EPA/DCHWS Clu-In Webinar: Integration of Resiliency and Sustainability into Remedy Evaluation, Design, and O&M: A Compilation of Case Study Findings

A selection of resources is provided below. This is not a comprehensive list.

Social Cost of Emissions & Energy Use Methodology and Resources

- Cooperative Research Centre for Contamination Assessment and Remediation of the Environment [CRC CARE]. 2018. National Remediation Framework Guideline on performing cost-benefit and sustainability analysis of remediation options. Version 0.1 August.
    - https://www.crccare.com/files/dmfile/GuidelineonpeformingCBandSAofremediationoptions_Rev0.pdf
- Quantifying Global Impacts to Society from the Consumption of Natural Resources during Environmental Remediation Activities, Journal of Industrial Ecology
    - https://onlinelibrary.wiley.com/doi/abs/10.1111/jiec.12380
- Social Cost of Carbon, estimating the benefits of reducing GHG emissions
    - https://19january2017snapshot.epa.gov/climatechange/social-cost-carbon_.html
    - https://www.epa.gov/sites/production/files/2016-12/documents/social_cost_of_carbon_fact_sheet.pdf
- Weighing the Value of a Ton of Pollution
    - https://www.cato.org/sites/cato.org/files/serials/files/regulation/2010/6/regv33n2-5.pdf
- Estimating Social Impacts of a Remediation Project Life Cycle With Environmental Footprint Evaluation Tools. Remediation Journal
    - https://onlinelibrary.wiley.com/doi/10.1002/rem.21374

Resources to Evaluate Cost/Benefit to Environmental Justice Communities

- A Triple Bottom Line Assessment of Traditional and Green Infrastructure Options for Controlling CSO Events in Philadelphia's Watersheds. Includes poverty reduction benefits from local job creation, benefits from increased recreational use/access, increase in property values due to restored/enhanced aesthetics.
    - https://www.epa.gov/sites/production/files/2015-10/documents/gi_philadelphia_bottomline.pdf
    - CDM Smith recently performed a literature review to update this assessment, including consideration of benefits from crime reduction, community cohesion, environmental equity, and community health and safety. This has not been published for public use.

Sustainable Remediation Resources (developed by the Sustainable Remediation Forum)

- Resilient remediation: Addressing extreme weather and climate change, creating community value
    - https://onlinelibrary.wiley.com/doi/full/10.1002/rem.21585
- Ten years later: The progress and future of integrating sustainable principles, practices, and metrics into remediation projects. Remediation Journal
    - https://static1.squarespace.com/static/5a4eb702cd39c3e7d62cb562/t/5d7ab1b1c2caf90a7a179c3e/1568321971836/Favara_et_al-2019-Remediation_Journal.pdf
- Integrating the Social Dimension in Remediation Decision-Making: State of the Practice and Way Forward. Remediation Journal
    - https://onlinelibrary.wiley.com/doi/full/10.1002/rem.21447

NetSTORM

- CDM Smith's software for hydrologic data analysis and collection system model pre- and post-processing.
    - http://www.dynsystem.com/netstorm/

Additional Resources

- ASTM E2876 – 13 Standard Guide for Integrating Sustainable Objectives into Cleanup
    - https://www.astm.org/Standards/E2876.htm
- USEPA 542-R-17-004 Ecosystem Services at Contaminated Site Cleanup
    - https://semspub.epa.gov/work/HQ/100000459.pdf
- EPA's Climate Change Adaptation Resource Center (ARC-X) program and use it as a starting point during project planning. It is also a useful tool for identifying BMPs. The ARC-X program tools are complementary to the EPA CREAT (Climate Resilience Evaluation and Awareness Tool).
    - https://www.epa.gov/arc-x
    - https://www.epa.gov/crwu/creat-risk-assessment-application-water-utilities
    - https://toolkit.climate.gov/tool/climate-resilience-evaluation-awareness-tool-creat
- EPA 2016 Technical Memorandum, Consideration of Greener Cleanup Activities in the Superfund Cleanup Process.
    - https://semspub.epa.gov/work/HQ/100000160.pdf