

North Star Nature Preserve  
**Biodiversity  
& River Use  
Update**

**2023**







## Background.

In 2025, OST will undertake a public planning process for the update to the North Star Nature Preserve Management Plan. This document provides a mid-management plan update on the efforts of the North Star Nature Preserve partners. Working together, Open Space and Trails, US Forest Service, Aspen Valley Land Trust and City of Aspen manage North Star Nature Preserve to protect and restore the ecosystem processes that support biological diversity and provide limited recreational uses.

Overall, biodiversity conditions at the nature preserve are stable or continuing to improve. River use has fluctuated over the years depending on river flows and weather patterns; total use in 2023 was up 5% from a comparable summer in 2019. However, the acute peak river use experienced during the daylight hours of the summer season does not overlap with the peak wildlife use.

This update provides adaptive visitor use strategies for 2024 that align with the currently adopted management plan. The update provides context for strategies to better manage the put-in and takeout through commercial use permits and education. Ultimately, current and continued study allows partners to better understand how both commercial and private use of the property impact the ecological outcomes. The more we learn about the implications of visitor-use strategies, the more we can tailor recommendations prior to adoption through a management plan.

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# Management Context.

## Partnerships

Pitkin County Open Space and Trails (OST) works with its partners and within its capacity to manage North Star Nature Preserve.

## Pitkin County OST

The North Star Nature Preserve Management Plan encompasses the land that Pitkin County owns - the North Star Nature Preserve and James H. Smith properties - including three access points to the river as well as four parking areas. At these points, OST has implemented measures to manage public and commercial use. The plan does not include private properties or lands conserved by others. A 2023 addendum to the 2020 Management Plan added management tools such as enforcement at the USFS Wildwood put-in.

## US Forest Service

The White River National Forest manages the land at the Wildwood put-in. The 2023 addendum and amendment to the 2020 Management Plan enables OST rangers to enforce commercial use and parking regulations consistent with North Star Nature Preserve. No restrictions are in place to limit public use other than the physical limits to available parking.

## Aspen Center for Environmental Studies

The Aspen Center for Environmental Studies owns two parcels totaling 64.5 acres immediately upstream of James H. Smith Open Space.

## City of Aspen

James H. Smith is co-owned by the City of Aspen and Pitkin County, and managed through the North Star Nature Preserve Management Plan.

## Aspen Valley Land Trust

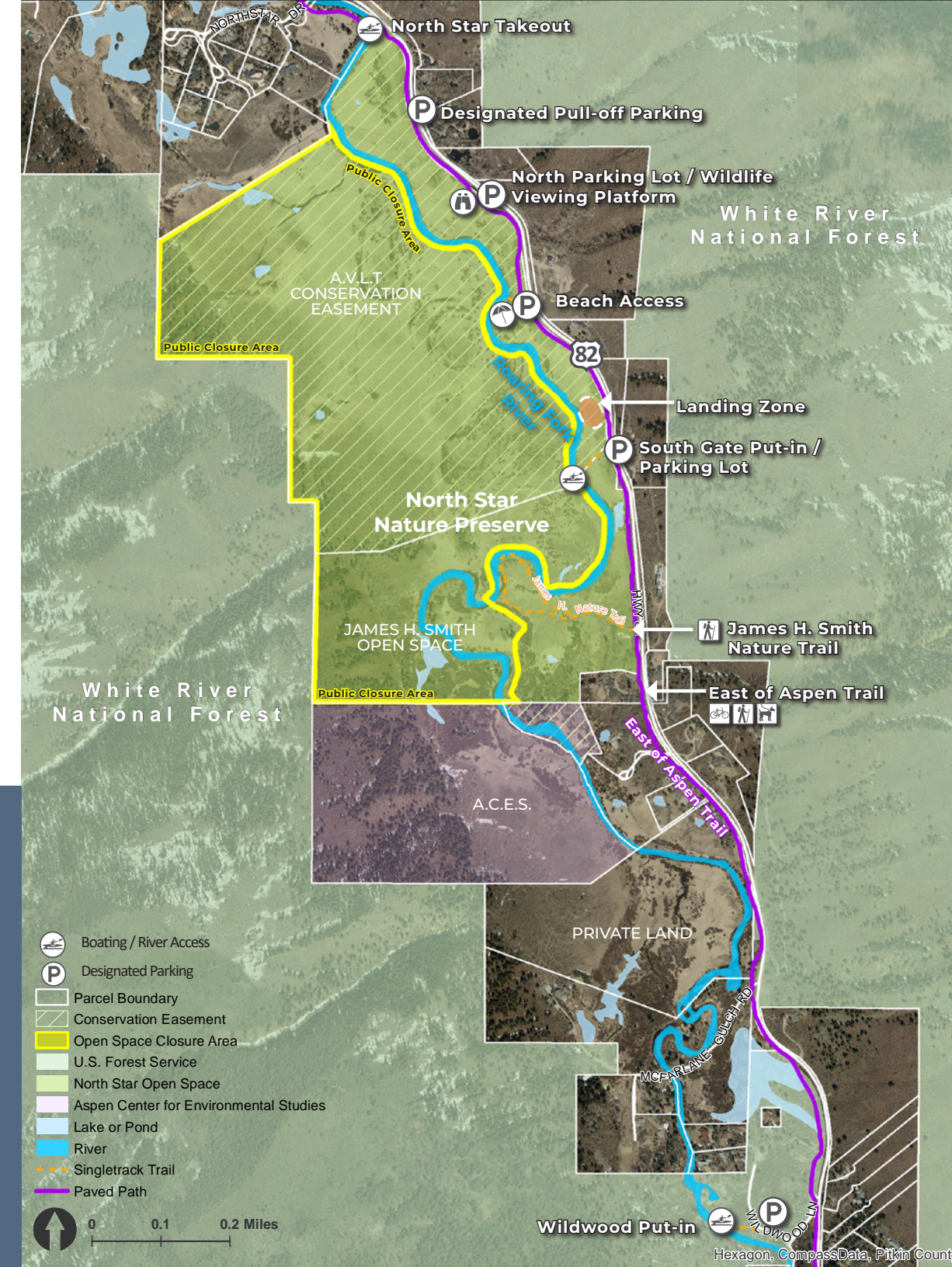
The North Star Nature Preserve property, owned by Pitkin County, has an additional level of protection through a conservation easement held by AVL. A component of this easement requires that the North Star Nature Preserve Management Plan be updated every 5 years; amendments may address but not increase the type or intensity of recreational, commercial or public use.

## Others

Colorado Parks and Wildlife manages the wildlife in the area.

Colorado Department of Transportation manages Highway 82 and the associated right-of-way. Portions of the right-of-way are leased by OST to allow for ranger enforcement and improvements to parking areas.

The river also passes through a series of private properties owned by various landowners.



## Adaptive Management

Many of the attributes that make North Star such an important place to protect are also what make it a popular destination for locals and visitors. **The original acquisition language acknowledged the property's value as both a nature preserve and for limited recreational uses.**

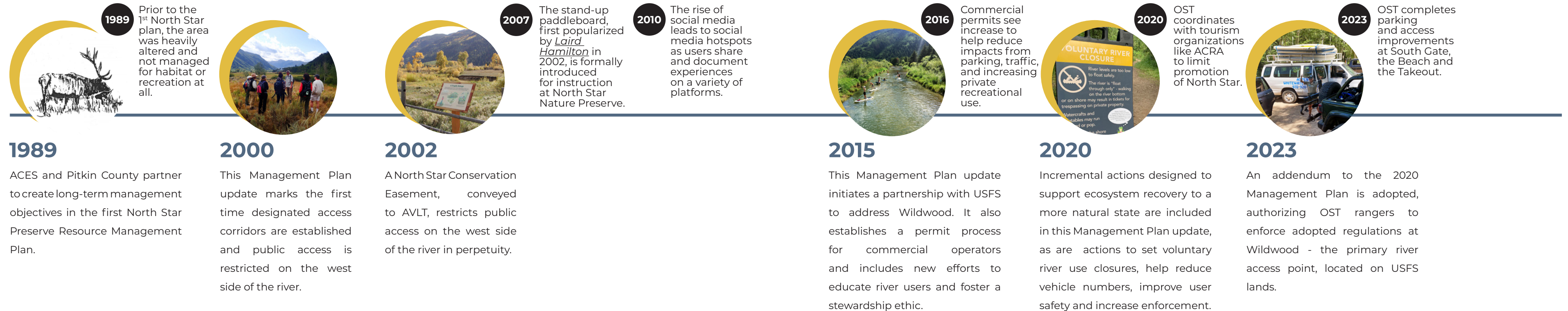
North Star's increase in popularity over time requires increased management focus to support the original conservation values. Science-based decision making is used to guide the management of North Star to ensure that recreation is not negatively impacting the natural resources of the property.

**Management plans are meant to be updated over time to respond to changes in types or intensity of use that may impact biodiversity and visitor experience.**



## Management Plans and Visitor Use **Timeline.**

*The continuing goal of the current Management Plan (2020), carried forward from the 2000 and 2015 management plans, is to protect and restore the ecosystem processes that support biological diversity within the preserve.*





**NATURALISTS IN ACTION**  
OST partnered with ACES on the Naturalist Program to educate visitors about the Preserve's ecology and encourage responsible recreation.

**MORE RANGER POWER**  
Additional seasonal and full-time rangers were hired to patrol the North Star area, educating people about the rules and regulations and handing out tickets to repeat offenders.

**CLEARING THE WAY AT WILDWOOD**  
OST sponsored a Forest Protection Officer to help patrol parking at the Wildwood put-in, where the overflowing parking area often blocked access to the preschool and private homes.

**NO TRESPASSING SIGNAGE**  
"No Trespassing" signage was installed along the banks of the river to encourage people to stay on their watercraft when passing through private property and the preserve, where access is limited to designated corridors.

**FEWER TUBES = LESS TRASH AND TRESPASSING**  
Prior to 2015, many users floated the river on inflatable tubes. Tubes often popped or rear ends went numb, causing people to trespass on private property or closed areas of the preserve, and tubes often became litter. With education initiatives and the popularity of paddleboards, there have been fewer issues related to poor flotation devices.

**EAST OF ASPEN ADA IMPROVEMENTS**  
The East of Aspen Trail that runs along the eastern edge of the preserve was improved to meet ADA standards wherever possible so that more people can enjoy the trail.

**EDUCATIONAL PROGRAMS**  
ACES and the Roaring Fork Conservancy lead educational tours, including morning birding, evening river floats, and fall elk education programs, to share the natural wonders of this special place with locals and visitors.

**LOW-FLOW RIVER CLOSURE**  
A voluntary river closure (mandatory closure for commercial permittees) when flows drop below identified cfs, was implemented in 2019.

**ACES Property**

**Wildwood Put-in**

**Private Property**

**East of Aspen Trail**

**James H. Smith Open Space**

**Federal Land (USFS)**

**Google Earth**

**QUIET ZONE**  
A quiet zone was established and signed for herons on James H. Smith Open Space and along the private property before entering the preserve.

**NATURE AT WORK**  
OST has continued to monitor wildlife and vegetation on the preserve, where unique and variable habitat is protected for the many species that call North Star home, including beavers, ducks, elk, bears, moose and many others. The west side of the river is closed to the public for the benefit of wildlife. 188 acres or 77% of the preserve is reserved for wildlife only.

**STILLWATER BRIDGE TAKEOUT ENHANCEMENTS**  
The Stillwater Takeout underwent a makeover to stabilize the riverbank.

**SIGN INSTALLATION**  
Wayfinding and regulatory signage was installed on the East of Aspen Trail and at trailheads to inform visitors about the rules/regulations of the area. Updated interpretive signs were placed at key locations, including the wildlife viewing platform.

**Float Like a Native Campaign**  
OST and ACES launched the "Float Like a Native" educational campaign and have been working with commercial operators to encourage responsible recreation and educate users about the preserve. Check out [www.northstaraspen.com!](http://www.northstaraspen.com!)

**James H. Smith Open Space**

**North Star Nature Preserve**

**South Gate Put-in**

**Roaring Fork River**

**North Parking Lot**

**Stillwater Take-out**

**Private Property**

**Federal Land (USFS)**

**White River National Forest**

**82**



# 2023 Efforts.



## Visitor Use Management

In a holistic approach to visitor use management at North Star Nature Preserve, Open Space and Trails uses a variety of visitor management strategies to achieve and maintain desired ecological conditions, manage visitor use and address safety concerns at access points. Recent visitor use strategies employed by OST are described to the right.

*“The term visitor capacity is a component of visitor use management and, therefore, should not be used interchangeably with the term ‘visitor use management.’ Identifying visitor capacity is just one of many visitor use management strategies available to achieve and maintain desired conditions. Visitor capacity decisions are, therefore, part of a holistic approach to visitor use management and can be made only after desired conditions, and appropriate indicators and thresholds, are established.”*

*- Interagency Visitor Use Management Council*

## Visitor Use Management and Safety Strategies



Parking Reductions

Overall, parking has been reduced at North Star Nature Preserve through closures of parking along the highway shoulder and the redesign of parking areas.



Reorganized Takeout

Improvements at the Takeout include spaces for three staged vehicles, improved river access and river user amenities like a paddleboard rack.



Safety Improvements

East of Aspen Trail improvements at South Gate and the Takeout provide better separation of trail and river users. Formalized parking at all sites improves ingress and egress from the highway.



Wildwood Parking & Enforcement

The practice of double parking at Wildwood was eliminated through an agreement with the USFS, reducing available parking from 14 to 6 spaces.

The addendum to the Management Plan also enabled more regulation of commercial permittees and general river use by OST rangers.

OST added an additional ranger in 2023 to staff Wildwood. A Forest Protection Officer, staffed by the USFS, assists at Wildwood.



Commercial User Education

Annually, OST rangers host a pre-season, mandatory education meeting with all permitted commercial operators.



# Biodiversity.



# 77%

of North Star Nature Preserve is closed to human activity for the benefit of wildlife, plants and a functioning ecosystem. Recreational activity is physically separated from the majority of the property by the Roaring Fork River.

A wide variety of wildlife live or visit North Star, from small rodents to their predators, from mosquitoes to charismatic mega-fauna like elk. The diversity of wildlife is largely a result of the interspersed multiple habitat types and its landscape context at the valley bottom.

## Background

North Star has served as a tourist amenity, local playground and ranchland to the valley's homesteaders since Aspen's early days. Human alteration of the land can be traced primarily to two events – vegetation clearing for ranching and, more significantly, the upstream diversion of water to the Front Range, reducing flows that once flooded the meadows and wetlands on a regular basis. In 1973, James H. Smith submitted an application for a 350-residence planned unit development on the property. The application was denied and negotiations to preserve the land began. The Smith family conveyed the North Star Nature Preserve parcel (175 acres) to The Nature Conservancy

**27** studies have been completed on natural resource topics at North Star since 1981, 21 of which have been within the last 10 years.

in 1977. The preserve was subsequently acquired by Pitkin County. In 2001, Pitkin County OST and the City of Aspen jointly acquired the 70-plus-acre James H. Smith parcel.

## Current Conditions

Natural resource studies and monitoring show that adaptive management and partnerships are supporting a dynamic and healthy ecological community. OST conducts much more frequent and in-depth monitoring of birds and wildlife at North Star than is common for protected lands, and more than at any other Pitkin County open space.

## Notable Impacts

- Water diversion remains the biggest threat to the wetlands as flow reductions cause soils that were historically saturated to dry out.
- Moderate impacts to the overall flora from historical agricultural activities remain.
- Climate change

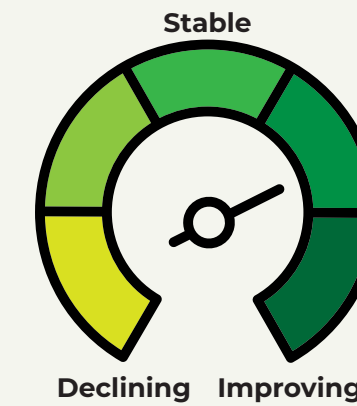
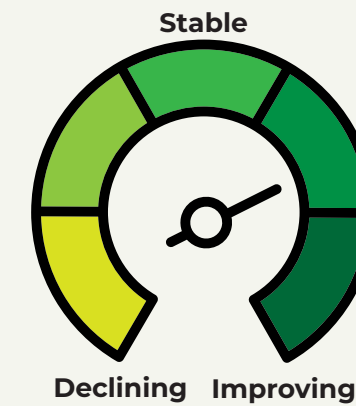
*Scientifically robust studies are used to guide the management of North Star to ensure that recreation is not damaging the natural resources of the property.*

Management actions can impact these physical and biotic elements, creating desirable conditions for diverse animal species:

Management actions can impact in situ physical and biotic elements, creating desirable habitat conditions for diverse animal species.

### Habitat.

A major wetland restoration project has been accomplished, and the addition of natural resource field staff is improving multiple habitat types at the preserve to favor native flora and fauna.



### Riparian area.

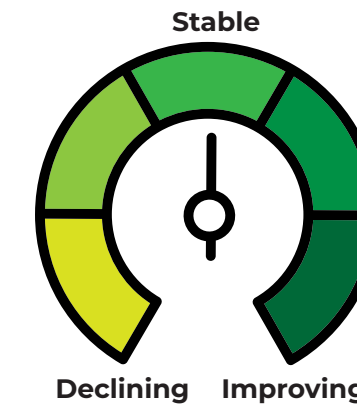
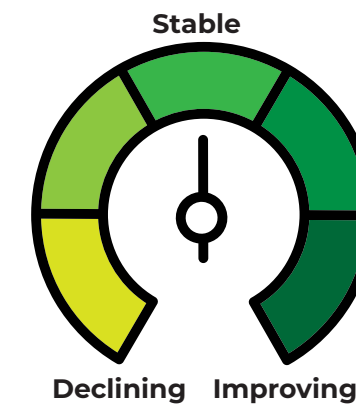
The most prominent trend at North Star is the increase in the presence and extent of woody vegetation such as willows along the riverbanks and across the preserve. This, in turn, supports more biodiversity.

## Biodiversity Conditions.

Monitoring animals provides insight to habitat condition and use on North Star while population-level issues are driven by larger regional and global factors.

### Bird Use.

Songbirds, wading birds, raptors, owls and waterfowl all have distinct habitat needs that are found at North Star.



### Wildlife Use.

While moose can be seen fairly often during the day, peak wildlife use of the area occurs from dusk to dawn and during the transitions between seasons.



## Improved **Habitat.**

### Restoring the Fen

- A multi-year project to restore the functioning of the area's only old-growth wetland, or fen, is complete and working well!
- Monitoring required by the US Army Corps of Engineers revealed the project is meeting restoration objectives.
- The result is a slowing of outflow from the fen to the river, which in turn is improving saturation extent.
- Saturated areas provide very important habitat to waterfowl, songbirds, great blue herons and insects of many types, and also serve to sequester carbon from the atmosphere naturally.
- Herons are frequently observed foraging in the restored fen and other backwater areas.



*Multiple water and wetland resources exist within the closed portions of the property. 50% of North Star Nature Preserve has riparian or wet meadow habitat. Only 5% of the preserve is open water or river.*

## Naturalized **Riparian Area.**

### Current Conditions

The trend toward a naturalized riparian area is confirmed by a 2017 geomorphological analysis of the river. Cross-sections up and down the area reveal channel narrowing over the past 70 years that coincides with the transition away from agricultural land use. Willow communities and woody vegetation are on a trajectory toward increasing riparian extent.

The river is adapting over the decades to the change in water quantity and hydrologic regime that resulted from upstream diversions to the Front Range.

### Beaver Presence

*"Following many years of aggressive beaver control by the former owners and neighbors, the beaver population at North Star has been steadily increasing over the past decade or so."*

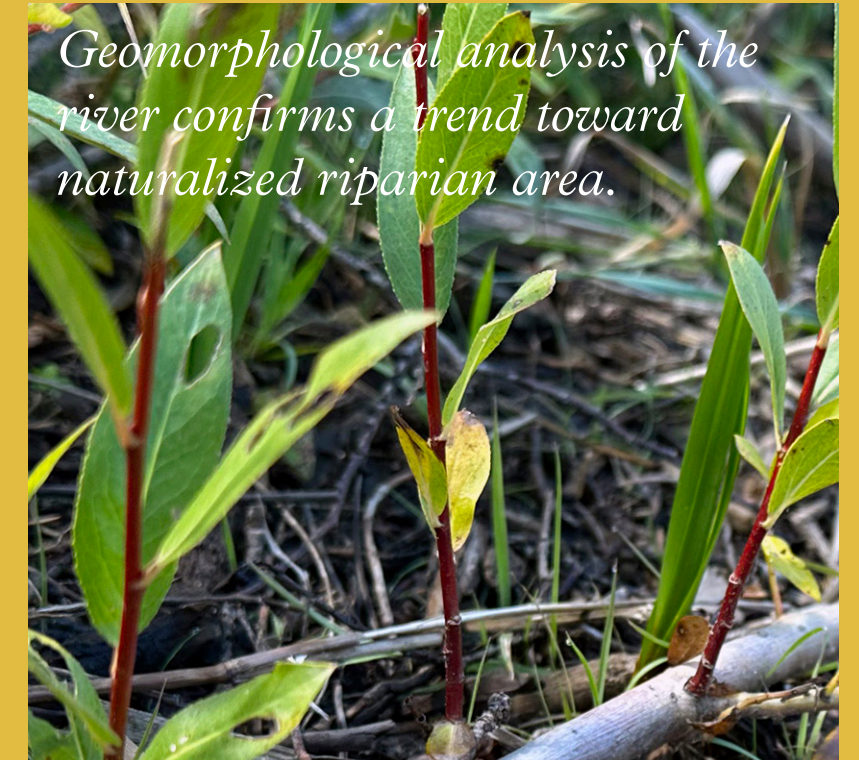
*- Colorado Wildlife Sciences.*

Beaver activity surveys were conducted in 2018 and 2023, both of which found the upstream portions of North Star have regular beaver activity, with plenty of forage, habitat and lodge presence. The increase in beavers, beaver-influenced areas, and beaver dens or lodges, have paralleled the improvement of the health of the riparian ecological system at North Star.

### Beaver Dam Policy

OST has a policy within the 2020 Management Plan to ensure beaver dams are not dismantled or removed.

**5** 2018 survey effort located 5 free-standing surface lodges/bank lodges and 15 other areas important to beaver ecology were located in the the 2018 survey.



*Geomorphological analysis of the river confirms a trend toward naturalized riparian area.*

### Key Takeaways

- **A major habitat trend on the property is the overall increase in willow extent since the property was conserved.**
- Willows provide cover for elk, deer, etc.
- Willows provide bird habitat for nesting, foraging, hiding and reproducing.
- Willows provide increased habitat and a food source that is supporting more beaver presence.
- This is a major win and shows that, with time and occasional management interventions, the ecosystem is moving toward a more natural state with more valuable habitat for local flora and fauna.



## Bird Use.

### Monitoring

- Avian monitoring documents local use and unique occurrences. Over the years, 86 bird species have been detected at North Star, 21 of which may be of conservation concern.
- Songbirds, wading birds, raptors, owls and waterfowl all have distinct habitat needs that can be found at North Star. Managing and maintaining the mosaic of habitat types here ensures this diversity of bird species continues into the future.
- Several Management Indicator Species for North Star are birds, meaning their welfare is an indicator of the welfare of other species that use the same habitat. Monitoring them helps OST assess the impacts of management actions on a particular area and over time.
- Consistent, comprehensive avian monitoring (per the monitoring schedule in the 2020 plan) helps build a dataset that reveals long-term trends and is not driven by year-to-year variability.



**Mountain Bluebird**  
Songbird populations around the country are declining due to a number of factors. At North Star, nest boxes have been placed on old fence posts, following the advice of Roaring Fork Audubon, to give the at-risk Mountain Bluebird a leg up on interspecies competition.

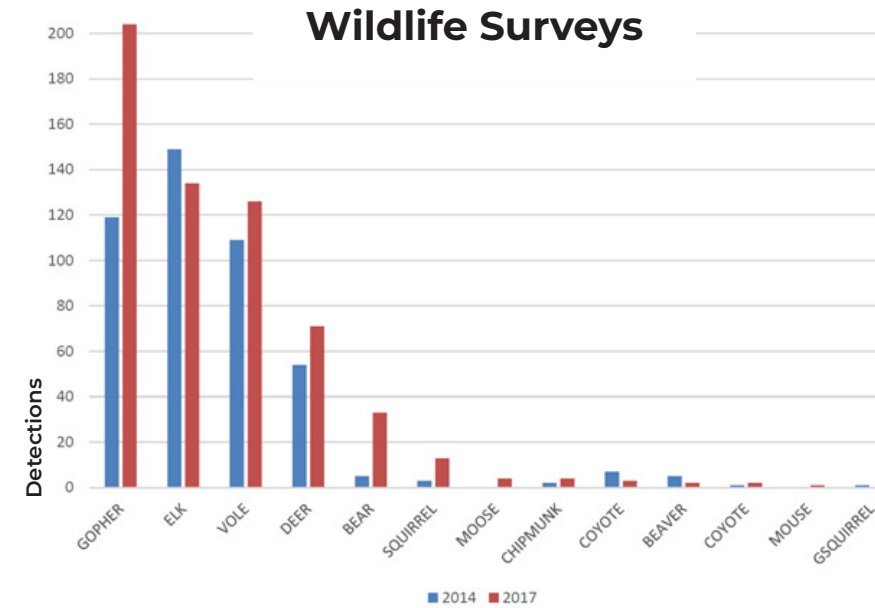


**Great Blue Heron**  
This bird is not rare, threatened or endangered, is not designated as a sensitive species by the BLM or USFS Region 2, but is considered a sensitive species by the State of Colorado. They are one of North America's most abundant wading birds according to National

Audubon Society (2014). Nevertheless, it is a species that OST monitors closely and studied further in response to MIS data. The heronry moved once in 2006 and again in 2017. As of 2017, great blue herons have not nested at North Star. Herons continue to be seen flying, resting and foraging at North Star each summer and have recently been observed nesting in several new locations along the Roaring Fork. External research indicates herons do regularly relocate their nest sites and while causation cannot be confirmed, the latest move did correlate with increased river recreation, increased construction and traffic, and increased predator (eagle) activity in the area. OST continues to preserve heron habitat by protecting high-quality foraging areas and alternative nest trees on the property.

## Wildlife Use.

*Even as recreational use has increased, wildlife use of the area remains strong and the ecological conditions are improving over time.*



### Key Takeaways

- **Peak wildlife use of the preserve does not coincide with the timing of peak river use.** Seasonal ungulate movement across the transitional habitat of North Star occurs in spring and fall. Daily wildlife movements and activity naturally occurs primarily near dawn and dusk, or at night with respect to beaver.
- Wildlife species may experience acute recreational pressures along the river corridor during mid-summer daylight hours. "Acute" because while numbers may be high, it is not a continuous disturbance (i.e. animals can adjust and still meet all of their needs, like they do with construction activity and traffic).
- **Multiple water and wetland resources exist within the closed portions of the property.** The strict closure of this side of the river is in place to ensure that wildlife has access to the seeps, springs, oxbows, wet meadows, dry grasslands, shrublands, forests, hillsides and wetlands that they need to survive and thrive.

**Monitoring** The primary purpose of the North Star wildlife monitoring is to:

1. Determine whether current management affects habitat quality and effectiveness;
2. Document changes in wildlife use of North Star over time; and
3. Guide adaptive changes in the ecological and recreation management of North Star.

**+1** Another year of wildlife and avian surveys has been completed, with data analysis and reporting underway in preparation for the 2025 plan update.

**597** observations of 13 mammal species or sign of those species was documented by terrestrial visual encounter surveys in 2017.

Avian Management Indicator Species			
Species	Habitat	Documented Status from 2017 Biologist Surveys	Comparison to 2001-2013 period
Warbling Vireo	Aspen Forest	stable	> median; within range of variability
Lincoln's Sparrow	Riparian	stable to increasing	> median; exceeded the total count for all years except 2013
Song Sparrow	Riparian	stable to increasing	> median; exceeded the range of variability
Yellow Warbler	Riparian Woodland	stable to increasing	> median; within the range of variability for
Red Winged Blackbird	Emergent Wetlands	declining	< median; substantially below the range of variability
Great Blue Heron	Broad-scale Riparian Specialist	declining nesting and production	< median; below the range of variability

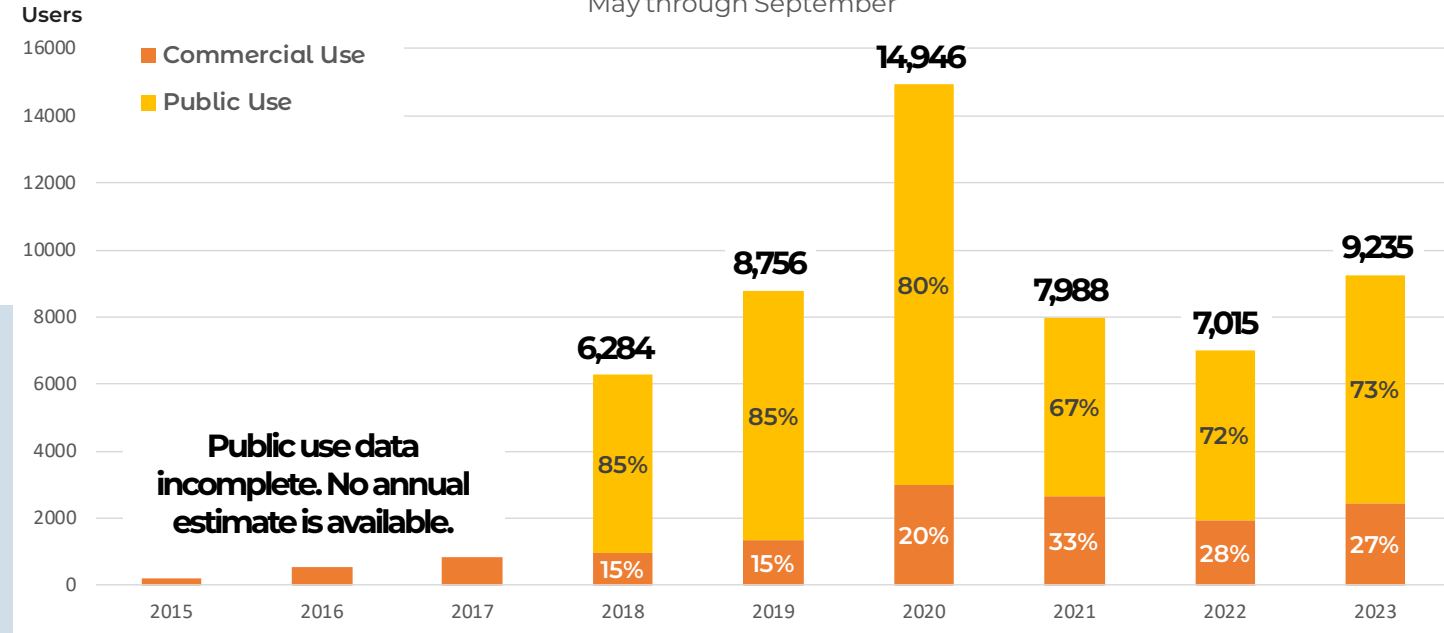
Management Indicator Species (MIS) are species that indicate of the welfare of given habitat type. Consistent monitoring of these species will help build a dataset that reveals long-term trends and is not driven by year-to-year variability.



# Visitor Use.

## Overall River Use

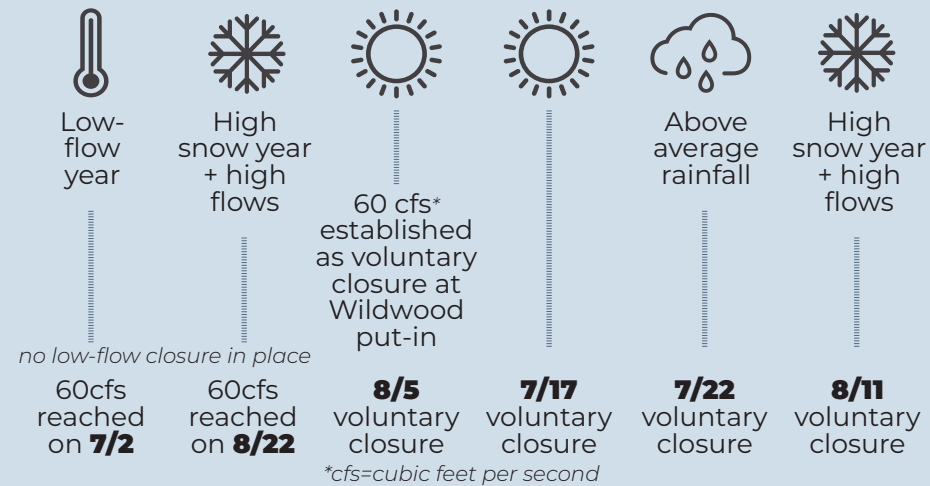
May through September



Public use data incomplete. No annual estimate is available.

Overall, annual river use and commercial use has increased since the 2015 Management Plan. River use is generally reflective of yearly river flows, temperatures and precipitation, and fluctuates with social trends.

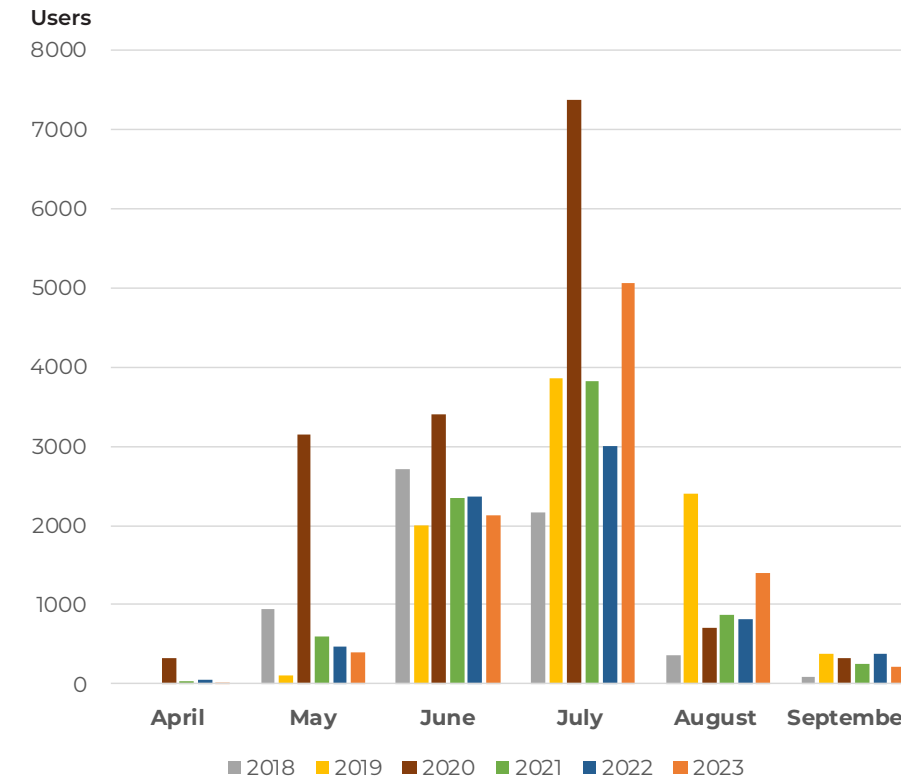
\*Commercial use is tracked annually by operator reports and has a high level of accuracy. Public use is captured through camera data. Available camera data varies by year and is currently collected from May 1 to September 30.



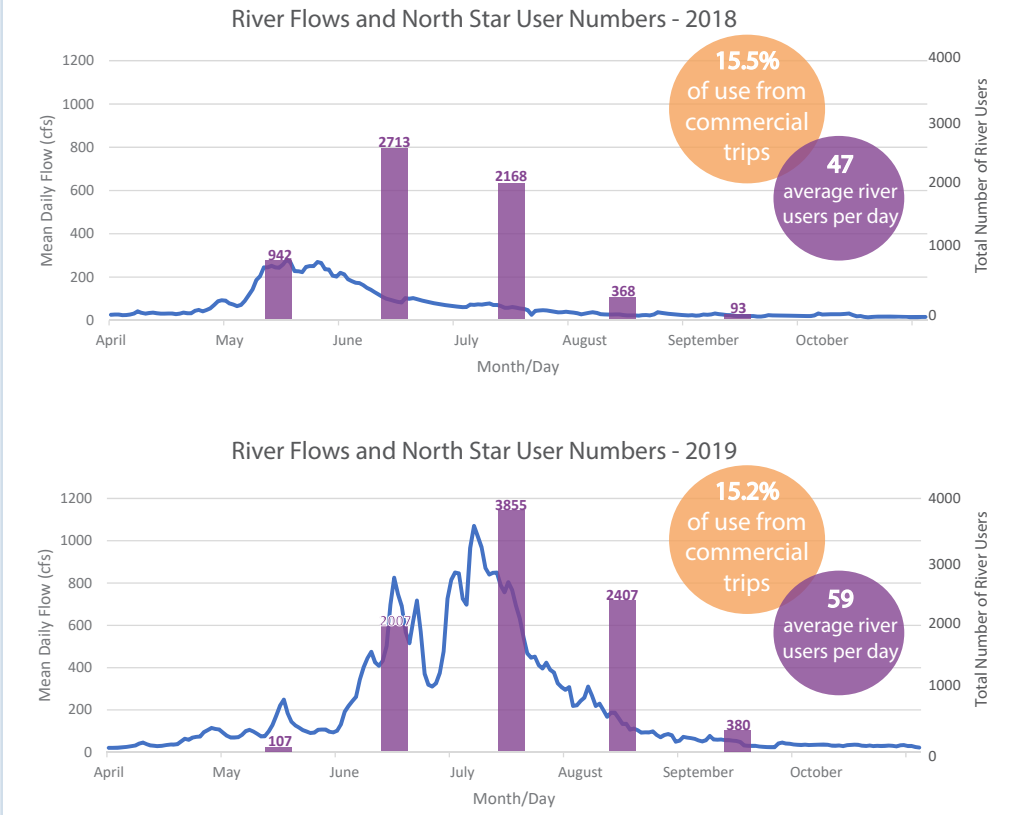
\*cfs=cubic feet per second

## Monthly River Use

Peak River Use Hours 10am-5pm



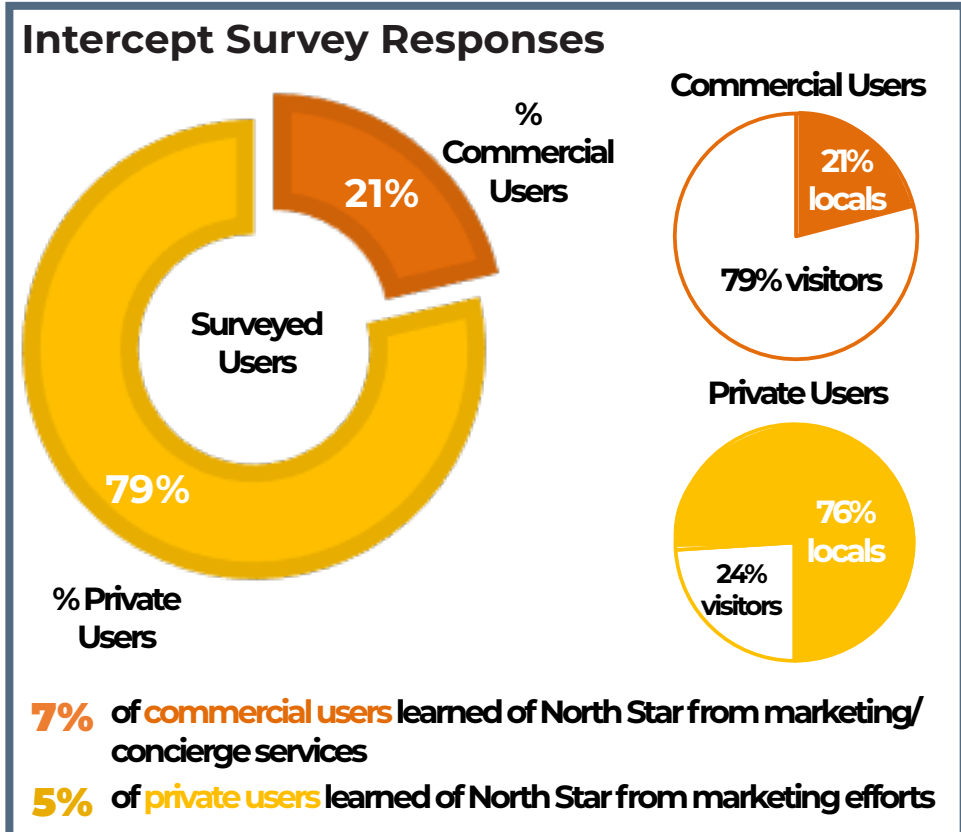
## River Flows and River Use



River use is highly concentrated to three months, June through August, and is reflective of annual river flows. In low-flow years, such as 2018, river use is typically lower than high-flow years, such as 2019.



## 2023 Visitor Use Survey.



# 895

294 river users participated in a survey conducted by OST staff and ACES naturalists at North Star Nature Preserve during the summer of 2023. Their responses represented the actions of groups of individuals visiting North Star - 895 people in all.

### The Survey

To understand river user characteristics, the Open Space and Trails Board directed OST staff to conduct an intercept survey of users accessing North Star Nature Preserve from the Wildood put-in and South Gate. The survey was conducted, with the help of ACES naturalists, from June to September 2023. The survey was issued to 254 groups, representing 895 river users, which represents approximately 10% of the 2023 total river users. This level of survey participation provides OST with key insights into user makeup, group size, vehicle counts, environmental education and marketing.

### Commercial and Private Use

Most commercial users come from out-of-town (79%) whereas only 24% of private users come from out-of-town. About 16% of private groups rent equipment to float. Commercial groups must adhere to OST regulations on group size, hourly drop-offs and guests must receive education about the nature preserve prior to their float.

### The Word is Out About North Star

Only 7% of commercial users and 5% of private users report first learning of North Star through marketing efforts, shops or concierge services. Most reported learning of floating North Star from friends or word-of-mouth, which likely includes social media sites such as Instagram.

### Group Size



**3.9**

**Average commercial group size**



**12%**

**of private groups have 6 or more people**

**3%**

**of private groups visit in groups of 10 or more people**

*Commercial group size is limited to 6 users and operators are limited to one drop per hour.*

### Vehicles and Shuttles

- Surveyed **private river users brought a total of 280 personal vehicles** to North Star. Only 3 of the private groups surveyed did not bring a vehicle to North Star.
- On average, private river users surveyed reported bringing **1.4 vehicles per group** to North Star, or .4 vehicles per person.
- In 2023, it is estimated that **private users brought 2,699 personal vehicles** to North Star. Commercial shuttle operations reduced the number of private vehicles by **20%, or 980 vehicles**.
- Acknowledging that commercial operators bring vehicles to North Star, we estimate the overall number of vehicles taken to North Star was reduced by 300 to 570 vehicles due to commercial shuttles.

The numbers below were estimated using the 2023 Visitor Use Survey and overall 2023 use numbers.

**>25** estimated number of private groups that did not bring a personal vehicle to North Star in 2023.

**2,699** estimated overall number of personal vehicles brought to North Star by private users in 2023.

**980** estimated number of additional personal vehicles that would have been driven to North Star in the absence of commercial operations in 2023.

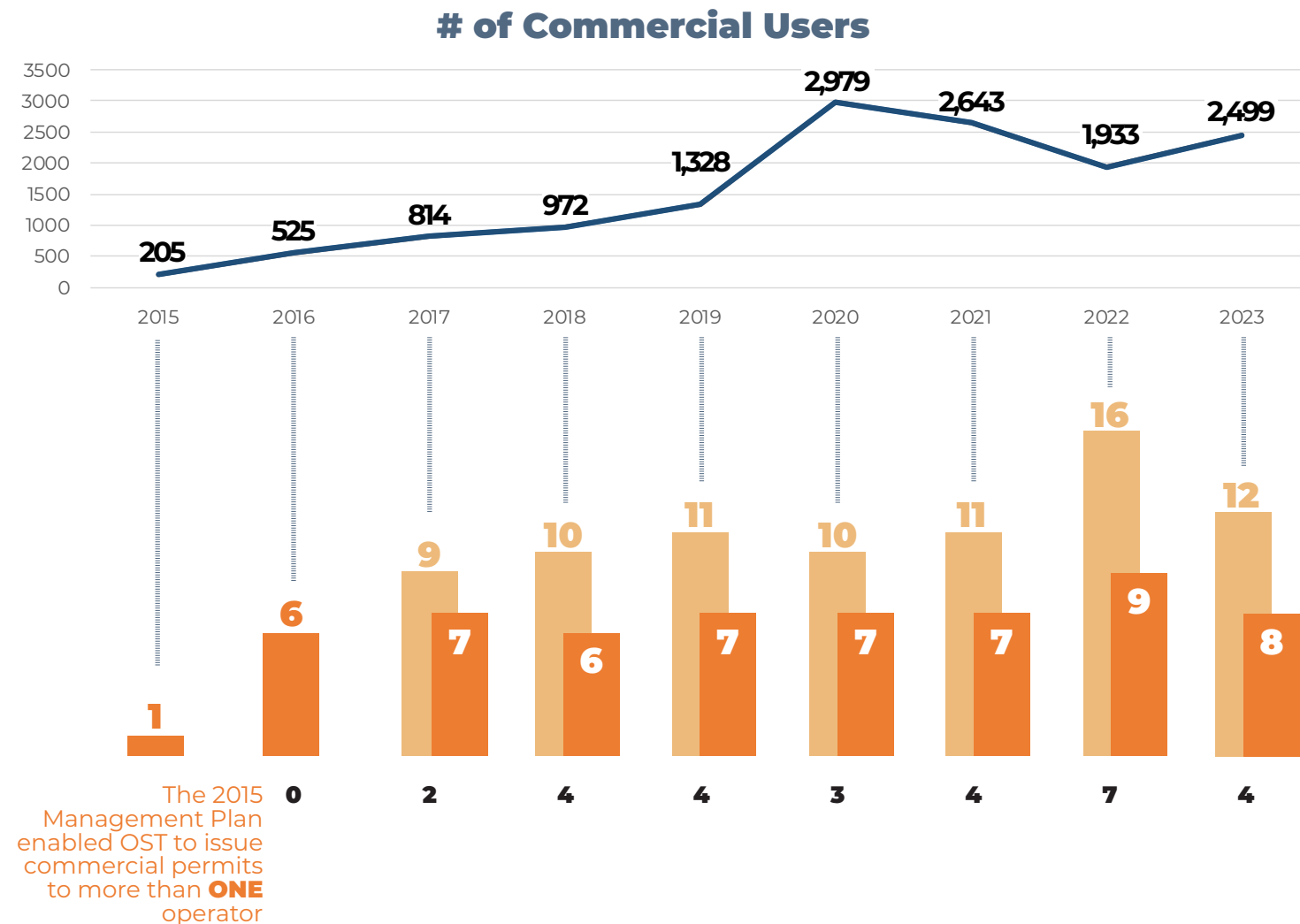
*Commercial operators assist in reducing vehicle numbers at North Star helping to reduce the intensity of use.*

**90%** of all surveyed commercial users received education about the importance of North Star.



## Commercial Operator Permits.

The 2015 Management Plan allowed for an increase in commercial permits and shuttles in order to reduce impacts from parking, traffic and increasing unregulated private use.



### Permits

The 2015 Management Plan enabled OST to issue commercial permits to more than one operator in an effort to limit the use and intensity resulting from increasing, unregulated private use. Commercial operations have assisted in reducing parking pressure, limiting group size and educating users.

**# of Commercial Permits Issued**

**# of Active Commercial Permits**

**Number of operators that reported 10 or fewer users**

## Ranger Data.

Rangers report that commercial guests demonstrate a high level of preparedness and adherence to guidelines while recreating at North Star Nature Preserve.



**1,002 Hours**  
minimum OST ranger patrol hours at North Star in 2023.

### Pre-season Meeting

All permitted commercial operators attend an educational meeting with OST rangers prior to the start of the season.

Penalty Assessment	Local (RFV)	Non-Local	Total
Commercial	4	0	4
Private Users	22	18	40
<b>Total</b>	<b>26</b>	<b>18</b>	

**0%**  
of penalty assessments in 2023 were issued to clients of commercial operators.

### Note on Penalty Assessments

Four commercial citations were directed toward the commercial operators themselves, not the guests participating in their trips. Regarding private user/non-commercial violations, a significant portion of incidents involved dogs at the Beach or other violations unrelated to floating in the nature preserve.



# 2025 Management Plan Update

## Plan Update

North Star presents land managers with a challenge to balance human recreation and education with wildlife habitat and desired biodiversity outcomes. This balance requires data-driven decision making and adaptive management, and is captured in a living management plan that is updated every 5 years.

**In 2025, OST will undertake a management planning process to update the plan for North Star Nature Preserve.**

Based on pending results of biodiversity studies and visitor use data collected, the plan update will address use at peak hours and explore changes to the Wildwood put-in. And importantly, it will review the biodiversity indicators previously established to ensure that conditions are being met and that there are many hours

in the day, even in summer, when animals can move, drink and forage.

## Public Outreach

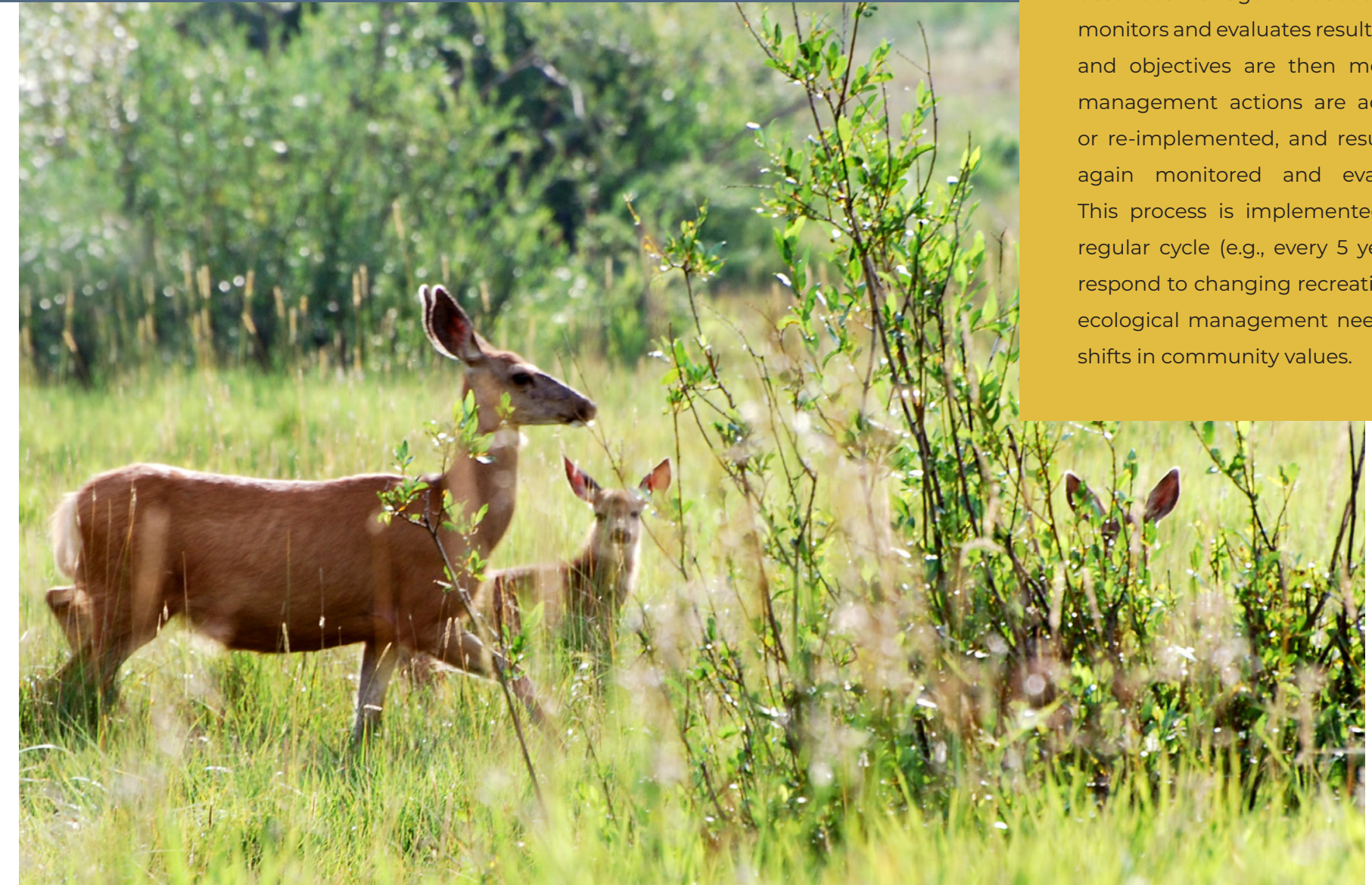
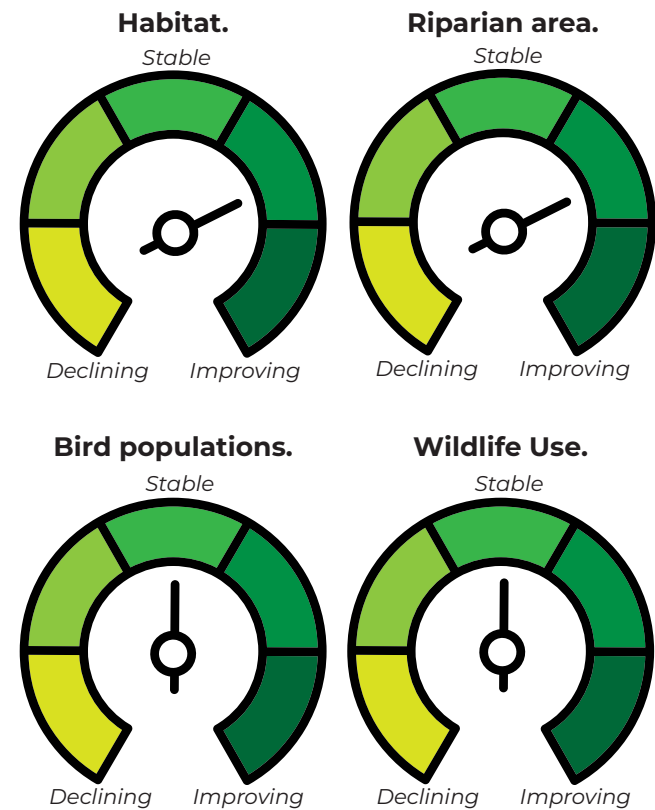
This update will strive for broad public engagement to ensure that residents and visitors have the opportunity to weigh in on the management direction for the preserve.

**The public will have the opportunity to provide feedback on both commercial and private river use on public lands.**

## Potential Considerations

- **Wildwood Exchange** Continue to work with the USFS on ownership of the Wildwood put-in and parcel.
- **Put-in Changes** Explore limits to parking and turnaround options at Wildwood.
- **Indicators** Review biodiversity indicators to continue to monitor the impact of use.
- **Use** Continue to manage North Star Nature Preserve to protect the nature preserve experience.

## 2023 Update Biodiversity Conditions.



## Adaptive Management and the Planning Process

Adaptive management incorporates an iterative process that sets management goals and objectives, describes management actions, and monitors and evaluates results. Goals and objectives are then modified, management actions are adjusted or re-implemented, and results are again monitored and evaluated. This process is implemented on a regular cycle (e.g., every 5 years) to respond to changing recreation and ecological management needs and shifts in community values.



# 2024 Visitor Use Strategies.

*Current and continued study of visitor use strategies allows management partners to better understand how both commercial and private use of the property impact the ecological outcomes. The more we learn about visitor use strategy implications, the more we can tailor recommendations prior to adoption through a management plan.*



## 01 Stagger Commercial Trip Arrivals and Cap Commercial Operator Permits at 5

Limit 2024 commercial permits to 5 operators through an RFP process and work with operators to implement staggered arrival windows. This cap reflects the annual number of active operators and acknowledges that commercial operators are educating users and helping to limit group sizes and reduce use of personal vehicles. The cap establishes a more manageable number of permittees for the rangers to oversee. It also offers an opportunity to study the impacts of commercial use reduction and potential unintended consequences in advance of the 2025 Management Plan. Commercial group size limit of 6 will remain and operators will continue to receive mandatory education at the pre-season meeting.

## 02 Launch Rental Company Education

Initiate a new educational touchpoint, through the OST rangers, to target the nearly 16% of private groups that visit a local shop to rent a paddleboard or other equipment to float North Star.

## 03 Roll Out the 'Re-think Your Float' Campaign

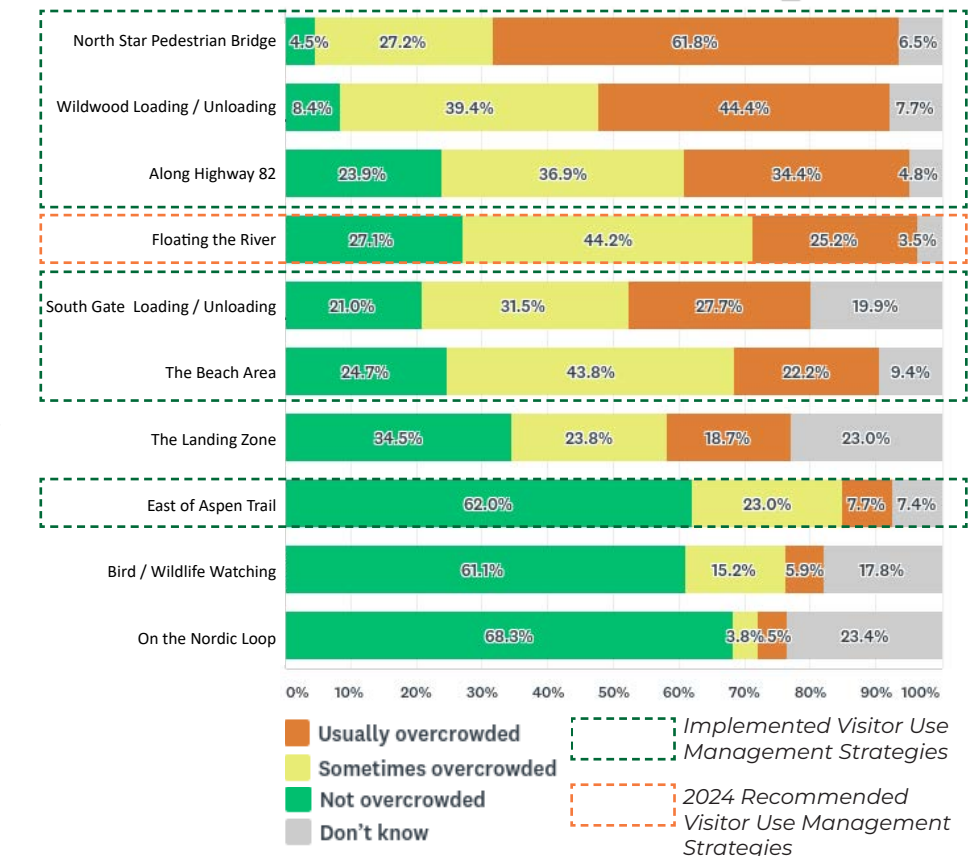
Challenge private users to visit North Star without a vehicle or run their shuttles by biking or walking through the 're-think your float campaign,' using newly installed paddleboard racks and recent trail improvements.

## 04 Continue to Study Visitor Use

Staff will continue the river user surveys by engaging a consultant to assist in the development of visitor use management strategies to inform the 2025 Management Plan update which will address user feedback on crowding and river experience.

### User Feedback on Crowding

Survey results from the 2020 Management Plan showed crowding was most evident at the Takeout/Bridge, Wildwood and along Hwy 82. Staff prioritized strategies to address these concerns.





## **North Star Nature Preserve.**

2023 Biodiversity and Visitor  
Use Update

Prepared by Pitkin County  
Open Space and Trails