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SURF Vice President Reflects on Virtual Reality

For the last three months, COVID-19 has turned our world upside-down. But SURF is resilient, is determined to continue furthering sustainable remediation, and has spent these weeks finding the opportunity in this challenge. Two great examples of this resilience are highlighted below – showcasing how we continue to share knowledge and collaborate even when we can't be together physically.

How do we facilitate knowledge transfer when in-person conferences are cancelled?

For the last several years, SURF has partnered with the Association for Environmental Health and Sciences Foundation (AEHS) for semi-annual East and West Coast conferences. Unfortunately, due to COVID-19, the AEHS Conference scheduled for March 2020 in San Diego, California was cancelled. SURF embraced this challenge by moving the planned in-person SURF member meeting and platform presentations online. This allowed us to continue sharing ideas and innovations while expanding our reach through virtual participation. SURF held a virtual member meeting on April 16 that was attended by 44 people from around the country and abroad. Did you miss it? A recording of the meeting is available [here](#).

Stay-tuned! We are planning monthly webinars to broadcast the presentations we missed at AEHS and make sure we come out the other side of the crisis more sustainable and resilient than before. View previously recorded presentations [here](#).

How can we collaborate on cutting edge guidance when we can't meet face-to-face?

Last year, SURF, represented by Barbara Maco and Kathy Adams, was selected as the Program Advisor for the new Interstate Technology and Regulatory Council (ITRC) team focused on

Green and Sustainable Remediation with Resiliency to Extreme Weather Events and Wildfires. Many SURF members are also contributors to this team, with three of the five writing sub-groups being led by current SURF members.

As the ITRC contributors worked on this guidance for the last nine months, they had a deadline of April 2020 in their minds – the date of the in-person working session. At this meeting, dozens of ITRC members would converge in Minneapolis for several days to put pen to paper and knock out the first draft of this updated guidance. When this in person meeting was cancelled due to COVID-19, it was quickly moved online and went forward without a hitch. Jason

Virtual Reality, cont'd on p. 3



Then...SURFers present to packed rooms at AEHS in October 2019.



Now...SURFers present on packed webinars. Recordings of the presentations are available 24/7 online on SURF's YouTube channel [here](#).



SUSTAINABLE REMEDIATION FORUM

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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

About The SURF Report

This newsletter is published semi-annually by the SURF Communications Committee to provide you with highlights of SURF's activities and opportunities and developments in the field of sustainable remediation.

Deadline for newsletter submissions is the 15th of April and November for the following semi-annual issue.

Contact the Newsletter Editor by email for submittal: Mike Smiley, Georgia
Department of Environmental Protection,
newsletter@sustainableremediation.org

Submissions are subject to editing for space considerations.

Circulation: The newsletter is circulated to about 1,000 individuals directly and is posted online at www.sustainableremediation.org.

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

The SURF website, www.sustainableremediation.org, is our primary resource for sharing the latest and greatest news about SURF and sustainable remediation. Our online library provides a one-stop shop for guidance, tools, information, and related documents. You can also learn more about SURF's committees and initiatives, partners, and sponsors. Suggestions for additions and improvements are welcome by using the Contact SURF form on the website or by emailing administrator@sustainableremediation.org.

2020 SURF Board of Trustees Election Results

Please congratulate and welcome recently elected trustees:

- Treasurer: Jason McNew, EA Engineering
- At-Large Trustee: Kristen Thornton, Delaware Department of Natural Resources and Environmental Control (DNREC)
- At-Large Trustee: Emerald Erickson-Mulanax, Farallon Consulting

These individuals join the following board members serving the second year of their two-year term:

- President: Matt Ambrusch (Langan Engineering)
- Vice President: Betsy Collins (Jacobs)
- Secretary: Cathy Rockwell (Woodard & Curran)
- At-Large Trustees: Roy Thun (GHD) and Kyle Waldron (Marathon Petroleum)

Gerlinde Wolf (AECOM) is serving the second year of Tom Potter's (Massachusetts Department of Environmental Protection) term as At-Large Trustee as Tom enjoys retirement (congrats, Tom!).

A big thanks to outgoing At-Large Trustee Lynn Tucker (Ford) for all of her contributions.



Kristen Thornton,
SURF At-Large Trustee

Welcome Kristen!

We are happy to welcome Kristen Thornton to the 2020 SURF Board of Trustees. Kristen is relatively new to SURF and we are delighted she dove right in by running for an At-Large Trustee position.

Similar to other new Board members in 2019, we asked Kristen to introduce herself.

In her own words...

"Being raised by two Biology majors and science teachers, I was exposed to science and ecology from an early age, so it's no wonder that I eventually received a B.S. in Biology with a concentration in the environment and ecology from Lock Haven University. I was fortunate to grow up in Maryland at the head of the Chesapeake Bay and participate in two summer camps with the

Virtual Reality, cont'd from p. 1

McNew, SURF Treasurer and member of the ITRC team, noted that the move to an online meeting was a benefit to him. "Although I wouldn't have been able to travel to Minneapolis for days of in-person meetings, I was able to contribute to the virtual meeting by dialing in when I was able."



Then....ITRC members met in person to kick-off the new sustainable resilient remediation initiative last year.



Now....ITRC members (blurred for privacy) are using virtual meeting technology to stay on schedule and move sustainable resilient remediation forward.

Virtual collaboration is still improving, but the ITRC team found success by taking advantage of the many different meeting platforms available, using video and breaking out into smaller groups – just like we would in person! Despite COVID-19 interruptions, this group is on schedule to release the updated Sustainable Resilient Remediation Guidance by the end of this year.

As SURFers, we will continue to innovate and seize the opportunities this challenge provides and come out stronger, and more sustainable, on the other side.

*Contributed by
Betsy Collins, SURF Vice President*

2020 Election Results, cont'd from p. 3

Chesapeake Bay Foundation that also guided me to pursue a career in a Superfund program. I've been an Environmental Scientist and Project Officer with the State of Delaware's Remediation Section since 1999. I oversee Brownfield remediation and redevelopment and serve as the State administrative trustee for Natural Resource Damage claims. Currently I'm working on incorporating green infrastructure, ecological revitalization, and sustainable remediation into the Brownfield program. Outside of work, I'm a member of a dyslexia advocacy group trying to change dyslexia education in Delaware. I have a 14-year-old son, Jack, who already towers over me; two rescue dogs; and the best cat in the world. I love baseball (especially the Phillies), painting and rehabbing furniture, and hunting for vintage finds and craft beers.

Thank You to SURF's Sponsors

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BSI | EA Engineering | Earthcon
Marathon Petroleum | Provectus

Build Your Network by Volunteering!

Team Name	Help Needed	Leader(s) (click to email)
Climate Change and Resilience	Help us partner with private and public sectors to support pilot studies and build capacity.	Barbara Maco and Cathy Rockwell
Case Studies	Contact Leader and submit case study for the new template.	Sue Dugas
Webinar Series	Contact Leaders if interested in presenting a topic or participating on the team.	Betsy Collins and Kyle Waldron
Meetings and Programs	Brainstorm ideas with team to establish membership meeting purpose and intended outcomes.	Matt Ambrusch
Partnership with AEHS	Chair a session, brainstorm ideas with team for session topics, and recruit speakers.	Paul Hadley and Gerlinde Wolf
Membership	Send an email to the Leader explaining the benefits you derive from membership.	Cathy Rockwell
Finance	Help with annual sponsorship renewal and tracking.	Jason McNew
Newsletter	Write an article for our next issue.	Mike Smilley
Government Outreach	Reach out to government personnel and work with team to present a sustainable remediation topic that interests them.	Kyle Waldron

Spring 2020 SURF Membership Meeting

As highlighted on page 1, SURF held its first 2020 membership meeting virtually on April 16. The original in-person March meeting was rescheduled because of COVID-19. SURF's Board of Trustees elected to combine their first open Board call with the membership meeting. Participants logged in and shared their video, happy to see each other after spending about a month in quarantine.

- Matt Ambrusch (SURF President) kicked off the meeting by announcing the 2020 SURF Board of Trustees (see page 3 for election results).
- Roy Thun (At-Large Trustee) provided a quick overview of the worldwide progress of sustainable remediation. SURF initiatives are now well established in the U.S., United Kingdom, Canada, Australia, New Zealand, Netherlands, Italy, Taiwan, Brazil, and Columbia with further interest in China and Japan. SURF is working with the Association for Environmental Health and Sciences Foundation (AEHS) and other SURF international affiliates to bring the International Sustainable Remediation Forum (SustRem) to San Diego, California in 2022. More information will be provided in future newsletters.
- Barbara Maco (SURF Past Vice President) presented an overview of the Government Accountability Office's report entitled "Superfund: EPA Should Take Additional Actions to Manage Risks from Climate Change" (see page 6 for a summary of the presentation).
- Ian Doromal (SURF Member) described a potential new initiative (pending volunteers) focusing initially on SURF's mission and messaging and subsequently on creating messaging tactics and strategies. The goal would be to make sure SURF members are aligned with the mission and to spark interest in others to get involved in SURF. If you're interested in this effort, contact any SURF Board member (see page 2 for contact information).
- Jason McNew (SURF Treasurer) highlighted the many ways that SURFers can network by volunteering for different teams. Page 4 lists the teams, volunteer opportunities, and contacts — don't be shy, give volunteering a try!

Missed SURF's first three webinars in 2020? Check them out on SURF's YouTube Channel

SURF has held three webinars so far this year. These webinars are available on demand on the SURF YouTube channel (click [here](#)). Timing and topics that were addressed are highlighted here.

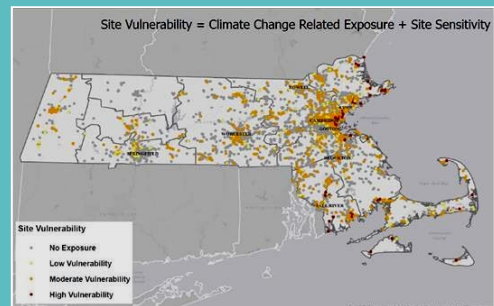


Sustainable Solar-Powered Soil Vapor Extraction

Rob Rebel,
LT Environmental
February 27, 2020

Vulnerability of Hazardous Waste Sites to Climate Change

Barbara Maco, ITRC SRR Team
Program Advisor
Eric Mielbrecht, EcoAdapt
Cathy Rockwell, Woodard & Curran
May 19, 2020



SuRF-UK Sustainability Process and Indicator Guidance

Paul Bardos, r3 environmental technology
June 24, 2020

GAO Recommends EPA Take Additional Actions to Manage Risks from Climate Change

In October 2019, the Government Accountability Office (GAO) published the report “Superfund: EPA Should Take Additional Actions to Manage Risks from Climate Change.” At SURF’s membership meeting, Barbara Maco (Past SURF Vice President) provided an overview of the GAO’s research and findings.

In its report, the GAO reviewed issues related to climate change impacts on nonfederal sites on the National Priorities List (NPL) to answer three primary questions. The questions and findings are summarized below.

Question 1:

What do federal data suggest about the number of non-federal NPL sites in areas that may be impacted by selected climate change effects?

About 60% of nonfederal NPL sites are located in areas that may be impacted by flooding, storm surge, wildfires, or sea-level rise. It is important to note that this result is limited by data constraints (e.g., data not available, data based on past conditions, quality data on site boundaries lacking, data does not account for changing conditions). An interactive graphic showing all results is available [here](#).

Question 2:

What is the extent to which EPA has managed risks to human health and the environment at these sites?

The table below shows how EPA actions align with the essential elements of enterprise risk management.

Essential Elements	Extent to which EPA’s Actions Aligned with Essential Elements
Aligning enterprise risk management process with goals and objectives	Not aligned
Identifying risks	Aligned
Assessing risks	Partially aligned
Responding to risks	Partially aligned
Monitoring risks	Aligned
Communicating about and reporting on risks	Aligned

Source: GAO-20-73

Question 3:

What are the challenges, if any, that the EPA faces in managing the risks at these sites?

Based on GAO research, EPA faces institutional, resource, and technical challenges when managing risks from potential climate change effects at nonfederal NPL sites. Institutional challenges include a lack of direction (e.g., no standard guidance) and the necessity of relying on others outside of EPA control. The main resource challenge was insufficient or changing resources (especially staffing and funding). Available expertise (e.g., lack of training) and data were found to be the primary technical challenges facing EPA.

Recommendations

The GAO recommends the following as a result of its research:

- The EPA Administrator should clarify how EPA’s actions to manage climate change risks align with the agency’s goals and objectives. (The EPA cited its current strategic goal 1.3, revitalize land and prevent contamination, as proof of alignment; the GAO believes the recommendation is still warranted.)
- The EPA Superfund Director should:
 - Standardize and improve information on site boundaries. (The EPA agreed with this finding and responded it had taken initial steps to develop an approach to standardize and improve information. EPA expects to establish a schedule for this effort by the second quarter of 2020; the status of this item remains open.)
 - Guide remedial program managers to integrate potential climate change impacts and effects into risk assessments and risk response decisions. (The EPA responded that existing processes and resources of Superfund provide this direction and noted that it will determine—by January 31, 2020—if it will issue a memorandum to reinforce the tools and resources available; the status of this item remains open.)

For More Info...

For more information, read the full report [here](#).

Sustainable Remediation Myths

The following text is excerpted from “Debunking Myths about Sustainable Remediation” by SuRF-UK member Jonathan Smith. The full article appeared in *Remediation* (2019; 29:7–15); click [here](#).

Myth 1: Sustainability means you can do less remediation and leave unacceptable risks in place.

Reality 1: Risk-based objectives prevail over sustainability goals as the criteria to trigger remedial action; sustainability informs us how to optimally manage unacceptable risks.

Myth 2: Just saying a project is sustainable makes it so.

Reality 2: Claims that remediation projects are sustainable, which are not compliant with relevant standards, such as ISO 18504, will bring the reputation of sustainable remediation into question. Work performed to poor professional standards, or perhaps worse—deliberate greenwashing—only serves to undermine confidence in, and the reputation of, sustainable remediation.

Myth 3: It is only about saving money.

Reality 3: The efficient use of capital in remediation projects is an important goal for any sustainability framework, but must be balanced against social and environmental factors. Ultimately, sustainable remediation is about identifying and creating value, in the broadest sense, within contaminated site projects.

“Ultimately, sustainable remediation is about identifying and creating value, in the broadest sense, within contaminated site projects.”

SURF Sessions at Virtual AEHS Fall Conference

The Association for Environmental Health and Sciences Foundation (AEHS) will hold its 36th Annual International Conference on Soils, Sediments, Water, and Energy and first ever virtual conference from October 19-22, 2020. As in past years, SURF is partnering with AEHS and SURF technical sessions are part of the program. SURF technical session themes are as follows:

- Sustainable Remediation Techniques and Case Studies
- The Impact of Climate Changes on Remedy Implementation (mini-session)

SURF will also be holding its Fall 2020 Membership Meeting virtually during the conference. We hope to “see” you there! For more information, click [here](#).

SURF Webinar Series Lineup

SURF’s webinar series hit the ground running in 2020. Our free, one-hour webinars on sustainable remediation topics are held every one to three months and are open to non-members as well as members. Webinars are announced via SURF e-mails; click [here](#) and fill out the form to get on our distribution list.

We are always looking for new speakers (currently SURF members only) and topics; contact Betsy Collins or Kyle Waldron (see p. 2 for contact information) if you have ideas for future webinars or want to be part of the Webinar Team.

Here’s the lineup for 2020:

July 2020:

Case Study: CSM Refinement Using Existing Data Allows Transition from Active Remediation to Monitored Natural Attenuation

Scott Stromberg, Orion Environmental

August 2020:

Greenhouse Gas Offsets for Natural Source Zone Depletion

Ben McAlexander, Trihydro

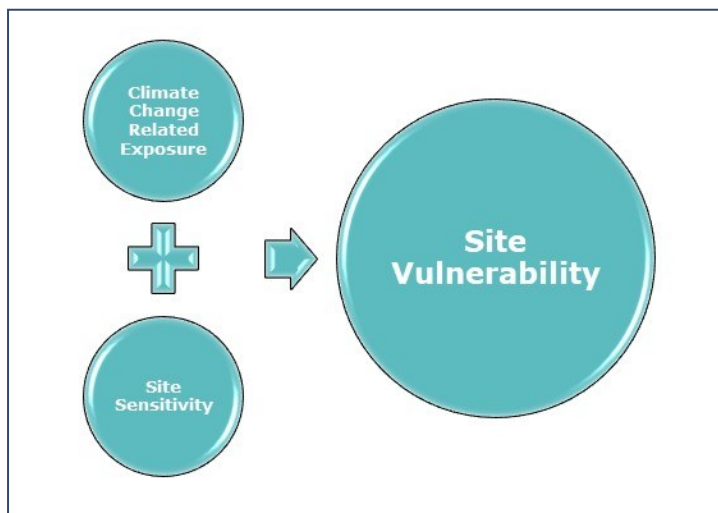
September 2020:

Technologies Combined to Address Two Complex Chlorinated Hydrocarbon Sites at a Military Installation

Betsy Collins, Jacobs (SURF Vice President)

SURF Collaboration Delivers Vulnerability Screening Tool

As highlighted in previous newsletters, SURF collaborated with the Massachusetts Department of Environmental Protection (MassDEP), EcoAdapt, and Boston University to develop a vulnerability screening tool that stakeholders can use to relatively rank sites.



Potential site vulnerability was evaluated by adding predicted climate change related exposure (flooding, storm surge, sea-level rise) with site sensitivity data such as active exposure pathway mitigation measures and imminent hazard classification.

SURF and our partners evaluated the potential vulnerability of sites with oil and hazardous waste contamination. Over 6,000 of these Massachusetts Contingency Plan (MCP) sites were screened based on nearby sensitive communities and infrastructure (e.g., drinking water source areas); site-specific environmental characteristics; and predicted exposure to flooding, storm surge, and sea-level rise. Evaluation results revealed that 40% of sites are likely to be exposed to flooding, storm surge, or sea-level rise.

Overall vulnerability was quantified as a limited first step in understanding how vulnerable the community and environment may be to a possible uncontrolled release of contaminants from a hazardous waste site because of flooding. The screening tool provides a relative ranking of site vulnerability, providing stakeholders a starting point for discussing climate resilience and planning a vulnerability assessment.

The tool is currently available to SURF members through our member portal on the SURF website (click [here](#)). The ultimate goal is to make the tool readily available to Licensed Site Professionals (LSPs), the regulated community, municipalities, and the public. SURF is working with the LSP Association to share the tool with project stakeholders and demonstrate how to use it.

For more information about the research and tool, visit SURF's YouTube channel [here](#) and check out our May 19, 2020 webinar entitled "Vulnerability of Hazardous Waste Sites to Climate Change." If you're interested in learning more about the screening tool, contact Cathy Rockwell (secretary@sustainableremediation.org).



SuRF-UK Updates Sustainability Guidance

SuRF-UK is an initiative set up to progress the United Kingdom's understanding of sustainable remediation. This year, SuRF-UK updated its 2011 sustainability process and indicator guidance. The original guidance, SuRF-UK Annex 1, served as a sustainability criteria checklist when developing sustainability assessments and has been widely used in the UK and internationally. The updated guidance has an expand-

ed review of the sustainability assessment process, including a detailed checklist of potential sustainability indicators and their rationale and an approach for selecting indicators at a specific site. The guidance is available as SuRF-UK Supplementary Report 1 and 2 and will be available soon [here](#). SURF's webinar on this topic is available on our YouTube channel [here](#).

Join us at the Sustainable Remediation Forum

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 a recent initiative includes incorporating resilience into sustainable remediation.

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 (Free!!), Student Member (dues are \$25 annually), Retiree Member (\$60 annually), and Academia Member (\$50 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/.

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 the following benefits:

- Complimentary SURF memberships and meeting registrations
- Use of the SURF sponsor logo
- Name displayed on the SURF website and hyperlinked to your webpage
- Name displayed in the SURF newsletter
- Name announced during SURF events



If you'd like to be a SURF sponsor, contact [Jason McNew](#), SURF Treasurer