

Evaluation of a National Workshop Series to Minimize Health, Social, and Economic Disruptions from Oil Spills



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Many survey respondents expressed the value of networking with others with interest or expertise in oil spills, as seen here at the workshop in Anchorage in February 2019. Photo by Texas Sea Grant.

Introduction

The Gulf Research Program (GRP), a division of the National Academies of Sciences, Engineering, and Medicine (NASEM), identified the need for a national workshop series at the 2017 workshop, “Preparing for a rapid response to major marine oil spills: Protecting and assessing the health and well-being of communities,” in Washington, D.C. This workshop, cohosted by NASEM’s Health and Medical Division, addressed public health issues surrounding oil spills, with an emphasis on preparedness, response, and lessons learned. Workshop participants discussed potential challenges communities might face, suggesting that input was needed at the regional level to determine opportunities for the GRP to support preparedness around the country (Giammaria, Nicholson, & Snair, 2018).

In late 2018 and 2019, GRP, the Gulf of Mexico Research Initiative (GoMRI), and multiple Sea Grant programs collaborated to host a series of workshops around the country focused on human dimensions of oil spill preparedness. The Gulf of Mexico Sea Grant Oil Spill Science Outreach Program, Alaska Sea Grant College Program, University of Southern California (USC) Sea Grant Program, and Virginia Sea Grant College Program coordinated the effort, which resulted in five regional events (Hale, Covi, Holen, Partyka, Schulhof, Sempier, & Skelton, 2019).

A project planning committee made up of GRP advisory board members, Sea Grant employees, emergency responders, and researchers developed the workshop series. Five workshops spanned multiple coasts, taking place from December 2018 through May 2019 (Table 1). Separate workshop committees headed by Sea Grant programs led each individual event. While every workshop in the series focused on the three topical areas of public health, social disruption, and economic impacts of oil spills, each workshop committee strove to make their agenda applicable to the unique needs of their region (Hale et al, 2019).

Table 1. Date, location, and lead of five, one- and two-day regional workshops held as part of the national workshop series on human dimensions of oil spills and preparedness.

Region	Date	Location	Lead Sea Grant program
Western Gulf of Mexico	December 4-5, 2018	Houma, Louisiana	Texas Sea Grant College Program
Alaska	February 20-21, 2019	Anchorage, Alaska	Alaska Sea Grant College Program
Mid-Atlantic	March 29, 2019	Virginia Beach, Virginia	Virginia Sea Grant College Program
West Coast	April 5, 2019	Santa Barbara, California	USC Sea Grant Program
Eastern Gulf of Mexico	May 6-7, 2019	Mobile and Bayou La Batre, Alabama	Mississippi-Alabama Sea Grant Consortium

The purpose of the workshop series was to raise awareness of human dimensions related to spills, listen to people directly affected by spills, identify regional-level needs and priorities for improving preparedness, promote networking among groups who may not have previously interacted, and identify resources to address gaps. Workshop organizers employed a number of methods to achieve their goals. Presenters shared diverse perspectives from a range of backgrounds, including response professionals to community leaders to researchers with expertise in human dimensions of oil spills. Participants included people who live or work in places that have experienced significant spills or are in areas with



high or growing potential for oil spills to occur. In many cases, participants shared their experiences from past oil spill events.

During each workshop, attendees participated in breakout groups to discuss a series of questions regarding current and needed resources, suggested protocols, pilot project ideas, and research and outreach priorities for improving oil spill preparedness in the area. Facilitators recorded the dialogue surrounding each question. The information gathered at the workshops was included in a series of reports—five from each regional workshop and one that summarized the findings across the series (Hale et al, 2019, Hale, Maung-Douglass, Partyka, Sempier, & Skelton, 2019; Holen, 2019; Partyka, Hale, Maung-Douglass, Sempier, & Skelton, 2019; Schulhof & Grifman, 2019; Walker & Covi, 2019). The workshop reports, presentation videos from some of the workshops, and more information about the series can be found at <https://gulfseagrant.org/oilspilloutreach/collaborative-workshop-series/>.

The final phase of the project took place six months after the collection of workshop reports were released. All involved in the project, whether participants, speakers, or organizers, received a follow-up evaluation about the workshop series. This report summarizes the results of the evaluation.

Methods

Evaluation Design

Representatives from GRP and each Sea Grant program involved in the workshop series created the evaluation (Appendix A), framing questions in several ways to understand if and how workshop objectives were met. The first set of questions listed a series of statements about the workshops, giving participants an option to choose from five Likert-scale responses (strongly agree, somewhat agree, neutral, somewhat disagree, strongly disagree) as their answer. The second set of questions used yes-no to obtain dichotomous information. The third set included open-ended prompts/questions that were used to provide more qualitative information about the workshop series. Respondents answered the following prompts or questions:

1. Please share if there have been additional benefits from participating in this workshop that are not listed above.
2. What did you like about the workshop(s)?
3. What would you like to see as next steps after this workshop series?
4. What specific questions do you continue to have about oil spills and health, social, and economic disruptions?
5. Please provide any other ideas, comments, questions, or feedback.

Finally, multiple choice questions identified additional workshop details and participant demographics.

Implementation

Workshop leaders or other Sea Grant representatives notified workshop participants and organizers that a third party would send them the evaluation. This was done to ensure confidentiality and impartiality in the final phase of the project. The third party, Survey Research Laboratory (SRL) at Mississippi State University, emailed the evaluation to the contacts provided by Sea Grant. SRL released a series of three emails, one per week, to serve as reminders. The first email went out on February 25, 2020, and the last on March



11. On March 18, SRL closed the evaluation and began tabulating the results. SLR removed respondent identifiers prior to sending the results to the workshop organizers, who then developed this report.

Results

Response Rate, Workshop Attendance, and Roles

The Sea Grant programs provided 273 email addresses of workshop organizers, speakers, and participants. Fourteen email addresses were undeliverable, and no alternative contact found. Of the 259 people who received the evaluation, 79 completed it for a response rate of 31%.

All workshops were represented in the evaluation results (Table 2). In some cases, people participated in more than one workshop. In addition, respondents identified the single or multiple role(s) they played within the workshop series (Table 3). The evaluation reflects input from at least ten people who attended the workshop and most responses came from participants.



Respondents shared positive comments about the workshop format, which included opportunities for speakers and participants to discuss important questions in breakout groups throughout the day. Photo by Mississippi-Alabama Sea Grant Consortium.

Table 2. Number of respondents that participated the workshop. (N = 79)

Workshop location	Number of respondents
Anchorage, Alaska	23
Mobile, Alabama	19
Santa Barbara, California	19
Virginia Beach, Virginia	15
Bayou La Batre, Alabama	12
Houma, Louisiana	10



Table 3. Number of respondents based on their role(s) in the workshop series. (N = 78)

Workshop role	Number of respondents
Participant	55
Presenter	14
Workshop planning committee for one workshop	11
Facilitator	5
Workshop planning committee for workshop series	3
Other*	1

*Respondent indicated that they “documented” the workshop.



Respondents indicated that speakers shared information at a level that was easy to understand, as at the workshop in Santa Barbara. Photo by Texas Sea Grant.

Respondent Feedback

The majority of respondents strongly agreed or somewhat agreed with every statement rated using a Likert-scale (Table 4). The top four statements had 85% or higher percent of respondents agreeing that the workshops helped them network, identified priorities that were relevant and would improve preparedness, and produced reports that were easy to access.



Table 4. Levels of agreement to statements about workshop objectives, expressed as a percent.

Statement	Strongly agree	Somewhat agree	Neutral	Somewhat disagree	Strongly disagree
The workshop(s) helped me network with others that I may not have previously interacted. (N = 78)	64%	26%	8%	1%	1%
The workshop reports were easy to access. (N = 76)	53%	36%	12%	0%	0%
The identified priorities in the workshop reports will help improve oil spill preparedness. (N = 79)	53%	32%	12%	4%	0%
The identified priorities in the workshop reports are relevant. (N = 76)	51%	34%	12%	3%	0%
The workshop(s) raised my knowledge of human health and/or other socioeconomic issues related to oil spills. (N = 77)	48%	43%	8%	0%	1%
The identified priorities in the workshop reports are actionable for me. (N = 72)	35%	36%	24%	4%	1%
The workshop reports have helped me personally or professionally. (N = 72)	28%	40%	24%	4%	4%

The series of yes/no questions showed more varied responses (Table 5). The majority of respondents indicated that their awareness and knowledge improved, and new partnerships were fostered. Actions that take longer to mature had lower positive responses. However, at least some participants became more involved in spill planning; initiated new projects; applied for funding related to spill response, planning, and human well-being; and received funding.



Table 5. Responses to the question, “As a result of your participation in this workshop, do any of the following statements now apply to you?”

Statement	Yes	No
My awareness and knowledge related to spill response, planning, and/or human well-being has improved. (N = 76)	93%	7%
I fostered new partnerships. (N = 79)	69%	31%
I have become more involved or active in spill planning for my community or region. (N = 68)	37%	63%
I have initiated new projects related to spill response, planning, and human well-being. (N = 69)	23%	77%
I applied for funding for new research, outreach, or projects related to spill response, planning, and human well-being. (N = 70)	6%	94%
I received research, outreach, or project funds related to spill response, planning, and human well-being. (N = 67)	5%	95%

Respondents shared a substantial amount of feedback through the open-ended questions and prompts, which are available in Appendix B. Eleven participants described additional benefits from attending the workshop (Table 6). Answers fell into three key categories: learning and using new information, networking and communicating, and funding. The responses were positive and indicated actions occurred, such as an agency began developing an air quality emergency response document for oil spill response. In addition, respondents increased their awareness of regional issues and appreciated discussions that compared issues across regions. They also noted that including discussions about prevention, issues facing indigenous people, human and sociological dimensions, and the value of citizens advisory councils was useful.

Table 6. Number of responses per category to the statement, “Please share if there have been additional benefits from participating in this workshop that are not listed above.”

Categories	Number of responses
Learning and using new information	6
Networking and communicating	4
Funding	1
Total	11

The question about what people liked about the workshops received the most responses, with 60 replies (Table 7). The individual responses could be divided into three categories: networking and communicating, workshop format and design, and learning and using new information. The largest number of respondents focused on the “diverse mix of participants” with “lots of contrasting viewpoints” at each event. The “combination of researchers, policymakers, and local stakeholders” allowed for rich discussion, “feelings of shared experience and camaraderie,” and “empathy and understanding.” Multiple responses noted that “organizers did a good job getting some stakeholders who don’t come to agency oil spill



preparedness meetings to attend.” Some overlap occurred between appreciating the networking opportunities and workshop formatting. Multiple responses indicated that workshops were “accessible,” and the format allowed all voices to be heard. The speakers, while experts, “spoke at a level that was easily understood.” The combination of expert presentations followed by breakout sessions “allowed attendees to learn and process what they learned by networking with speakers and other audience members.”

The responses that centered around learning new information tended to fall into two categories, oil spill responders learning about non-response issues and non-responders learning about response. One person wrote, “I work in oil spill response, but not directly on health, social, and economic disruptions. This workshop gave me an additional perspective on the bigger ramifications of spills and their aftermath.” Another reflected the views of many by reporting, “It increased my knowledge on oil spill response and who to call in the event of a spill.”



Survey respondents spoke positively of their ability to network with oil spill response experts, such as U.S. Coast Guard Public Information Officer Juston Lee. Photo by Texas Sea Grant.

Table 7. Number of responses per category to the question, “What did you like about the workshop(s)?”

Categories	Number of responses
Networking and communicating	30
Workshop format and design	21
Learning and using new information	9
Total	60

Respondents shared diverse answers to the question about next steps that are needed after the workshop series, with seven categories emerging across 51 answers (Table 8). The majority of responses related to building on the engagement that occurred at the workshops and supporting follow-up workshops and training activities to address the identified needs. The second largest cluster of responses identified specific research and information topics that should be addressed, followed by the need to fund activities, be even more inclusive, and address law and policy topics.



Table 8. Number of responses per category to the question, “What would you like to see as next steps after this workshop series?”

Categories	Number of responses
Continued engagement and follow-up	17
Workshops and meetings	11
Information and tools	6
Research and modelling	6
Funding	5
Inclusion	3
Law and policy	3
Total	51

Seventeen people identified additional questions about oil spills and health, social, and economic disruptions (Table 9). The responses could be placed into five categories: community concerns, human health, prevention and preparedness, monitoring, and oil transport. Most comments were evenly divided across the first three categories. Community concerns focused on continuing to incorporate local knowledge, communities, and businesses into processes to understand and prepare for the health, social, and economic disruptions associated with oil spills. The prevention- and preparedness-related comments ranged from decreasing oil-related activities to increasing training for local communities. Finally, the human health-related points covered both mental and physical health concerns, including developing a database of mental health professionals that can be used in spill response.

Table 9. Number of responses per category to the question, “What specific questions do you continue to have about oil spills and health, social, and economic disruptions?”

Categories	Number of responses
Community concerns	5
Human health	5
Prevention and preparedness	5
Monitoring	1
Oil transport	1
Total	17

The final evaluation prompt allowed respondents to leave general comments (Table 10). The 23 responses fell into four categories: positive feedback, opportunities to improve workshop(s), follow-up activities, and other comments. Several positive comments related to specific workshops, the representation at the workshops, and the structure of the workshops. Areas to improve ranged from workshop-specific suggestions to timing of release of the evaluation to be closer to the end of the workshop. Most of the follow-up activities suggested additional workshops at local and national levels and follow-through with addressing the recommendations and ideas shared at the workshops.



Table 10. Number of responses per category to the prompt, “Please provide any other ideas, comments, questions, or feedback.”

Categories	Number of responses
Positive feedback	8
Opportunities to improve workshop(s)	6
Follow-up activities	5
Other comments	4
Total	23

Demographic Information

Respondents had a variety of backgrounds (Table 11). Numerous responses in the “other” category could not be categorized into another role. The three most common roles were oil spill responder or manager, university/college researcher, and nonprofit/NGO staff or representative.

Table 11. Respondents gave the following answers to the question, “What is the primary reason you are interested in oil spills? Because I am a/an:”

Role	Number of responses
Oil spill responder or manager	12
University/college researcher	11
NGO staff or representative	11
Outreach professional	5
Public health official	5
Fisher	3
Tourism specialist	1
Social worker	1
Other*	27
Total	76

*Other verbatim responses included advocate for safe oil transportation; air pollution control district; biologist, retired federal government; concerned citizen; economic development planner; environmental policy professional; former politician, EMS responder, concerned environmentalist; government; government communicator; government social scientist; healthcare administration; land management agency; landowner/land manager; photographer; PNP rep; policy/decision maker; regulator; representative of a national clinical organization; research funder; retired univ. professor; special investigator/advisor; state employee (two responses); tribal advocate; wildlife biologist; and worked with class action attorneys and represent Cordova District Fishermen United

Conclusion

Approximately six months after the national release of the workshop series reports, SRL collected input from 79 people who participated in one or more workshops. The 31% response rate is very good considering an online evaluation was shared more than one year after some workshops occurred. The evaluation included representation from every workshop, with 10 or more perspectives shared from each workshop. The results suggest



that the workshop series met its anticipated goals and objectives. An overwhelming majority of respondents indicated that the workshop(s) helped them network, raised their knowledge



Facilitators recorded notes during breakout sessions that were a valued part of the workshops, including at the Virginia event. Photo by Aileen Devlin of Virginia Sea Grant.

of the human dimensions of oil spills and response, and identified priorities that would improve oil spill preparedness. Results indicated positive responses to some workshop objectives may take longer to mature, such as initiating new projects related to spill response, applying for funding to address identified needs, and receiving funding to address these needs. It is anticipated that over time more people would indicate that they have achieved these as well.

Responses to open-ended questions revealed more details about benefits from the workshop series. Many cited positives such as the new information participants learned, the value of networking with others, and the diversity of perspectives shared through the composition of speakers and participants. They also indicated that the format of the workshops prompted an exchange of ideas. Clear next steps were articulated, including conducting additional workshops to expand this work, supporting follow-up activities, identifying and sharing tools, and providing funding to address workshop priorities. In addition, people expressed a desire to continue to expand the reach of this work and include more groups in this process.

Based on the feedback collected, this collaboration across nine organizations can be considered a success. An opportunity exists to build on this momentum and interest by people who attended, presented at, and/or organized the workshop series and to further meet the needs related to the human dimensions of oil spill preparedness and response.



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Appendices

Appendix A: Evaluation Instrument Administered by SRL

Introduction

Thank you for participating in an oil spill workshop focused on health, social, and economic disruptions during the past 16 months (link to: <https://gulfseagrant.org/oilspilloutreach/collaborative-workshop-series/>). This workshop series was implemented by Sea Grant programs throughout the U.S. and sponsored by the National Academy of Sciences, Engineering, and Medicine's Gulf Research Program and the Gulf of Mexico Research Initiative.

We would like to learn more about what has happened since the workshop and have a few questions for you. This form should take less than ten minutes to complete, but you may take as much time as necessary to complete. Your participation is voluntary, and you may discontinue at any time. Individual responses that identify who submitted answers will not be shared.

Which workshop(s) did you participate in? (Check all that apply)

1. Alabama (Bayou la Batre), May 6, 2019
2. Alabama (Mobile), May 6-7, 2019
3. Alaska (Anchorage), February 20-21, 2019
4. California (Santa Barbara), April 5, 2019
5. Louisiana (Houma), December 4-5, 2018
6. Virginia (Virginia Beach), March 29, 2019

What is your level of agreement with the following statements?

	Strongly agree	Somewhat agree	Neutral	Somewhat disagree	Strongly disagree	Skip item
The workshop(s) raised my knowledge of human health and/or other socioeconomic issues related to oil spills.						
The workshop(s) helped me network with others that I may not have previously interacted.						
The workshop reports were easy to access.						
The workshop reports have helped me personally or professionally.						
The identified priorities in the workshop reports are relevant.						
The identified priorities in the workshop reports are actionable for me.						
The identified priorities in the workshop reports will help improve oil spill preparedness.						



As a result of your participation in this workshop, do any of the following statements now apply to you?

	Yes	No	Skip item
I fostered new partnerships.			
My awareness and knowledge related to spill response, planning, and/or human well-being has improved.			
I have become more involved or active in spill planning for my community or region.			
I applied for funding for new research, outreach, or projects related to spill response, planning, and human well-being.			
I received research, outreach, or project funds related to spill response, planning, and human well-being.			
I have initiated new projects related to spill response, planning, and human well-being.			

Please share if there have been additional benefits from participating in this workshop that are not listed above.

What did you like about the workshop(s)?

What would you like to see as next steps after this workshop series?

What specific questions do you continue to have about oil spills and health, social, and economic disruptions?

What is the primary reason you are interested in oil spills? Because I am a/an:

- Elected official (local, county/parish, state levels)
- Oil spill responder or manager
- Fisher
- Tourism specialist
- Public health official
- Social worker
- Faith leader
- University/College researcher
- Educator (formal and informal K-Grey)
- Other (specify)
- Select this option to skip this question

What role did you play in this workshop series? (Select all that apply)

- Workshop participant
- Workshop presenter
- Workshop facilitator
- Workshop planning committee member
- Planning committee member for all workshops
- Other (specify)



What state(s) do you primarily work or serve professionally? (Select all that apply)

- Alabama
- Alaska
- Arizona
- Arkansas
- California
- Colorado
- Connecticut
- Delaware
- Florida
- Georgia
- Hawaii
- Idaho
- Illinois
- Indiana
- Iowa
- Kansas
- Kentucky
- Louisiana
- Maine
- Maryland
- Massachusetts
- Michigan
- Minnesota
- Mississippi
- Missouri
- Montana
- Nebraska
- Nevada
- New Hampshire
- New Jersey
- New Mexico
- New York
- North Carolina
- North Dakota
- Ohio
- Oklahoma
- Oregon
- Pennsylvania
- Rhode Island
- South Carolina
- South Dakota
- Tennessee
- Texas
- Utah
- Vermont
- Virginia
- Washington
- West Virginia
- Wisconsin
- Wyoming
- Washington DC
- Serve at national level (all states)

Please provide any other ideas, comments, questions, or feedback.



Appendix B: Open-ended Responses

The open-ended responses are verbatim, organized by prompt or question, and then alphabetized within each category.

Please share if there have been additional benefits from participating in this workshop that are not listed above.

Learning and using new information

- I have initiated an Air Quality Emergency Response document for my agency that will include an oil spill response section.
- I learned about how issues in our region of Alaska compare to issues in other parts of Alaska.
- It was good that you included a presentation on prevention and accident prevention models. The body of knowledge on prevention has grown in recent years. It is more important than response.
- Opened my eyes to the depth of problems especially concerning the involvement of indigenous people.
- The human, sociological dimension was new to me, and the guest speaker was great in explaining this. I have contacted her several times to discuss ideas.
- The most important thing I learned from the workshop is that there are currently no effective ways to prevent oil spills—happening constantly—and no effective way to police the oil rigs in the Gulf of Mexico so that the owners have a real incentive to prevent spills. The entire emphasis of the workshop was on what to do after a major spill occurs—how to clean up the mess and how remediated persons are harmed medically and financially by a major spill.

Networking and communicating

- I appreciate the broad participation in this informational and educational gathering. Prior to the Exxon Valdez oil spill the individuals and communities were worrying in the wind. While public information was reassuring on the surface, ominous fears were there. We all felt very isolated and helpless. Having an organization such as the Prince William Sound Regions Citizens Advisory Council provides us with a place at the table, high quality staff to sort through the paperwork blizzard and make sense as to what our benefits and risks are. This series of workshops brought us together nationally (as could be done given restrictions).
- I became acquainted with a sea turtle nonprofit on the Florida Panhandle who now features publications created by my team in their visitor's center.
- It was great to explain the value of Citizens Advisory Councils and the value they could provide if they could be created in other areas.
- The printed materials have had a big impact on visitors to our sea turtle conservation center. We have a video that runs during our open hours and printed materials that talk about everything from oil dispersants to animals that were impacted by the oil spill. We host field trips for all age groups and many of the students that visit the center take with them the printed materials to use in papers or class projects. It has been nice to be able to have this resource and share with not only our local communities but also visitors to our area. Thank you for implementing this program and for the resources that communities can now access.



Funding

- Our organization may have acquired funds; I am not sure. I represented our Director of Science and Research who would have a more direct knowledge of this, but was unable to attend.

What did you like about the workshop(s)?

Networking and communicating

- Broad participation across gov't, academia, community and industry.
- Brought together all aspects and points of view on oil spill impacts, not just environmental and economic.
- Chatting and understanding the problems faced by folks from other areas, ie. Western Alaska & North Western.
- Combination of researchers, policymakers, and local stakeholders.
- Diverse participants, lots of great contrasting viewpoints.
- Diversity of people involved, opportunity for those entities who have not seen each other since the spill to reconnect and network, and to plan new ways to stay connected.
- Face time with other folks with interest in oil spills in Louisiana.
- Feelings of shared experience and camaraderie surrounding breakout discussions.
- Good cross functional makeup of academia, industry and community.
- Hearing local issues, meeting new people from the area.
- How all these different groups worked together.
- Knowledgeable speakers and to network.
- I liked hearing from and connecting with people that do not often have a voice, or a seat at the table, when it comes to spill response/recovery planning, or research and outreach decision making. While I thoroughly enjoyed and learned a lot from the spill response and public health experts, for me the individuals that had been impacted by spills were able to connect the dots and fill in the whole picture with descriptions of their experiences and needs.
- I liked the way in which they convened a diverse group of stakeholders and decision makers.
- Interacting with coastal user groups that I was not familiar with.
- It provided a forum for stakeholders to explain their perspectives and co-mingle.
- It was a good opportunity for me to learn what concerns members of various communities had and what their priorities are. As a representative of a national clinical organization, this helps me prepare our members for questions.
- Loved the opportunities to interact with others, and learned a lot!
- Mix of attendees, including Indigenous reps from western AK.
- Networking.
- Opportunity to engage with others and discuss variety of oil spill topics. Network across the US. Organization, efforts taken to make them accessible to community members, range of topics and presenters.
- Organizers did a good job getting some stakeholders who don't come to agency oil spill preparedness meetings to attend.
- The ability for community members to provide input.
- The breadth of Alaskans involved.
- The diverse mix of participants and the break out sessions.
- The inclusion of people from regions not normally connected to oil spill response
- The tribal presence and engagement in the panel discussions.
- The workshop brought relevant stakeholders together and allowed for each stakeholder to explain their claim, thereby fostering empathy and understanding.
- Trying to get other folks in the area to network is good.
- Variety of govt and ngo voices.



Workshop format and design

- Accessible. Great selection of presenters. Spoke at a level that was easily understood.
- Brainstorming of priorities and strategies.
- Break out sessions. Value from the presentations/breakouts throughout the day.
- Excellent format and wide participation.
- Excellent workshop with a variety of topics and information provided. These workshops should be continued. The format with breakout sessions was valuable.
- Great to attend something that was human health centric vs the usual equipment and response heavy conferences.
- I have been in the oil spill response business for over 30 years. I thought your workshop was most professional and useful. Since I retired I have not used the opportunities that your workshop provided.
- I liked the combination of talks and breakout sessions. This format allowed attendees to learn and process what they learned by networking with speakers and other audience members.
- I liked the information pertaining to what happened at the spill itself so that we could discuss lessons learned and ways to improve spill response. I also liked the breakout groups and new ideas that came from these discussions.
- Interesting presentation from a broad selection of people concerned about oil spills.
- It was well structured and well organized.
- Organization, efforts taken to make them accessible to community members, range of topics and presenters.
- Strong presentations — really liked the last presentation about the social science of spills.
- Subject matter and participants/knowledge.
- The breadth of the involvement represented in presenters.
- The multiple presenters who had like topics and issues. The opportunity to present information beyond the 101 level — to warriors in the field.
- There was good discussion about preparedness and response.
- Variation in speakers, plenty of time for group discussions.
- Venue and format.
- Well organized and communicated.
- Well organized, broad involvement and collaboration!

Learning and using new information

- A lot of information.
- Brought me a vast awareness of oil spill response preparedness in Virginia.
- I was not with my current organization during the Refugio Oil Spill, so it was a helpful forum to get up to speed on what took place that day and during the aftermath of the spill.
- I work in oil spill response, but not directly on health, social and economic disruptions. This workshop gave me an additional perspective on the bigger ramifications of spills and their aftermath. In a recent drill, more social and community concerns were injected into the Joint Information Center. This was very useful as we often focus merely on the response, but not on the broader impacts to the community being disrupted.
- Informative.
- It increased my knowledge on oil spill response and who to call in the event of a spill.
- It offered resources to contact about events like oil spill.
- Learning about all the effects on the small communities like Cordova, AK.



- The ability to learn about impacts from oil spills to socio-economic aspects of communities. This is often not as well researched following a spill.

What would you like to see as next steps after this workshop series?

Continued engagement and follow-up

- A follow-up I check-in on which action items have occurred.
- Active steps taken by industry to deploy response supplies throughout the routes.
- Additional engagement with industry. As a key stakeholder we want to be part of solutions to improve spill preparedness, response, education.
- Continued community outreach about how to respond and report an oil spill.
- Continued focus on effects of spills, especially the socioeconomic effects, as it seem that they are generally left out.
- Follow up and continued discourse.
- Follow up on major issues and if there has been any resolution to said issue.
- How these groups can actually do work together instead of just talking about it.
- I sincerely hope that the communities that expressed their needs at these workshops- as well as the ones that were not able to participate — receive resources to address those needs. I would like to see outreach and engagement programming coupled with research that is geared toward the priorities identified in the workshops. I would like to see the spill planning, response, recovery, and restoration worlds more integrated with each other, as well as with the research and outreach worlds. I would like to see the grassroots and bottom-up efforts guiding some of the changes that need to be made throughout the chain of command.
- Include prevention topics.
- More focus on building connections with the others in the room.
- Opportunities for youth engagement with these types of workshops as well as other activities related to communication and knowledge cultivation around spills. I would love to get involved in supporting youth-led initiatives.
- Opportunities to collaborate on action items and keep work moving forward.
- Perhaps a follow-up to discuss any new actions that occurred. We in the Virginia Area Committee are continuing our efforts to expand our work at the community level that we began in 2017, tested viability and adaptations in the Sept. 2019 PREP exercise on Virginia's Eastern Shore, with recommended actions in IOSC paper for May 2020 "Oil Spill Preparedness and Response: Building the Capacity to Protect Public Welfare and Support Community Resilience"
- Preparedness.
- The people that were involved will make better connections.
- To continue this conversation and collaboration across the region.

Workshops and meetings

- Actual follow-up regarding the specific recommendations. Maybe reconvene in a year?
- Future workshops.
- Hold a more hands on event in a rural coastal community or hub city in which participants interact with residents on the ground (e.g., field trip, work session in the community, etc.).
- More of same.
- More workshops like this are needed to reach more members of the community.
- Outreach for hazmat training inviting the public to gain and maintain certification to serve as volunteers.



- People actually present what they are actually doing on the ground and what community-research/academia-government collaborations.
- Perhaps training aimed at the oil spill responders?
- Players on the original scene change — age, availability, job moves, etc. Having a biannual gathering as the boafish expo does would minimize the time commitment yet maximize the quality of information to share.
- Touch base as a group to provide update. In person discussion is more productive than on-line chat or distributing reports.
- Updates on continuing preparedness efforts.

Information and tools

- Better integration with the tools presented in the NIEHS DR2 program.
<https://dr2.nlm.nih.gov/>
- I would like to see an online database made of oil spill related resources around the Gulf that folks could turn to when one occurs.
- More information on what it takes for a community to recover after a large oil spill or natural disaster. I'm assuming there are lots of examples of what works and what does not work in rebuilding a community.
- Show us where to find information regarding oil spills on a regular basis. Whether smaller spills have happened and impacts to communities.
- Some form of handbook or publication that people can easily access.
- The information needs to be provided to the participants in multiple ways. I would like to get reminded of the resources with easy links to key documents.

Research and modeling

- A concrete effort to begin to integrate the human and the biological effects into an interdisciplinary pursuit.
- Area specific modeling.
- Continued steps to elevate human dimensions considerations.
- Implement or address the needs identified at the workshop and address at local, regional, and national level.
- Perhaps an articulation of feedback on the workshop reports and statements from the National Academies of Sciences on their research priorities based on workshop outcomes.
- Scientific explanation of the composition of the oil and how it chemically and biologically interacts with the environment.

Funding

- Active engagement in RFP process to ensure funding goes toward areas identified as priorities through workshops.
- More investment in research and community outreach in communities that could potentially be impacted by a spill in the future. Communities in high risk areas.
- More work to increase community resilience to oil spills. Specifically development of resources to help families. Where to find food and other types of basic necessities in areas of 'food deserts', etc.. Development of resources to enable parents & teachers help the youngest members of the community (children) cope with oil spill aftermath would be great.
- Outreach of products to appropriate funding organizations.
- There should be some follow up especially concerning extensive community planning and funding support to help prevent and respond to oil spills.



Inclusion

- Inclusion of Alaskans from Southeast and the Aleutians. These individuals were not represented and, therefore, their voices were not heard.
- Increased inclusion of coastal resident stakeholders.
- More awareness of the diversity of ethnic groups and language.

Law and policy

- Address the powers of the state to exceed minimum federal pipeline oil spill regulation (49CFR194) if the state so elect to do so.
- Local laws changed to protect communities more.
- New protocols or regulations in place for individual communities.

What specific questions do you continue to have about oil spills and health, social, and economic disruptions?

Community concerns

- How to better incorporate local knowledge into oil spill preparedness and response. How to improve response capabilities for remote communities. How to make sure affected stakeholders have a voice in oil spill response decisions that impact them. How to better address the social impacts of a technological disaster like an oil spill (i.e., peer listener training programs, etc.).
- I am very concerned about political commitment in this area as well as transparency of the processes.
- I really learned a lot about community concerns and would like to learn even more. I think a workshop with diverse community participation from all regions would be beneficial. I'm sure concerns and issues have commonalities, but I was not able to attend in other regions and would love to learn about unique issues in other communities.
- We need to engage local businesses through their chambers of commerce. Right now with the coronavirus disruption advise as to workforce (medical personnel, too) impacts, service in daily lives impacts is waking people up. A natural or man-made disaster is like a lightning bolt — right here! Disaster planning using the Community Guidebook is a wonderful resource to prepare, understand the nightmare and respond to the event. [Of course, available from Prince William Sound Regions Citizens Advisory Council.]
- How to educate the oil companies on the short and long term effects of oil spills on public health and the environment?

Human health

- Health issues.
- Is there a database of mental health professionals that could be incorporated into existing spill response databases? We are working on a database called the Geographic Response Inventory Database, and I'm not sure this category is included. But I'll find out.
- What are the long term effects of dispersants which have developed after Deepwater Horizon?
- What resources are there to help teachers and parents help children cope with oil spills?
- Would love to learn more about psychological impacts and how resource managers can deal with perceptions versus reality, and acknowledge the real impacts of people's perceptions even if not based on fact.



Prevention and preparedness

- I think it's time to look at the effect of decreasing oil (exploration, development) activities on the economic health of Alaska.
- What can be done to increase preparedness and training in the coastal communities most at risk?
- What steps have been taken to create stronger health, social, and economic safety net for the communities along with transportation routes.
- Why (when are?) states are not closing the gaps when the federal government is heading in the opposite direction of preventing oil spills? The definition of Waters of the U.S. is the best example.
- Would like to see comparison of actions across the range of locations that held workshops.

Monitoring

- How do we maintain the long-term attention and monitoring that is called for?

Oil transport

- How oil spills at the mouth of the Chesapeake Bay might spread up bay under varying tidal and weather conditions.

Please provide any other ideas, comments, questions, or feedback.

Positive feedback

- I loved the graphic recording! It is an excellent way to engage participants in the conference, keeping folks engaged during the presentations, especially native elders who noted their appreciation.
- It was particularly edifying to hear from the oil companies about the manner in which oil is transported via pipeline, an arcane subject that we very rarely hear about. In contrast we hear a great deal about marine oil spills.
- Pacific Fisheries Management Council advisory body appointee, Santa Barbara City appointee, marine researcher and journalist. I found inter-agency competition for involvement during spill cleanup excessive and costly. Public access was often unnecessarily restricted. Public volunteerism was initially suppressed as competition, rather than embraced as an outreach opportunity. The workshop provided a review venue where the involved parties met collectively to share their views to develop consensus where it was available.
- Thank you for the opportunity to be a part of the workshops in Houma, Mobile, and Bayou La Batre.
- Thank you!
- Thanks for organizing, well worth the time!
- The group of presenters was diverse, and I liked this. Lots of different perspectives.
- This was a great forum and helped folks understand other area problems.

Opportunities to improve workshop(s)

- Have multiple translators available, not just one focused on only one additional language. Although many people affected by oil spills are Vietnamese, there also are many who speak Lao, Khmer, and Thai languages. To focus only on Vietnamese groups further alienates and marginalized others.
- I thought the schedule was too packed for the Santa Barbara meeting, so breakout group discussions were extremely rushed.
- It would have been more helpful to have this survey within a few weeks of the workshop when the event/material was more fresh in my head.



- My feedback may have been more relevant or accurate if it was requested sooner after the workshop. It's been a year, so some of the information or my recollection may not be as accurate.
- Next time, please plan fewer power point lectures.
- Please include more representatives from throughout the state.

Follow-up activities

- Have another very large workshop or conference, bringing everyone together at the national level.
- I think a more comprehensive symposium on the socioeconomic aspects of a spill need to be emphasized along with an added point on subsistence and native values.
- I think follow-up is very important, both with respect to the recommendations discussed by presenters, but also the new ideas from the audience and breakout groups.
- My role was very different than others but it is a topic I would love to continue to document and be apart of. Documenting the spill response work would be beneficial to visually represent the impacts of the spills.
- Would like this workshop to happen often.

Other comments

- Importance of prevention of marine accidents and fires that lead to oil spills.
- From my work on the Exxon Valdez Oil Spill and participation on the Prince William Sound Regions Citizens Advisory Council I was invited to work with the Deep Water Horizon Oil spill. I now visit annually and teach Native American art and culture. The conversation always includes a welfare check. I view my attendance as encouraging self reliance and community participation.
- I didn't learn much new about spill response because I have spent considerable time learning about spill response issues in the past.
- Retired chemistry professor who taught and completed research with mainly undergraduates. My research centered on analytical and environmental chemistry and published 45 papers before I retired.

