions are you taking to manage commercial use (non-shuttle related)?*



*Example comments from individual respondents about managing commercial use:*

- Most commercial outfitters have been limited to resident clients only, due to a 14-day quarantine for those coming from out-of-state.
- The commercial outfitter decided only self-guided trips at this time.
- Commercial operations are to comply with state mandates - they have discretion in how to meet these mandates whether smaller groups, households only, etc.
- Each one advertises their own methods.
- Follow existing river rules and regulations but trips/frequency/logistics up to outfitter.
- Handwash stations, limited number allowed on ramps at one time, fogger use in common areas.
- The commercial companies are limiting their own launches and group sizes so far, which has been working well without much agency involvement.
- Self-imposed limit to two operators on the ramp at a time. Encourage client provided transportation to ramp.

*What actions are you taking to manage commercial shuttles?*

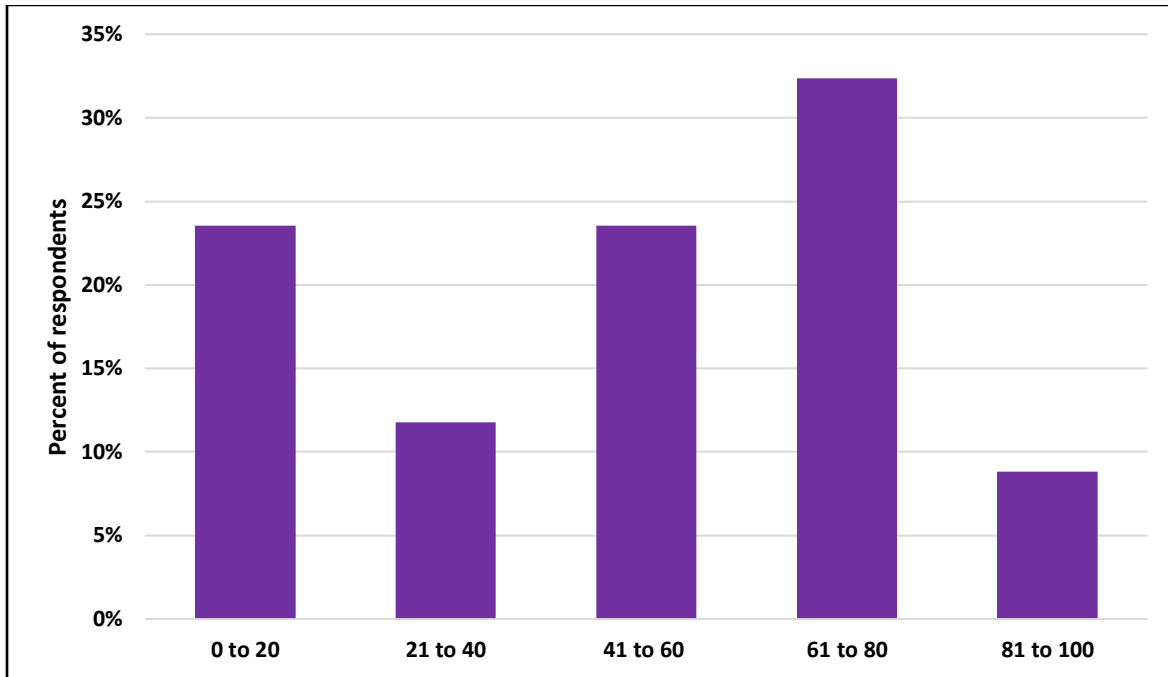


*Example comments from individual respondents about managing commercial shuttles:*

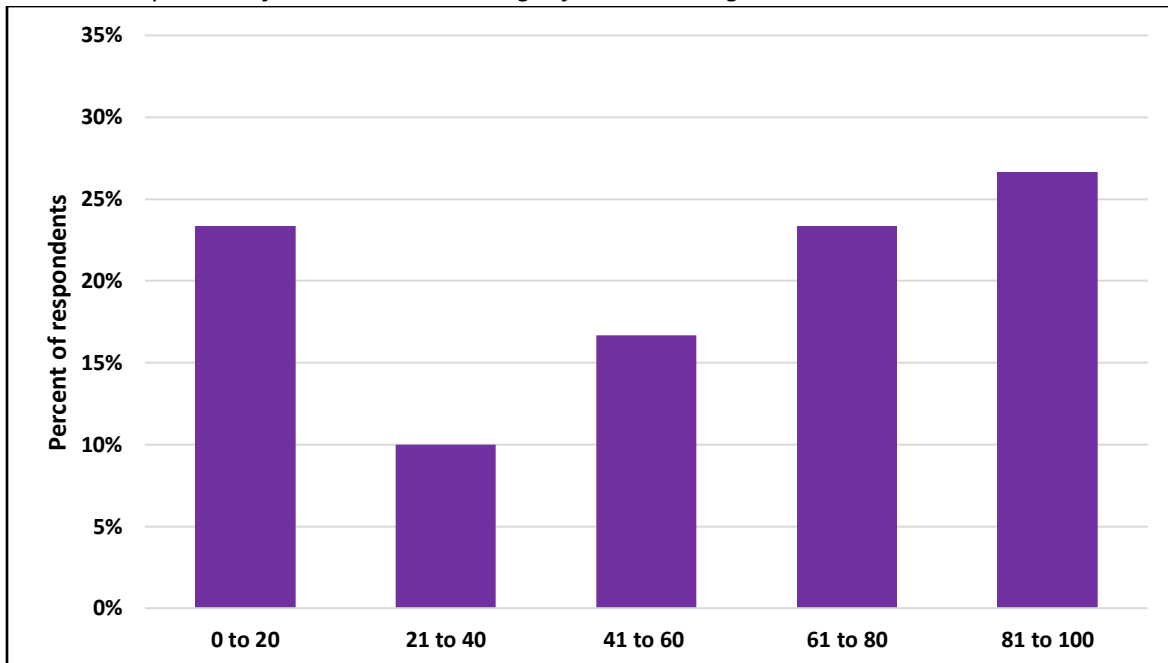
- Spacing on commercial buses and face coverings should be required.
- Advise commercial services that they are expected to adhere to state guidance. No enforcement.
- Working on PMADS Personal Mask Air Delivery System
- Shuttle driver is only staff allowed on shuttle.
- We are allowed to operate so long as all protocols (including social distancing) are in effect. So the reality is that we are allowed to operate, but it is not possible to do so and still follow the rules.
- Shuttle companies were not operating for a while, so people were setting up their own personal shuttles for a while, but the commercial shuttle companies are starting to operate again.

## Distancing compliance

*About what percent of visitors are observing 6-foot distancing at ramps and parking areas?*



*About what percent of visitors are observing 6-foot distancing on the river and beaches?*



*Example comments from individual respondents about compliance at ramps and parking areas:*

- At the sites that are open, people still struggle to maintain social distancing of 6 ft.

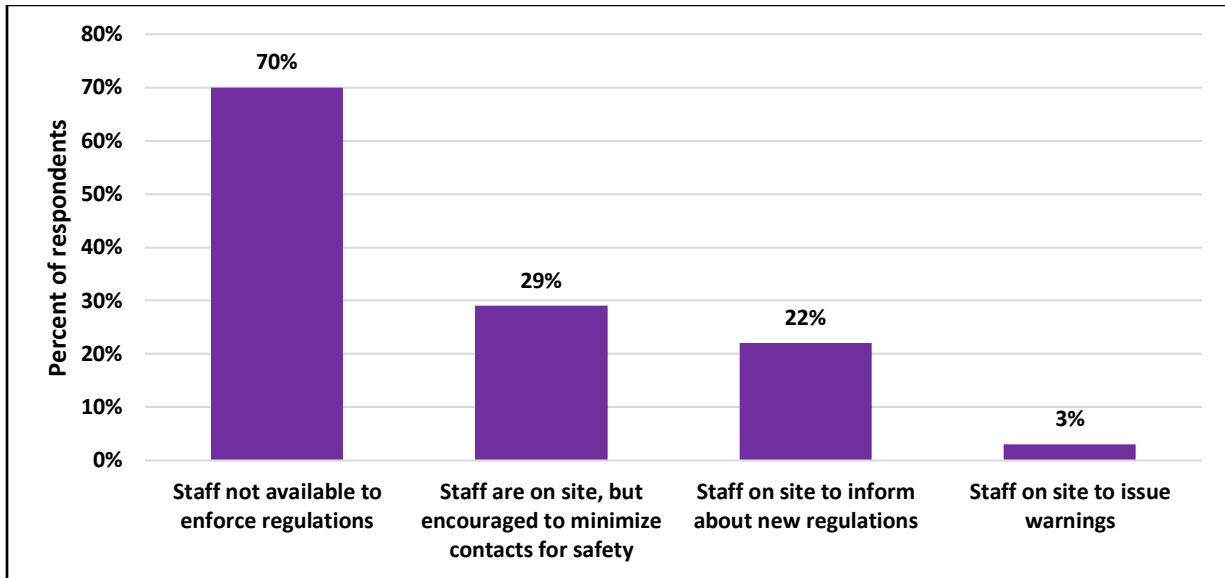
- Too early to say. Not enough people out there.
- Within a group, there is very little. Between different groups, there is about 75% compliance.
- I'd say it's about 80%, seems like people in different groups are doing a really good job but hard to tell within the same group sometimes. Many people have formed their own group of people who they feel comfortable with and no longer follow the 6 ft. rule with those people.

*Example comments from individual respondents about compliance on the river and beaches:*

- 75% The weather has still been cool and rainy, so actual river activity has not been heavy.
- 80% on the river as people are in individual watercraft for the most part (SUP's, IK's). Many of the people using "pool toy" type watercraft tend to cling to each other.
- Within a single group very little.
- On river is great! People are doing a good job! Not too many people on beaches...
- We are not allowed to patrol/monitor.

## Enforcement

Please describe your current enforcement strategy:



Example comments from individual respondents about enforcement:

- Staff has been encouraged to not be "social distancing police."
- It would be helpful to have the county sheriff departments help educate/enforce regulations.
- Unsure what staffing is available.
- We've been directed to monitor only and not make contact.
- We have limited staff to enforce regulations. Only one law enforcement officer for the district.
- Citations issued when necessary.
- Signage warning that copperheads and water moccasins have been sighted at all take-outs.
- Law enforcement staff were on duty and dispersed and would inform the public and enforce rules as needed.

## Comments from individual respondents in response to open-ended prompts

### *Ideas about guidance for distancing and sanitizing:*

- Face masks recommended but not mandatory where social distancing is easy; face masks required for indoor spaces or where social distancing is difficult.
- Considering allowing outfitters to conduct trips on some river segments with groups from one household. Transportation plan would require clients drive to one of the limited number of put-in sites that can accommodate 20-30 vehicles, and take-out sites where groups can disperse while waiting to be picked up. Outfitter would shuttle drivers back to put-in in vehicle where social distance can be maintained. Drivers would have to retrieve household members at the take-out.
- Signage with more clear instruction on rules.
- There must be an industry COVID plan agreed to by all outfitters for their behavior at the river sites and on the river. All may have their personal plan to turn into the agency, but if another company is unsafe, it is all for naught. Mine came up with only allowing two companies on the ramps at once. Great idea. Their rule they agreed to. Beyond that, there must be some type of sting for the greedy guy who tries to push onto the ramp with a third company. If one does it and gets away with it, then they will all do it.
- A lot of great information was provided. Unfortunately, this isn't a "one size fits all." Every river and office will have to approach their situation differently. It would be nice to be consistent across the board, but that's not a feasible approach.
- I don't see how to do it and still follow the protocols.
- Outfitters should be allowed to operate if they followed the phased reopening rules. Outfitters are professionals at risk management and are role models to the general public. Currently during phase 1 the public is allowed on the river and outfitters are not.
- Our County is heavily recreated by out-of-area climbers in the spring. The county and federal and private agencies have shut off parking areas and posted "Go-Home" signs at all entries of high-use rec areas. Highly controversial, which has helped the cause. Flamers on social media have been greatly outnumbered by shamers. Social media has helped keep people at home.
- Accesses are open, people have been encouraged to recreate outdoors, only camping is not open. Use is up.
- We are separating staff into "safe circles." Inside your safe circle, staff can share a vehicle for shuttles and other work where social distancing, masks, and other precautions can't be fully implemented. However, contact between "safe circles" still requires social distancing, masks, and other precautions. One of the benefits is that if one "safe circle" is exposed or quarantined, the others can still function. As much as possible, staff will telework - with short visits to the office when needed.

### *Biggest challenges:*

- Getting all parties on same page to move forward with one voice.
- Non-residents asking if/when the 14-day quarantine will be lifted. Non-residents and residents alike asking if we'll honor all COVID-affected permits, not just those permits that were cancelled due to the river closure.
- My river rangers are not able to patrol our rivers, because we have not found a practical way to run shuttles while social distancing. We're allowing only one person per vehicle right now.
- River operations staff shortage. This was caused by on-boarding and shared housing guidance implemented due to COVID.
- Inter-state coordination so that open states are not overrun by residents still unable to recreate in their own states.
- People will not tolerate being locked down at home or locked out of public lands for months on end. Agencies will have to figure out a way to safely manage public use for the foreseeable future.
- Commercial float fishing boats do not allow for 6' spacing so I will likely convert float fishing to bank and wade fishing. River shuttles will put people in vehicles together. Toilets cannot be sterilized after every use.
- The continuous change in direction has been tough--some of the discussions that we have faced with, include: Do we clean the bathrooms? Do we leave the bathrooms open with no TP/maintenance? Do we lock bathrooms up and provide portable toilets? Do we have enough PPE to clean the bathrooms now? What about enough PPE to get us through the season? Do we enforce restriction on O&G restrictions?...etc.
- For me, the biggest challenge has been trying to figure out what to do with our recreation sites' bathrooms. There has been a lot of going back and forth. We are now at the point where some of our bathrooms have been locked up since they are unusable/dirty. We were asked to leave the bathrooms open without TP/being maintained and were not given the option to lock them up. Leadership hasn't been listening to their field employees--that's the bottom line. Ideas have been brought forward...and nothing has been acted upon. It's been extremely frustrating to not be heard.
- Maintaining spacing, both on rafts and during transit to and from the river. Also, maintaining sanitary conditions on massive amounts of soft surfaces without destroying the gear.
- The reopen-now crowd in the community who are flaunting orders. These folks are seeding rebellion that isn't helpful. We are seeing more out-of-town visitors who are defying orders and potentially bringing with them Covid-19. Our rural hospital cannot cope with an influx of cases. We have few beds and millions of regular visitors. With even a fraction of normal visitation we are in trouble.
- High use urban river and park system, many points of entry, difficult to enforce social distancing on trails around the river and at river access points / beaches.
- Convincing the public/river community during the peak of the outbreak (March/April) that perhaps the best idea was to stay at home.
- Just reminding people to wear masks.

- Restrooms and garbage cans are not available. Human feces and litter are going to be a near future management issue.
- The lack of any consistent guidance. Having to navigate between federal, state, county, forest service, BLM, dept of labor and industries, health department, etc. - all with different rules and regulations.
- We have different agencies managing similar resources with different protocols. The desire is to mirror each other's protocols, but in reality each agency is following their own system.

*Other comments about sharing information:*

- Commercial outfitters are really struggling to figure out if, when, and how they can guide trips. It would be great if their trade groups would work with state regulatory agencies to find solid answers to these questions.
- The idea of "best practices" that all river managers can use is a really good idea.
- During these times when most meetings can only happen online or over the phone, it is challenging to get some people to embrace video conferencing technology. Also, sometimes agencies have technology that is only accessible by in-house staff, making it more difficult for those outside the agency to participate.
- RMS list-serve has been helpful.
- Loaner life jacket stations and the risk of spreading COVID through shared PFD. At this time, we will not be putting loaner life jacket stations out at public accesses because of not being able to properly disinfect the PFD.
- As usual, will the problem will come back to trash and poop?!
- Most important is that the managing agency must be willing to adapt management and facilities to make this whole thing work to keep the river open. If there is no willingness, then it won't work. Adapting equipment, changing the use up a bit, allowing an additional boat or bigger ones to allow more spacing, installing handwash or decontamination stations, putting in markers guides can send party members to break up groups ("stand by the blue post"), etc. are all things that the managing agency must be a willing partner in to make this a safe success.
- Family boating with appropriate social distancing is safe recreation if you can stay near your home to play on local rivers. Once travel restrictions are lifted, and non-local boaters arrive, things will get even crazier busy. Rangers are doing a good job.
- They need to provide either an exception to spacing requirements or sack up and say we are not allowed to operate.
- Keep the message simple. Use social media directed at your user groups to your advantage.
- Who is going to determine liability? Small towns cannot handle visitors due to the lack of medical support.