



JUNIOR RANGER

2021 PROGRAM REPORT



We're teaching Boulder youth valuable work and life skills while they explore the city's open spaces and serve their community.

LEARN MORE AT OSMPJuniorRangers.org



Background

PROGRAM MISSION

At the City of Boulder Junior Ranger Program, we create an enriching work experience dedicated to preserving land through trail maintenance, stewardship and resource management service.



PROGRAM HISTORY

Our program offers paid jobs for teens (ages 14 to 17) to work with the City of Boulder's Open Space and Mountain Parks (OSMP) department. Each summer, hardworking Junior Rangers on each of our 10+ crews complete trail maintenance and construction, forestry, vegetation, and ecological restoration projects. Junior Rangers will learn critical work skills, support department and Master Plan goals, serve the Boulder community, and have fun! We also provide career and leadership development from natural resource professionals.

Since our program was established in 1965, we have employed well over 4,000 youth. This has built a legacy of community stewards who are personally invested in the future of OSMP and all public lands.

SERVICE LEARNING MODEL

The day to day operations of our program are based on a service learning model combining education with community service. Our model provides a pragmatic, progressive learning experience while still meeting societal needs. As Junior Rangers, these youth gain practical work skills and learn how their work impacts larger environmental systems.

We hire for two types of Junior Ranger crews: the well-known legacy Trail crews and the Youth Ranger crew.

TRAIL CREWS

The Junior Ranger Trail Crews work on trail maintenance and construction, forestry, vegetation, agriculture, fencing, and ecological restoration projects. We provide Junior Rangers the opportunity to explore careers in natural resources, steward their public lands, and become leaders in their community.

YOUTH RANGER CREW

The Youth Ranger Crew works directly with Rangers on field-based community Ranger projects and skills-based training. Through experiential learning, youth discover how diverse Ranger work is and what other career options exist in conservation, parks, land, and natural resource management.



Program Goals



WE DEVELOP COMPETENT, WORKFORCE-READY YOUNG EMPLOYEES.

Teaching essential work skills such as timeliness, work ethic, professionalism, communication, and conflict resolution every day.

WE PROVIDE OPPORTUNITIES TO DEVELOP SKILLS IN LAND MANAGEMENT AND PROTECTION.

Youth gain real world experience as they participate in forest management, trail maintenance, emergency services training, environmental interpretation, and visitor education and outreach.

WE CONTRIBUTE TO HIGH PRIORITY OSMP PROJECTS.

Many energetic hands make light(er) work.

WE FOSTER CONFIDENCE AND PERSONAL GROWTH.

Giving youth the tools and confidence to succeed.

WE TEACH THE IMPORTANCE OF TEAMWORK, COMMUNICATION, AND HEALTHY RELATIONSHIPS.

Ability to work in a team, solve complex problems, communicate effectively, and motivate and mentor others are consistently in the top 10 most desired skills according to Forbes and Business Insider.



WE OFFER FIELD-BASED EXPOSURE TO COMMUNITY RANGER WORK & NATURAL RESOURCE PROTECTION

Working side-by-side with our talented OSMP Rangers gives youth direct experience in Leadership, Teamwork, Communication, Environmental Conservation, Land Stewardship, Natural Resource Management, and Emergency Response.

WE GROW A CULTURE OF STEWARDSHIP AND CARE.

Having fun outdoors + meaningful projects = more engaged young people with strong connections to nature.

“Before Junior Rangers, I was less of a leader. I didn’t think of myself as someone who could lead and I would always follow other people. After Junior Rangers, I have not only gained confidence in my leadership ability, I know how to step up to leadership opportunities with excitement.” - Wren H, 2nd year



OSMP Master Plan Alignment

In September 2019, City Council unanimously accepted and adopted the OSMP Master Plan. So what does that mean for the Junior Ranger Program? It means we're doing all of the same great work, with renewed attention and effort towards these key focus areas:

WELCOME DIVERSE BACKGROUNDS AND ABILITIES

This is a continued priority of the Junior Ranger program. Equitable hiring is not a one-year task and is a process we strive to improve over time. We are a founding partner of Nature Kids Boulder which engages youth & families who haven't traditionally felt included in outdoor opportunities like Junior Rangers. In collaboration with community partners, we updated the Junior Ranger application to be more accessible for youth & families, restructured the application process to value a diversity of backgrounds and experiences, and supported youth throughout the onboarding process. See more on pages 6 - 8.

(CCEI.1, Tier 1)



CONNECT YOUTH TO THE OUTDOORS

The Junior Ranger Program has long been a critical component of OSMP's ability to connect youth to the outdoors. We foster interest, competence and confidence in conserving nature by combining hands-on service learning projects with diverse educational lessons led by experts in their field. See more on page 16. (CCEI.3, Tier 2)

"Junior Rangers are integral in helping OSMP Trails accomplish our workplans. They bring an excellent attitude, a desire to learn and integrity to complete their work to our high standards. I get psyched every time I see Junior Rangers on our projects because they bring me back to a time when working hard with your friends and going home dirty was not only the best job ever, but also the start of a lifelong appreciation for the outdoors." - Beau Clark, Trails Coordinator

REDUCE TRAIL MAINTENANCE BACKLOG

We are part of a trail maintenance approach that fixes immediate needs and contributes to projects that increase the sustainability and longevity of our existing trail network. See pages 11 and 12 for this year's highlighted maintenance projects, Tenderfoot and Springbrook trails. (RRSE.2, Tier 1)

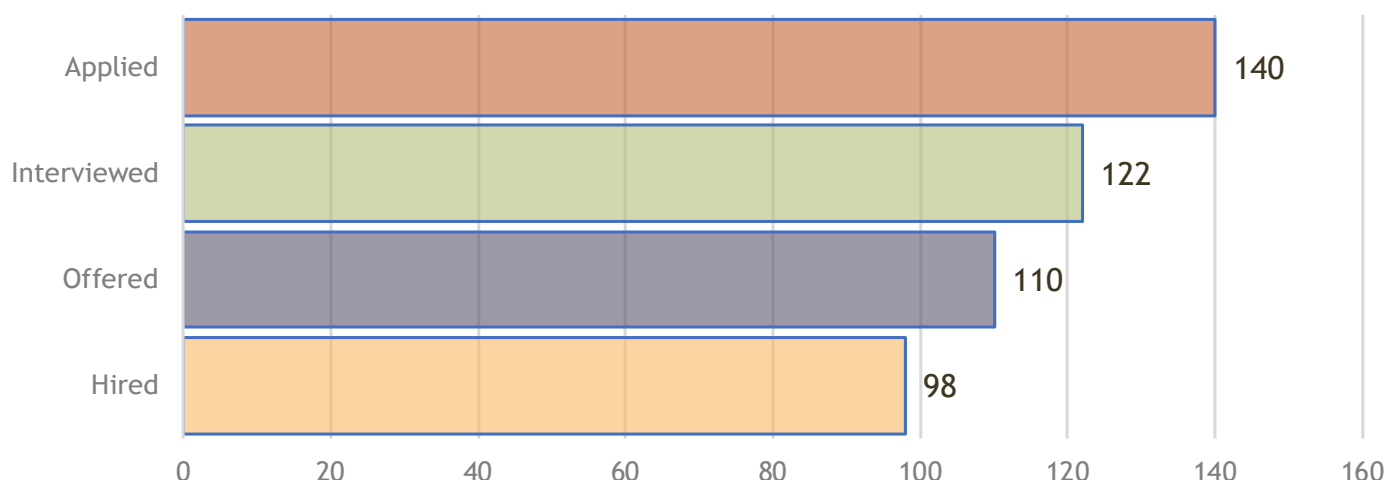


Recruitment & Hiring

RECRUITMENT

Historically, our biggest source of recruitment has been word-of-mouth (thank you, alumni!), but we recognize this means the majority of applicants learn about Junior Rangers from the same social, socio-economic, religious, cultural, or school-affiliation circles. In these groups, the Junior Ranger Program has a long tradition of providing job opportunities to youth and is, thus, a competitive position. This year we received 140 applications for just 98 youth positions. While we don't necessarily need to recruit applicants, we strive to do targeted outreach in communities that are underrepresented within the program demographics, especially the Latino & Spanish speaking communities.

In 2020 and 2021, we provided family programming in Spanish & English with Nature Kids Boulder to help introduce teenagers and their families to the Junior Ranger Program. **Huge thanks to our colleague Juanita Echeverri** for her *years* of work building partnerships and her support in amplifying the amazing community-building work between organizations, community members, schools, city government, etc already being done in Boulder.



For several years, we have been working to make the process of being hired as a Junior Ranger - the application, interview, and selection - more accessible. A brief summary of what we've done:

APPLICATION

We rewrote the job posting to be more accessible, created a Spanish language version of the job description, removed the reference letter requirement, simplified the application, and raised Junior Ranger wages to match the market rate. Our program staff team also worked 1:1 with youth & their families to complete the Junior Ranger application knowing that, despite our changes, it is still a complex and bureaucratic government application.

INTERVIEW

All Junior Ranger applicants take part in an interview process because it is a critical job skill, and we support the development of this skill by providing the interview questions in advance and offering practice sessions. In 2022, applicants will have the option to submit their interview answers in written form as well if it would help them articulate their skills.

2021 DEMOGRAPHICS OF HIRED YOUTH

We also adjusted our interview questions to reveal foundational job skills that youth develop in all aspects of their daily lives, eg. they can show leadership skills not just in an activity such as a sports team, but also through responsibilities like afterschool childcare for their younger siblings.

SELECTION & HIRING PHILOSOPHY

The vast majority of Junior Ranger applicants each year are highly qualified, highly motivated, and would greatly benefit from the opportunity. However, we cannot hire everyone who applies. We designed our scoring rubric to prioritize potential over prior experience, knowing that this is a first job for many youth who apply.

To select which youth will be offered a position, we rank applicants based on **foundational skills and their capacity to grow**, such as their ability to be:

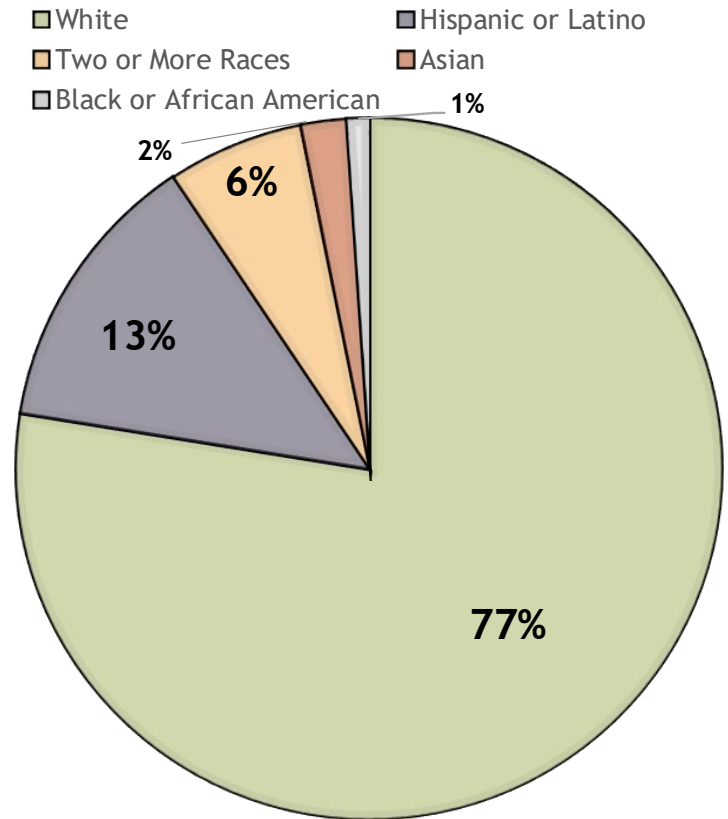
- team players
- respectful of others
- committed & motivated
- coachable and willing to learn
- personally responsible for something

WELCOME DIVERSE BACKGROUNDS

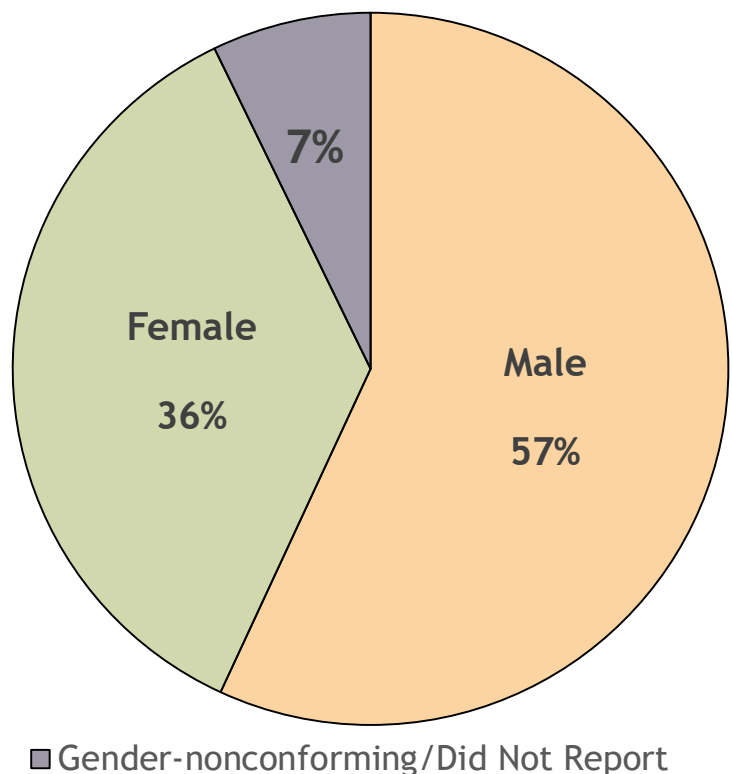
(CCEI.1, Tier 1)

Our hope is that these changes - from recruitment, through the application, and the selection process - allow us to minimize bias and hire a diverse group of highly motivated youth - diverse in age, race, ethnicity, gender, ability, and prior program experience (to name a few). In 2021, we saw the data reflect this goal, with increased diversity of race and ethnicity among hired Junior Rangers. These steps aren't the end, and equitable hiring is a long-term process. See page 17 for future program planning.

RACE/ETHNICITY OF JUNIOR RANGERS



GENDER OF JUNIOR RANGERS



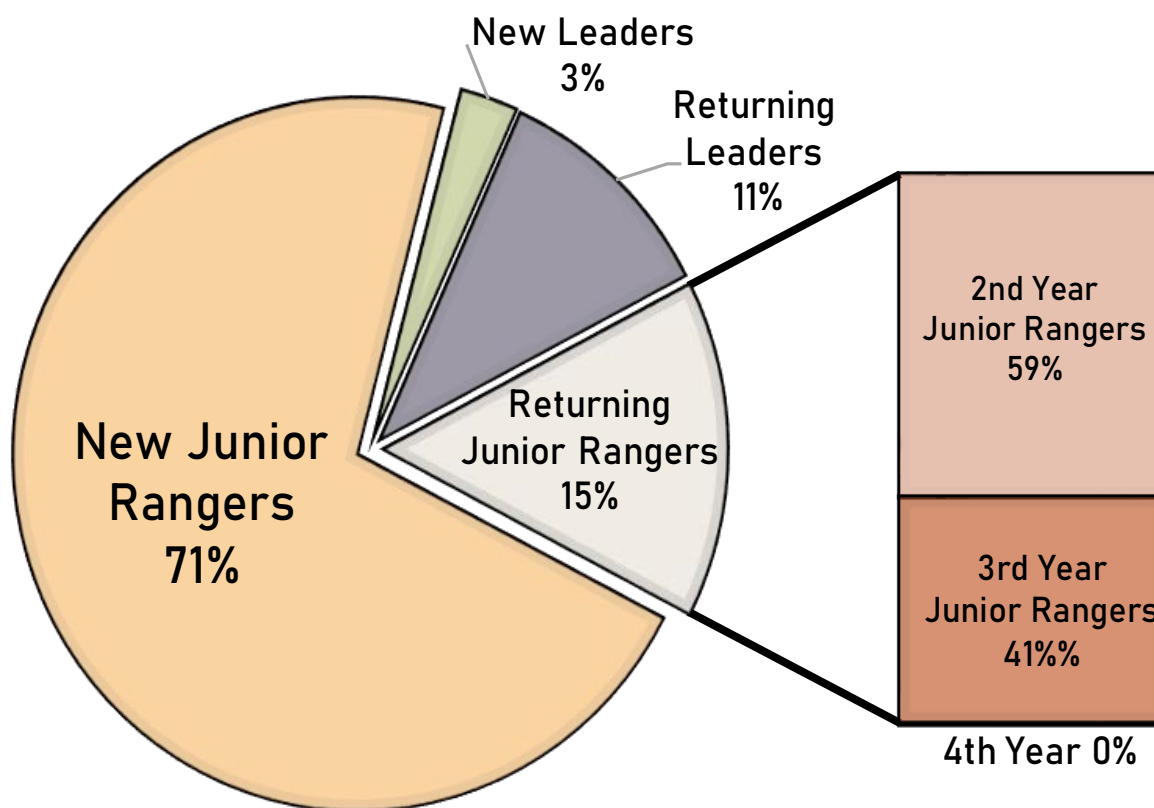
RETENTION OF JUNIOR RANGER YOUTH & ADULT LEADERS

In a typical year (2021 was not typical), we strive to hire 50% returning staff and 50% new staff. We believe the best way to serve the Boulder community is a balance between **exposure** (for as many youth as possible) and **expertise**. Each year that a Junior Ranger returns provides new opportunities for leadership, career exploration, and skill development. These scaffolded opportunities build leaders in stewardship (CCEI.7, Tier 3) and provide meaningful career ladders for young adults. Many graduates motivate others to serve in the program, seek jobs in conservation, or return to OSMP as team leaders or full-time staff.

Unfortunately, in 2021, the program saw a drop in returning Junior Ranger applications - largely due to the impacts of COVID-19. With no JR program running in 2020, many past Junior Rangers aged out of the program, moved on to other jobs, or were simply not ready for in-person activities. We ultimately hired primarily new (first year) youth - over 80% of total youth positions. We hope to bring many returners back to the program in 2022 after a successful 2021 season, but are also excited to have introduced the program to so many new faces this year.

However, among adult team leader positions, we hired mostly returning staff. Returning staff are critical to the sustainability of this seasonal program, especially in a year with so many first year Junior Rangers. Hiring returning staff can lower training costs, produce higher quality work, and ensure continuity of program standards & traditions.

RETENTION OF JUNIOR RANGER STAFF



"Giving Junior Rangers more responsibility and treating them as mature adults manifested in them rising to those expectations. Not just leadership and professional development, but personal growth as well. Believing they can handle a tough discussion about mental health led to deeper emotional maturity. We practiced soft skills with them like emotional intelligence, empathy, vulnerability, which I hope will serve them better, and impact them more. They like to think about their place in the world and social dilemmas, and there is no other place for that." -Fiona R, Team Leader

Youth Impact: Testimonials

WE PROVIDE OPPORTUNITIES TO DEVELOP SKILLS IN LAND MANAGEMENT AND PROTECTION.

"My most valuable takeaway from the Junior Ranger program was more valuable information on the importance of trails for preserving the local ecosystems. I also loved learning more about the trails in Boulder and getting a new perspective on trail work."

-Suntali D, 1st year

WE GROW A CULTURE OF STEWARDSHIP.

"I feel so much pride in knowing that the work I did made our trails a better place. I feel like I made a really positive contribution and I learned so much about the environment."

-Sophia G J, 1st year

WE TEACH THE IMPORTANCE OF TEAMWORK, COMMUNICATION, AND HEALTHY RELATIONSHIPS.

"My favorite part of being a Junior Ranger has by far been getting to work with such an amazing crew with such amazing people. We always managed to pick each other up, listen when we needed to, and work hard every single day. The thing I will miss most from this session will be the people."

-Sebastien L, 1st year

WE FOSTER CONFIDENCE AND PERSONAL GROWTH.

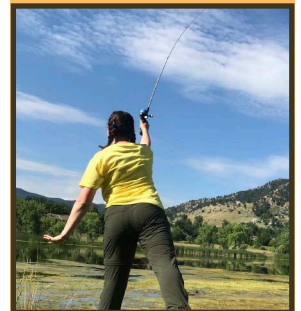
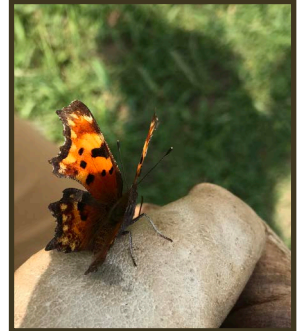
"Because of Junior Rangers, I am a drastically different person. I have much more confidence in myself, which in turn has helped me lead others. I feel much more comfortable in my own skin. I want to go into a career related to ecology or biology now."

-Sasha L, 3rd year

WE DEVELOP COMPETENT, WORKFORCE-READY YOUNG EMPLOYEES.

"I feel like I'm a different person because of the connections and friends I got to have here. I went outside every day, talked to people, and overall my mood changed in a positive way. I gained so much experience not just building trails, but also leadership and career building skills. After Junior Rangers, I feel like I have the skills I need to be successful."

-Linda B, 1st year



System Impact: Work Accomplishments

In 2021, 98 Junior Rangers worked 602 crew hours on high priority OSMP projects working on 5,207 linear feet of new trail construction, building 54 feet of raised wooden trail on Springbrook and Marshall Mesa trails, and repairing 696 linear feet of tread.

Junior Rangers chipped 1080 branches over 60 hours for the Forestry crew and Youth Rangers spent 160 hours on fire mitigation projects at the Cal-Wood fire site.

Junior Rangers also removed invasive plants from 736 acres with Vegetation Management and built or repaired 2835 feet of fencing on Agricultural lands.

Youth Rangers spent 400 hours training on environmental education and 40 hours to create and deliver a fishing program to the public.



Project Snapshot

TENDERFOOT TRAIL REROUTE



“Junior Rangers are integral in helping OSMP Trails accomplish our workplans. They bring an excellent attitude, a desire to learn and integrity to complete their work to our high standards.”

- Beau Clark, Project Manager



Junior Rangers supported the Tenderfoot Trail reroute project for all of June and July this summer. The Junior Rangers worked alongside adult Trail crews, as well as other youth organizations, to complete most of the reroute this season. The crews cleared vegetation, rough cut tread, backsloped, outsloped, built rock structures, installed timber checks, and much more. Junior Rangers worked on a total of 2,164 linear feet of trail - 0.40 miles - on the Tenderfoot project. Crew 1, during July, dedicated every work day of the month to the Tenderfoot project - building advanced trail techniques, patience, focus, and determination along the way.



SYSTEM IMPACT: Reduce trail maintenance backlog, improve trail usability, reduce future maintenance & personnel costs.

YOUTH IMPACT: Team work, problem solving, project management skills, developing patience & determination, learning resource management techniques.

Project Snapshot

SPRINGBROOK TRAIL CAUSEWAY



This June, Junior Ranger crews began work on a spot project halfway down the Springbrook Trail in South Boulder. This popular hiking & mountain biking trail is frequently muddy, causing trail widening, tread erosion, and a potential hazard to the public. The largest Junior Ranger-only project in 2021, this 36 foot long causeway (raised trail platform) will replace the muddy section of trail and was completed in just two months. Crews began by carrying lumber into the project, digging spaces to fit wooden sills into the trail, and then constructing the causeway. In the last few weeks, they collected rocks and dirt to fill in the wooden structure and created earthen ramps on either side to improve hiking & biking ease.

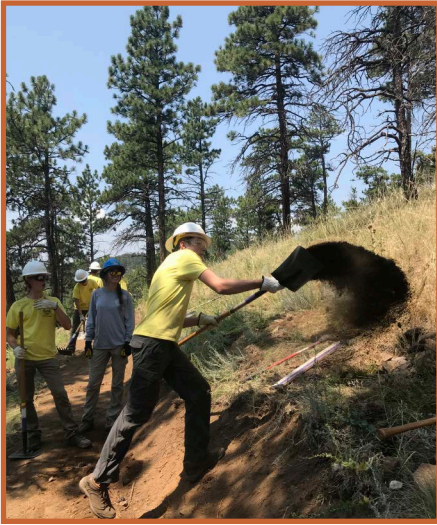


SYSTEM IMPACT: Reduce trail maintenance backlog, improve trail usability, retain & improve trail conditions (getting water off, keeping people on), restore trail functionality.

YOUTH IMPACT: Acquire technical building skills, improve patience, teamwork, and goal setting skills, learn how to assess quality, and complete a task to specifications with pride.

Project Snapshot

ANEMONE TRAIL CONSTRUCTION



Junior Rangers began work with a contract crew this year, Timberline TrailCraft, on an extensive reroute and new trail construction of the Anemone Trail near Red Rocks. The new Anemone trail will wind up switchbacks, slowly gain elevation, and give an incredible view of Boulder Canyon. Junior Ranger crews spent a total of 6 weeks (24 work days) on the Anemone project, building and refining the backslope and outslope of the trail cut by Timberline TrailCraft crew members. Junior Rangers learned from the skills of the professional trail crew and constructed 730 ft of an incredible and sustainable new trail.



SYSTEM IMPACT: Reduce trail maintenance backlog, improve trail conditions, reduce habitat fragmentation from social trails, & improve conditions for native wildlife & plants.

YOUTH IMPACT: Gain a broad knowledge of trail functionality, complete trail assessments, practice project management skills, develop team work & problem solving skills.

Education Snapshot

As a youth employment program that hires many youth for their first ever paid job, education is at the heart of what we do. Every trail we shape, every rock we move, is a lesson in itself. This type of project-based service learning accounts for 87% of our crews' time (of that project time, 78% is spent on trails, 9% on forestry, 6% on vegetation management, 2% on restoration, and 4% on fencing projects). Yet, we also set aside dedicated time during the work day (13% of their time) to provide more structured educational opportunities and ensure that the next generation is prepared to steward our land. Here are just a few of the topics covered by our crews this year:

ENVIRONMENT & SUSTAINABILITY

- Environmental Education (EE) lessons from OSMP Naturalists on topics including: birds, bats, botany, geology, fire ecology, etc
- Bilingually facilitated EEs on environmental topics
- Junior Ranger's very own Bike to Work Day - supported by Moe's Bagels and Lucky's Market
- Accessibility hikes with Topher Downham
- Forest bathing with David Ford
- Outdoor safety, Leave No Trace, and Ranger responsibility lessons
- And much, much more!



"Our crew's EE (environmental education lesson) with Topher on an accessible wheelchair hike taught me how to be more respectful and helped make me a better person by helping me empathize with others. I was surprised to learn about the challenges that those with physical disabilities face." -Lee S, 2nd year



PROFESSIONAL & INTERPERSONAL

- Safety and proper ergonomics
- Pilot Leadership & Development crew with weekly leadership seminars
- Resume building & goal setting workshops
- CPR/First Aid training
- Defensive tactic trainings
- Youth Ranger crew led public fishing program
- Patience
- Perseverance in the face of setbacks, disappointments or adversity & maintaining crew morale

"One of my most valuable takeaways from Junior Rangers is the idea of self-advocating. In order to perform well, you need to be able to pay attention to your well-being first. What works best for you? How do you learn best? Do you feel comfortable? Knowing all of this is the only way to move forward. Taking care of yourself allows you to look after others. I think self-advocating translates to every aspect of life. With the JR program, I was forced to self-advocate constantly and my crew was always reminding me of how important it was that I pay attention to my health and well-being just as I did for everyone else. The journey of self-discovery that I'm on right now only works if I self-advocate." -2021 Junior Ranger

Crew Snapshot

YOUTH RANGER CREW



YOUTH IMPACT:

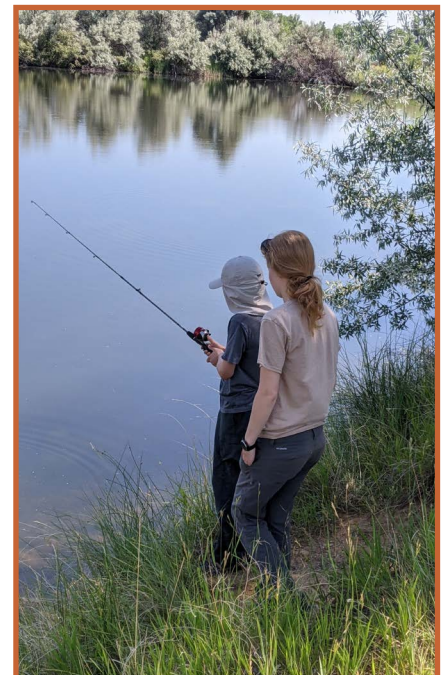
Working side-by-side with OSMP rangers gives youth real-life experience in natural resource protection, leadership, and emergency response. We teach youth life skills while exploring new career paths in the outdoors.

SYSTEM IMPACT:

The Youth Ranger program transforms youth into life-long stewards of open space and creates future leaders who will help protect and preserve our natural resources in perpetuity.



"The Youth Ranger program was my first opportunity to establish myself as a leader, especially in the outdoors, which has allowed me to get an on-campus job [at college] in the Outdoor Program." - 2021 Youth Ranger



LEARNING & WORK HIGHLIGHTS

The 2021 Youth Ranger Program had a variety of different activities over the session. Each day was a unique experience encouraging the crew to explore new ideas and incorporate what they had just learned into the work. Some highlights included:

Bird Banding - Youth Rangers captured and banded birds as part of ongoing avian research spanning more than 65 years.

CPR/First Aid - Youth Rangers completed a course to earn their CPR certification.

Wildland Firefighting - Following the Cal-Wood fire near Boulder, Youth Rangers worked on a fire mitigation project at the Cal-Wood Education Center. Boulder Fire Station 8 also discussed wildland fire fighting in the wildland-urban interface on OSMP and surrounding communities.



Defensive Tactics - Rangers instructed the Youth Rangers on self-defense tactics used by law enforcement officers to protect themselves and visitors to the parks.

Search and Rescue - Rocky Mountain Rescue taught Youth Rangers how to treat and evacuate an injured hiker from the field. Youth Rangers met the Boulder County Sheriff's Office search & rescue dogs and watched the dogs perform a mock search.

Bat Ecology Night - During a night hike, Youth Rangers observed bat behavior and learned about the importance of bats' roles in the ecosystem.

Herpetology - The Colorado Center for Snake Conservation allowed Youth Rangers to examine and handle a wide variety of native and exotic species of snakes, amphibians, and reptiles.

Flight for Life - A Flight for Life helicopter crew landed on OSMP property and talked with the Youth Rangers about the world of emergency air transport and their use in search and rescue.

Interpretive Naturalist Training - Youth Rangers learned how to develop an educational program for the public, and they delivered their own program by teaching children how to fish at Sawhill Ponds.



"Visiting the CU-Boulder Mountain Research Station with the Youth Rangers got me connected with a professor from the university. This resulted in me being able to do research as a senior in high school, which has been totally invaluable to me." - 2021 Youth Ranger

2021 Pilots & Future Opportunities

With the completion of the Open Space and Mountain Parks Master Plan in 2019, we have clear direction from the community on where to focus our energy in the future.

FOCUS ON WELCOMING DIVERSE BACKGROUNDS (CCEI.1):

As mentioned on pages 6-9, a priority of the Junior Ranger Program is to make our recruitment methods, application process, and program more inclusive and welcoming to *all* youth. This winter, we continue to revise and update our hiring process with insight from Spanish speaking community members and city colleagues focused on racial equity.

In the hiring process of Summer 2021, we found that the mandatory City of Boulder onboarding paperwork is a major barrier for many youth & families. When we provided 1:1 support for filling out each of these forms, many Junior Rangers were able to successfully start their job when they may have otherwise dropped out of the process. Next year, we plan to spend even more staff time on this 1:1 support, in English & Spanish, with the assistance of the HR department.

In 2022, we will also continue our community partnerships to do a “cultural audit” of the Junior Ranger Program, and seek suggestions for how to improve our programming to ensure it is culturally inclusive, relevant, and safe for the diversity of youth in Boulder.

CREATE A CONTINUUM: CONNECT YOUTH TO THE OUTDOORS (CCEI.3):

As mentioned on pages 5-7, in 2021 we collaborated with other Nature Kids Boulder partner organizations to deliver introductory, welcoming family programming to families not otherwise engaged in OSMP. This family programming, along with intentional community building and continual internal improvements, helped us introduce the outdoors to youth in a safe, supportive, and interesting way.

For 2022, we are looking at partnerships that might allow us to create more inviting starting places for youth ages 11-18 to enjoy learning and working outdoors, with slightly less of a commitment than a typical Junior Ranger trail crew.

CREATE A CONTINUUM: CULTIVATE LEADERS IN STEWARDSHIP (CCEI.7):

In 2021, we piloted the development of specialized crews with the Weather & Climate “Data Team” and a full session “Leadership Crew”. In 2022, we will also add a new “Peer-led Crew”. These crew types extend the continuum of learning for Junior Rangers, providing an opportunity for youth to dive deep into a specific topic area or build a pathway to confident leadership.

Weather & Climate - In partnership with Professor Cassano at CU and OSMP’s Brian Anacker, Junior Rangers on this crew collect microclimate data across their worksites on Open Space and crunch the data using RStudio and Excel. These Junior Rangers practice using the scientific method, develop critical thinking skills, learn to analyze and visualize data, and practice scientific writing and presenting.

Leadership Crew - The Leadership crew dedicates their 4 week session to one critical OSMP project, giving Junior Rangers the chance to develop more complex trail building skills and hone their maintenance techniques. Each week, the crew builds leadership development skills and explores career options, based on a curriculum developed in 2021 by team leaders Ailish McDonald & Trevor Laugen.

Peer-led Crew model - This crew bridges the gap between skills developed by Junior Rangers and the requirements for the professional adult trail crews at OSMP. Members of this crew are 18+, either graduates of the Junior Ranger program or young adults who never participated, and are interested in a professional skill-building pathway to year-round trail crews or a crew leader role.

Acknowledgements

This program would not be possible without all the hard work and time from dedicated City of Boulder staff, conservation professionals, emergency responders, and other professionals who helped with this program.

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Flight for Life Flight Crew
City of Boulder Wildland Fire Crew
Cameron Young, Executive Director for the Center for Snake Conservation
Nature Kids Boulder partners
Professor John Cassano, CU
Angie Busby, Cal-Wood Education Center



“Never stop the Junior Ranger program because it has changed the lives of so many people for the better” -Linda B, 1st year Junior Ranger