



**UPCOMING MEETING:**

**SURF 31 – March 2-3, 2016**

**Parsons, Pasadena, California**

**Registration and details for future SURF meetings will be available on the SURF website:**

**[www.sustainableremediation.org](http://www.sustainableremediation.org)**

**2016 BOARD OF TRUSTEES:**

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[paul.hadley@sustainableremediation.org](mailto:paul.hadley@sustainableremediation.org)

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[colleen.liddell@sustainableremediation.org](mailto:colleen.liddell@sustainableremediation.org)

Kristin Mancini, ARCADIS  
[kristin.mancini@sustainableremediation.org](mailto:kristin.mancini@sustainableremediation.org)

Aaron Thom, ExxonMobil  
[aaron.thom@sustainableremediation.org](mailto:aaron.thom@sustainableremediation.org)

Rick Wice, Tetra Tech  
[rick.wice@sustainableremediation.org](mailto:rick.wice@sustainableremediation.org)

**Past President**

L. Maile Smith, Northgate Environmental  
[maile.smith@ngem.com](mailto:maile.smith@ngem.com)

## **SURF REPORT – WINTER 2016**

### **PRESIDENTIAL ADDRESS FROM JOHN SIMON**

As I began writing this message to the SURF membership, I felt inspired to describe how much integrating sustainable practices into remediation projects means to me and how important it is for us to lead the remediation community in the battle against climate change. Then, I recognized there is no need to preach to the choir – as most SURF members can probably express this better than I.

When I thought more about the message, I realized that my message shouldn't be why SURF is important. We know that. But, instead, about why I find SURF to be such an impressive organization that has great potential and one that I've always been proud to be affiliated with. For me, it is more about my SURF colleagues than the organization itself. And, when I think about it, that is what makes an organization strong. At SURF meetings, I consistently see the following attributes in our members:

- The camaraderie is genuine; I don't sense very much competition between the SURF members but do feel widespread support for our cause.
- I see supremely passionate, engaged professionals who were the innovators, and now the leaders, in the field of sustainable remediation (and, frankly, remediation in general).
- The level of volunteered engagement demonstrates passion – we are not paid to do what we do for SURF, yet SURF members' contributions are vast.
- And, most impressively, I see professionals who are not afraid to voice their opinion which, in turn, promotes thought-provoking conversations.

However, SURF has intellectual talent that we can leverage even further. After 10 years, now is the time for advancing the organization in ways that we as members will find personally and

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## COMMITTEE CHAIRS:

### Communications

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

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

SURF Secretary  
secretary@sustainableremediation.org

### 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:

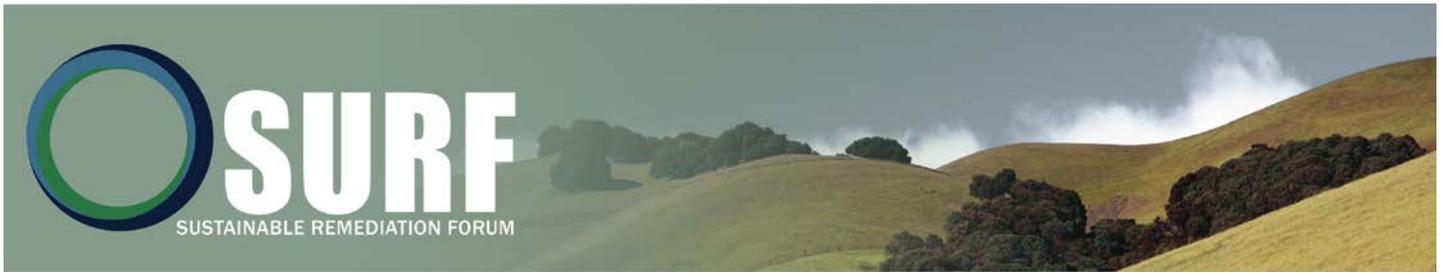
- Advancing the science and application of sustainable remediation
- Developing best practices
- Exchanging professional knowledge
- Providing education and outreach

**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](http://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](mailto:administrator@sustainableremediation.org).

## IN THIS ISSUE:

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- Warm Welcome to the 2016 Board of Trustees
- Case Study Feature: Integrating Remediation & Redevelopment at a Former Army Base
- SURF Member Spotlight: John Sohl, Columbia Technologies
- SURF's Social Aspect Technical Initiative Publishes White Paper
- Methodology to Quantify Global Socio-Economic Impacts
- Upcoming Events and Conferences



### **Presidential Address (Continued from Page 1)**

professionally fulfilling. The SURF Board recently circulated a survey designed to encourage our members to think about how SURF can help them grow professionally and what they would like their role to be in the organization.

Over the next year, my personal goal is to help SURF expand as we continue leading the remediation community and, perhaps, even groups outside remediation. Although I have my own ideas, our members will collectively decide the direction of the organization. The opportunities are widespread – ranging from the status quo to promoting clean technology, advancing social initiatives, or engaging economists. We can start a journal, host a conference, or collaborate with university professors and their students.

Obviously, we can't do it all, but as a group we should craft our future path and then focus on it with the same gusto we did when 55 SURF members co-authored the White Paper in 2008 and 2009. That was certainly groundbreaking and there's reason to believe that SURF will continue leading the remediation community with the same degree of excellence as it has over the past 10 years.

If you are reading this and are not a SURF member – you should be. As my friend and former SURF President, Nick Garson, told his management about SURF. “*Why should we join SURF? Because I'd rather be at the table than be on the menu.*” It's going to be a great year.

*Contributed by John Simon  
SURF President 2016-2017*

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## **THANK YOU TO SURF'S SPONSORS!**

### **Gold**

Boeing • BP • CH2M • DuPont • Shell

### **Silver**

AECOM • Amec Foster Wheeler • CDM Smith  
Haley & Aldrich • Langan Engineering • Terra Systems

### **Bronze**

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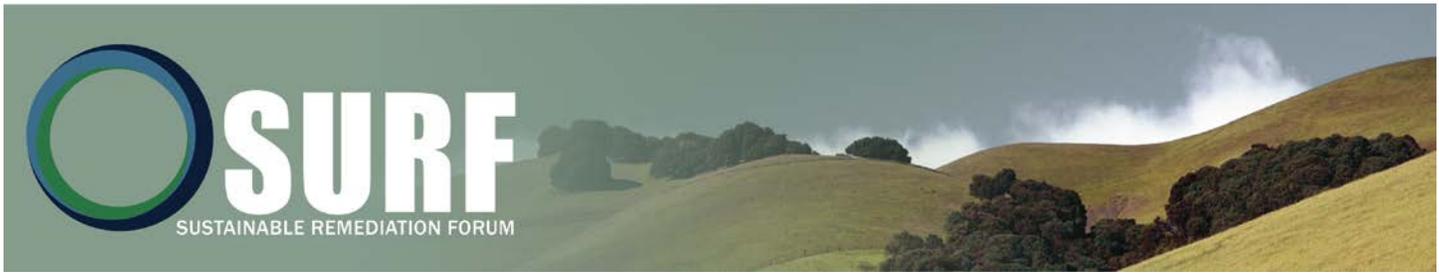
## **WARM WELCOME TO THE 2016 SURF BOARD OF TRUSTEES**

Congratulations to the newly elected Board of Trustees, who will serve the following positions for the 2016 calendar year:

- President - John Simon, Gnarus Advisors LLC
- Vice President - Barbara Maco, Wactor & Wick LLP
- Secretary - Tammy Rabideau, Tetra Tech, Inc.
- Treasurer - Keith Aragona, Haley & Aldrich, Inc.
- At-Large - Colleen Liddell, Ford Motor Company
- At-Large - Aaron Thom, ExxonMobil

These Trustees will join At-Large Trustees, Paul Hadley, Kristin Mancini, and Rick Wice, serving the second year of their two-year terms.

Thank you to the past Board Trustees, as well as SURF members who have nominated others or were nominated for the board. Your efforts are greatly appreciated within the organization!



## CASE STUDY FEATURE: INTEGRATING REMEDIATION & REDEVELOPMENT AT A FORMER ARMY BASE

The 330-acre Oakland Army Base was decommissioned in 1999. A reuse plan was developed that leveraged the unique assets of this bayside property to meet local economic and community development objectives, which were keenly focused on recovery from the estimated 7,000 jobs lost when the base closed. During the base closure process, project stakeholders recognized the opportunity to cost-effectively integrate phased remediation with the redevelopment of the site.

Working with the Cal/EPA Department of Toxic Substances Control (DTSC) as the regulatory oversight agency, the City of Oakland and the Port of Oakland jointly developed and implemented a Remedial Action Plan (RAP) and Risk Management Plan (RMP) as frameworks for the post-transfer cleanup program.

The RAP and RMP establish soil and groundwater management guidelines, site-specific cleanup goals focused on future land use, as well as screening levels to facilitate quick assessment if environmental media encountered during construction are indicative of an unanticipated source area. Cleanup work was phased to address higher-risk source areas first, prior to construction activities. Readily accessible areas were also cleaned up prior to



*From a historical perspective, the Oakland Army Base (shown here) was the gateway to the “American Dream” for the military who served and civilians who worked there, and it seems fitting that the project will benefit those who were the most impacted by its closure.*

redevelopment. Impacted areas and features that would be removed during redevelopment were left in place until “horizontal” infrastructure construction began in 2013. The flexible, performance-based RMP allowed remediation activities to remain protective yet consistent with long-term land-use goals and a long planning horizon.

A comprehensive Mitigation Monitoring and Reporting Program (MMRP), developed as part of the California Environmental Quality Act (CEQA) planning process, provides a third framework and useful tool to protect human and environmental health and safety, and is really where the principles of sustainability come to light. As part of the

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**SURF MEMBER SPOTLIGHT:  
JOHN SOHL, COLUMBIA  
TECHNOLOGIES USA**

*John Sohl has been a SURF member for 6½ years. He is the CEO and co-founder of Columbia Technologies USA and co-founder of Columbia Technologies do Brasil, Ltda.*



*Our Editor, Gerlinde Wolf (AECOM), caught up with John to get his perceptions and experiences with sustainable remediation.*

**What does sustainable remediation mean to you?**

I believe the organization’s mission statement captures the meaning quite well for me – the use of sustainable practices during the investigation, construction, remediation, redevelopment, and monitoring of environmental cleanup sites, with the objective of balancing economic viability, conservation of natural resources and biodiversity, and the enhancement of the quality of life in surrounding communities.

**Have you worked on projects in which sustainable remediation practices have been implemented? If so, which practices and how?**

We have supported several projects involving complex assessment and restoration goals for DuPont and Dow. The complexity required balancing economic viability, conservation of natural resources, and addressing the quality of life in surrounding communities. Our contribution included assisting in the development of sustainability attributes, identifying data gaps,

streamlining processes, and monitoring performance metrics.

**What has surprised you the most about your experience with SURF?**

I am continuously amazed at the creativity of the individuals involved in “thinking and restoring.” The case studies present out-of-the-box thinking and creative solutions for addressing site restoration using a holistic approach and break the pattern of proscriptive remedies we so often see employed.

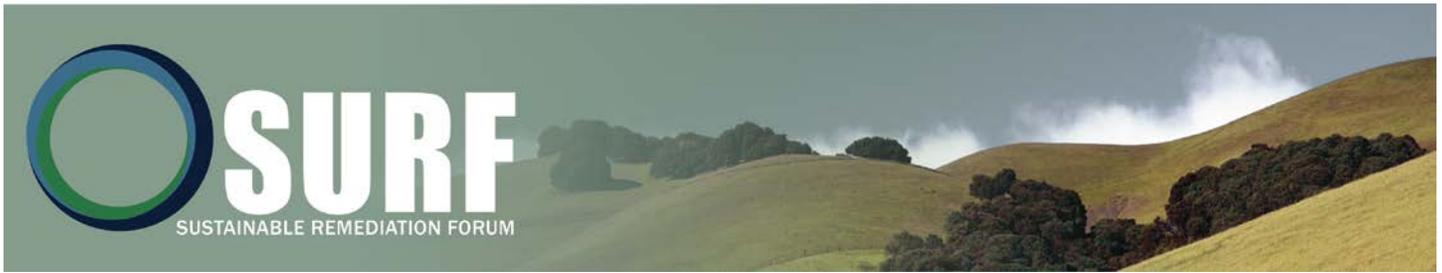
**How do you think SURFers can convince the sustainability skeptics to adopt green and sustainable remediation practices?**

We really need to take our technical hats off and put our business hats on, understand all of the factors involved in site restoration, and then incorporate sustainability attributes in the normal course of project development instead of giving them a special consideration. If we did that, we could more effectively make the case that a sustainable restoration is less expensive and provides an overall better outcome in the long run.

**Want to be featured in a future SURF Member Spotlight?**

If you’d like to be featured in a future SURF Member Spotlight article, please contact our Newsletter Editor, Gerlinde Wolf at [newsletter@sustainableremediation.org](mailto:newsletter@sustainableremediation.org).

*Contributed by John Sohl, Columbia Technologies and Gerlinde Wolf, AECOM*



### **Case Study Feature (Continued from Page 4)**

development agreement with the City, a comprehensive package of community benefits was negotiated that addressed environmental, social, and economic aspects of the project, including a “ban the box” provision, local hiring goals, air quality monitoring, and stakeholder participation. Project- and media-specific plans, which complement and build upon the nonprescriptive elements of the RAP, RMP, and MMRP, provide specific guidance for construction activities and associated environmental mitigation measures (e.g., soil and groundwater reuse, recycling goals, emissions reduction).

After more than a decade of investigation, remediation, and strategic planning, the former base is now being developed into the Oakland Global Trade and Logistics Center, a world-class intermodal transport gateway. The project, funded through public/private partnership, is expected to be completed in several phases over the next decade. Construction will create about 1,500 new jobs, 50 percent of which are going to local residents. It is estimated that an additional 1,800 permanent positions will be needed when the project is fully operational. Other long-term community benefits include waste diversion, air quality improvements, reduction of truck traffic and associated injuries/damages, and relocation of recycling and trucking support businesses from residential West Oakland to this future commercial hub.

*Contributed by L. Maile Smith,  
Northgate Environmental Management, Inc.*

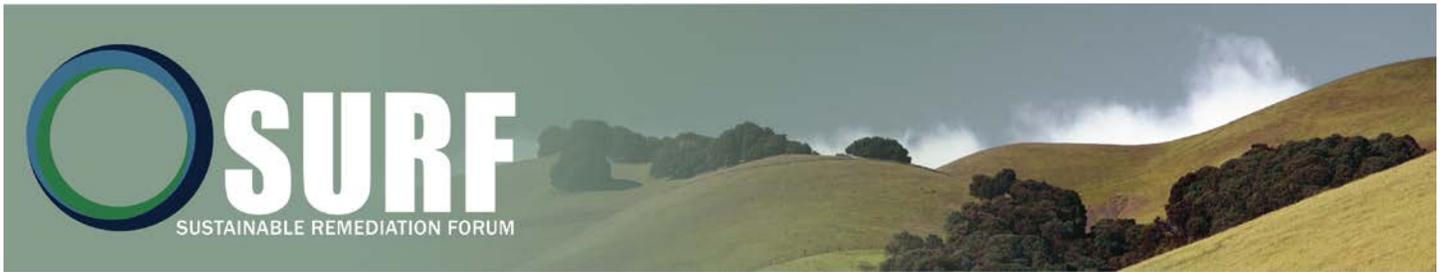
### **SURF’S SOCIAL ASPECT TECHNICAL INITIATIVE PUBLISHES WHITE PAPER**

The social aspect of sustainable remediation is one of the three integrated dimensions of the triple bottom line (i.e., environment, society, and economy). As such, a sustainable remediation evaluation includes assessing the potential impacts of all three of these sustainability dimensions. Currently, the majority of sustainability assessments conducted on remediation projects evaluate local and, to a lesser extent, global

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*The white paper is available on the SURF website at  
[www.sustainableremediation.org](http://www.sustainableremediation.org)*



### ***Social Dimension (Continued from Page 6)***

environmental impacts, project implementation cost, and occasionally community impacts from proposed remediation activities. Due to the complexity of the concept of sustainability stemming from the interrelations among the three dimensions of the triple bottom line, relevant and applicable indicators can be lost in the assessment process.

To address this knowledge gap, SURF's Social Aspect Technical Initiative developed a white paper in collaboration with representatives of international SURF organizations, policy-maker networks, academia, and standardization committees. The paper presents the (1) status quo of how the social dimension of sustainable remediation is assessed among various countries and organizations; (2) methodologies to quantitatively and qualitatively evaluate societal impacts; and (3) findings from this research, including challenges, obstacles, and a path forward.

**Case studies** illustrating the successful use of methodologies focused on the social dimension are presented as an **appendix to this paper**, as well as archived on the **SURF website**.

*White Paper Co-Authors: Debora Reanne Risdale (SURF Canada, Univ. of Saskatchewan), Dominique Darmendrail (Common Forum on Contaminated Land in Europe), Paul Bardos (r3 Environmental Technology Ltd., Univ. of Brighton), Filip Alexandrescu (SuRF-Italy, Univ. of Venice), Paul Nathanail (Univ. of Nottingham, ISO), Lisa Pizzol (SuRF-Italy, Univ. of Venice), and Erika Rizzo (SuRF-Italy, Univ. of Italy).*

*Contributed by Melissa Harclerode,  
CDM Smith*

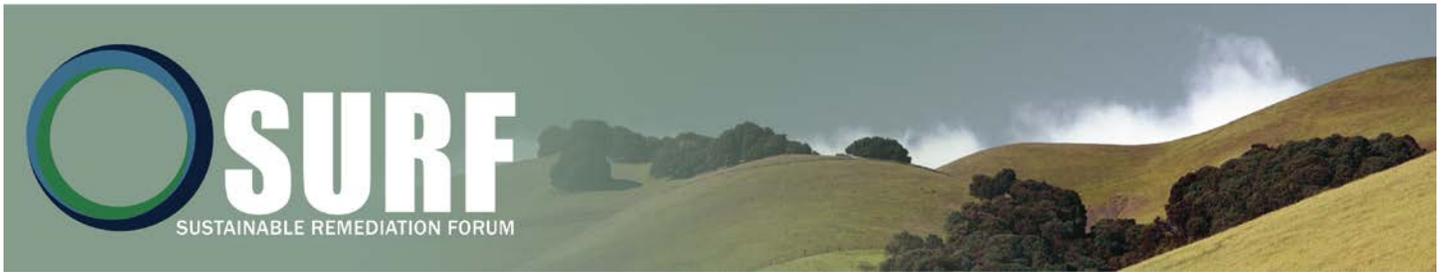
### **METHODOLOGY TO QUANTIFY GLOBAL SOCIO-ECONOMIC IMPACTS**

The work of SURF members Mike Miller and Melissa Harclerode (CDM Smith) along with Montclair State University's Pankaj Lal was published in the *Journal of Industrial Ecology*. "Quantifying Global Impacts to Society from the Consumption of Natural Resources during Environmental Remediation Activities" was part of a special issue of the journal that linked local consumption to global impacts. The article describes a cost-benefit analysis methodology that was used to integrate the social cost of carbon emissions to quantify global impacts from site activities. This methodology addresses a data gap in current footprint evaluation tools that do not associate the environmental implications (e.g., generation of greenhouse gases) with global impacts (e.g., contributions to climate change).

Current sustainability assessment tools are heavily geared toward quantifying environmental impacts (e.g., greenhouse gas emissions, water and energy resources consumed) from an activity. To conduct a more holistic and comprehensive sustainability assessment, the social cost of environmental metrics (e.g., the social cost of carbon emissions) were integrated to quantify global socio-economic impacts.

The results of this comprehensive sustainability assessment enable stakeholders to identify components of the remedy that can be optimized to reduce impacts to the triple bottom line, rather

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## UPCOMING EVENTS AND CONFERENCES

### ***4<sup>th</sup> International Conference on Sustainable Remediation (SustRem) – April 26-28, 2016 – Le Centre Sheraton Montreal, Montreal, Quebec, Canada***

This conference builds on the successes of the first three SustRem events and brings participants and speakers to North America for the first time. The conference aims to stimulate international exchange by providing a venue for where professionals and interested parties can share experiences and perspectives on how contaminated sites can be remediated with a lower environmental footprint and how site reuse can contribute to more sustainable land development. For more information and registration materials, click [here](#).

### ***The Tenth International Conference on Remediation of Chlorinated and Recalcitrant Compounds – May 23-26, 2016 – Palm Springs Convention Center, Palm Springs, California***

This conference is the world's largest and most comprehensive meeting on the application of technologies and approaches for characterization, monitoring and management of chlorinated and complex sites. This year the conference will be held in Palm Springs because the Monterey Conference Center building will be undergoing a complete renovation during the conference time period. Click [here](#) for more information.

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## PLEASE NOTE:

There are too many events and conferences to list here. For a complete list of upcoming environmental and remediation events, please view the SURF calendar [here](#).

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### ***Global Impacts (Continued from Page 7)***

than solely environmental elements. In addition, the integration of the social cost of environmental metrics into an environmental impact analysis normalizes those metrics (e.g., tons of CO<sub>2</sub>, tons of PM10) into the same unit (\$\$), which helps stakeholders compare the metrics to each other and set targeted sustainability goals (e.g., a 20% decrease in monetized global impacts from on-site electricity consumption). Lastly, the quantification of these global damages in monetary terms provides a measurement tool and an argument for more vigilant environmental stewardship that can be appreciated by a broad swath of society.

This methodology can be integrated into footprint evaluations among various disciplines (e.g., remediation, wastewater treatment, water reuse). Mike and Melissa are available to present on this topic via webinar or in-person meeting ([harclerodema@cdmsmith.com](mailto:harclerodema@cdmsmith.com)).

*Contributed by Melissa Harclerode,  
CDM Smith*

### GET SOCIAL WITH SURF!



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"Sustainable  
Remediation Forum"  
to join



@SR\_Forum



### **NEWSLETTER SUBMITTALS:**

Deadline is the 15<sup>th</sup> 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](http://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 **here**.