



UPCOMING MEETING:

SURF 29 (Webinar) – June 16, 2015
SURF 30 – October 2015

Registration and Details for SURF 29 and 30 will be available on the SURF website:

www.sustainableremediation.org

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melissa.harclerode@sustainableremediation.org

Kristin Mancini, ARCADIS
kristin.mancini@sustainableremediation.org

Olivia Skance, Chevron
olivia.skance@sustainableremediation.org

Rick Wice, Tetra Tech
rick.wice@sustainableremediation.org

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Nick Garson, Boeing
nick.garson@sustainableremediation.org

SURF REPORT – SPRING 2015

PRESIDENTIAL ADDRESS: NEWS FROM MAILE SMITH

Even though I have had the pleasure of serving on SURF’s Board of Trustees previously, it is a true honor to now serve as its President. I hope to continue the tradition of exploration and accomplishment set by SURF’s past Presidents, and help guide SURF on its strategic path for future growth and improvement.

It’s exciting to be on the front lines of the sustainable remediation movement and part of a community that is changing our profession in a fundamentally positive way. There is a clear mandate to do better: the number of complex remediation sites is growing, few of these sites close, and risk communication remains a mysterious art. We must continue to explore and innovate, publish valuable technical resources, and develop and implement robust standards for sustainable remediation. It is critical that we take a life-cycle approach in the development of new remedial technologies and practices. We are still learning how to incorporate societal and economic benefits into our projects and which metrics best assess the impacts of our remedy decisions, striving to diligently document our sustainable remediation projects, go beyond regulatory compliance, and avoid “greenwashing.”

This is not to say that we haven't learned a lot since SURF's first gathering in 2006! We know that the most successful projects begin with envisioning “the end,” and pairing end land use with achievable remediation goals. We know that it is essential to engage stakeholders and integrate the concept of sustainability throughout the planning and implementation stages of a cleanup project. We know that societal, economic, and environmental benefits—and stability—are intrinsically linked. We also know that in solving our local and national challenges, we are helping to reduce world-wide risks to human and ecological health.

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COMMITTEE CHAIRS:

Communications

L. Maile Smith, Northgate Environmental
maile.smith@ngem.com

Jake Torrens, Amec Foster Wheeler
jake.torrens@amec.com

Education and Outreach

Stephanie Fiorenza, BP
stephanie.fiorenza@bp.com

Rick Wice, Tetra Tech
rick.wice@tetrattech.com

Academic Outreach

Dick Raymond, Terra Systems
draymond@terrasystems.net

Keith Aragona, Haley & Aldrich
karagona@haleyaldrich.com

Government Outreach

Buddy Bealer, Shell
leroy.bealer@shell.com

Stephanie Fiorenza, BP
stephanie.fiorenza@bp.com

Finance

Keith Aragona, Haley & Aldrich
karagona@haleyaldrich.com

Meetings and Programs

Kristin Mancini, ARCADIS
kristin.mancini@arcadis-us.com

Membership

Jake Torrens, Amec Foster Wheeler
jake.torrens@amecfw.com

Nominations

Open

Technical Initiatives

Karin Holland, Haley & Aldrich
kholland@haleyaldrich.com

Paul Favara, CH2MHILL
paul.favara@ch2m.com

Contact chairs for volunteer opportunities!

ABOUT SURF

The Sustainable Remediation Forum (SURF) promotes site assessment and remediation that protects human health and the environment while maximizing environmental, social, and economic benefits throughout the project life cycle by:

- Advancing the science and application of sustainable remediation
- Developing best practices
- Exchanging professional knowledge
- Providing education and outreach

Greetings from SURF! This newsletter is published quarterly by the SURF Communications Committee to provide you with highlights of SURF's activities and opportunities and developments in the field of sustainable remediation.

The SURF website, www.sustainableremediation.org, continues to be our primary resource for sharing the latest and greatest news about SURF and sustainable remediation. Our Online Resources page provides a one-stop shop for resources, tools, information, and documents. The Calendar shows remediation, sustainability, and related conferences, as well as deadlines for submitting abstracts. Suggestions for additions and improvements are welcome by using the Contact SURF form on the website or by emailing administrator@sustainableremediation.org.

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- Upcoming Events and Conferences

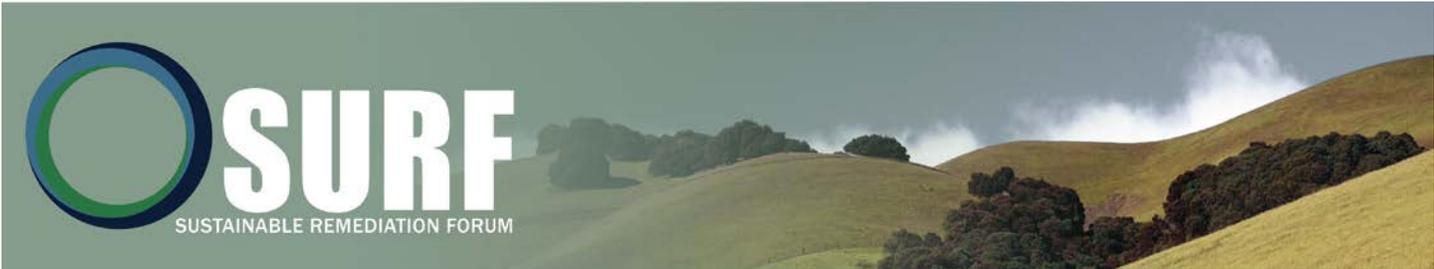


PHOTO HIGHLIGHTS FROM SURF 28 IN ARLINGTON, VA, FEBRUARY 24-25, 2015





SURF 28: INDUSTRY PANEL ON SUSTAINABLE REMEDiation

SURF 28 was held at the Boeing Long Bridge office in Arlington, Virginia on February 24-25, 2015 and focused on “Moving Sustainable Remediation Forward.” At the end of the first day, four members of industry participated in a panel discussion of past successes and future sustainable remediation programs. John Simon (Gnarus Advisors) facilitated the panel discussion; panelists included Buddy Bealer (Shell), Russ Downey (Pfizer), Nick Garson (Boeing), and Scott Pittenger (Norfolk Southern).



Panelists at SURF 28. From left to right: Russ Downey, Scott Pittenger, Buddy Bealer, Nick Garson

The panel discussion started with panelists describing their company’s sustainable remediation program. Panelists’ company programs ranged from formalized (i.e., written) to informal to currently in development. Regardless of the program’s development stage, sustainable remediation is funded at panelists’ companies on a per project basis. Panelists seemed to agree that their company’s sustainable remediation program was expected to be cost neutral. They discussed the importance of a flexible program in which

social and economic elements (vs. solely environmental) can be considered.

When panelists were asked what might help move sustainable remediation forward, their responses focused not on tools and guidance but “practice, practice, practice.” Panelists emphasized the importance of promoting sustainable remediation (i.e., “getting the word out”) and demonstrating its implementation and value through case studies. With that in mind, the majority of panelists believe that no additional tools or guidance are needed. Two panelists said that moving sustainable remediation forward will require a culture change akin to that of company safety.

Most panelists seemed to believe that the concept of sustainable remediation is simplistic. As such, general discussions between panelists and SURF 28 participants focused on how to tell a simpler story to explain sustainable remediation. A few panelists shared their belief that sustainable remediation is being performed and is a common practice but isn’t labeled as such. One panelist compared the communication challenge to sustainable development in the 1980s, noting that the value of what is trying to be accomplished must be communicated.

Contributed by Panelists and Kathy Adams

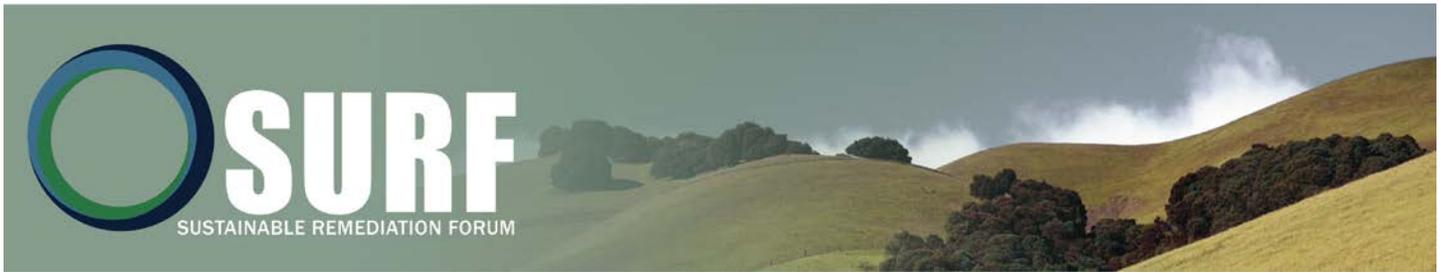
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Presidential Address, continued from page 1

Whether you believe that the mother of invention is necessity or curiosity, it is clear that interest and innovation in sustainable remediation is growing. There are now SURF groups in 11 countries and several professional conferences entirely dedicated to the subject. For many of SURF's members, remaining at the forefront of this wave is not optional; it is imperative to staying competitive in a national and global marketplace. Although the U.S. may have led the charge in environmental remediation over the last 30+ years, we are now collaborators within a global community, many of whom are eager to learn from and expand upon our work, some with undeniable urgency. At SURF 28 in February, we heard how the World Bank Group is addressing contaminated sites in low- and middle-income countries and how important it is that sustainable remediation considers the specific socio-economic conditions in these countries to fully and equally address economic, social, and environmental impacts. Last month, as part of a STEM mentoring and cultural exchange program, I had the opportunity to hear from scientists, engineers, and innovators in Tunisia who recognize the opportunities (and potential profitability) of environmental entrepreneurship. Students and teachers at the Higher Institute of Applied Biological Sciences of Tunis and the non-profit Maya Organization are working to solve their country's water and waste management challenges through innovation and collaboration, notwithstanding significant economic and security difficulties. And from California to Brazil to Pakistan, water impairments and shortages are demanding urgent attention from all sectors of society.

It's clear that we have very pressing, yet interesting, problems to solve—and an incredible opportunity to design truly restorative solutions to those problems. By being a member of SURF, you are already leading the way to these solutions. There is no other professional organization with the same opportunities for professional collaboration and peer-to-peer mentoring as SURF. One of my jobs as President will be to guide a general course of action, but it is truly SURF's collective members who lead the organization by providing their ideas and expertise to SURF's committees and technical initiatives. By collaborating with other remediation professionals, technologists, and regulators across the nation (and the world), we share ideas and work towards common goals, iteratively improving ourselves and our industry. Along the way we will find that each of us has valuable contributions to make, and that it is our relationships as well as our intellect that will drive innovation in our field.

*Contributed by L. Maile Smith
SURF President 2015-2016*

THANK YOU TO SURF'S SPONSORS!

Gold

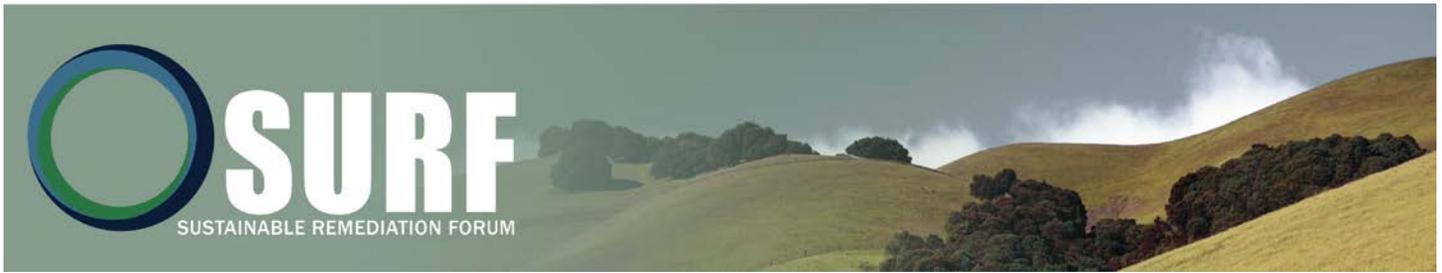
Boeing • BP • CH2MHILL • DuPont • Shell

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SURF PRESENCE AT BATTELLE IN MIAMI

Battelle's Third International Symposium on Bioremediation and Sustainable Environmental Technologies will be held in Miami, Florida from May 18-21, 2015. The conference will be focused on environmental assessment, remediation, and management through the use of bioremediation and sustainable technologies

(<http://battelle.org/media/conferences/biosymp>). If you are planning on attending, please contact Rick Wice at rickwice@sustainableremediation.org.

SURF is pleased to be a sponsor of both the student paper competition and the symposium itself and will have a booth located in the exhibit hall featuring our brand new conference banner. SURF will collect business cards at our booth and, in lieu of giving handouts or giveaways, SURF will make a donation to a sustainability-based organization for each card that is collected.

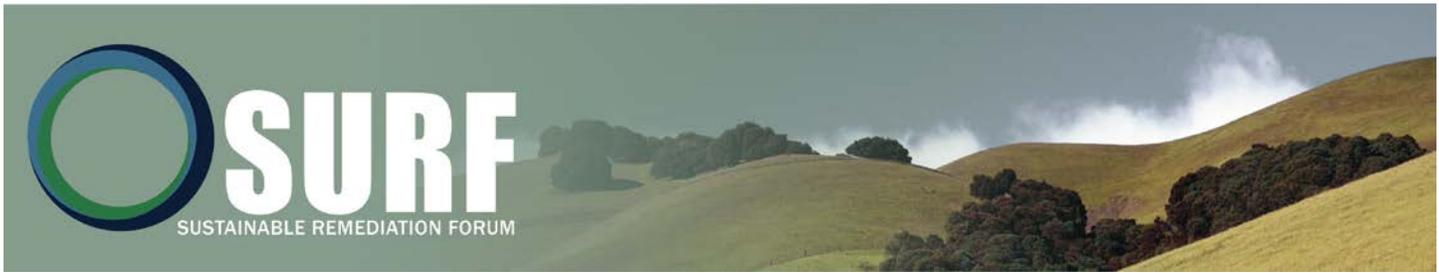
This conference is an excellent opportunity to network, introduce more remediation professionals to sustainable remediation, and reach out to potential new SURF members. SURF members will be leading technical sessions and presenting in the GSR and Sustainable Site Management tracks. A panel discussion on the Impacts of Remediation on Ecosystem and Natural Resources will also be held. If you are planning on attending, please consider volunteering at the SURF booth or helping to get the word out about SURF while networking.

SURF is grateful to Amanda McNally of AECOM for helping develop three roll-up banners for the SURF booth (and future conference use), Mike Miller of CDM Smith for coordinating the student paper competition, and Rick Wice of Tetra Tech for working on the Battelle conference steering committee. SURF will be sending out additional information about activities and volunteer opportunities as the conference date approaches.

Contributed by Rick Wice



Nick Garson introduced the 2015 SURF Board of Trustees at SURF 28 in Arlington VA. From left to right: Nick Garson (Past SURF President), Rick Wice (At Large), Olivia Skance (At Large), Kristin Mancini (At Large), Melissa Harclerode (At Large), Keith Aragona (Treasurer), Amanda McNally (Secretary), Jake Torrens (Vice President), and Maile Smith (President).



CASE STUDY FEATURE: THE GREENING OF CHEVY IN THE HOLE

At a recent SURF meeting, Joel Parker (Environmental Consulting & Technology) presented a case study of the ongoing sustainable remediation being conducted at the site of the original Chevrolet manufacturing plant in Flint, Michigan. At this site, trees became the social catalyst for change and community engagement, resulting in social aspects of the triple bottom line being weighed more heavily than the technical aspects of environmental cleanup.

The 130-acre property was a key center of manufacturing for General Motors and is known as Chevy in the Hole because it is located in a depression along the Flint River. The Flint River flows through downtown Flint and the site. After several floods, the U.S. Army Corps of Engineers installed a concrete, one-mile channel in 1963. In the mid-1990s, General Motors began to close plants at site, and the last building was demolished in 2004. After the buildings were demolished, the site was paved with asphalt to eliminate direct contact with site contaminants, including solvents, oils, and metals. In addition, a barbwire fence was installed at the property perimeter to restrict access.

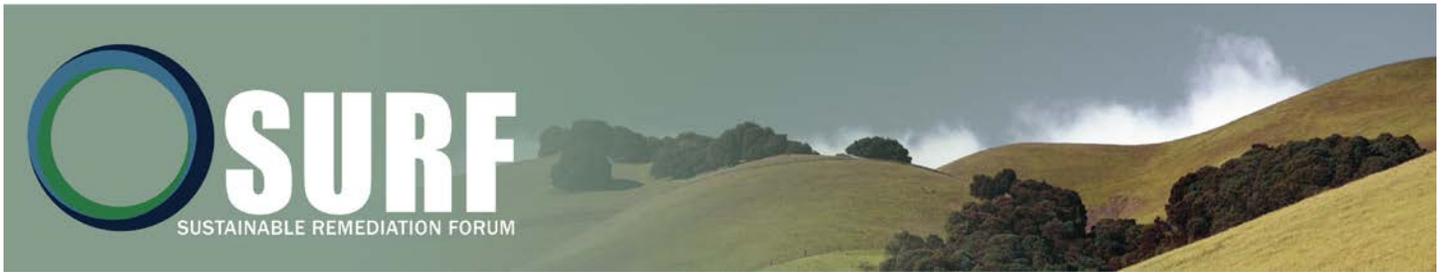
Unlike conventional brownfield redevelopment, reuse discussions at this site were driven by site-specific issues and conditions. With no interested developer, the goal was to leverage site issues and conditions into an asset or resource and let this thinking drive reuse. Two positive items were

identified about the site: time and space. Because reuse was not being driven by a developer, there were no demands to constrain the timelines of treatment technologies. In addition, the space (or location) of the site demonstrated its potential as a community connector. Surrounded by two elementary schools, two universities, a stadium, residential communities, and a children's museum (to name a few), the site could serve as an important center of the community.



Workers celebrate as the famous sit-down strike comes to an end!

In 2011, the site was awarded a Great Lakes Restoration Initiative grant for the reduction of toxic substances on a brownfield site via the U.S. Forest Service. The grant focused on the need for trees at key locations along the river to serve as a riparian buffer and as nutrient runoff filter strips to protect the river from compost piles. The compost piles had



evolved from the use of a portion of the site for municipal yard waste collection, which offered considerable savings to the City under financial duress.



Nature abhors a vacuum.

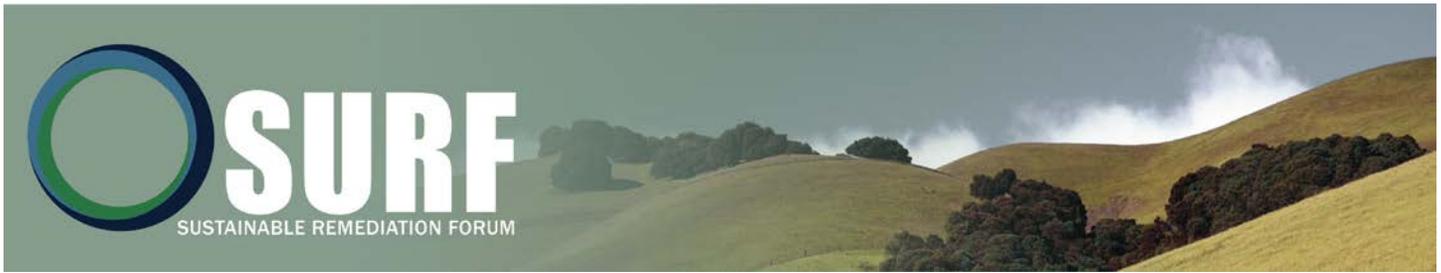
A pioneer tree grows through an old industrial slab on-site.

Different disciplines were brought together, and phytohydraulics was identified as the primary mechanism for contaminant treatment. Trees were planted and irrigated using solar power with pumped water from the river. Within one growing season, trees grew to an average of 8 to 10 feet, with the compost pile filter strip trees growing to as much as 13 feet. With the tangible evidence of trees, the community began to view the site as something that could be positive. The trees changed the community's view of the site and helped initiate a sense of ownership in the community. With community interest sparked, the public came forward with ideas for reuse.

A third grant phase is currently underway and focuses on the technical nuances and factors of phytoremediation, including a variety of screening trials and mechanisms. At this time, however, the social benefits of remediation far outweigh the technical benefits. Approximately 1,600 new trees have been planted and over 200 pioneer trees have been irrigated and their growth stimulated. After two growing seasons, small whips and 10-inch cuttings watered using solar power have grown as high as 25 feet with a 95% survival rate. In addition, the concept of filter strips for runoff collection was demonstrated successfully. Site contamination is being leveraged as an asset, with technologies being featured for local high school students through STEM programs. Community college students have received classroom and on-site field training and related certificates in environmental techniques (e.g., low-flow groundwater sampling) to better equip them in environmental industry careers. Community interest has prompted an annual city art festival to be held on the site for the last two years, and the First Annual Flint River Flotilla was held in 2014 so that residents could float through Chevy in the Hole on their kayaks and inner tubes.

Future site activities will include a third phytoremediation planting effort to focus on the potential for vegetation to uptake contamination from soil and be harvested as biofuel or other related uses. In the future and with additional green infrastructure, the site could be used as a local storm water utility authority.

Contributed by Kathy Adams and Joel Parker



SURF 28 RECAP: RIDING THE WAVES OF OPPORTUNITY

On Day 2 of SURF 28 in February, SURFers continued exploring the theme of “Moving Sustainable Remediation Forward” by looking inward. What are the driving forces of sustainable remediation? How do we advance the practice? What can SURF offer the industry that no other organization can? These questions were posed to breakout session groups and spurred thoughtful exchanges about the state of the organization and what we as SURFers can do to move sustainable remediation forward.

Connecting the Dots: Early in this discussion, it was apparent that the drivers for sustainable remediation are multiple and diverse. Suggestions ranged from regulator or government mandates to reduced life-cycle costs and liabilities to opportunities to enhance the communities in which we operate. The clear message was that there are many good reasons to incorporate sustainability into remediation programs and that, in many cases, we are already doing so. One of the hurdles identified was how to best communicate the benefits and perceived risks or deterrents of sustainable remediation. The takeaway? We need to do a better job of addressing concerns from regulators and site owners alike! Another key is to recognize sustainable remediation successes to demonstrate that sustainable goals are not only achievable, but provide real benefit to stakeholders.

Spotlight on SURF: The afternoon breakout session focused on what SURF can do to build on recent successes and what we should be doing now to advance sustainable remediation. As an organization, we bring together a group of highly engaged group of regulators, site owners, consultants, project managers, engineers, and geologists. Our members collaborate in an open, inclusive environment that fosters advancement of the sustainable remediation practice. To build upon this

foundation, members suggested ways to expand our reach, including providing workshops and training modules at conferences and online, partnering with non-profit organizations and governmental agencies alike, and fostering academic pursuits with educational materials focused on sustainable remediation. The newly elected SURF Board excitedly engaged in these discussions and is working to develop a strategic plan and communications approach to take advantage of SURF members’ ideas and energy. Thanks to the passion and support of SURF members, we are looking forward to an exciting and active 2015!

Contributed by Amanda McNally

UPCOMING EVENTS AND CONFERENCES

The Third International Symposium on Bioremediation and Sustainable Environmental Technologies – May 18-21, 2015 – Hyatt Regency Miami Hotel, Miami, Florida

This symposium will present information on advances in bioremediation and the incorporation of green and sustainable practices in remediation. The program is designed for scientists, engineers, regulators, remediation site owners, and other environmental professionals representing universities; government agencies; and consulting, research and development, and service firms from around the world. Visit <http://www.battelle.org/media/conferences/biosymp> for information, including program and registration materials.

Air & Waste Management Association 108th Annual Conference & Exhibition – June 22-25, 2015 – Raleigh Convention Center, Raleigh, North Carolina

This conference will focus on connecting the dots from environmental quality to climate. Visit <http://ace2015.awma.org/> for more information.

NEWSLETTER SUBMITTALS:

Deadline is the 15th of March, June, September, and December for the following quarterly issue. Contact the Newsletter Editor by email for submittal:

Gerlinde Wolf, AECOM
newsletter@sustainableremediation.org

Submittals are subject to editing for space considerations.

Address Changes

Please submit to the SURF Secretary at secretary@sustainableremediation.org.

Circulation

The newsletter is circulated to about 500 individuals directly and is posted online at www.sustainableremediation.org.

Sponsorship

Sponsorship is a great way to demonstrate to your communities, clients, employees, or shareholders that you are committed to advancing the science and application of sustainable remediation.

As an appreciation for sponsorship:

- Your company or organization will receive complimentary SURF memberships and meeting registrations
- Your company's or organization's name will be displayed on the SURF website and hyperlinked to your webpage
- Your company's or organization's name will be displayed in the SURF newsletter and announced during SURF events
- Your company or organization may use the SURF Sponsor logo

To inquire about sponsorship options, contact:
membership@sustainableremediation.org.

SURF MEMBERSHIP

Join SURF or Renew your Membership TODAY!

SURF provides great value to our members, the public, and the practice of remediation. We do this by supporting:

- Alignment with organizational sustainability goals
- Environmental footprint reduction
- Social responsibility and public outreach
- Reduced remediation costs and long-term liabilities
- Innovative thinking, research, and real world application
- Peer benchmarking (domestic and international)
- Access to leading-edge case studies
- Opportunities to collaborate on publications
- Networking and access to subject matter experts
- Academic outreach and mentoring

By joining SURF, you establish partnerships and build relationships with a wide variety of remediation stakeholders: industry and agency peers, customers, clients, academia, technology vendors, and the public. Our website, meetings, and communications provide a clearinghouse and source for the latest information about policy, case studies, best practices, and educational opportunities.

As a member, you have the opportunity to participate in SURF's Technical Initiatives. SURF has published several groundbreaking guidance documents, and recent or current initiatives include examining more sustainable practices for water use and reuse, compiling sustainable remediation case studies, assessing the social aspects of sustainable remediation, and exploring the viability of a sustainable remediation site rating and professional certification system.

SURF has several membership levels based on an individual's qualifications: Regular Member (dues are \$150 annually for new members and \$140 for renewing members), Government Member (dues are \$50 annually), and Student Member (dues are \$25 annually).

The term for all classes of Members is February 1 through January 31 of the following year.

Learn more and apply for membership at www.sustainableremediation.org/membership/.