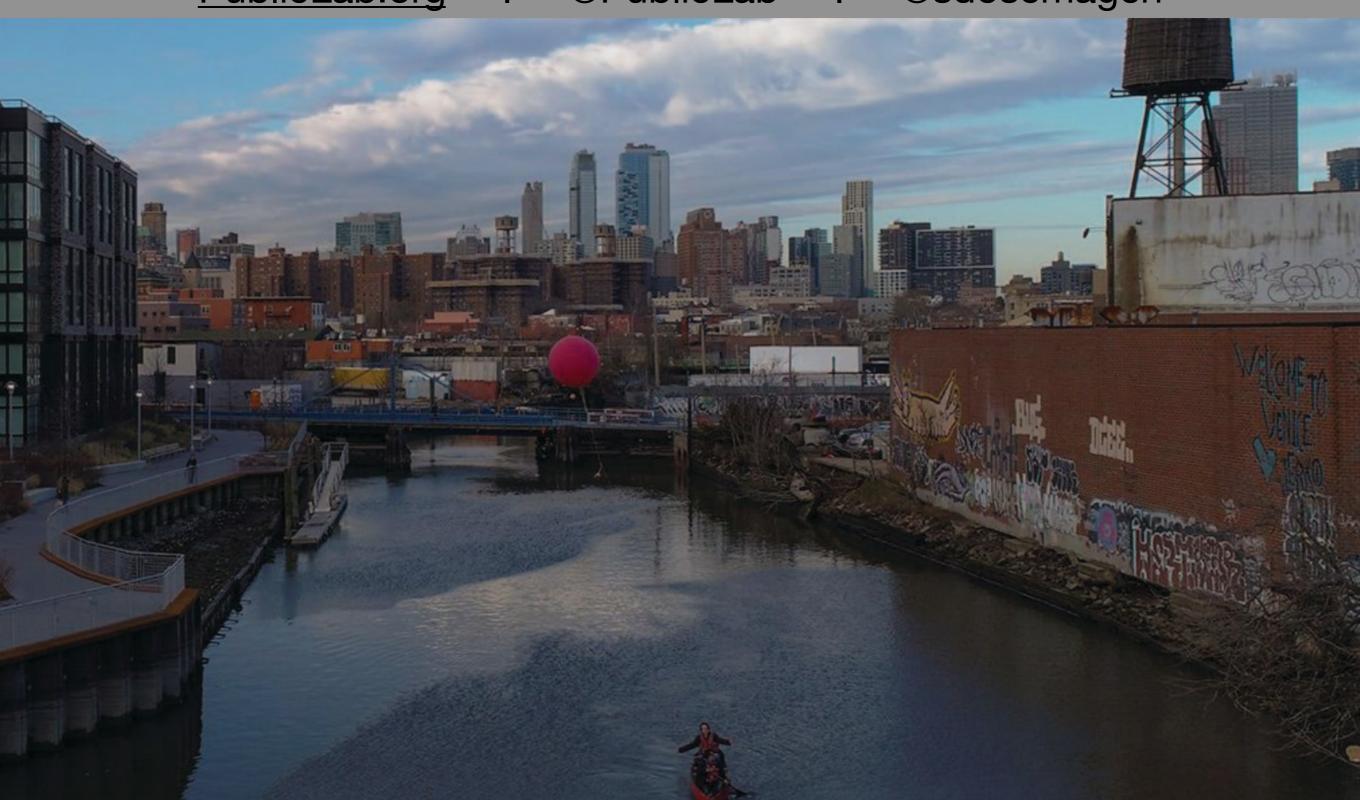
Collaboration in Action:

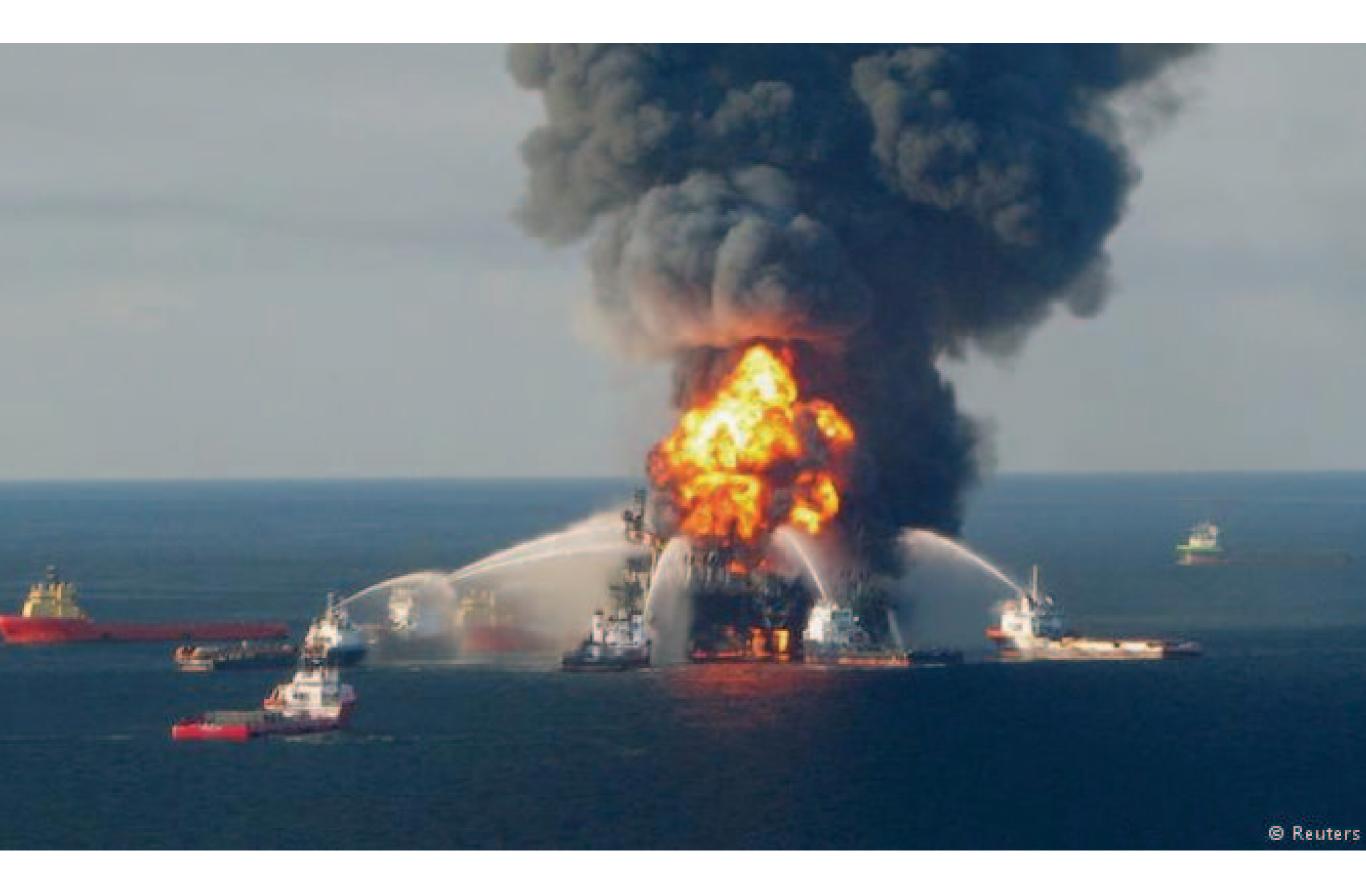
Community-driven projects for environmental problem solving

PublicLab.org I @PublicLab I @sdosemagen



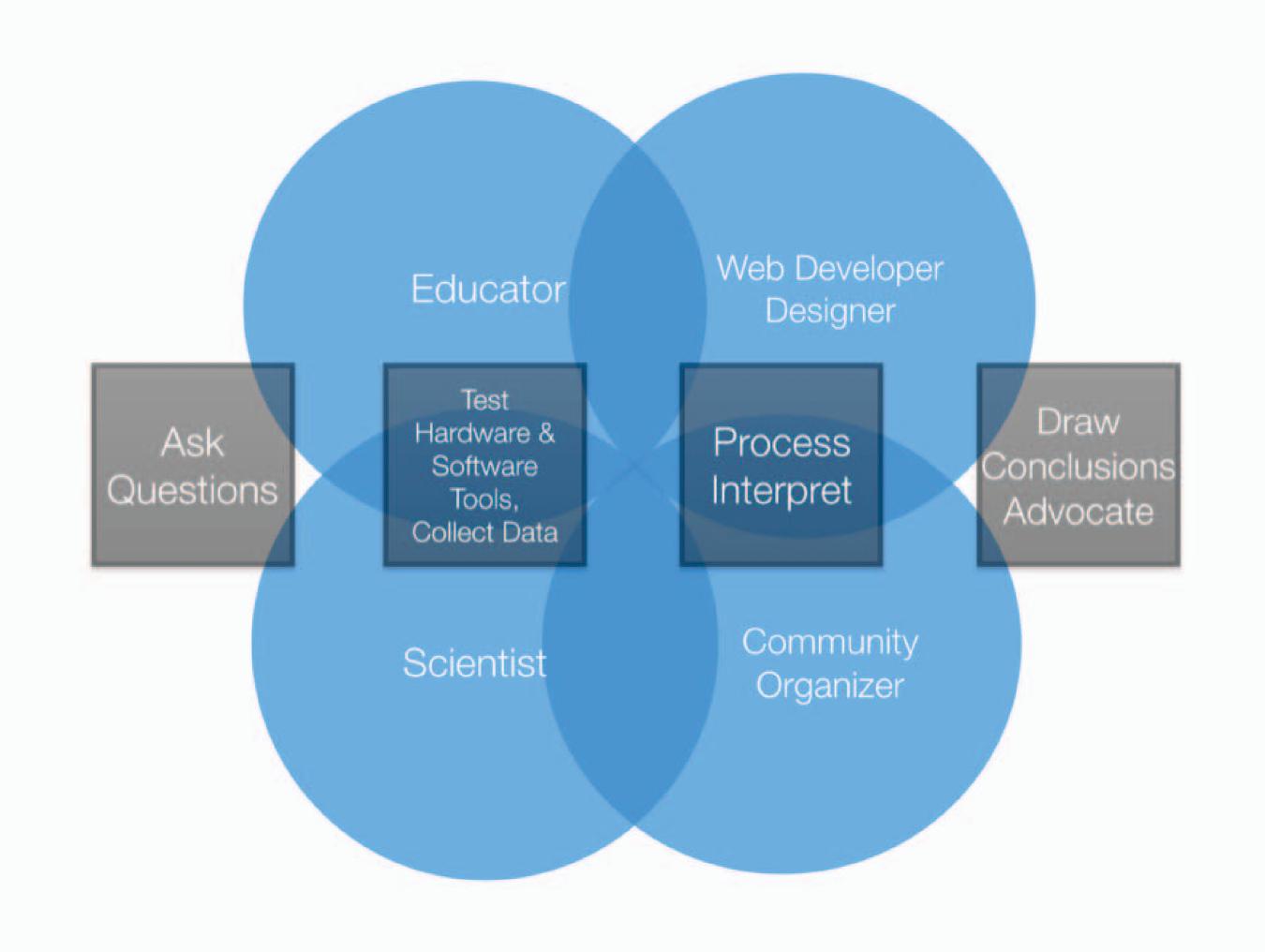


St. Rose, LA. Photo for YES! Magazine by Marc Pagani





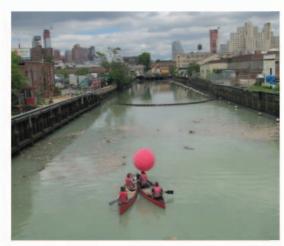




Environmental Protection Belongs to the Public

A Vision for Citizen Science at EPA









National Advisory Council for Environmental Policy and Technology (NACEPT)

December 2016

EPA 219-R-16-001

Embrace citizen science as a core tenant of environmental protection

- Articulate and implement a vision for citizen science at EPA
- Take a collaborative approach to citizen science
- Define and communicate EPA's role in citizen science
- Emphasize place-based approaches to citizen science

Invest in citizen science for communities, partners and the Agency

- Dedicate funding for citizen science
- Improve technology and tools and build technical capacity

Enable the use of citizen science data

- Adopt a positive, cooperative agenda that increases the utility of citizen science
- Adopt standards for citizen science data
- Provide guidance and communicate data quality needs for different data uses

Integrate citizen science into the work of EPA

- Support citizen science for environmental protection beyond regulations
- Support community citizen science
- Integrate citizen science into EPA science
- Expand EPA's regulatory mission to include citizen science

Full report: https://www.epa.gov/faca/nacept-2016-reportenvironmental-protection-belongs-public-vision-citizen-science-epa

Benefits of Citizen Science

Engaged Communities. An educated and engaged public that can support EPA in solving environmental and health problems.

Collaborative Governance. Energized and improved environmental governance created through generating deep public involvement in EPA priorities and monitoring practices.

Common Vision. A public connected to and invested in the missions of federal agencies by promotion of open government, civic participation and volunteerism.

Actionable Information. Contributions to environmental and health research that would otherwise be impossible, including data and information to fill current gaps, early warning of environmental issues and problems, and information on problems not adequately covered by monitoring networks.

Shared Knowledge. The advancement and acceleration of scientific research through collaborative practices bounded in group discovery, learning and the co-creation of knowledge.

Accessible Technology. Technology that is open sourced to promote rapid iterations and advancements in support of environmental priorities.

Environmental Literacy. The advancement of national priorities around science, technology, engineering, arts and mathematics (commonly known as STEAM) education through citizen science activities.

Community engagement: awareness, partnership, development, stakeholder engagement, public outreach

Case Studies:

Citizen Science in Great Smoky Mountains National Park

Environmental Health Organizing in El Paso, Texas

Condition indicator: media campaign, cross-sector stakeholder involvement, request for further study or involvement by government agency and/or research institutions

Case Studies:

Argentine/Turner Rail Yard Community Air Pollution Monitoring

Southeast Alaska Tribal Toxins Partnership Management decisions: remediation, restoration, community solution enactment

Case Studies:

Canton Creek Snorkel Survey

Composting Food Waste with Fermentation

Regulatory standard setting:

new mandatory and voluntary standards, development of best practices, revision of prior standards, changes in methodologies for measuring compliance status

Case Study:

The Dewey-Humboldt Arizona Garden Project

Community Engagement

Education

Condition Indicator

Research

Management

Regulatory Decisions Regulatory Standard Setting

Enforcement

Education: Environmental and STEAM literacy, civic participation, stewardship

Case Studies:

Ironbound Community Corporation Partnership

Center in the Park's Senior Environment Corps Research: creating baseline datasets, identifying trends and hotspots in health and ecological change over time, filling gaps in

Case Studies:

datasets

Watershed Monitoring in the Mill (Otter) Creek Watershed

Friends of the Shenandoah River

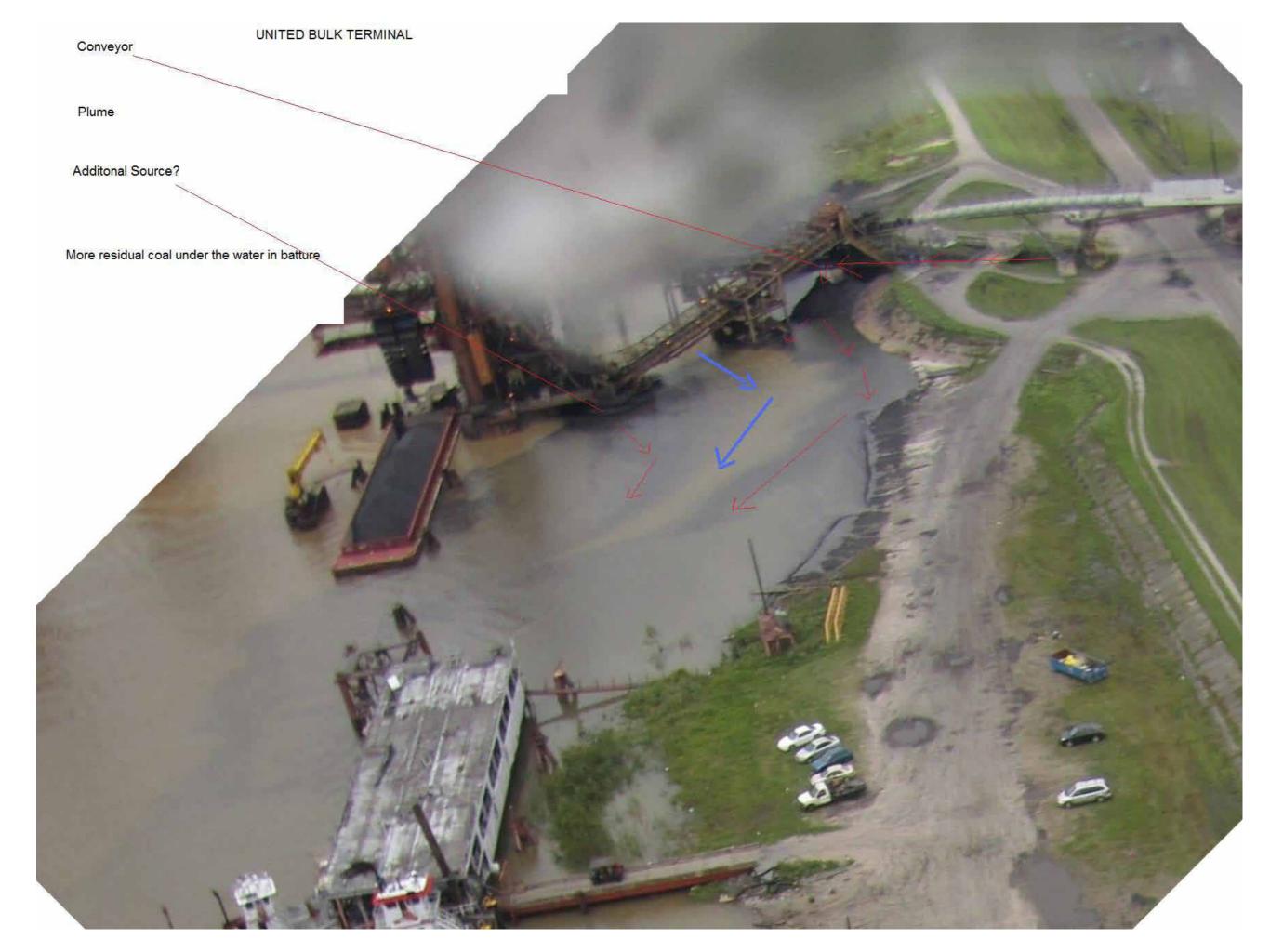
Regulatory decisions: permits, licenses, leases, environmental permits, zoning and rezoning, site plan approvals, mitigation requirements

Case Study:

Aerial Imagery of the United Bulk Terminals in Plaquemines, Louisiana Enforcement: launching of inspections; investigations; prosecution of administrative, civil or criminal violations; imposition of new permit conditions; liability

Case Study:

Tonawanda Coke Air Monitoring



Considerations:

- Build relationships based on equity* from the beginning (resource distribution, ownership of processes and data)
- Honor different types of expertise, local knowledge and experience
- Consider the many places where collaboration can happen
- Leverage scientific knowledge to help distribute power
- Think critically about the use of terms such as "inclusion" and "empowerment". Co-opting people and their work can create friction.
- Move beyond feedback loops and step into solution finding
- Address tech-solutionism before it becomes a problem

*Why equity? Equality is treating everyone exactly the same, while equity starts from the idea that people/groups start from different social, political and economic positions and strives to address this unevenness.