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MANUFACTURING AND SOCIAL RESPONSIBILITY

2018 REPORT



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INTRODUCTION

MSR's founder, Larry Penberthy, wasn't just a tech-minded engineer, he was also a passionate outdoorsman. He knew that having respect for the outdoors was one of the best ways to preserve these precious wild places. To him, this meant building his gear to last as long as possible, so that excess resources needn't be used up to replace it. That dedication to conservation is still alive at our company today.

MSR strives to leave an increasingly positive handprint on the world in which we create and use our outdoor products, and this report outlines our responsible actions to date and our path for the future. We are committed to minimizing the social and environmental impacts of our products, suppliers, and operations through better materials, safer chemicals, and smarter packaging.



Larry Penberthy, MSR Founder



ENVIRONMENTAL SUSTAINABILITY

From the materials in our products to how long we keep the lights on, environmental sustainability runs through MSR in a variety of ways. We realize that every decision we make has a positive or negative environmental impact, and the following pages detail the areas we've deemed priorities at MSR.





DESIGNING FOR DURABILITY, LONGEVITY, AND REPAIR

We build products to last, offering outdoor enthusiasts more adventures and reducing the amount of goods piling up in landfills.

Product Durability

Our first priority is to design and manufacture durable, long-lasting products. Extensive testing—both in-house and in the field—allows us to ensure that our products will stand up to the wear and tear to which our customers subject their gear.

Our products have stood the test of time, and we often hear stories from customers who are still using their MSR stoves from the 1980s. Because we believe in what we make and stand behind it, we offer a [three-year limited warranty](#) on all of our products.

Product Care and Repair

The majority of MSR products are repairable by customers or service staff at MSR's [Seattle Repair Shop](#). This helps keep your gear in the field and out of landfills. Furthermore, our repair team shares knowledge with customers to empower them to repair their own gear in the field using one of our service kits.

50

Years of combined experience on our repair and service team.

80%+

Of all products received are repaired.

Our repair and service team has more than 50 years of combined experience, and has been featured in *Outside Magazine* for their work. As more customers become aware of our Seattle repair shop, the number of products that get serviced, repaired, and returned for use continues to increase. In 2017, we repaired over 6,000 products, or more than 80% of all products received.

End of Use: Recycling

MSR products are made from durable materials, many of which are recyclable. Check with your local recycling program to determine which parts of your product can be recycled as opposed to discarded in a landfill.

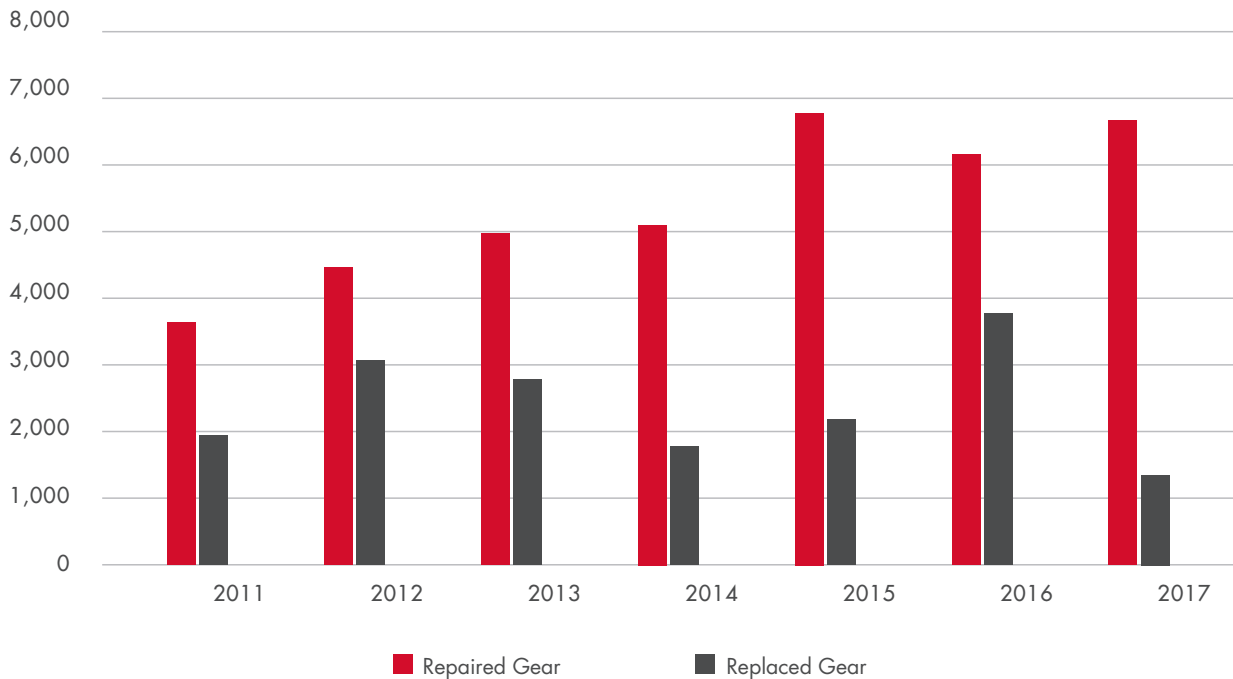
MSR's downtown Seattle repair shop additionally offers a [fuel canister recycling program](#). Customers who walk in with empty fuel canisters of any backpacking brand can exchange their empty fuel canisters for a discount on new MSR IsoPro canister fuel.

Building Better Products

Data collected by our repairs team provides a glimpse into how our customers use our products. Our repairs shop meets with our product development team on a quarterly basis to review this data, arming our product developers to continually produce better, higher-quality products.

REPAIRED AND REPLACED GEAR

Our Seattle repair shop aims to reduce waste by repairing gear instead of replacing it.



MATERIAL SELECTION

Choosing sustainable materials embodies the good stewardship of being in the outdoors, and creates a worthy legacy for future generations. When we decide that a plastic or other petroleum-based material is the best choice for a product, we make sure it is a durable, high-performance material.

Manufacturing Materials

There are a multitude of products across MSR that are recyclable, use environmentally-preferred materials, or limit chemicals and toxic substances. We're committed to increasing the number of products made with durable, sustainable materials.

MSR water storage systems are free of BPA, BPS, and phthalates, additives commonly found in plastics that have been linked to negative health effects.

Our stoves, tents, water treatment devices, cookware and snowshoes feature components that can easily be recycled.

Packaging Materials

While MSR relies on its packaging to deliver products safely to its customers, the company continues to consider opportunities to reduce packaging materials when possible to reduce the amount of resources used.

We've worked with our packaging suppliers to source materials that can be recycled, reducing the amount of materials that find their way to landfills. Where available, curbside recycling will accept all MSR packaging materials for processing at a local recycling facility.

MSR's packaging materials are locally sourced from northwest suppliers when possible, contributing to local jobs in the United States and reducing unnecessary shipping.



97.5%

of energy used by our
SEATTLE, WA, facilities
is supplied by renewable
energy sources.

25%

of energy used by our
RENO, NV, facilities
is supplied by renewable
energy sources.

Energy Use

SEATTLE, WA

Our Seattle, WA, manufacturing facility and offices are powered by Seattle City Light, with a renewable energy mix of over 97.5%.

ENERGY GENERATION TYPE	PERCENTAGE
Hydroelectric	89.6%
Nuclear	4.3%
Wind	3.6%
Coal	0.9%
Others	0.9%
Landfill Gas	0.7%

Source: Seattle City Light, 2014

RENO, NV

In Reno, NV, our manufacturing facilities and distribution center are powered by NV Energy, which has a growing renewable energy portfolio of over 25%.

ENERGY GENERATION TYPE	PERCENTAGE
Natural Gas	69%
Non-Hydroelectric Renewable Sources	20.6%
Coal	5.2%
Hydroelectric	5.2%

Source: Energy Information Administration, 2017

Waste Reduction

We're always looking for new and creative ways to minimize and repurpose waste from our products. For example, a number of MSR product pieces are stamped by machine or laser-cut from a single sheet of material. Product pieces are cut in a specific arrangement that yields the greatest quantity of pieces, and the remaining sheet is recycled.

MSR aspires to be a zero waste facility, and is exploring how to achieve this goal. Future objectives include the development of a waste-to-energy program and ways for our suppliers to reuse excess raw materials.

CHEMICALS

Flame Retardants

We know that customers have concerns around flame retardants (FRs) in products. That is why we actively participate in the Outdoor Industry Association (OIA) Chemical Management Working Group (CMWG). Leah Freed, Product Integrity Engineer at MSR, is co-chair of the Flame Retardant Task Force, which focuses on disseminating knowledge to other OIA members as well as to regulatory agencies and the general public.

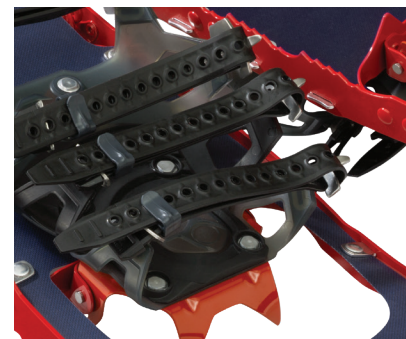
We also have MSR Shelter Category Manager Terry Breaux on the Canadian General Standards Board (CGBS) Committee on Tents, a federal government organization focused on developing a national standard for flammability and labeling requirements for tents. As a voting committee member representing a consumer product brand, Terry is helping to update the Canadian standard for flame resistance for tents sold in the Canadian market.

As part of these organizations, we are working with government and industry organizations to find better solutions to FRs within markets that require them, working to remove FRs from markets that don't, and changing regulations so that we can continue to design the best and safest gear available.

Read more about our work around flame retardants [here](#).



*Terry Breaux, MSR Shelter
Category Manager*



“... MSR’s Restricted Substance Lists (RSL) help us protect our customers, employees and the environment from harmful substances.”

Restricted Substance Lists

Developed in alignment with Bluesign and OEKO-TEX, MSR’s Restricted Substance Lists (RSL) help us protect our customers, employees and the environment from harmful substances. We require our suppliers to comply with our restricted chemicals list. The following Restricted Substance Lists are constantly evolving as we engage with new toxicology research and regulations.

RESTRICTED SUBSTANCE LISTS

Durable Water Repellants

Flame Retardants

Water Filtration and Hydration Systems

Cleaning and Maintenance Materials for Employee Safety

Material Family and Material Type Database

MSR’s thorough database cataloging all chemical materials used in its products contains information on chemical sources, identification, and how these materials are ranked by the Higg Index Material Sustainability Index (MSI). This database provides product developers with visibility on the relative environmental impact of materials that are selected for current and future products.

The database also contains Material Safety Data Sheets (MSDS) for each material, used to evaluate the safety of materials handled by MSR’s employees.

RESPONSIBLE MANUFACTURING

Building the majority of what we make in-house and using local suppliers allows us greater control over product quality and the environmental impacts of our manufacturing processes.

100s

HUNDREDS OF JOBS

in Seattle & Reno, USA
& Midleton, Ireland

53%+

OF PRODUCTS

manufactured in
Seattle, WA

100%

OF PRODUCTS

designed, engineered,
and tested in Seattle, WA

OUR SEATTLE HEADQUARTERS

We're proud of the fact that all of MSR's products are designed, engineered, and tested in-house at our downtown Seattle factory Headquarters. More than half of our products, by dollars of sales, are manufactured at our downtown Seattle factory headquarters. Domestic production provides hundreds of jobs in Seattle, USA, Reno, USA, and Midleton, Ireland.

Many MSR products are still hand-made on manufacturing lines in our Seattle factory, originally opened in 1969 in the same neighborhood where we currently operate. Built around our manufacturing facility, our marketing and operations offices, microbiology lab, and research and development lab employ hundreds of Seattle-based employees.

SEE HOW SOME OF OUR SIGNATURE PRODUCTS ARE MADE IN SEATTLE, WA:



MSR Timeless Quality



Building the MSR WhisperLite Stove



MSR WindBurner Research and Development



Behind the Scenes at MSR's Seattle Water Lab



Sustainable Manufacturing

With production facilities in Seattle, WA, Reno, NV, and Cork, Ireland, MSR holds itself to strict standards for how it manages and disposes of water and waste resulting from the company's manufacturing processes.

In Seattle, these standards include:

- US DOT: 49CFR (Hazardous Materials)
- WA Dept. of Ecology: WAC 173-303 (Dangerous Waste Regulations)
- WA Dept. of Ecology: RCW 70.119A (Public Water Systems)
- King County 28.84.060 (Wastewater)
- King County RCW 35.58 (Wastewater)
- King County Stormwater Ordinance Nos. 16264 and 15052 (Stormwater)
- US EPA: 40CFR Part 261 and 262 (Hazardous Waste Generator)
- Globally Harmonized System of Classification and Labeling of Chemicals (GHS) - WAC 296-800-170, 296-839, 40CFR1910
- City of Seattle (Seattle Municipal Code (SMC) Chapter 25.09 - Environmentally Critical Areas (ECA) Code

Manufacturing Code of Conduct

Ever since MSR was founded, the company has striven to adhere to higher manufacturing standards to ensure the quality of our products. Today, many MSR products are still built by hand on manufacturing lines just a floor beneath where we concept them.

"... many MSR products are still built by hand on manufacturing lines just a floor beneath where we concept them."

Furthermore, our company provides a work environment for its manufacturing employees that is safe, fair, non-discriminatory and continuously improving. Our employees are an essential contributor to the success of our company, and we believe it's important to set basic expectations on how our employees are regarded.





Supplier Tracking

Responsible manufacturing at MSR extends far beyond what happens at our Seattle factory, and includes not only our own practices, but the practices of our materials suppliers. MSR believes that the key to responsible manufacturing includes the social, economic and environmental impacts of our suppliers, and expects that our suppliers share our commitment to sustainability.

To ensure that MSR's supplier values are aligned with our own, we have created a Supplier Code of Conduct outlining basic expectations of our business partners. Many of MSR's suppliers go above and beyond these basic expectations.

Life Cycle Analysis

A life cycle analysis is a tool to model and quantify the environmental impacts of a product, service or system. This tool identifies environmental hot spots, or areas of high negative impact, and opportunities for improvement in a product's manufacturing life cycle. Furthermore, this study includes a sensitivity analysis to consider how specific changes in inputs or outputs would influence environmental impacts.

In 2017, MSR partnered with Yale University to conduct our first full life cycle analysis on our packaged Lightning Ascent 22" snowshoes, providing a cradle-to-gate review. This study will inform future environmental performance strategy and priorities at MSR, and we aspire to complete a life cycle analysis for additional products in the future.

Key learnings from the analysis include:

- The amount of CO₂ equivalent emissions produced by this line of packaged snowshoes is just 10% the estimated CO₂ equivalent emissions produced by manufacturing a bicycle.
- Transportation of materials accounts for a small percentage of our total CO₂ equivalent emissions.
- The greatest opportunity for the reduction of CO₂ equivalent emissions lies in MSR's materials choices for frames, specifically aluminum production. MSR is considering the use of recycled aluminum to further reduce the CO₂ equivalent emissions.

PRODUCT TESTING

Our founder Larry Penberthy's crusade to improve the safety of mountain equipment is still alive at MSR today, and is perhaps most visible in the company's product testing process. From our in-house water research lab to burn-testing stoves before shipping, MSR has a history of holding itself to a higher standard for quality and safety.

Water Research Lab

Behind every MSR water treatment and hydration product is a team of scientists dedicated to researching, developing and testing the latest in water treatment solutions. Established in Seattle in 1997, this on-site microbiology lab is crucial to MSR's water program and the safety and reliability of our products. Initially founded to ensure quality control, today the lab's world-class efforts stretch into research of new technologies, testing and development for the U.S. military, and contracts with nonprofit organizations working in developing nations.

Product Testing

Product testing has been in MSR's DNA since Larry Penberthy published the first *Mountain Safety Research* newsletter, a bulletin focused on testing and improving mountaineering gear.

These are just some examples of product testing conducted at MSR:

- Quality testing every water filter
- Burn testing every Reactor & WindBurner Stove System, and WhisperLite, XGK EX, Dragonfly, WindPro 2, and SuperFly stove
- Real-use field testing
- Durability testing
- Stress and water column fabric testing for tents
- UV exposure simulation
- Rigorous field testing



RESEARCH AND DEVELOPMENT LAB

MSR's goal is to bring transformative innovations to life. Each year, NGOs, government organizations, and private foundations provide grants to advance our exploration of technologies that can improve the lives of the people these partners support. At any given time, our R&D team is working on a dozen of these grant-funded projects. These are two products that have resulted from those efforts.

Guardian Purifier

The Guardian purifier was developed for the U.S. military to allow service members to safely drink from contaminated sources while on the move. After six years of extensive R&D, which included the design of a revolutionary hollow fiber membrane, the result became this rugged pump that quickly transforms even the most challenging backcountry water sources into safe drinking water. Today the Guardian purifier is sold in the global outdoor market, where it's received over a dozen innovation awards.

DayOne Response Waterbag and Filter

The DayOne Response Waterbag has brought safe drinking water to thousands of victims of natural disasters. Utilizing P&G™ Purifier of Water packets and a turbidity filter, the simple treatment bag enables users to purify very dirty drinking water using a single vessel. Supported by a grant from the Office of Naval Research, MSR worked with DayOne Response to improve the durability, usability and manufacturability of the bag. In addition, we engineered a refined turbidity filter, which we continue to manufacture and co-brand as the OEM partner.





GLOBAL HEALTH

At MSR, we believe our products can create lasting, positive impact on our local and global communities.

MSR Global Health was launched in order to produce innovative products that meet the basic human needs of those living in developing countries and rebuilding after natural disasters. We believe that the same level of engineering that creates gear to keep explorers safe in some of the world's most challenging environments can be leveraged to improve the lives of those struggling with access to safe water, food, and shelter.

GLOBAL HEALTH PRODUCTS

MSR's team of in-house engineers, water treatment scientists, product developers, and production leads share a dedication to high quality products and sustainable models that can impact the lives of many around the world.

Community Chlorine Maker

In 2015, MSR Global Health launched the SE200 Community Chlorine Maker, changing how citizens in low-resource communities around the world are able to create safe drinking water. The small device, co-developed with PATH, produces chlorine using just water, salt, and electricity from any power source, including a rechargeable car battery—resources that are available in even the most remote places, where the means to treat drinking water are hard to obtain and waterborne illnesses are a fact of life. Each batch produces enough chlorine to create 200 liters of safe drinking water. A chlorine supply chain innovation, the chlorine maker lets users treat water on the spot at wells, water trucks, and other common sources.

Most importantly, the Community Chlorine Maker empowers families, community leaders, and entrepreneurs all over the world to create their own supplies of safe drinking water.





MSR IMPACT PROJECT

Launched in 2018, the MSR Impact Project accelerates access to innovative technologies that advance global health and improve quality of life around the globe.

The MSR Impact Project conducts a variety of regular fundraising initiatives. Using the funds raised by these initiatives, MSR Global Health issues grants to partner organizations for the implementation of life-saving global health technologies. Grants issued by MSR Global Health are typically used to fund water and sanitation projects, supplies, education, training, behavior change, monitoring, and evaluation.

GLOBALLY PROVEN



MSR's Community Chlorine Maker has provided safe water treatment in nearly three dozen countries around the globe.

PARTNERS IN GLOBAL HEALTH

It takes the hard work and collaboration of many to make a global impact. MSR Global Health works with NGOs, government entities and private institutions to deliver products that serve communities in need. The following is a selection of MSR's valued partnerships in Global Health.

PATH

PATH is the world leader in driving global health innovation. A key development partner for MSR Global Health, PATH provides our team with critical field expertise and channels for product testing and implementation within the communities we strive to help. PATH is also a founding member of the Safe Water Product Development Alliance, along with MSR Global Health.

World Vision

World Vision is a humanitarian organization that tackles the causes of poverty and injustice by working with children and families worldwide to reach their full potential. An important mentor to MSR Global Health, World Vision helps our team facilitate in-country field trials and pilot programs through WASH initiatives, and remains a key partner in current projects.

Operation Blessing International

One of the largest nonprofits in America, Operation Blessing International provides a broad range of humanitarian and disaster relief efforts—from hunger to health issues—in over 37 countries. The organization was an early adopter of MSR's SE200 Chlorine Maker for disaster relief efforts, and it continues to participate in design review meetings for products currently in development.



OUTDOOR INDUSTRY LEADERSHIP

MSR is proud to be a founding member of the Outdoor Industry Association Sustainability Working Group, a coalition of more than 300 outdoor brands, suppliers and manufacturers dedicated to addressing our most important sustainability challenges. As one of the first hard-good brands to voluntarily use the Higg Index to examine our practices in material traceability, chemical management, social responsibility and other core competencies, MSR is proud to continually advance this work as a member of the outdoor industry.



The Higg Index

Founded by the Outdoor Industry Association Sustainability Working Group, the Higg Index is the outdoor industry's first suite of sustainability measurement tools. The Higg Index empowers brands of all sizes and at every stage of their sustainability journey to accurately measure and score their products' sustainability performance.

In addition to being one of the founding members of the group that launched this valuable tool, MSR is one of the first hard-good brands to voluntarily use the Higg Index to examine our practices.



COMMUNITY AND CONSERVATION

MSR is proud to partner with organizations committed to educating on safe and respectful recreation in our backcountries while empowering people to challenge themselves within these wild places that move us.



Alpine Mentors

Alpine Mentors pairs proficient young climbers with highly experienced climbing mentors to foster the next generation of great alpinists. Over the course of two years, under the tutelage of their guides, the young alpinists learn critical skills and sound judgment in complex environments, as they strive to complete technical routes in the high mountains. A longtime sponsor, MSR provides monetary support to the nonprofit and gear to the mentees.



American Alpine Club

At 16,000 members strong, The American Alpine Club is the voice of America's climbers. Through its deep history of conservation, education, grants and policy work, it has protected pristine climbing landscapes, advanced research projects and promoted many of climbing's pioneering feats. MSR is an AAC financial sponsor, and supports its Craggin' Classics climbing festivals across the United States.



American Mountain Guides Association

The American Mountain Guides Association inspires and supports a culture of American mountain craft providing world-class and internationally recognized education, training, and certification to aspiring and professional guides. With hundreds of years of collective experience, the American Mountain Guides Association is the leading organization of America's most vibrant, inspiring community of climbers and skiers.



Conservation Alliance

The Conservation Alliance is a group of outdoor businesses that collectively disburses funding to grassroots environmental organizations to protect wild places. Since its inception, the alliance has funded more than \$18 million in conservation grants throughout North America. MSR employees participate in the regular voting process that disburses funding to environmental organizations.



European Outdoor Group

The European Outdoor Group is an association that represents the common interests of the European outdoor industry. Areas of focus for the European Outdoor Group include market research, coordination and promotion of responsible industry practices, workshops, networking events, trade shows, cooperation with trade associations, and promotion of best practices for the whole European outdoor industry.



Northwest Avalanche Center (NWAC)

The leading avalanche forecasting, safety and education center for the Pacific Northwest, NWAC's mission is to save lives and reduce the impacts of avalanches on the region. The center maintains one of the most comprehensive weather data networks of its kind. It also offers public avalanche awareness clinics. MSR sponsors its Going Deep Avalanche Workshops, and provides the center with financial support that promotes everything from its forecasting apps to its fundraisers and its annual SnowBash and Splitfest events.



Outdoor Industry Association (OIA)

Founded in 1989 by a group of 14 visionary outdoor industry pioneers, the Outdoor Industry Association is a unified, collaborative, and pre-competitive voice to help guide the outdoor industry. With more than 1,200 members, the OIA leads industry collaboration to achieve meaningful change in recreation and trade policy, sustainable business innovation, and increasing outdoor participation.



Utah Avalanche Center

The Utah Avalanche Center provides high-quality mountain weather and avalanche forecasting for backcountry recreationalists and industry professionals in the state of Utah. Through its educational workshops, the center promotes avalanche awareness and safety, ensuring that backcountry travelers have the tools they need to stay safe while recreating in winter terrain. MSR's financial contributions support the center's operations, forecasting resources and its public safety efforts.



Winter Wildlands Alliance SnowSchool

Winter Wildlands Alliance is a nonprofit organization committed to promoting and preserving winter wildlands and the enjoyment of human-powered snowsports on public lands. Through its SnowSchool program, it has introduced thousands of underserved youth to their local winter environments. These exploratory field trips teach students about snow science and winter ecology. Each year, MSR provides discounted snowshoes and snow tools to SnowSchool, and our financial support has helped establish new SnowSchool sites across the country.



EMPLOYEE PROGRAMS AND BENEFITS

At MSR, employee compensation goes above and beyond a paycheck. From traditional benefits like 401k contribution matching to a gear closet program, our employee perks make MSR a great place to work. Due to the variety of positions available at MSR, benefits vary by employee department and position.





Bike Commuter Benefits

To reduce vehicle emissions, we offer a variety of amenities for our employees that choose to commute by bike, including lockers, showers, and bike storage. MSR participates in the annual commuter challenge and bike-to-work month.

Public Transportation

MSR's Seattle headquarters is conveniently located on a number of mass transit lines, including bus and train, and all employees are eligible for a discounted mass transit pass. MSR's commute options program includes full access to Seattle Metro Transit on weekdays and weekends, offers 8 Home Free Guarantee emergency ride home service passes, vanpool fare subsidies, carpool incentives, and customized ride-matching services.

"Get Outside and Play" Holidays

Salaried employees are allowed two paid holidays in addition to their regular paid time off, established to encourage MSR employees to enjoy the Pacific Northwest's natural beauty.

401k Savings and Investment Plan Contributions

All regular fulltime and eligible part-time employees are automatically enrolled in MSR's 401k savings and investment plan, and may elect to contribute any percentage of their salary to this program up to the IRS contribution limits. MSR matches a percentage of contributions starting one year after the eligible employee's hire date.



Profit Sharing Discretionary Bonus

Every employee at MSR plays an important role in contributing to the overall success of the company. To celebrate and acknowledge employee contributions, MSR offers all employees the opportunity to share in the profitability of the company when specific financial goals are met.

Service Awards

The spirit of MSR service awards is to recognize an employee's contribution and tenure with the company. These awards are recognized at regular intervals with the company, with incentives such as bonuses or paid time off.

Wellness Program

Employees at MSR have the option to participate in a wellness program to receive substantial discounts on their monthly health insurance premium.

Flex Time

The Flex Time program at MSR permits salaried employees that work above and beyond to take the time off they desire to recharge. With approval from their supervisor, employees are rewarded with additional time off by request.



Employee Assistance and Counseling

MSR sponsors an Employee Assistance Program (EAP) that provides referrals for confidential employee assistance and professional counseling services. Employees and their families are encouraged to utilize these services whenever necessary to resolve personal or family issues.

Shared Gear Closet

From kayaks to tents, MSR provides its employees with shared outdoor products that can be borrowed at no charge, reducing the amount of individual products owned by employees.



Volunteer Programs

Many employees choose to get involved with their local community through MSR-sponsored volunteer events with local partners. After approval by a supervisor, employees are paid for volunteer work done during business hours.

Work from Home Policy

MSR offers employees the ability to work from home as appropriate, reducing vehicle emissions and traffic congestion.

Dog-Friendly Office Policy

As part of its commitment to a fun and unique work environment, MSR allows employees working in its offices to bring their dogs to work.