



2021/2022

ENVIROLUTION

PROJECT RECHARGE

CAREER QUEST

INTRODUCE A GIRL TO ENGINEERING DAY

# 2021-2022 ANNUAL REPORT



*Inspiring and empowering the next generation of leaders and workers who will drive the growth of a sustainable economy*

1755 E Plumb Ln., Ste. 135  
[www.envirolution.org](http://www.envirolution.org)  
775-229-8488

A 501(c)(3) Nonprofit Organization  
EIN: 208274660

**OUR MISSION**

To inspire and empower the next generation of leaders and workers who will drive the growth of a sustainable economy.

**OUR VISION**

To live in a world wherein the social, environmental, and economic spheres of our lives are prosperous and in balance. We envision an educational system that employs an inquiry-based and practical approach that inspires and prepares our youth for this rapidly developing sustainable economy.

**LETTER FROM OUR EXECUTIVE DIRECTORS**

On behalf of Envirolution staff and the Board of Directors, we are excited to share our accomplishments for this 2021/2022 annual report. The theme for this past year was sustainable growth! As the world started opening up after the pandemic, we experienced an influx of requests for events and resources for our community partners. We saw this growth and excitement for engagement with students the most within our Career Quest program, which added seven new business locations to our list. We also reached over 3,400 girls across 38 states as part of Introduce a Girl to Engineering Day. These successes are a testament to our ability to host large-scale virtual events successfully with maintained engagement.

As many of our partners will attest, Envirolution has grown into a significant workforce development leader for Nevada. We received the CLEAN grant with NV Energy which has helped to advance workforce development and promote the benefits of clean energy in Nevada, especially in rural and historically underrepresented communities. We have also created two additional Energy bikes in Las Vegas that NV Energy is helping to facilitate for teacher-led class presentations. Our virtual presence and continued success with our Project ReCharge professional development sessions have allowed us to experience much more cost-effective growth. One of these initiatives is our Pilot National Expansion of Project ReCharge in Phoenix, Arizona. Located near the Apple Data Center, this grant has helped bring on ten new teachers receiving over \$2,000 worth of hands-on STEAM materials. They have also participated in over 130 cumulative hands-on hours of training, both in-person and virtually.

Getting back to in-person training has been a breath of fresh air for all of our stakeholders but this has been an especially beneficial time for our staff to focus on training and personal development. We have all been participating in DEI training and core values development sessions that have been helping the staff to connect more with the organization while empowering their voices. Over the past year, we also outgrew our residential home office. We moved into a much larger space on E. Plumb Ln., which has elevated us to a new level of professionalism and has poised us for our inevitable continued growth in communities across the country. As we look towards another exciting and busy year, we encourage you all to reach out to learn more about how you can get involved in helping us accomplish our mission. Whether that's volunteering to help put classroom materials together for teachers, speaking to students about your STEAM career or sponsoring our programs so they continue to stay free and accessible to all schools. We welcome all the support and sincerely appreciate it!



**Vanessa Robertson, M.A.**

Co-Executive Director  
Programs and Partnerships



**Mike Robertson**

Co-Executive Director  
Operations and Technology



## FIVE YEAR STRATEGIC PLAN

**Objective 1:** By 2024, provide 500 science/math and STEAM teachers with professional learning and on-going resources.

- **Update 2021/2022:** Have provided 274 science/math and STEAM teachers with professional learning and on-going resources.

**Objective 2:** By 2024, engage and educate 100,000 students from diverse backgrounds in articulated STEAM and sustainability concepts.

- **Update 2021/2022:** Engaged and educated 67,980 students from diverse backgrounds in articulated STEAM and sustainability concepts.

**Objective 3:** Each year, increase student knowledge of, and interest in, STEAM and sustainability careers by 25-50% percent.

- **Update 2021/2022:** Student pre/post content surveys showed an average increase of 36%.

**Objective 4:** Each year, increase awareness and impact of STEAM and sustainability programs by interacting with community members across 30+ events.

- **Update 2021/2022:** Increased awareness and impact of STEAM and sustainability programs by interacting with 4,583 community members across 42 events.

**Objective 5:** Each year, show long term support of annual programs by increasing annual funding by 15-20% and diversifying funding sources by 25-50%.

- **Update 2021/2022:** Increased annual funding by 11% and diversified funding sources by 52%.

**Objective 6:** By 2024, expand Project ReCharge to 5 new cities (outside Nevada).

- **Update 2021/2022:** Project ReCharge has successfully expanded into 6 new cities in 6 states.



For more details on our strategies visit:

<https://envirolution.org/strategic-plan>



## FINANCIALS



**\$709,141**  
**TOTAL REVENUE**

Government grants: \$616,664  
Foundations: \$46,768  
Individuals: \$8,724  
Businesses: \$23,977  
In-kind Services: \$13,008



**\$696,440**  
**EXPENDITURES**

Programmatic: 61%  
Administrative & Fundraising: 34%  
Research and Development: 5%

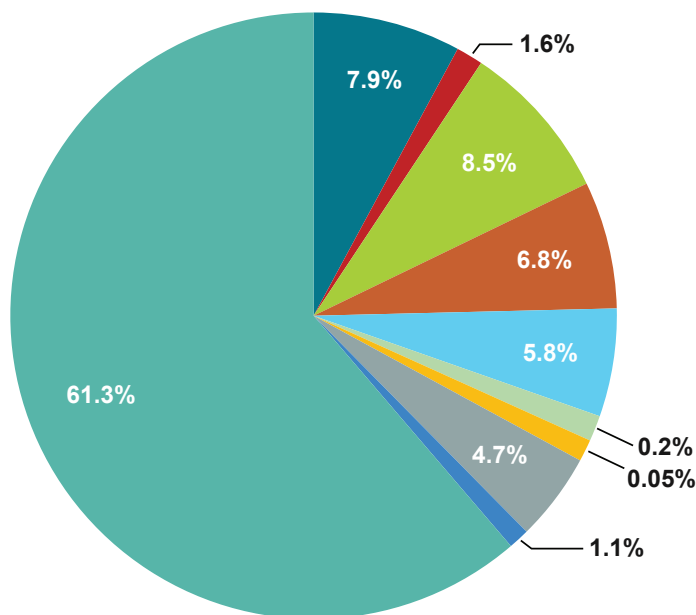


**11%** **REVENUE GROWTH**

We continued to grow our staff, programs and value in our communities resulting in \$71,955 more revenue in 2021 than 2020.

### ADMIN & FUNDRAISING EXPENSES

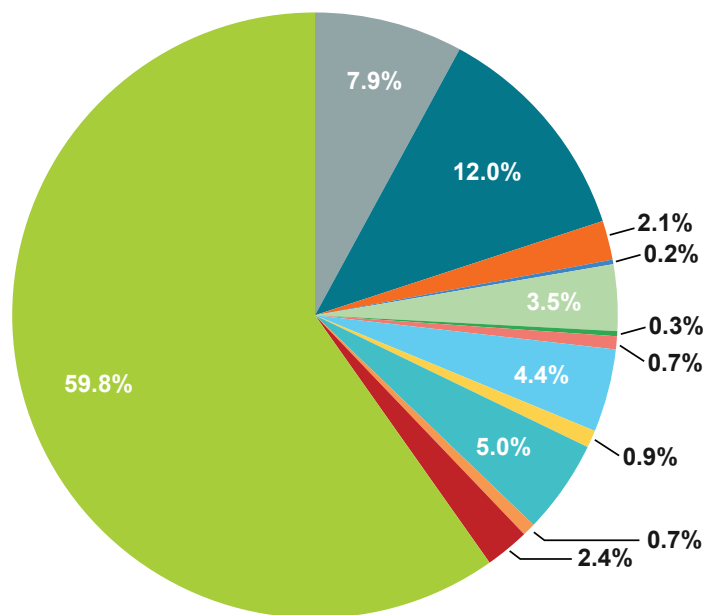
**\$243,487**



- Employee wages/taxes (admin)
- Continuing education/development
- Insurance/licensing
- Office supplies/postage
- HR PEO Fee
- Advertising/marketing
- Facilities/rent/utilities
- Professional services
- Food
- Dues/subscriptions

### PROGRAMMATIC EXPENSES

**\$424,963**



- Employee wages (programmatic)
- Hands-on materials
- AmeriCorps
- Curriculum development and trainers
- Subscriptions
- Teacher stipends
- Printing and materials
- Value of In-Kind services
- Travel
- Shipping
- Program promotions
- Student projects and recognition



**\$27,990** **R&D EXPENSES**

Employee wages: \$23,732  
Hands-on student materials: \$3,556  
Travel: \$702



## PROJECT RECHARGE



Project ReCharge is a formal hands-on, project-based Science, Technology, Engineering, Art, and Mathematics (STEAM) curriculum and training program dedicated to educating and preparing students to become future sustainability leaders by solving real-world problems. This program provides teachers with the classroom resources and training to equip their students with the knowledge, skills, industry connections, and confidence needed to become sustainability detectives and inspire them to pursue careers in STEAM sectors. In this innovative program, students are provided with the opportunity to build on learned STEAM concepts to solve sustainability issues in their homes, school, and communities and make an impact on the local and global environment.

### 2021/2022 IMPACT

**59**  
NEW  
TEACHERS



**37**  
NEW  
SCHOOLS

**5**  
NEW  
DISTRICTS



*"I am going to tell my mom and dad that they have to unplug everything if we are not using it!"*

– Project ReCharge Student, 2022



**36%**  
INCREASE

in content knowledge  
shown from pre/post  
student content surveys.

## PROJECT RECHARGE - IMPACT TO DATE



# 223 TEACHERS

Teachers from 108 schools & 15 school districts have been provided with over 9,190 hours of professional learning.

# 65K STUDENTS ENGAGED

with interactive hands-on STEAM curriculum



# \$1.29M ENERGY SAVINGS

Based on 10,418+ MWh of energy savings as a direct result of student-driven sustainability projects.

=



# 930

This savings is equivalent to powering 930 American homes for one year.

# 1,591

This savings is equivalent to removing 1,591 combustion cars from the road.



# \$390K+

In classroom materials distributed to 108 schools

*"I loved how hands-on everything is - my kids will be super engaged!"*

– PRC Teacher, 2022

## PROJECT RECHARGE - ADVISORY BOARD

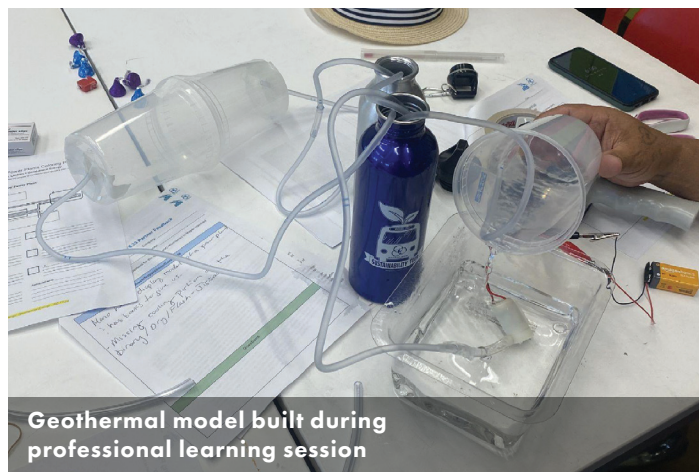
**Alex Gamboa**, President - AG20 Investments | **Cara Tirado**, Carson City School District | **Frank Dolan**, Staff Electrical Engineer, Infrastructure - Redwood Materials | **Jarell Green**, UNR Upward Bound Math Science Program | **Mike Matheus**, Senior Building Energy Engineer - McKinstry | **Roger Cramer**, Retired Educator | **Amy Fleming**, Program Development and Engagement Specialist - NV Governor's Office of Workforce Innovation | **Robin Yochum**, Energy Program Manager - NV Governor's Office of Energy | **Shayne Patrick**, Freshman at Reed High School | **Sarah Gobbs-Hill**, CEO - Listening Forward Consulting | **Elizabeth Korinek**, Retired from Washoe County School District



**Accomplishments:** The advisory board met four times this year to determine the goals and priorities for Project ReCharge (PRC) curriculum over the next few years. Using curriculum rubrics, stakeholders decided PRC will focus on the middle and high school Next Generation Science Standards for new curriculum development around general sustainability and energy.. The team determined the next four full 5E lessons to be developed will be: Electric Vehicle, Food and Sustainability, Waste and Sustainability, and Battery Storage.

## PROJECT RECHARGE - CURRICULUM EXPANSION

The curriculum has two new lessons: (1) Transportation Introduction where students investigate their own understanding of transportation, explore a simple motor, learn about the history of transportation, and consider the properties needed for the future of transportation, and (2) HS Geothermal Energy where students investigate how magma moves to analyze geothermal energy as a potential renewable energy source for their area. About 20 new activities were added to provide more resources for students to understand sustainability and energy concepts, provide up-to-date background information, make our activities more accessible through the lens of diversity, equity, and inclusion, and provide students and teachers more resources to complete the Year-End Student Projects.



Geothermal model built during professional learning session

**20**  
NEW  
ACTIVITIES



**3**  
NEW  
LESSONS

**3**  
NEW  
STANDARDS

## PROJECT RECHARGE - BILINGUAL INITIATIVE

**28**  
WORKSHEETS  
TRANSLATED

Envirolution is currently in the process of translating our Project ReCharge curriculum into Spanish! The translation of the standards-based, hands-on curriculum will allow us to engage and impact Latino and Spanish-speaking students and provide them the opportunity to learn about energy efficiency, sustainability, and STEAM.

**So far, we've translated 2 units, 7 lessons, and 28 worksheets to Spanish!**





CAREER QUEST



the burden on schools and businesses while increasing its impact and efficiency.

Career Quest is a collaborative program that connects businesses to students by exploring workplace STEAM education and sustainability-focused career opportunities. Through engaging presentations, industry tours, and hands-on activities, Career Quest introduces students to the benefits of STEAM education while connecting local businesses to their future workforce. Career Quest provides both in-person and virtual events, which has allowed classrooms, regardless of geographic location, the ability to engage in career development opportunities. All logistics are facilitated by Envirolution, significantly reducing

Expanded business tours included:

Click Bond, Wood Rodgers, ROC, Apple Data Center, TMWA, Redwood Materials, Waste Management

2021/2022 IMPACT

41  
EVENTS

Facilitated virtually and in-person.

1,106  
STUDENTS

Engaged in unique workforce development experiences

19  
PROFESSIONALS

From 8 companies attended 3 STEAM Guest Speaker Development sessions



Apple Data Center



IMPACT TO DATE

3,587

Students have participated in Career Quest with our 15 partner businesses

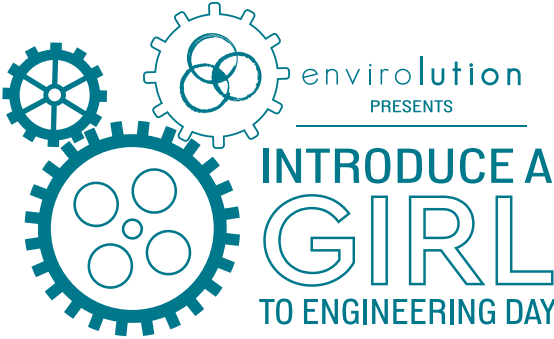
52

Schools from 8 school districts have participated in Career Quest

5,378

Career Development Hours received through 122 events

# INTRODUCE A GIRL TO ENGINEERING DAY



Introduce A Girl to Engineering Day (IGED) is part of a National event dedicated to inspiring and encouraging young girls, nonbinary, and genderqueer students to consider a career in engineering. This year Envirolution was able to host two events: an in-person event at the University of Nevada, Reno, and an online event in partnership with Tesla!



On **February 24, 2022**, Envirolution partnered with the **College of Engineering** and the local **Society of Women Engineers** chapter to bring Introduce A Girl to Engineering Day to the **University of Nevada, Reno (UNR)** campus for this inaugural event. Forty-nine middle school students from Eagle Valley Middle School and Carson Middle school attended the event filled with inspiring speeches, fun, hands-on engineering activities, and an exclusive tour of UNR’s cutting-edge technology. Students also interacted with engineering students and industry professionals from 8 local companies and heard from special presenters, including Associate Dean of the College of Engineering Indira Chatterjee, University President Brian Sandoval, and Senior Vice Provost Dr. Jill Heaton. Each student received a one-of-a-kind “This is what an engineer looks like” shirt and left the event with a goodie bag filled with engineering-related promotional materials from our industry partners.



## PARTNERS

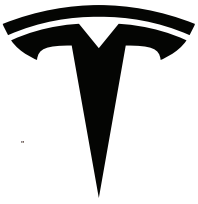


TESLA





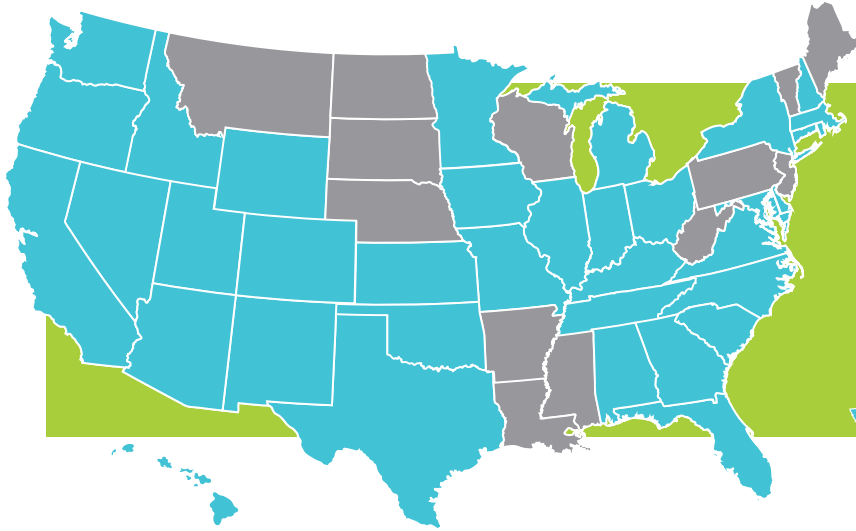
## INTRODUCE A GIRL TO ENGINEERING DAY



# INTRODUCE A GIRL TO ENGINEERING DAY



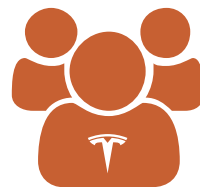
2022 marked our 5th year of partnership with Tesla on this incredible event! We registered over **1,400 students** from across **500 schools** and **38 States**, with a few even from **Canada, Mexico, India, and Australia!** Participants received one-of-a-kind virtual tours of Tesla's Fremont, Nevada, and Buffalo Gigafactories while hearing inspiring messages from Women at Tesla. 500 students received materials to participate in creating a simple motor, becoming some of the youngest electrical engineering "interns."



### IMPACT TO DATE

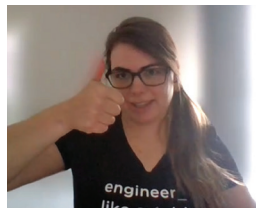
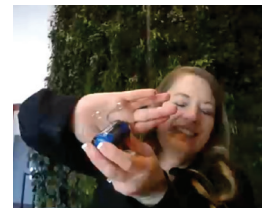
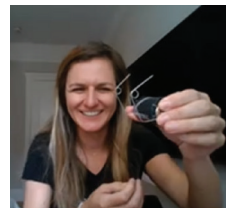
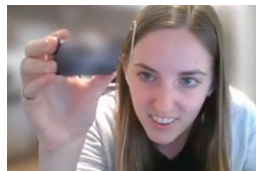
# 3,293

students registered from across  
**39 states, 589 schools &  
6 countries**



# 690

VOLUNTEERS





# RESEARCH & DEVELOPMENT

Envirolution is committed to continuous improvements to our programs and outreach methods and a portion of select grants goes towards research and development. From piloting new lessons and materials to participating in new events, funding is needed to support the time and materials required so these opportunities are not missed. This innovative approach allows us to meet the immediate needs of our community without the restricted timeline of traditional funding.



**Digigirlz** - Envirolution teamed up with Sierra Nevada Journeys on July 15th to support Microsoft’s 20th Anniversary of Digigirlz, a one-day workshop on the UNR campus aimed at connecting girls with opportunities to learn new technology, engage in workshops, and explore amazing role models in a variety of technical and tech-infused careers. Together we took around 100 high school students through the engineering design process to learn about renewable energy and our local watershed and challenged them to build their own wind turbines.

**Tech Trek** - On July 18th, Envirolution team members traveled to the UC Davis campus to kickstart the week-long annual Teck Trek for 90 8th grade girls from across California. Our workshop theme was titled “How electric cars can save the world.” Participants used the engineering design process to build a simple electric motor and learned that if electric vehicles made up just 21% of the total car market it could reduce CO2 emissions by over 7.66 gigatons which is the equivalent of planting 9 million acres of trees (5x the size of the US)!

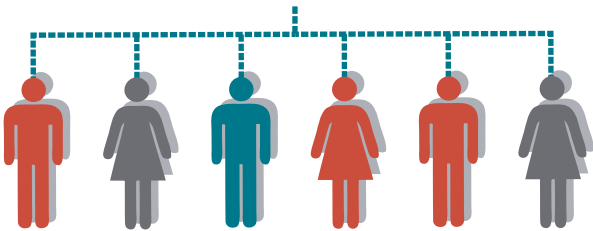


**Northern Nevada Science and Tech Festival -**  
April 26-30, 2022, marked the 2nd Northern Nevada Science and Technology Festival, a free week-long event aimed to inspire and connect our community with the power of science and technology happening in Nevada. We utilized our growing network of businesses and community organization to spearhead the first year of Science is Everywhere. We facilitated the recruitment, promotion and booking of over a dozen business tours that reached over 350 community members. Educating the public and connecting them to our local community by providing free and accessible opportunities is a part of our Strategic plan and we are excited to see this festival grow year after year.



## STUDENT DEMOGRAPHICS (NV)

52%



Students Impacted  
Attending Title 1 Schools

- 67% of our students received a free or reduced lunch

### Represented Nationalities

- 10% African American/Black
- 1% American Indian/Alaskan Native
- 6% Asian/Asian American
- 42% Hispanic/Latinx
- 1% Native Hawaiian/Pacific Islander
- 6% Multiracial
- 34% White



# COMMUNITY ENGAGEMENT

2021/2022 IMPACT



## 4,483

community members reached through  
42 events hosted or attended by  
Envirovolution



## 413

Our volunteers have generously  
contributed 413 hours during material  
preparation and park cleanups



*"I love that Envirovolution offers educational programs that allow kids to engage with environmentalism and learn about sustainable alternatives for a more green future."*

– Volunteer, 2022



## TESTIMONIALS



*"Thank you for creating the most innovative and relevant sustainability curriculum on the planet! You are transforming childrens lives daily, offering them a path they didn't know existed. You inspire me!"*

– PRC Teacher, 2022



*"I had so much fun and can't wait to do this activity with my kiddos. Thank you for all of the work you put into this!"*

– PRC Teacher, 2022

*"My favorite thing about Career Quest is that they want to show people different types of careers that you can go into after you gaduate high school!"*

– Student, Career Quest 2022



*"The best part of this event was that many girls this age now have an idea of what is offered to them in the future because there aren't that many people that agree with women in tech and engineering right now.*

– IGED student, 2022

*"Students really enjoyed doing the research and creating a presentation. This project gave students the freedom to choose a topic they're interested in and utilize information they have to convince others to join in on their 'fight'"*

– PRC Teacher, 2022





## OUR TEAM

Engaging students and supporting teachers takes a passionate and dedicated team!



**Vanessa Robertson**  
Co-Executive Director -  
Programs and Partnerships



**Mike Robertson**  
Co-Executive Director -  
Operations and Technology



**Laura Scarselli-Hendrix**  
Project ReCharge  
Manager



**Aimee Frugoli**  
Programs Manager: Sustainability  
Expedition, Career Quest, IGED



**Megan Weinhold**  
Curriculum Developer



**Chaja Hogeweg**  
Marketing and Content  
Coordinator



**Brittney Gutierrez**  
Development  
Coordinator



**Katie Rominger**  
Educational Materials Manager



**Courtney Moran**  
Research and Evaluation VISTA



Check out our latest team members at:

[www.envirolution.org/envirolution-staff](http://www.envirolution.org/envirolution-staff)

## MASTER TEACHERS

### Level 4:

- **Todd Markey** - North Valleys HS - Chem AP Env Sci (Reno)
- **Dustin Coli** - Wooster HS - CTE (Reno)
- **Leigh Metcalfe** - Doral Academy MS - Science (Reno)
- **Krissi Hadley** - Swope MS - Science (Reno)
- **Michelle Hollis** - Pinecrest Academy - STEM Specialist (Sparks)
- **Tammy Borremans** - Dayton ES - 5th Grade (Dayton)
- **Randie Orong** - Churchill MS - STEM (Fallon)
- **Cali Holman** - Heritage Homeschool MS (Reno)
- **Natalie Wierzbicki** - Incline MS - Science (Incline Village)

### Level 3:

- **Kristi Varner** - Fernley HS - Environmental Science (Fernley)
- **Cindy DeLeon** - FlagView IS - 5th grade (Elko)
- **Kim Tucker** - Eagle Valley MS - STEM (Carson City)
- **Cameron Piggot** - Sawyer MS - Science (Las Vegas)
- **Lorenzo Worster** - Sierra Expeditionary - 6th grade (Truckee)

### Level 2:

- **Teneya Cramer** - Carson HS - English (Carson City)
- **Lisa Daughtery** - Del Sol Academy - Phys. Science (Las Vegas)
- **Eric Heiselt** - Silverland MS - PRC Elective (Fernley)
- **Christen Vice** - CC Meneley ES (Gardnerville)

## BOARD OF DIRECTORS

**Matt Rittenhouse**, Board Chair  
Loan Officer, New American Funding

**Mara Langer**, Board Chair (2020-2022)  
Community Relations Professional

**Sylvia Scoggin**, Secretary (2017-2022)  
Secondary Science Curriculum Facilitator -  
Washoe County School District

**Todd Markey**, Director (2017-2022)  
Teacher, Washoe County School District

**Breann Koep**, Director  
Project Controls Manager, Exyte

**Debbie Patrick**, Director  
Marketing/PR - Promotional Concepts

**Mark Korinek**, Director  
Director of Operations and Sustainability -  
Carson City Schools

**Lina Tanner**, Director  
Attorney/Government Relations - Tanner Law &  
Strategy Group, LTD. & Burning Man Project

**Gina Nakahara**, Director  
High School Manufacturing Teacher -  
Central Technical Training Academy (Las Vegas, NV)

**Carlos Rendo**, Director  
Public Outreach Manager - Nevada Division of  
Water Resources

**Antuan Cannon, CEM, LEED AP, MFBA**, Director  
Director of Talent Development & Innovation - Willdan

**Rhonda Chavez**, Board Appointed Treasurer  
RHC Enterprises

# UPCOMING PLANS FOR 2022 / 2023

## • Programmatic

- Continued expansion of Project ReCharge into Arizona, Colorado, California and Maine with the support of Apple Inc. and a NAAEE and Pratt and Whitney E-STEM Award.
- Formal creation of new program EDGE (The Empowerment and Development of Girls in Energy and Engineering) and the execution of the E-Power Workshop in April 2023 in Carson City School District.
- Add 3 new Career Quest business partnerships while developing a robust scheduling system for events.
- Expand IGED to other businesses and partners, reaching more girls in the community and across the country.
- Resume Sustainability Expedition in March 2023, after a 3 year hold due to the pandemic.

## • Organizational

- Begin development of new four year Strategic Plan.
- Continue incorporating additional diversity, equity and inclusion elements into the programs and organization while further defining Envirolution's Core Values.
- Increase individual public donations by 25%.
- Expand and develop a collaborative system of Action Teams between the Board of Directors and Envirolution Staff.

## MEDIA PRESENCE



5/28/22

Local Nonprofit and Electrical Contractor Helping Dayton Students with Sustainability Project

2/24/22

Introduce A Girl to Engineering Day

2/22/22

Local Non-Profit and UNR to Welcome 50 Carson City Students for Engineering Day Event



5/19/22

Project ReCharge Teacher and Student Recognition

5/18/22

Teachers and Students Honored for Work on Pro-Environment Efforts

2/24/22

Program Encourages Girls to Go into Engineering



1/3/22

Engineering Event Encourages Carson Girls to Explore STEM Field



1/3/22

Girls and Engineering are the Focus of Outreach Event



2/24/22

Carson and Eagle Valley Middle School Girls Introduced to Engineering at UNR



1/3/22

Event Encourages Carson Girls to Explore STEM Field

## THANK YOU TO OUR PARTNERS



TESLA



COMMUNITY  
FOUNDATION  
of Northern Nevada



NEVADA  
STEM  
NETWORKS





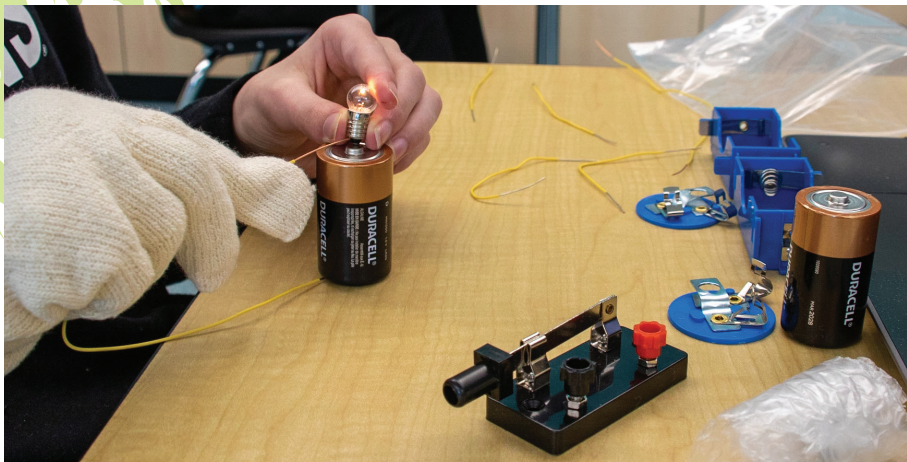
## INSPIRING THE NEXT GENERATION



## OF LEADERS AND WORKERS



## WHO WILL DRIVE THE GROWTH



Digital Annual Reports Available at:  
[envirolution.org/annual\\_reports](https://envirolution.org/annual_reports)

### Social Media

Facebook: @Envirolution  
Twitter: @EnvirolutionORG  
Instagram: @envirolution

[envirolution.org](https://envirolution.org)