.Unequal Response Unequal Protection

Report to Grassroots Community Leaders

Investigating Health Impacts in Communities Exposed to Toxic Chemicals from Environmental Contaminants

Prepared by the
Center for Health, Environment and Justice
Falls Church, VA

January 30, 2021

Chapter 1 – Introduction

The Center for Health, Environment & Justice started the Unequal Response, Unequal Protection campaign to address the federal government's ongoing failure to protect communities exposed to toxic chemicals. This failure stems from the lack of a structured federal response capacity and inadequate scientific methods for investigating health outcomes related to exposures to toxic chemicals. Health investigations typically take years to complete and often result in an uncoordinated multi-agency investigation with little attention given to the specific health concerns of local residents. Rarely do these investigations generate meaningful action to protect communities. Additionally, the failure of the current response has a disparate impact on low-wealth populations and communities of color who are already disproportionately impacted by environmental hazards.

CHEJ is proposing to address this lack of capacity and effective investigative tools by bringing together community leaders, scientists and policy analysts to identify and develop key elements of a new public health response model for investigating health Impacts related to areawide environmental contamination that is community-driven. This approach would include evaluating the effectiveness of current scientific methods tools used to investigate health outcomes related to widespread chemical exposures in communities. The overall goal of this effort is to secure an appropriate timely response to investigating health impacts in communities exposed to chemical exposures from on-going releases and legacy chemicals existing within communities that is community-driven.

Through virtual meetings, CHEJ brought together 24 community leaders from contaminated communities throughout the country to discuss the structure for an improved response. We began by discussing flaws in the government's current approach to evaluating chemically-associated health conditions and brainstormed overarching principles for an alternative response. We identified areas of focus where change is necessary and subsequently divided into working groups to discuss reforms across each of them. Each group compiled a draft narrative explaining their component of the response. This report represents the consolidation of the four focus areas that reflects the work of the community leaders.

Chapter 2 - Background

A. Federal Response to Epidemics, Contaminated Food and Disasters

There are existing structured responses for many public health exposure situations. If the public is exposed to an infectious disease or contaminated food source, there is an immediate and urgent response by federal agencies to investigate, identify, and eliminate the exposure. Both the Centers for Disease Control (CDC) and the Food and Drug Administration (FDA) have programs in place with clear proactive protocols that can be activated to respond immediately. The National Institute for Environmental Health Sciences (NIEHS) and the U.S. Environmental Protection Agency (EPA) also have structured response programs in place.

B. Federal Response to Area-wide Environmental Contamination

However, in the case of a neighborhood exposed to environmental chemicals, the government's response is not clear or well defined. If the public is at risk from exposure to widespread toxic chemicals in a community, there is no rapid response capacity and the ensuing investigation is uncoordinated and often reactionary. These investigations typically take years to complete and rarely lead to action. Even if an investigation determines that a disease cluster does exist, there are no guidelines to direct federal or state agencies on how to effectively respond. This often results in government taking no action to address or further investigate elevated rates of disease. Meanwhile, the community is left with many unanswered questions as well as ongoing exposure to undetermined health hazards.

C. Community Meetings

Over several months, CHEJ held five virtual meetings with 24 community leaders from contaminated communities to begin exploring key elements of a new public health response model. Participants agreed that health investigations should be driven by the impacted residents in collaboration with independent professionals. Additionally, it is essential to hold the investigating group accountable for conducting a timely health investigation and communicating with residents throughout the entire process. Other key areas discussed included the importance of involving impacted residents from the very beginning, the value of local knowledge and the need for community leaders to define the goal/purpose of the investigation.

We began by brainstorming our approach by highlighting specific problems with the government's current framework and potential solutions. We discussed both tangible elements of a health investigation, such as the need for testing that can help evaluate health concerns, and overarching principles, such as human life being the basis for environmental

protection and eliminating political agendas from public health protocols. Several areas of special interest quickly emerged (see below) that became the focus of small working groups that met independently to further refine their work, concluding with a draft narrative that was circulated to the full group.

From the very first meeting, participants raised strong concerns about health investigations related to the issuance of permits, both new and those up for renewal. Some people felt strongly that no new permits should be issued if a health investigation is underway. Others felt that a submission of a request for a permit, or a renewal, should be grounds for initiating a health investigation. The issue of permits raised so many concerns that this became a special focus area for our participants. The group developed many exciting ideas on how to improve the permitting process. While these ideas do not generally address the questions raised about how health concerns in communities are currently investigated, it was important to capture these ideas which are included in Chapter 5.

D. Organization of the Report

We began our conversation with community leaders by discussing flaws in the government's current approach to evaluating chemically-associated health conditions. These concerns are included below in **Section E, Concerns About Health Investigations Raised by Community Leaders,** and brainstormed overarching principles for an alternative response which are included below in **Section F, Overarching Principles Identified by Community Leaders.** We then identified four areas of focus where change is necessary and subsequently divided into working groups to discuss reforms across each focus area. These four areas represent the four main chapters in this report. The first of these chapters **(Chapter 3), Investigating Health Impacts in Communities Exposed to Toxic Chemicals**, represents the main focus of this effort. **Chapter 4**, **Community Involvement and Participation in a Health Investigation,** addresses the importance of involving the community from the very beginning and offers suggestions on how this might be achieved. **Chapter 5, Extensive Evaluation and Community Engagement for Permits with Potential Health Impacts,** provides ways to improve the permitting process to address concerns raised by the impacted community. **Chapter 6, Human Health Impacts of Cumulative Risks**, addresses the importance of including cumulative risks when conducting a health investigation, especially in an overburdened community. The appendices include additional background resources and information.

We attempted to integrate the key elements of Chapters 4 to 6 into Chapter 3, Investigating Health Impacts in Communities Exposed to Toxic Chemicals. As a consequence, there is some redundancy between these chapters.

This report represents our efforts to provide a single document that reflects the work of the community leaders in discussing what a community-driven health investigation might look like. Our next step is to invite health professionals (doctors, researchers, epidemiologists, and others) into the conversation to discuss the more technical aspects of conducting a health investigation.

E. Concerns About Health Investigations Raised by Community Leaders

Participants raised a number of specific concerns about how health investigations are carried out including:

- The long time it takes for the government to respond or take any action. People's concerns are not taken seriously. It seems that no one listens to the community. It often takes years for the government to follow-up on people's concerns about health problems due to political inertia and bureaucratic logistics.
- The lack of a trigger mechanism to start an investigation.
- The reliance on existing data generated by agencies for other purposes (i.e., not for investigating health concerns).
- The lack of testing to determine the extent of contamination. When testing is done, the government decides (in isolation of the impacted community) where to test and what to test for. This approach is too limited, in the wrong places, and often looks for the wrong chemicals. Testing should establish what people are being exposed to.
- Testing is further limited because it only measures the impact of individual chemicals and does not measure the cumulative impact of contaminants.
- Measuring on-going exposure was another concern. Community leaders wanted to see monitors installed to measure on-going contamination. One person suggested there be a ring of monitors around a community. Local knowledge should also be included to drive and give context to testing and data collection.
- The failure to meet with the community before designing their study.
- The lack of follow up (taking action) once the investigation was complete. There are no protocols guiding interpretation or communication of results.
- State and federal agencies, the Agency for Toxic Substances and Disease Registry (ATSDR) in particular, have provided basically no help, even when they're alerted to problems.
- Many government studies are inconclusive by design. Methods used to determine if health problems in a community are increased are poorly designed and often cannot answer the questions that people have about health problems in their community.
- Chemical exposure usually just looks at cancer risk, not health effects more generally. Cumulative risks are not considered.
- At the state/federal level there's a bias towards evaluating population risks rather than individual risks (i.e., if single people/workers are heavily exposed, government does not respond as long as on average the risk to the community is low).
- The investigating agency needs to be independent to avoid/minimize corporate and political influence.
- Sometimes, health problems are covered up.
- ATSDR is reactive not proactive. It's better to prevent chronic problems before they occur. A standing response team trained in investigating health problems in communities is needed.
- There are no specific protocols to guide a site investigation.
- The difficulty in separating politics from the environmental response.

There was acknowledgement that there are good people in government, and that often, their hands are tied by politics or other constraints. Some expressed concern that the goal should not be to "kill" the ATSDR because sometimes they do help people. At times, ATSDR has done good work, but they need to do things differently. Government needs to become a willing partner who respects community concerns and knowledge. An important challenge for this campaign is to create a mutually respectful relationship between the community and government that is seeking to resolve the health concerns in a neighborhood or community.

People agreed that a national multi-level campaign that will likely take years was needed and that unions and workers should be part of the effort.

F. Overarching Principles Identified by Community Leaders

Community Leaders identified a number of overarching principles. These are principles, which were discussed in multiple breakout groups over the course of our process, are intended to guide the relationship and work between an investigating entity and the community. These principles included:

- The value of human life is the basis for environmental protection.
- No preventable death is acceptable.
- Assume chemicals are dangerous until proven safe.
- Presumption that health is being harmed if people live in an overburdened community.
- Community voices are critical to understanding a local health concern and to defining the goal(s) of a health investigation.
- We need a proactive, not reactionary approach to investigating health problems in communities.
- Community leaders must be involved at the very beginning of any health investigation.
- Cumulative risks need to be included in all health assessments and evaluations.
- Community leaders need the financial resources to participate as equals.

G. Key Elements to a Proposed Framework of a New Public Health Response Model for Investigating Area-Wide Environmental Contamination

Community Leaders identified a number of key elements to a health investigation that was community driven:

- Community leadership needs to be involved from the very beginning and have equal standing to scientists/experts/government officials in the decision-making process. Don't give anyone your voice.
- The community needs to lead and control the data generated by the investigation.

- There needs to be mutual respect between community leaders and scientists/ experts/government officials.

- The scientists/experts/government officials need to listen to the community/community leaders when they share their knowledge, culture and traditions.
- The community/community leadership need to define the question(s) that the investigation will answer/address.
- The goal(s) of the investigation should be determined **after** meeting with the community and community leaders.
- The design of the investigation should result from communication between the community and the scientists/experts/government officials. Communication during the entire process is essential to ensure that the community/community leaders and scientists/experts/government officials are on the same page.
- Local and traditional knowledge should be incorporated into the design of the investigation. What's possible should not be limited to readily available statistics/data or by traditional scientific methods.
- Testing plans should consider and incorporate local and traditional knowledge when appropriate.
- Testing plans should include testing designed to assess public health risks.
- The experts' role should be to listen and answer community questions. If needed, scientists/experts/government officials should be given training to strengthen their communication and listening skills.
- Communities need the resources (like a TAG grant) to hire an expert/health scientist of their choosing to advise and educate them about whether a study can answer/address the questions they have about health problems in their community.
- Establish rules of operating behavior similar to Institutional Review Board (IRB) or Community-Based Research Agreement guidelines to ensure that the community has rights that are followed throughout the investigation. These rights might include ownership of data collected in the investigation (who owns what data?), keeping the community informed, preventing (further) community harm, etc.
- There needs to be a presumption of exposure to eliminate questions about causation and allow the investigation to proceed.

Chapter 3

A Proposed Framework for a New Public Health Response Model that would provide an appropriate timely response to investigating health impacts in communities exposed to chemical exposures from on-going releases and legacy chemicals existing within communities that is community-driven.

A proposed framework for a new public health response model for investigating areawide environmental contamination would begin with the formation of a Community Leadership Team that would engage community members in a process of determining the scope of the investigation. As part of this effort, community leadership and the involved scientists/experts/government officials need to build a relationship based on mutual respect and cross learning. Out of this relationship building will emerge a level of trust and connection that will guide the investigation. The Community Leadership Team would issue recommendations for a proposed investigation plan/approach as appropriate. If an in-depth health assessment or study is recommended, this work would be carried out by an investigative team/private entity. Based on the results of this health assessment or study, the Community Leadership Team would issue recommendations on what action steps are needed to follow-up the findings of the investigation.

The term Community Leadership Team is used throughout this chapter to mean the members of the community and the scientists/ experts/government officials who work together to carry out the investigation

Community Triggers a Response to Area-Wide Contamination. The primary trigger that would initiate the need for a health investigation would be a request from a local community-based organization, expressed as a series of complaints or a petition from the public. Local and state health agencies could also request an initial evaluation.

Formation of Community Leadership Team. Once a decision is made to respond to the concerns raised by community leaders, the appropriate state authorities would establish an on-site Community Leadership Team to lead the investigation. An open and transparent process would be used to select members of this working group. The main purpose of the group would be to engage and involve community members and ensure transparency in the process of determining the goals of the health investigation and what the investigation should look like. This group would also ensure that community leadership is involved in decision making processes from the very beginning and be responsible for sharing information with community members and the public. The Community Leadership Team would coordinate the activities of government agencies, community members and other interested organizations. Paid staff would provide ongoing support, report writing and other assistance as needed. Funding will be needed to support the work of this group. The Community Leadership Team should be formed within 30 days of the request to initiate a health investigation.

Make-up of Community Leadership Team. There would be at least an equal number of community participants as there are scientists/experts/ government officials on the Community Leadership Team. At least half the members of the Community Leadership Team would be community residents over the age of 18 who live within the impacted neighborhood/community. Government officials and experienced public health professionals (toxic chemical specialists, epidemiologists, GIS specialists, etc.) would be members of this working group. This team would establish operating rules that are similar to Institutional Review Board (IRB) or Community-Based Research Agreement guidelines that ensure the community has equal standing in the decision-making process and clearly defined rights that are followed throughout the investigation. A sample of a community-based research agreement is included in Appendix A. These rights might include the community having equal authority in the decision-making process, ownership of data collected in the investigation, keeping the community informed and engaged, preventing (future) community harm, etc. The initial work of this working body would be to build a relationship between the community/ community leaders and the participating scientists/experts and government officials based on mutual respect and cross learning. Consideration should be given to including a health educator/communicator as part of the Community Leadership Team to help translate information for the community and the public accurately and in easy-to-understand language.

Technical Assistance. In order for the community/community leaders to be informed on the technical aspects of the health investigation and the tools used to assess health impacts, funds should be made available to the community to hire an expert/health scientist of their choosing. The model for such a program is the USEPA's Technical Assistance Grants (TAG) program that provides $50,000 to local grassroots community organizations at every Superfund site to provide independent technical support to local residents. This expert would advise and educate local community leaders about the investigation process including whether a study can (or cannot) answer/address the questions they have about health problems in their community.

Define Area of Concern. The first order of business for the Community Leadership Team would be to define the Area of Concern, or the area that has been impacted by the contamination and is the subject of the investigation. This determination would be done in collaboration with community leadership and the larger community. This is the area that would be targeted for gathering and evaluating existing environmental testing and health data and for determining if additional testing is needed. This area would also be the target of outreach efforts and the subject of an in-depth health assessment/study as deemed appropriate. The Community Leadership Team would also determine whether this area is an environmental justice community and if that community is overburdened by exposures to toxic chemicals.

Listening Sessions. The initial meetings of the Community Leadership Team would consist of listening sessions whereby the scientists/experts/government officials would listen to members of the community and to community leaders to learn what their concerns are and to learn and understand the local, cultural and traditional knowledge present in the community. Local, cultural and

traditional knowledge should be included in the design of any testing that needs to be done as well as in the design of the investigation. The Community Leadership Team would also conduct in-depth interviews with community members and leadership to determine what actions community members might want, such as making medical or screening tests (blood, urine, etc.) available to residents in the community. The scientists/experts/government officials should participate in a tour of the impacted neighborhood/area to better understand the concerns raised by community members and leaders. Prior to beginning the listening process, scientists/experts/government officials could be given training to strengthen their communication and listening skills.

Outreach to the Community. The Community Leadership Team would be responsible for overseeing all community action and information distribution. The goal of the outreach program would be to keep the community informed on the work of the Community Leadership Team throughout the investigation process. Responsibilities would include the distribution of all data identified and collected during the investigation including environmental testing and health data; information on potential sources of contamination; preparing maps showing the Area of Concern with summarized health and environmental testing results; preparing fact sheets on information identified during the investigation such as identified pathways of exposure and the toxicity of key contaminants identified in the Area of Concern. The fact sheets would be written in language easily understood by the readers in the Area of Concern and be available in multiple languages as appropriate. A health educator/communicator could help prepare documents and information accurately and in easy-to-understand language.

Continued Outreach to the Community. The Community Leadership Team would ensure that the information generated during the investigation is made available to the impacted community throughout the process. This would require all of the actions including the guidelines described above and provided in detail in Chapter 4. All of the data and information should be made available on a website and provided in hard copy upon request. The Community Leadership Team could brain-storm other methods for effectively distributing information that respond to the unique characteristics of the impacted community.

Define the Purpose of the Investigation. Following the listening sessions, meetings with community members and tour of the area, the Community Leadership Team would discuss the health questions raised by the community/community leadership and define the purpose and goal(s) of the investigation. This process would determine what questions the investigation needs to answer. The investigation should focus on health impacts from all chemical contaminants identified in the Area of Concern, not just contaminants of interest or some subset of the identified contaminants. The investigation should also take into consideration the need for long-term follow-up due to issues such as latency and diagnostic difficulties for cancer and other health outcomes. One of the most critical comments raised in our meetings was the importance of the community/community leadership defining the question(s) that the investigation will answer/address. Communication is essential to ensure that the community leadership and the scientists/experts/government officials are on the same page

Evaluate the Adequacy of the Existing Environmental Data. Following the listening sessions and visiting the impacted community, the Community Leadership Team would evaluate whether the existing environmental testing data is sufficient and adequate to properly evaluate the public health risks posed by the environmental contamination. They would recommend additional testing as needed. The group would gather all relevant health and environmental data and information and consider local and traditional knowledge and what was learned from the community visits and listening sessions. They would identify the toxic substances involved and evaluate existing health and environmental data around areas of suspected/known contamination. The evaluation would include the following steps:

1. Gather and evaluate existing environmental testing data within the Area of Concern.
2. Gather and analyze existing health data and health reports within the Area of Concern.
3. Identify potential source(s) of the contamination.
4. Identify existing and potential routes of exposure.
5. Identify whether any of the substances identified in the situation are considered to be "extremely hazardous substances" as defined by the EPA Superfund program.
6. Establish whether a mixture of chemicals is present in the air, water, and/or soil for which the cumulative combined health effects are a concern.
7. Use scientific judgment and a weight-of-the-evidence approach to determine if an imminent public health threat exists and take appropriate action such as emergency cleanup or relocation.

Consider Options for Conducting the Investigation. The Community Leadership Team would consider what type of investigation methods are available to answer the questions that the community leadership has identified and achieve the goals and purpose of the investigation. This may require additional environmental testing identified in the previous step needed to address the health questions posed by the community leadership and to properly evaluate the public health risks posed by the environmental contamination. The group would consider the strengths and weaknesses of different options for investigating the adverse health outcomes in the community. Options that could be considered/discussed might include conducting a large-scale health study; evaluating health statistics available in computer databases; taking biological monitoring samples; or establishing a community registry (either health or exposure).

Recommendations for Investigation. Based on consideration and evaluation of the options that can answer the questions posed by the community, the Leadership Team would make a recommendation(s) as to the kind of investigation needed.

Development of Draft Protocol. The Leadership Team would identify and work closely with an investigative team/private entity team of subject experts who would develop a specific design protocol for the health investigation. This team would include members of the Community Leadership Team. The design of the investigation should result from communications between community leadership (informed by its expert health advisor) and the scientists/experts/ government officials. Local and traditional knowledge should be considered in the design of the investigation.

What's possible in the investigation should not be limited to readily available statistics/data or to traditional investigative methods. The Community Leadership Team would have final sign-off on the investigation protocol.

Investigative Team/Private Entity Conducts the Health Investigation.

Findings of Investigation. The Community Leadership Team would release the results and findings of the health investigation and create a response plan to ensure that the findings and results of the investigation are clearly communicated and made available following the outreach guidelines previously described and included in Chapter 4. The Community Leadership Team would also ensure that responsive action is taken by government agencies, even if there is no clear outcome.

Chapter 4

Community Involvement and Participation in a Health Investigation

A new public health response model for investigating area-wide environmental contamination must begin with a sincere effort to involve the impacted community early in the process of a health investigation. This is the most critical and basic tenet of a successful response program. It's not just involvement, but making a commitment to listening to what people affected by the contamination have to say and providing community members with the resources to participate. Partnering with the community is necessary to create change.

A community involvement process should begin with *listening sessions* whereby the scientists/ perts/government officials listen to members of the community and to community leaders to learn what their concerns are and to learn about the local, cultural and traditional knowledge present in the community. *Local, cultural and traditional knowledge* should be considered and incorporated in the design of any health investigation, which should not be limited to readily available statistics/data or to traditional scientific methods. There should also be *in-depth interviews with community members* and leadership to determine what additional actions community members might want, such as making medical or screening tests (blood, urine, etc.) available to residents in the community. The scientists/ experts/government officials should participate in a *tour of the impacted neighborhood/area* to better understand the concerns raised by community members and leaders. Prior to beginning the listening process, scientists/experts/government officials could be trained to strengthen their communication and listening skills.

Community Engagement Principles

Community leaders agreed with a number of basic principles of community engagement to guide the relationship and work between an investigating entity and the community. These principles include:

- Scientists/experts/government officials need to be clear about the purpose(s) or goal(s) of the engagement effort and the populations and/or communities they want to engage. Community leaders should be involved in determining the purpose and goal(s) of any investigation.
- Scientists/experts/government officials should become knowledgeable about the community's culture, economic conditions, social networks, political and power structures, norms and values, demographic trends, history, and experience with efforts by outside groups to engage it in various programs. They should also learn about the community's perceptions of those initiating the engagement activities.
- Scientists/experts/government officials should go to the community, establish relationships, build trust, work with the formal and informal leadership, and seek commitment from community organizations and leaders to create processes for mobilizing the community.
- Remember and accept that collective self-determination is the responsibility and right of all people in a community. No external entity should assume it can bestow on a community the power to act in its own self-interest.
- Partnering with the community is necessary to create change.
- All aspects of community engagement must recognize and respect the diversity of the community. Awareness of the various cultures of a community and other factors affecting diversity must be paramount in planning, designing, and implementing approaches to engaging a community. While community members may not possess academic credentials, they are resident experts with "life experiences" in their community.
- Community engagement can only be sustained by identifying and mobilizing community assets and strengths and by developing the community's capacity and by providing financial and educational resources to make decisions and take action.
- Organizations/Institutions that wish to engage a community as well as individuals seeking to effect change must be prepared to release control of actions or interventions to the community and be flexible enough to meet its changing needs.
- Community collaboration requires long-term commitment by the engaging organization and its partners.

In addition to the above principles, community participation promotes the following conditions within a community:

- Access to information for all members of the community, regardless of native language, accessibility needs, internet access and other communication barriers.

- Knowledge by community members of their rights including the importance of advocating for themselves.

Outreach to the Community on the Progress of the Investigation

The goal of the outreach program would be to keep the community informed on the progress of the health investigation. The investigating entity would be responsible for sharing all data identified and collected during the investigation including both environmental testing and health data; information on potential sources of the contamination; preparing maps showing the Area of Concern with summarized health and environmental testing results; preparing fact sheets on information identified during the investigation such as the identified pathways of exposure and the toxicity of key contaminants found in the Area of Concern. The fact sheets would be written in language easily understood by the readers in the Area of Concern and be available in multiple languages as appropriate. Including a health educator/communicator to help prepare documents and information accurately and in easy-to-understand language should be considered.

The investigating entity should set up a mobile or temporary office that would be located in the Area of Concern. This office should provide opportunities for document review, public outreach and public comment.

Interactive Public Meetings

Sharing information and meaningful community participation early is vital to the success of the investigation. There are different ways for the public to be involved. Public notices and public hearings normally allow the agencies to receive feedback from the public regarding a particular concern or problem. Public meetings, allow for interactive sessions where there is dialogue among the public, elected officials and the investigating entity. These interactive sessions will be subject to the same record-keeping requirements as public hearings and public notices.

Within 30 days of the health investigation request submittal, all agencies involved must coordinate with the investigating entity and schedule a timely public meeting to inform the residents within an Area of Concern of the scope and nature of the investigation. Meetings should be scheduled regularly (no less than biweekly) to keep the public informed on the progress of the investigation.

Accessible Public Information

Outreach efforts should address the diversity of community members in the Area of Concern, including those for whom English is not their primary language. Some community members find it difficult to understand technical language. This makes it difficult for residents to anticipate and evaluate impacts on their community.

The investigating entity must create a system through which individuals and groups in the Area of Concern can register to be notified of and updated on the progress of the health investigation. To accomplish this, the investigating entity will develop an outreach system capable of reaching the entire impacted community. To achieve this, the investigating entity must be able to reach individuals and groups that do not have Internet access.

Public notices, written in terminology and language(s) easily understood by the majority of readers within the Area of Concern should be sent to publications widely read by those residents and placed locally in areas of high visibility. These may include, but are not limited to:

- Local newspapers
- Community newsletters
- Church bulletins
- Public service announcements sent to local radio and television stations
- Notices broadcast on local cable television stations
- Notices posted in areas of high foot traffic
- Notices to environmental activist groups
- Notices to local community centers, such as senior citizen service centers

The investigating entity must regularly provide a plain-language summary of information collected in terms understandable to the majority of people living in the Area of Concern.

Document Availability

Access to relevant information is vital to the meaningful participation of communities. While the Internet is one option for making documents available, many minority and low-income residents have limited access to the internet and the ability to download documents. The investigating entity may need to open a mobile local office to ensure that relevant documents are available to the impacted community. Through extended hours or by appointment, the investigating entity must provide opportunities for all community members to view public documents during evenings and weekends. In the absence of a mobile local office, the investigating entity must identify alternative convenient locations where the public can view documents related to the health investigation. These locations might include public libraries, municipal offices and volunteer organizations.

The investigating entity must provide training, including guidance on how to locate materials in the files and orient the reader, to those responsible for granting access and maintaining these files. The investigating entity-produced fact sheets outlining the public participation opportunities and steps for contacting the appropriate investigating entity staff and programs should be included in these files. The files available at remote locations, including log sheets and correspondence, must be provided and updated by the investigating entity. The investigating entity will be responsible for maintaining the integrity of the files. Files should be updated in a timely manner. Files available at remote locations should include:

- A cover sheet logging all materials included in the file and their date of submission to the file.
- Color copies of all color-coded maps, charts and other documents.
- All official correspondence in the investigating entity files between the investigating entity and the community members, other federal or state agencies relating to the health investigation

Technical Assistance for the Local Community

A major issue for minority or low-income communities is the lack of access to technical and other expertise. In order for the community/community leaders to be informed on the technical aspects of the health investigation and the tools used to assess health impacts, funds should be made available to the community to hire an expert/health scientist of their choosing. The model for such a program is the USEPA's Technical Assistance Grants (TAG) program that provides $50,000 to local grassroots community organizations at every Superfund site to provide independent technical support to local residents. This expert would advise and educate local community leaders about the investigation process including whether a study can (or cannot) answer/address the questions they have about health problems in their community. Having access to an independent expert of their choosing would facilitate the community's meaningful participation in the health investigation process.

Chapter 5

Extensive Evaluation and Community Engagement for Permits with Potential Health Impacts

Throughout our process, community leaders raised such strong concerns about health investigations related to the issuance of permits that this became a special focus area of this effort. Many felt that addressing permitting was crucial to this project because it creates the opportunity to prevent communities from being harmed in the first place. Community leaders also felt that a community should have the right to reject a permit.

There are two main situations where permits intersect health investigations. In the first scenario, a health investigation has been requested or is already underway. When this occurs, no new permits would be issued. The request for a health investigation may have been triggered by health concerns related to **historical contamination**, defined as contamination that originated from a facility or other source that is no longer operating, or due to **ongoing exposures** from a polluting facility or other source that is currently operating. During the time while the health investigation is being conducted, an extensive evaluation of the impact of the permit on the impacted community would be carried out with a strong community engagement component. No new permits would be issued until the health investigation has been completed.

In the second scenario, a company requests a new permit or the renewal or modification of an existing permit. When this occurs, then a health investigation would be triggered to either 1) estimate the health impact of a new permit on the impacted community; or 2) in the case of a request to renew or modify an existing permit, to evaluate the impact the initial permit has already had on the impacted community. Community leaders made it clear that a community cannot afford to wait until people are sick before beginning a health investigation. The additional risks posed by issuing a renewal or modification of the permit would also be assessed in the health investigation. During the time while the health investigation is being conducted, an extensive evaluation of the

impact of the permit on the impacted community would be carried out with a strong community engagement component. The permit could not be issued until the health investigation has been completed.

Any health investigation triggered by a permit request must follow the community-driven approach described in Chapter 3 that has community leaders and scientists/experts/government officials in an equal partnership that values scientific and local expertise equally. Resulting public health decisions would be made through an equal collaboration by all parties in this partnership.

The following framework outlines the extensive evaluation and community engagement process referred to in the scenarios above and is provided to improve the process of issuing permits so that it more directly addresses concerns raised by the impacted community.

A Proposed Framework for Permit Evaluation and Community Engagement

The investigating entity must make use of the full scope of its authority to protect public health by preventing further community harm through permitting. Furthermore, the entity must seek additional authority where needed to make permit decisions based on cumulative health impacts. **The bottom line for issuing a permit to "new industry:" *NO NET GAIN of pollutants*.**

The environmental permit review process often creates tension among local elected officials, residents and the applicant. The lack of easily obtained, understandable information about health impacts – past, present and future – of permitted facilities in communities is often cited as a major cause of contention and environmental injustice. *Communities must be given the same access to information, consultation and accommodation by a permitting agency that is provided to industry*. When a community has requested a health investigation, there needs to be fundamental change in how permitting agencies and the investigating entity provide information, elicit input and communicate with individuals in communities before, during and after the permitting process.

Debates arise concerning the impact that the proposed activity will have on human health and the environment. The proof of cause-and-effect relationships, however, is often difficult to establish with scientific certainty. While the best available scientific understanding should be the basis of decision making, *permitting agencies must not allow scientific uncertainty to prevent it from protecting communities*. These recommendations seek to provide the investigating entity with the means to ensure *a cautionary approach throughout its permit review process*.

The investigating entity must take additional measures beyond the current practice, i.e., extensive evaluation and strong community engagement, to ensure that there is no disparity in the manner in which communities are affected by the entity and permitting agency's activities. For example, the investigating entity must ensure that the cumulative effects of additional emissions and discharge sources on a community would be considered when determining how such activities are to be

permitted, and monitored, especially in an overburdened community. A company will not be allowed to parse out their permits. The impact of all emissions must be considered when a permit is being reviewed. Heightened scrutiny, combined with enhanced public engagement will mitigate or eliminate a substantial portion of significant adverse impacts in communities.

Environmental Trigger Permits

Companies are required to obtain environmental permits to operate. Government agencies typically review more than a thousand different types of environmental permits. Appendix C provides a list of permit types that would trigger a more extensive permit evaluation and community engagement process. ***Trigger Permits*** *are those regulated activities that may lead to significant public concern due to potential impacts on human health and the environment*. Individual permits outside this list may serve as Trigger Permits if the community believes they warrant special consideration. For all Trigger Permits, the permitting agency and the investigating entity must define the Area of Concern.

Permit Review Process

Permitting activities include issuing new permits, renewal or modification of existing permits and denial or approval. The following review process would apply to a proposed Trigger Permit. Each of these steps must be completed within a reasonable time frame and the entity must provide a timeline at the start of the process. In implementing its permitting process, the permitting or investigating entity must:

1) Identify the Area of Concern;
2) Initiate public participation efforts;
3) Determine if the proposed activity is in compliance with all applicable statutes and regulations;
4) Determine whether reasonable efforts were made to minimize impacts on the community;
5) Identify potential impacts and conduct a Cumulative Impact Analysis to establish the impact from all releases coming from the proposed/existing facility;
6) Determine if the impacts from the proposed activity likely will create a disparate impact on the community;
7) Analyze the environmental harms identified and consider the options for reducing these impacts; and
8) Issue a decision regarding the proposed permit.

1. Define Area of Concern – the Area Impacted by the Permit

It is important to define the area/community that will be impacted by either a new permit, or a renewal or modification of an existing permit. The ***Area of Concern*** for a Trigger Permit is defined as all U.S. Census tracts contained entirely or in part within a circle defined by a radius of three miles from the center of a proposed permit activity or, where an activity is not centralized, an area

extending one mile beyond the boundary of the proposed activity. The Area of Concern would also include areas of impact for which the permitting agency is authorized to require analysis, such as the traffic corridors, groundwater plumes and areas of significant air impact.

This determination would be done in collaboration with community leadership and the larger community. The impacted area is the area that would be the target of community outreach efforts. This determination would also establish whether the impacted area is an environmental justice community and if that community is overburdened by exposures to toxic chemicals (see definition of an overburdened community in Chapter 6).

2. Enhanced Public Participation

The following recommendations will improve communication among the agency, the applicant, and the people who live within the Area of Concern.

2.1. Community Outreach

Companies seeking new, renewal, or modification to current permits must meet with community stakeholders, before they submit their application. Stakeholders include environmental groups, citizens' groups, individuals, government officials and businesses.

The purpose of these meetings should be to:

1) Inform community members of the proposed activity,
2) Answer questions from stakeholders,
3) Exchange information on how the impacts of the proposed activity could be mitigated,
4) Exchange information on how the impacts should be monitored, and
5) Involve communities in identifying the adverse impacts of the proposed activity.

A meeting with community stakeholders prior to the permit application submission would enable an applicant to prepare an application that addresses community interests and concerns, as well as provide the community with information early in the permit review process.

The agency must produce and distribute fact sheets regarding the proposed activity. These fact sheets should be written in language easily understood by the majority of readers in the Area of Concern.

The agency must use mobile or temporary offices, located in the Area of Concern. Particularly during the permit review process, these offices should provide opportunities for document review, public outreach and public comment.

The agency must provide the residents, both before and after permit approval, with information regarding permit conditions including the monitoring of impacts and enforcement options, and the appropriate steps to follow if the community believes the conditions are unacceptable or have been violated.

A major issue for communities throughout the permitting process is the lack of access to technical and other expertise. Therefore, the agency should encourage the development and funding of community partnerships with universities and colleges, non-profit organizations, consultants, attorneys, professional associations and public and professional libraries to facilitate meaningful community participation in the permit review process.

2.2. Public Information

Efforts to notify community members of proposed actions are often insufficient and do not address the diversity of community members in an Area of Concern, such as those for whom English is not their primary language. The agency must take the initiative to make information about permitted activities accessible to all members of the community.

The agency must create a system through which individuals and groups in all communities and those in a health investigation community can register to be notified about information related to proposed Trigger Permits. To accomplish this, the agency will develop an electronic system. It is essential, however, that the agency ensure a similar service is available for individuals and groups without Internet access.

Public notices, written in terminology and languages easily understood by the majority of readers within the Area of Concern, should be sent to publications widely read by those residents and placed locally in areas of high visibility. These may include, but are not limited to:

- Local newspapers
- Community newsletters
- Church bulletins
- Public service announcements sent to local radio and television stations
- Notices broadcast on local cable television stations
- Notices posted in areas of high foot traffic
- Notices to environmental activist groups
- Notices to local community centers, such as senior citizen service centers

2.3. Public Meetings

Sharing information and promoting meaningful community participation early in the permitting process is vital to the promotion of environmental justice. There are several different methods for the public to be involved with permitting activities. Public notices and public hearings normally allow the

permitting agency and other agencies to receive feedback from the public regarding a particular application. Public meetings, allow for interactive sessions where there is dialogue among the public, applicant, elected officials and the permitting agency. These interactive sessions will be subject to the same record-keeping requirements as public hearings and public notices.

Within 30 days of the permit application submittal, the applicant in coordination with the permitting agency must schedule a timely public meeting to inform residents within the Area of Concern of the scope and nature of the project. The applications will not be deemed complete until this meeting is scheduled. The meeting above would be in addition to any other required agency public meetings and hearings. Where appropriate or necessary, the agency must organize additional public meetings or interactive sessions.

2.4. Summary of Permit Application

Many community members find permit applications difficult to understand due to technical language and/or limited English proficiency. This makes it difficult for residents to anticipate and evaluate potential impacts on their community.

The agency must require applicants to provide a plain-language summary of the application that explains the purpose and location of the proposed facility or action, what actions the permit would authorize and its anticipated impacts (including visual, noise, traffic and other adverse impacts). This summary should be written in terms understandable to residents in the Area of Concern. The agency must review this summary for technical accuracy and completeness prior to its submission to the community.

The agency must provide guidance regarding the qualities of a good summary to applicants and potential applicants. These permit summaries will also be used by the agency for community outreach.

2.2.5. Document Availability

Access to relevant information is vital to the meaningful participation of communities in the permitting processes. In some communities, regional and district offices may be difficult to reach, particularly during non-business hours. Through extended hours or by appointment, the agency must provide opportunities for all community members to review public files during evenings and weekends. While the Internet should be pursued to facilitate access for the many, minority and low-income residents still have limited access to electronic communication and should not be the only source of access to documents.

Agencies must improve the accessibility and quality of data available so that communities have access to correspondence among the parties involved in the permitting process. Fact sheets produced by the agency outlining the permit process, public participation opportunities and steps for contacting the appropriate agency staff and programs should be included in these files.

Each regional and district office must identify additional convenient locations at which the public can review the complete files associated with proposed Trigger Permit applications. These locations may include public libraries, municipal offices and volunteer organizations. The agency must provide training such as guidance on how to locate materials in the files and orient the reader to those responsible for granting access and maintaining these files. The files available at remote locations, including log sheets and correspondence, must be provided and updated by the agency. When necessary, the agency will require applicants to submit multiple copies of materials. The agency will be responsible for maintaining the integrity of the files and should be updated in a timely manner. Files available at remote locations should include:

1. A cover sheet logging all materials included in the file and their date of submission to the file.
2. Complete copies of all permit applications.
3. Color copies of all color-coded maps, charts and other documents.
4. All official correspondence in the agency files between the agency and the applicant, community members, the EPA and/or other federal or state agencies relating to the permit application.
5. Comment response documents

3. Compliance with Regulation

As part of the permit review process, the agency will determine if the proposed activity is in compliance with all of its applicable statutes and regulations.

4. Minimizing Impacts

Applications for new and renewed Trigger Permits should include a description of how the applicant made a reasonable effort to minimize impacts and potential risks to public health and the environment.

5. Cumulative Impact Analysis

The agency must address cumulative impact concerns. However, further consideration is needed to define cumulative impact analyses, to identify reliable analytical tools, the cost of analyses (and who should pay those costs), the time allowed for these analyses and the scope of circumstances in which cumulative impact analyses are appropriate. In addition to the impacts from chemical releases, this analysis should also consider other reasonably anticipated impacts (e.g., noise, subsidence, vibration, odor, etc.) associated with the proposed permit activity (See Chapter 6 for more on Cumulative Impacts).

The agency, in conjunction with selected members of the community, will develop and promulgate a cumulative impact process (including how to conduct a cumulative impact analysis). In devising this process, the parties should consider the health status of the community.

For a renewal or modified permit, the cumulative impact analysis should include air modeling using the total of all facility emissions. The agency must determine if the renewal or modification will cause a violation of the Maximum Achievable Ground Level Concentration (MAGLC) at the facility fence line. If the air model shows that the current emission exceeds the MAGLC then the facility must reduce emissions to allow them to come into compliance with the MAGLC.

6. Disparate Impact Analysis

National evidence indicates that minority and low-income communities have historically borne unequal adverse environmental impacts. The disparate impact analysis process outlined below attempts to address environmental and human health concerns in situations when heightened scrutiny is necessary to protect communities.

The agency, in conjunction with selected members of the community, the entity and other relevant agencies, should develop a disparate impact screening process for Trigger Permits. The USEPA developed a Disparate Impact Analysis that could be adopted. This process provides for:

- Identifying the population affected by the facility's permit.
- Determining the racial/ethnic composition of this population.
- Examining other permitted facilities that should be included in the analysis and the racial/ethnic makeup of the populations affected by these permits.
- Conducting a disparate impact analysis, which at least includes analyzing the racial or ethnic factors within the population (as well as comparing the racial characteristics of the affected population with those of a nonaffected population).
- Determining the significance of the disparity pursuant to Title VI by using arithmetic or statistical methods.[1]

This process would be used to determine if a community is likely to experience a disparate impact from a proposed action. In devising this process, the parties must consider the current and future health status of the community. In order to establish the health status of a community, a health investigation following the guidance provided in Chapter 3 would be conducted.

If a significant adverse impact is reasonably anticipated from a proposed Trigger Permit and the community is likely to experience a disparate impact, then the agency must be authorized to require the applicant to conduct a disparate impact analysis.

[1] For more see: USEPA, *Interim Guidance for Investigating Title VI Administrative Complaints Challenging Permits*, February 1998 at <http://www.epa.gov/civilrights/docs/interim.pdf>.

When disparate impacts are anticipated for a Trigger Permit, the agency must encourage the applicant to enter discussions and voluntary mediation with stakeholders from the area of concern in order to mitigate or eliminate potential disparate impacts. Stakeholders will be identified through public meetings as well as other public involvement strategies.

7. Analysis and Mitigation of Impacts

The agency must analyze any environmental harms that will result from the proposed activity. If the disparate impact analysis show that disparate impacts would result from the issuing of the permit, then the agency should require the applicant to pursue additional mitigation efforts. Mitigation may include the reduction of impacts of the proposed activity. For example, the use of pollution prevention techniques, alternate technology, alternate routes, alternate configurations or the addition of infrastructure may reduce the impacts associated with a proposed action.

8. Decision

At the completion of this process, the agency must issue a decision on the proposed permit. The agency decision-making authority extends to the issuance of a permit, the issuance of a permit with conditions.

Chapter 6 – The Human Health Impacts of Cumulative Risks

The United States has had some form of health risk analysis in place to regulate chemicals and protect human health since the 1930s. In the 1980s, the Environmental Protection Agency (EPA) developed an official model called traditional risk assessment, a four-step process designed to evaluate the effect of exposure to a single chemical on human health. However, because communities are rarely exposed to just a single chemical, a need arose for a system that could evaluate the risk of multiple exposures. In 2003 the EPA outlined a model for cumulative risk assessment, which evaluates the risk of exposure to multiple chemicals or nonchemical stressors and how their interactions may pose an increased risk to health. An important feature of cumulative risk assessment is that it considers the broader context of a person's life – not just the chemicals they may be exposed to. These other determinants of health include age, race, education, employment, and socioeconomic status. Another important feature of cumulative risk assessment is ongoing community involvement – members of the affected community are included in the early stages of planning the assessment and identifying the chemicals or stressors to evaluate. Transparency and communication with the community is to be maintained throughout the process. Since then, the California EPA and the World Health Organization have established their own cumulative risk assessment paradigms. In 2014 the EPA unveiled a more comprehensive and community-centric paradigm, the EPA Next Gen Compliance Program, which is still in the process of being rolled out.

Risk Acceptance vs. Risk Avoidance

While progress has been made in risk assessment and protecting people's health, the United States still uses an ideology of risk acceptance, where chemicals are deemed safe until proven otherwise. This means that there are thousands of chemicals used in industrial, manufacturing, and consumer settings that have unknown risks to human health and the environment. Without known risks, these chemicals are often unregulated. Only after there is a suspected link to health effects in a community that investigations and scientific studies are done to assess a chemical's health impacts. By that time, it's too late to protect communities that have already been exposed. A better model (one adopted by the California EPA and the European Union) is one of risk avoidance, where a chemical must be proven to be safe before it can enter the marketplace. This prevention strategy is a much more effective way of protecting health.

Necessary Features of Risk Assessments

Based on the EPA's work and our conversations with community leaders, we identify some key features that should guide future risk assessments:

- Prioritizing health, especially that of vulnerable populations
- Adopting a model of risk avoidance or risk prevention, where chemicals must be proven safe before they can enter communities
- Community involvement from the very beginning of the process
- Using a weight-of-the evidence approach that considers both quantitative and qualitative data when considering risk

Health Impacts of Cumulative Exposures

When evaluating the health consequences of toxic chemical exposures, an often-overlooked consideration is the cumulative effects of these exposures. One component of these cumulative effects is that people are usually exposed to chemicals over extended periods of time, meaning that the human body accumulates and processes these chemicals for years or decades. These exposures can have particularly devastating consequences when they occur during the developmental or aging processes. A second component of these cumulative effects is that people are exposed to multiple toxic chemicals over their lifetimes, sometimes over different time periods or sometimes simultaneously. How these toxic chemicals interact in the environment and in the body is a key component of the health effects that exposed populations face.

Unfortunately, scientists know very little about how the cumulative effects of toxic chemical exposure can impact human health. More scientific research may help, but in most cases, we will never be able to understand every parameter that affects how specific exposures influence health. If we can't protect public health by fully accounting for the adverse effects that chemicals have, we must keep

communities safe by limiting their exposure to these chemicals. Designing a way to evaluate if communities are especially vulnerable to the cumulative effects of toxin exposures is an important strategy for protecting people's health.

Overburdened Communities

Communities that face cumulative effects from long-term chemical exposure and/or multiple chemical exposures are often called "overburdened." It is generally accepted that overburdened communities should not bear the brunt of additional sites of pollution. However, establishing what exactly constitutes being overburdened is difficult. We have provided a definition of what it means to be an overburdened community in order to create clear guidelines to protect those likely experiencing cumulative effects of chemical exposures.

What does it mean to be an overburdened community?

Many communities across the country are already overburdened by exposure to toxic chemicals, and this reality should receive serious consideration when determining guidelines for future facilities. We believe the best way to protect people's health is to require that sites of pollution face stricter standards when placed in overburdened communities. To this end, we have established a set of criteria based on population and geographic metrics to clearly define what it means to be an overburdened community.

Using conversations with community leaders from across the country and the new environmental justice bill signed into law in New Jersey (see Appendix D), we define an overburdened community as one that meets any one of the following criteria:

Population-based criteria:

- At least 35% of households qualify as low-income (at or below twice the poverty threshold as determined by the US Census Bureau)
- At least 40% of residents identify as minority or as members of a tribal community
- At least 40% of households have limited English proficiency (where no adult in the household speaks English "very well" as determined by the US Census Bureau)
- At least 7% of residents receive disability benefits
- Has a COVID-19 infection or mortality rate above the national average

Geography-based criteria:

- Within 5 miles of a Superfund site
- Within 10 miles of an existing facility that emits forever chemicals (such as PFAS) or greater than low-level radiation

- Within 5 miles of an existing facility in a natural disaster risk zone

We further affirm that because children and the elderly are particularly vulnerable, if a community is deemed overburdened, then new facilities should not be built within 5 miles of schools, assisted living facilities, or hospitals.

When assessing sites for potential ongoing or future pollution, governments and corporations may perform testing such as environmental monitoring, biological monitoring, statistical modeling, or animal studies. We affirm that the public deserves full, transparent, and real-time access to this data regardless of whether or not the community in question is deemed overburdened. Too often, results from this kind of testing are withheld from communities indefinitely or for long periods of time. Corporations and governments cannot have sole power over this data – those affected by the toxic chemicals deserve to know this information for their own health and safety.

Conclusions

Clear guidance on determining if communities are already overburdened with toxic chemical exposures will be an effective way of keeping people safe and mitigating their health risks. These communities have been historically overlooked, ignored, and silenced, so it is crucial to be proactive and explicitly protect them when considering the construction of new pollution-emitting facilities.

In developing this definition, our goal is to create standards that are specific, measurable, understandable, and broadly unobjectionable. Our goal is not to target individual industries, companies, or chemicals, but to create basic protections for vulnerable communities that haven't had them.

Appendix

Appendix A: Health Investigation Agreement Between Ohio University (researcher), the Buckeye Forest Council, Athens County Fracking Action Network and Torch Can Do

The Researcher, as named and the above-named Community Partners agree to conduct a research project with the following understanding:

1. **The purpose of this research project, as discussed with and understood by the Community Partners is:**

- Gather groundwater samples on private drinking water wells that are downgradient of the K&H and Atha injection wells.
- Leadership training.
- Training that will propel the community leaders into becoming self-reliant when it comes to obtaining information from state agencies and being able to use scientific data.

2. The scope of this research project (that is, what issues, events, or activities are to be involved, and the degree of participation by community residents), as discussed with and understood by members of Torch Can Do in this community, is:

1. Review wells locations to be sampled. Provide researchers with assistance in making connections in the community

2. Attend and participate in trainings to be provided to the community.

3. Attend partner meetings on a quarterly basis. If the community or researchers determine that meeting more often is necessary, the community will receive 72 hours' notice.

3. Methods to be used, as agreed by the researchers and the community, are:

1. Researchers shall share the testing methodology as well as any sampling/testing protocol used by the researchers. Researchers shall share and receive approval from the community for any deviations.

2. Researchers will provide the community with scientific data to show that testing is being conducted in the proper locations. Mapping should be used to show that wells being tested are in a downgradient location from the injection wells. However, one up gradient well may be used as a background well.

4. Community training and participation, as agreed, are to include:

1. Assist citizens in understanding their rights to and opportunities for participation in environmental decision-making processes.

2. Assist citizens in learning what environmental information is available, how to obtain it, and how to interpret it.

3. Provide training on specialized software needed to gather information from the ODNR database.

4 Build the leadership and organizing capacity of the local group, so they can take control of and affect solutions for environmental problems in their community.

5. Assist local group(s) with media messaging, information and media outreach techniques that will help them propel local environmental problems to the forefront of public attention, both within their communities and in major media outlets around the state.

6. Empower citizens to understand regulatory law and procedures so they can hold public officials accountable for protecting public health.

7. Assist local leaders in developing organizing strategies and a plan of action that will create a safer environment for their communities.

8. Provide leadership training for local communities.

5. Information collected is to be shared, distributed, and stored in these agreed ways:

1. The data collected are confidential and no name shall be attached to a record. Copies will be kept at Ohio University where the data will be converted to an electronic form. Data will be made available to the community minus any information that may reveal the identity of the well owner. The researchers will be available to answer questions and assist community members should community members decide to use the data for different purposes, beyond the objectives of this particular project.

2. A final report will be distributed only after approval from the community members.

3. The data shall not be posted to the watersheddata.com database until approved by the community group.

6. Informed consent of individual participants is to be obtained in these agreed ways.

1. The consent form will be read by the interviewer to the respondent. A copy of the consent form will be left with the respondent so that the addresses of each researcher can be used at any time, should the respondent wish to contact the researchers for additional information.

7. The names of participants and the community are to be protected in these agreed ways:

1. As mentioned on the consent form, the interviews are confidential. In no instance will the name of a respondent be attached to a record. For example, number codes might be considered.

8. Communication with the media and other parties, (including foundations) outside the named researchers and the community, will be handled in these agreed ways:

1. Researcher shall not release any of the information until they have received the approval of the community group.

2. If and when the information is released, a joint press release/conference shall be held with all Partners involved.

Appendix B

Commandments for Behavior between Investigators and Community Residents

To establish control, standards must be set. The standards may be established by a series of statements, herein as certain "shalls" and "shall nots," establishing what is acceptable and what is prohibited from the agent answering calls for help. In business, "The customer is always right" is a maxim that benefits both parties, the seller and the buyer. In environmental response, the same should be true. The following are offered to frame the debate.

Thou Shalt:

- Be respectful of individuals requesting help
- Listen to individuals presenting with a problem
- Assume these individuals are telling the truth
- Assist individuals to get the assistance requested
- Answer all questions in a timely way

Thou Shalt Not:

- Dismiss concerns raised by individuals
- Presume individuals have no experience or expertise
- Discount individuals because they present in distress

Appendix C - Trigger Permits

Permit Type	Program	Description	Application
Hazardous Waste	Waste Management	Boiler Industrial Furnace/Incinerator	New/Renew/modify
Hazardous Waste	Waste Management	Disposal Permit	New/Renew/modify
Hazardous Waste	Waste Management	Storage Permit	New/Renew/modify
Hazardous Waste	Waste Management	Treatment Permit	New/Renew/modify

Hazardous Waste	Waste Management	Commercial Boiler Industrial Furnace/ Incinerator	New/Renew/modify
Hazardous Waste	Waste Management	Commercial Disposal Permit	New/Renew/modify
Hazardous Waste	Waste Management	Commercial Storage Permit	New/Renew/modify
Hazardous Waste	Waste Management	Commercial Treatment Permit	New/Renew/modify
Municipal Waste	Waste Management	Land Application of Sewage Sludge Permit Agricultural Utilization	New/Renew/modify
Municipal Waste	Waste Management	Construction Demolition Landfill Permit	New/Renew/modify
Municipal Waste	Waste Management	Municipal Waste Composting permit	New/Renew/modify
Municipal Waste	Waste Management	Municipal Landfill Permit	New/Renew/modify
Municipal Waste	Waste Management	Resource Recovery and Other Processing Permits	New/Renew/modify
Municipal Waste	Waste Management	Transfer Station Permits	New/Renew/modify
Residual Waste	Waste Management	Commercial Landfill all Classes	New/Renew/modify
Residual Waste	Waste Management	Disposal Impoundment all Classes	New/Renew/modify
Residual Waste	Waste Management	Land Application Permit	
Residual Waste	Waste Management	Land Application Permit Land Reclamation	New/Renew/modify
Residual Waste	Waste Management	Landfill all classes	New/Renew/modify
Residual Waste	Waste Management	Processing or Incinerator Permit	New/Renew/modify
Residual Waste	Waste Management	Transfer Station Permits	New/Renew/modify
NPDES	Clean Water	Major IW Facility <250 MGD	New/Renew/modify
NPDES	Clean Water	Major IW Facility >250 MGD	New/Renew/modify
NPDES	Clean Water	Major Sewage Facility > 1 MGD and < 5 MGD	New/Renew/modify
NPDES	Clean Water	Major Sewage Facility > 5 MGD	New/Renew/modify
NPDES	Clean Water	Major Sewage Facility with CSO	New/Renew/modify
NPDES	Clean Water	NPDES Permit for New and Existing Industrial Discharger Major	New/Renew/modify

NPDES	Clean Water	NPDES Permit for Sewage Discharges Municipal Major	New/Renew/modify
State Water Pollution Control	Clean Water	Individual Site Permit for Beneficial Use of Biosolids by Land Application	New/Renew/modify
State Water Pollution Control	Clean Water	Water Quality Mgmt Part II, Industrial Waste, Land Application	New/Renew/modify
State Water Pollution Control	Clean Water	Water Quality Mgmt Part II, Manure Storage Facility for CAFO	New/Renew/modify
WPC NPDES	Clean Water	Concentrated Animal Feed Operations Individual NPDES Permit	New/Renew/modify
Air Quality	Air Quality	Major Facility Plan Approval MACT Air Toxics	New/Renew/modify
Air Quality	Air Quality	Major Facility Plan Approval New Facility Review Prevention of Significant Deterioration	New/Renew/modify
Air Quality	Air Quality	Major Facility Plan Approval New Source Performance Standard	New/Renew/modify
Air Quality	Air Quality	Major Facility Plan Approval New Source Review non-Attainment	New/Renew/modify
Air Quality	Air Quality	Major Facility Plan Approval New Source Review Non-Attainment De Minimis	New/Renew/modify
Air Quality	Air Quality	Major Facility Plan Approval State Regulation	New/Renew/modify
Large Non-Coal	Mining	Large Surface Mining	New/Renew/modify
Industrial Minerals Underground	Mining	IM Underground Mining	New/Renew/modify
Coal Prep Plant	Mining	Preparation-Reprocessing Plant	New/Renew/modify
Coal Refuse Disposal	Mining	Refuse Disposal	New/Renew/modify
Coal Refuse Reprocessing	Mining	Refuse Reprocessing	New/Renew/modify
Coal Surface Mining	Mining	Surface Mining	New/Renew/modify

Coal Underground Mining	Mining	Underground Mining	New/Renew/modify
Disposal Well	Oil and Gas	Drill & Operate Well Permit Disposal/Enhanced Recovery	New/Renew/modify
Production Well	Oil and Gas	Convert and Operate Well Permit Change in Use	New/Renew/modify
Production Well	Oil and Gas	Drilling & Operating well	New/Renew/modify
Storage, Treatment facilities	Oil and Gas	Facilities to store, treat or dispose of oil and gas waste	New/Renew/modify

Appendix D
New Jersey Environmental Justice Legislation

New Jersey passed an environmental justice bill on August 27, 2020 which was signed into law on September 18, 2020

For a full text of the bill, go to: legiscan.com/NJ/text/S232/2020
Statement from the governor: https://www.nj.gov/governor/news/news/562020/20200918a.shtml

Some additional reporting on the bill:

- https://www.natlawreview.com/article/new-jersey-passes-landmark-environmental-justice-legislation
- https://www.politico.com/states/new-jersey/story/2020/08/27/new-jersey-legislature-sends-groundbreaking-environmental-justice-bill-to-governors-desk-1313030

Overview

The first two paragraphs of the bill are a general statement of the problem and the state's commitment to environmental justice.

Definitions:

An overburdened community is any census block group that fulfills at least one of the following criteria:

- At least 35% of households qualify as low-income
- At least 40% of residents identify as minority or as members of a tribal community
- At least 40% of households have limited English proficiency

A low-income household is one that is at or below twice the poverty threshold (determined annually by the US Census Bureau)

A household with limited English proficiency is one where no adult speaks English "very well," according to the US Census Bureau.

What the bill requires:

If a company wants a permit for a new facility, an expansion of a facility, or a permit renewal for an existing facility and that facility is located partially or completely in an overburdened community, then the company must do the following three things:

1. Write an environmental justice impact statement that evaluates the unavoidable potential environmental and health impacts associated with the facility and the environmental and health impacts already affecting the overburdened community
2. Provide the environmental justice impact statement to government entities and the community
3. Hold a public hearing no sooner than 60 days after providing the environmental justice impact statement
   a. The public hearing must be publicized in at least two newspapers that serve the community (including one non-English language newspaper)
   b. The notice of the public hearing must include: description of the proposed facility, summary of the impact statement, date/time/location of the hearing, address at which community members can submit written comments
   c. The state Department of Environmental Protection will post the impact statement and the information about the public hearing on its website
   d. At the hearing the company "shall provide clear, accurate and complete information.