

# Findings from Phase 1 of the Stakeholder Needs Assessment: SURVEY QUESTIONNAIRES

CALIFORNIA  
ENVIRONMENTAL  
HEALTH TRACKING  
PROGRAM

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<sup>1</sup> California Conference of Local Health Officers.

<sup>2</sup> California Conference of Directors of Environmental Health

## 2. Executive Summary

### Background

The Centers for Disease Control and Prevention (CDC) awarded California a three-year grant in 2002 to support the development of a statewide Environmental Health Tracking System (EHTS).

The goal of the resultant California Environmental Health Tracking Program (CEHTP) is to develop comprehensive plans for a standards-based, coordinated, and integrated EHTS that enables public health actions through linkage, monitoring, reporting, and sharing of information on environmentally related diseases and environmental hazards/exposure.

A key step in the planning process is to identify, document, and communicate needs, issues, and concerns among key stakeholders including: non-governmental organizations (NGO) and local public health agencies (LPHA).

To that end, the Needs Assessment Workgroup of the CEHTP Planning Consortium was convened to assist in the development and implementation of a needs assessment strategy. Findings from the needs assessment will be used to inform the strategic plan for environmental health tracking in California. This includes community outreach and involvement strategies, data/information communication and dissemination strategies, data analysis and interpretation methods and priorities, and technical specifications for a future EHTS.

The overall needs assessment consists of multiple components. This report describes activities and findings from the first component of the needs assessment, Phase 1. Phase 1 focused on administering questionnaires to NGOs, local health departments, and local environmental health departments to identify and document needs, capacity, resources, gaps, barriers, issues and priorities related to environmental health tracking. Phase 1 also served to identify future partners/collaborators; engage stakeholders; evaluate current communication activities of

CEHTP; identify key messages; and generate awareness and interest.

### Respondents

Twenty-nine non-governmental organizations (NGOs) and thirty Local Public Health Agencies (LPHAs) completed the surveys. There was a broad range of respondents; varying widely in size and jurisdiction. Local agency respondents included cities (e.g. Long Beach, population: 487,000), rural counties (e.g. Apine, population: 1,280) and large, urban counties (e.g. Los Angeles, population: 10,103,000). In addition, NGO respondents varied in mission and their geographic scope of services ranged from small communities (Pacoima Beautiful) to international (Pesticide Action Network).

### Capacity Building and Training Issues

Overall, respondents engage in a variety of initiatives and activities related to environmental health tracking. A majority of respondent organizations were involved in public education/outreach/advocacy (93%) and building/fostering partnerships/coalitions (83%). Below are the priority focus areas, areas of strong capacity and priorities for training:

#### Non-Governmental organizations

- Priority Focus Areas:
  - Public education/outreach/advocacy
  - Building/fostering partnerships/ coalitions
  - Environmental justice
  - Interpreting/analyzing environmental health data
- Strong Capacity:
  - Public education/outreach/ advocacy
  - Building/fostering partnerships/ coalitions
  - Environmental justice
  - Regulation/public policy development
- Priority for Training:

- Interpreting/analyzing environmental health data
- Collecting environmental health data (primary data)
- Accessing data on environmental hazards/exposures
- GIS mapping and spatial statistics
- Accessing data on environmentally related health effects

### Local Public Health Agencies

- Priority Focus Areas:
  - Risk communication
  - Public education/outreach/ advocacy
  - Building/fostering partnerships/ coalitions
  - Program planning/ development
- Strong Capacity:
  - Public education/outreach/ advocacy
  - Risk communication
  - Interpreting/analyzing environmental health data
  - Environmental hazard/ exposure assessments
- Priority for Training:
  - Risk communication
  - Public education/outreach/ advocacy
  - Environmental hazard/exposure assessments
  - Regulation/public policy development
  - Building/fostering partnerships/ coalitions

In addition, LPHAs often indicated being engaged in risk communication, environmental hazard/exposure assessments, program planning/development, and program evaluation. NGOs often indicated working on accessing secondary data and interpreting/analyzing environmental and/or health data.

The questionnaire also ascertained the type of information or assistance that communities commonly sought from the respondents. Both NGOs and LPHAs were most likely to be asked for basic information on environmental health (see below).

- Frequently asked of respondents:
  - Basic information on environmental health
- Frequently asked of NGOs:
  - Data on environmental hazards/exposures

- Frequently asked of LPHAs:
  - Data on health effects
- Respondents are most able to provide:
  - Basic information on environmental health
  - Assistance in utilizing data for action
- Respondents are least able to provide:
  - Assistance in collecting community data
  - Assistance in conduction community-based research/studies

Respondents received requests from a broad range of groups. The general public/community members, non-governmental organizations, public agencies, and the media were cited as frequently requesting information/assistance from respondents.

### **Access, Utility, and Dissemination of Data/Information**

Respondents utilized various methods for dissemination and outreach regarding environmental health information. Websites, fact sheets, and newspapers (and media in general) were found to be often utilized and most effective. Although less commonly used, workshops and public meetings were often cited as effective methods. The target groups for respondents were quite diverse, with over 70% of the NGO respondents targeting at-risk groups, health affected populations, and legislators/policy makers.

Respondents reported working with various forms of data including both unanalyzed data such as .txt and .mdb data files and analyzed data such as charts/ graphs, GIS Maps, and reports/ summaries. A majority of respondents indicated utilizing analyzed data, including reports/summaries (also reported as the preferred formats) while the least number of respondents indicated working with unanalyzed data.

Additionally, the questionnaire gathered information about the type of data sources respondents accessed for health effects and environmental hazards/exposures information. The most utilized health effects data sources included:

- Local/Community generated source (e.g. community health surveys)
- California Health Interview Survey (CHIS)

- California Cancer Registry
- Vital Statistics
- OSHPD Patient (Hospital) Discharge Database

The most utilized Environmental Hazards/Exposures data sources included:

- Scorecard.org – Environmental Defense
- Toxic Release Inventory – US EPA
- National Toxics Inventory database – US EPA
- Other federal data sources (e.g. HUD E-Maps)
- California Integrated Waste Management Board (CIWMB) databases
- GeoTracker (Groundwater Resources Information Database)

On average, respondents used 5 different data sources and 14 respondents used at least 10 different data sources.

Among the data sources reported as exemplary (most useful, best quality, easiest to access, etc.) were, in order: Scorecard, California Cancer Registry, vital statistics, and CHIS.

Reasons given for why particular sources were cited as exemplary included: data accessibility (ease of access/obtain, user friendly, centralized, etc.), specificity/resolution (zip code level, county level, age groups, etc.), and the quality (thorough, very complete, valid, up-to-date, comprehensive, etc.). Respondents noted that the usefulness of data sources could be improved by addressing accessibility and data quality issues.

### **Utilizing Environmental Health Data for Public Health Actions**

Respondents were asked to describe the type of initiatives/activities in which they engaged using environmental health data. The responses fell into five broad categories.

- Programs/Initiatives (e.g. childhood lead prevention).
- Assessment/Research (e.g. Housing, land contamination, arsenic, and lead study).
- Outreach and Education (e.g. community asthma and clean air forums).

- Policy development (e.g. Precautionary Principle).
- Advocacy (e.g. advocacy on diesel exhaust and pesticides).

The questionnaire also ascertained factors that affect utilizing data for public health action. Four major categories of factors emerged.

- Quality of data (e.g. timeliness, specificity/resolution).
- Availability of and access to data (e.g. knowledge of data sources and how to access the data).
- Resource/Capacity/Infrastructure (e.g. GIS capacity).
- Understanding and Interpreting data (e.g. lack of summaries/reports).

Respondents provided examples of how information from environmental health tracking would enhance existing or enable new activities/initiatives. This issue received the most significant (both in quantity and range) responses. The breadth of responses speaks to the potential of an EHTS for respondents, given quality and accessible data. The responses also speak to expectations that stakeholders have for an EHTS. This was important to identify any misconceptions of environmental health tracking as well as identifying any resources that may help to meet needs that environmental health tracking cannot meet.

Below are categories of responses (along with selected examples) regarding what environmental health tracking would enable for respondents.

- Monitor health status to identify community health problems (e.g. identify trends).
- Diagnose and investigate health problems and health hazards in the community (e.g. track changes or improvements in air quality, especially toxics, and changes in the health status of residents).
- Inform, educate, and empower people about health issues (e.g. educate public about relationship between environmental hazards and lung disease).
- Mobilize community partnerships to identify and solve health problems (e.g. make data available

and accessible to CBOs, labor orgs, faith based orgs, and others to use in their campaigns).

- Develop policies and plans (e.g. advocate for changes in land use policies locally).
- Enforce laws and regulations that protect health and ensure safety (e.g. enforcement of healthy homes and public facilities).
- Link people to needed personal health services and assure the provision of health care when otherwise unavailable (e.g. establish a rural health, home health and environment testing for asthma patients).
- Evaluate effectiveness, accessibility, and quality services (e.g. give clearer direction of program effectiveness).
- Research for new insights and innovative solutions to health problems (e.g. correlate school absenteeism with air quality issues).

### **Priority Health Effects**

Most frequently cited as one of the top three priorities for both NGOs and Local Health Departments:

- Cancer
- Respiratory diseases

Other high priorities for NGOs:

- Reproductive outcomes
- Neurologic diseases
- Developmental diseases

Other high priorities for Local Health Departments:

- Diabetes
- Cardiovascular disease

Major differences in reported priorities were cardiovascular disease and diabetes which were much more of a priority for Local Health Departments; and developmental diseases, endocrine-disruptor related diseases, and infertility which were more of a priority for NGOs.

### **Priority Environmental Hazards/Exposures**

Commonly cited by both NGOs and LPHAs as priority hazards/exposures of concern were:

- Heavy metals

- Foodborne pollutants
- Indoor hazards
- Water pollutants

The main differences in reported priorities were endocrine disruptors, air pollutants, persistent organic pollutants, and pesticides which were often cited by NGOs as priorities and less frequently by LPHAs. The reverse applies to hazardous and solid waste.

### **Collecting, Accessing, Analyzing, and Reporting Data**

Many respondents were involved in accessing various health and environmental data. Factors that affect respondents' access to data varied from broad issues such as limited resources to specific issues such as ability to query hospital discharge data by ICD code. Broad categories of factors affecting access to data included:

- Awareness/knowledge of data and data sources
- Quality and format of data
- Processes/procedures related to accessing data
- Resources/capacity/infrastructure

Phase 1 also sought to discover factors that affect data collection which is a foundation to any surveillance program, including environmental health tracking. Responses indicate that data collection is a more resource intensive and complex/specialized function than accessing existing data. Those issues, and the fact that data collection is often driven by regulation and mandates for LPHAs, contribute to how, why, and what types of data are collected. Other factors affecting data collection centered on:

- Resources/capacity/infrastructure issues
- Data collection processes/procedures
- Scope/priority of the agency.

Respondents reported similar issues/comments regarding factors that impact data reporting.

Because there is a wide range of data formats and various purposes and needs for using data, it was important to discover any issues relevant to data analysis and interpretation. Similar to data collection, data analysis appeared to be

comparatively more resource intensive and complex/specialized. Major factors related to data analysis involved expertise/competency and resource issues. Another major factor related to analyzing data is being able to first access/obtain the data.

### **General Comments and Concerns**

Finally, the questionnaire solicited general comments via open-ended questions. Major themes involved issues regarding:

- The survey instrument (e.g. too long)
- Importance/value of environmental health tracking (e.g. data would support environmental health policy decisions)
- Respondents' role in environmental health tracking (e.g. limited role due to mandates)
- Concerns/questions/ambiguity regarding environmental health tracking (e.g. misuse/misinterpretation of data)

### **Conclusion/Discussion**

Phase 1 of the needs assessment yielded valuable information that will be used to facilitate the development of a strategic plan for an Environmental Health Tracking Network in California as well as to inform the development of outreach and training strategies. For example, findings related to data access, utility, and dissemination will inform the CEHTP Technical Team which is charged with developing technical specifications for an Environmental Health Tracking Network. More immediately, the survey results will be used as a springboard for determining other information needs and developing respective strategies.

Based on Phase 1 findings, CEHTP will continue developing strategies for other components of the statewide needs assessment, including Phase 2 and key informant interviews with tribal representatives. Phase 2 of the needs assessment will involve in-depth interviews/focus groups with a sample of respondents and will provide an opportunity to follow up on and better understand the information gathered in Phase 1 and obtain more specific and detailed information.

Due to the length and comprehensiveness of the surveys and the complexities surrounding environmental health tracking, there may have been gaps and missed opportunities to hear from a broader range of target groups. Possible activities to address these gaps include targeted assessments of NGOs whose primary scope/mission may not be environmental health and smaller CBOs with limited capacity/functions and other entities that provide data related services/consulting.

Overall, the results demonstrate the need to further engage stakeholders via outreach/education and training as there is tremendous potential for and interest in utilizing environmental health tracking information. Both LPHAs and NGOs are engaged in a breadth of activities that are critical for environmental health tracking and they appear well poised to utilize information generated by an Environmental Health Tracking Network, especially communicating information to various audiences. In order to facilitate these actions; however, key concerns regarding data quality and accessibility must be considered in designing an Environmental Health Tracking Network.

Findings also indicate that the NGOs and LPHAs may contribute to an Environmental Health Tracking Network via other functions such as data collection and interpretation. In order for stakeholders to participate in other aspects of environmental health tracking, future plans and recommendations must address issues related to their ability to collect, analyze and report data. Resource limitations are a barrier for many aspects; however, some issues appear to be addressable through targeted outreach, education and training/capacity building.

The survey results are a good starting point for understanding the priority health effects and environmental hazards/exposures; however, they did not yield definitive priorities representative of the state. More information about the priorities should be sought through targeted methods and secondary data sources.

In developing outreach/education and training strategies, CEHTP must be aware of and responsive the needs of the various target groups. To that end,

CEHTP has begun to identify similarities and differences in the needs, concerns, and issues among the groups. Although further analysis will be performed in the future, below are a few evident areas.

Findings point to many similarities between NGOs, local health agencies, and local environmental health agencies. Examples include:

- They utilize analyzed/summarized data more frequently than to unanalyzed data.
- Utility of data sources depend on accessibility, quality and specificity/resolution of data.
- Each target group is engaged in a variety of activities utilizing environmental health data.
- They are faced with limitations in resources, capacity, and infrastructure.

There were also key differences for each of the target groups:

- NGOs are frequently asked, by the community, to provide data on environmental hazards/exposures while LPHAs are more

frequently asked to provide data on health effects.

- NGOs utilize data for advocacy more often than LPHAs.
- The perceived role in environmental health tracking was least articulated by local environmental health agencies – their activities/initiatives are driven much more by regulations and mandates.
- LPHAs are generally more involved in data collection and reporting.
- LPHAs had many more concerns about environmental health tracking such as misuse and misinterpretation of data.

Finally, the results clearly illustrate the need to:

- Understand how to communicate information generated by a tracking system in the most effective and meaningful methods and formats.
- Understands and addresses local capacities related to accessing, analyzing, and utilizing data/information on environmental hazards and environmentally related diseases.

### 3. Background and Overview

The Centers for Disease Control and Prevention (CDC) awarded California a three-year grant in 2002 to support the development of a statewide Environmental Health Tracking System (EHTS).

The goal of the resultant California Environmental Health Tracking Program (CEHTP) is to develop comprehensive plans for a standards-based, coordinated, and integrated EHTS that enables public health actions through linkage, monitoring, reporting, and sharing of information on environmentally related diseases and environmental hazards/exposure.

CEHTP is a collaborative initiative of the California Department of Health Services, the California Environmental Protection Agency, and the University of California.

An EHTS would lack much of its intended utility if key stakeholders are not involved in various stages of planning and implementation.

Ultimately, CEHTP hopes to design a system that is useful to stakeholders and to increase their readiness to take full advantage of this future resource and become stronger partners in achieving healthy people in healthy communities.

A key step in the planning process is to identify, document, and communicate needs, issues, and concerns among key stakeholders including: non-governmental organizations (NGO) and local public health agencies (LPHA).

Findings from the needs assessment will be used to inform the strategic plan for environmental health tracking in California. This includes community outreach and involvement strategies, data/information communication and dissemination strategies, data analysis and interpretation methods and priorities, and technical specifications for a future EHTS.

Needs assessment findings have already informed and continue to shape CEHTP's approaches and activities during the development stages of an EHTS.

The overall needs assessment consists of multiple components. This report describes activities and findings from the first component of the needs assessment, Phase 1.

Objectives of the Needs Assessment Include Identifying and Documenting:

- Environmental hazards/exposures and diseases of concern.
- Priority data and information needs.
- Needs and issues related to working with (collecting, accessing, managing, and analyzing) environmental health data.
- Needs and issues related to utilizing environmental health data for public health actions.
- Capacity building and training issues related to environmental health tracking.

## 4. Phase 1 Methodology

### 4.A. Scope of Phase 1

After determining the overall scope and the objectives of the needs assessment, we separated the needs assessment activities into five components. We then adopted a phased approach where a wide net is cast via survey questionnaires in Phase 1 to obtain useful data that will enable the development of key questions to seek focused and detailed information in the interviews/focus groups in Phase 2. Phase 1 was also designed to identify future partners/collaborators, engage stakeholders, evaluate current communication activities of CEHTP, identify key messages, and generate awareness and interest.

### 4.B. Target Groups

Target groups selected for Phase 1 were non-governmental organizations (NGOs) and local health and environmental health agencies (LPHAs). NGOs and LPHAs are key stakeholders that could participate in and/or utilize an Environmental Health Tracking Network. Simply put, we believe these groups are among the primary users of environmental health data. These groups are presently involved or interested in using environmental health data for public health action (e.g. outreach/education, advocacy, environmental justice, planning, policy development, etc.) and/or involved or interested in collecting, analyzing, or accessing data. Because these target groups are increasingly engaging in efforts that are germane to Environmental Health Tracking, their information needs are becoming more sophisticated. If an Environmental Health Tracking Network is to be effective in California, we must seek input on issues, needs, and priorities related to environmental health and related data issues.

### 4.C. Survey Instrument

The self-administered survey questionnaires focused on four main themes:

- Environmental hazards/exposures and health effects of concern<sup>3</sup>
- Needs and issues related to utilizing environmental health data for public health actions.
- Needs and issues related to collecting, accessing, and analyzing environmental health data.
- Capacity building and training issues related to Environmental Health Tracking.

The questionnaires incorporated closed ended questions (e.g. is cancer a priority for your organization?); scale/rating type of questions (e.g. the data is very useful, somewhat useful, or not useful); and open-ended questions (e.g. what are your organization's challenges, limitations or barriers in accessing data?).

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<sup>3</sup> Questions about priority health effects and hazards/exposures were developed from findings of the California Senate Bill 702 (Escutia) Expert Working Group on Environmental Health Surveillance. In October 2001, Governor Davis signed Senate Bill 702, which declared the legislature's intent to establish an Environmental Health Surveillance System. The SB702 Expert Working Group, comprised of technical experts, was subsequently established and embarked on a report that would identify and describe the need for and goals of environmental health tracking in California; current knowledge about environmentally related diseases and their costs; diseases, environmental hazards, and exposures that should be tracked in California; community information needs; ethical, legal, and policy issues; and priority recommendations. The SB702 Report is available at <http://www.catracking.com>.

Separate questionnaires were developed for NGOs, local health agencies, and local environmental health agencies. It was important to capture comparable information from all three target groups; however, the uniqueness of each of the target group necessitated slight variation. For example: NGOs were asked about their primary target audiences; local health agencies were asked about factors affecting data reporting; and local environmental health agencies were not asked about priority health effects.

Draft questionnaires were field tested by three LPHAs and three non-governmental organizations. Feedback received from field testing served to revise the questionnaires before they were distributed statewide. A cover letter from the CEHTP Principal Investigator, instructions, and an overview accompanied each questionnaire. Local health agencies and environmental health agencies were asked to complete separate questionnaires. The complete questionnaires can be found in APPENDIX D: Survey Questionnaires (p.54).

#### **4.D. Survey Distribution**

We began outreaching to the target groups in July of 2003 to introduce the project and announce the needs assessment. The announcements were sent to each Local Health Officer and Director of Environmental Health and a list of NGOs. We further expanded the list of NGOs through existing relationships (Planning Consortium, SB702 Expert Working Group, CEHTP pilot project, etc.) and referrals before distributing the final survey questionnaires in September 2003.

The survey instruments were distributed to Local Health Officers and Local Directors of Environmental Health through the California Conference of Local Health Officers and the California Conference of Directors of Environmental Health. The NGO surveys were distributed directly as well as forwarded by other organizations. NGOs were asked to participate in the survey if the organization is involved or interested in using data about environmental hazards/exposures and health effects for public health action (i.e. outreach/education, advocacy, environmental justice, planning, policy development, etc.) and/or involved in collecting, analyzing, or accessing such data. The surveys were made available as email attachments, hardcopies, or downloadable documents on the CEHTP website.

Various venues were also used to disseminate and promote the surveys. Examples include: the 2003 annual meeting of the California Conference of Directors of Environmental Health; a monthly meeting of the Breast Cancer Fund; a Regional Asthma Management and Prevention (RAMP) conference; and an Environment California meeting about pesticides in schools.

## 5. Phase 1 Findings

### 5.A. Respondent Profiles

A total of 59 surveys were returned: 29 non-governmental organizations (NGOs) and 30 LPHAs (13 Local Environmental Health Departments and 17 Local Health Departments). See APPENDIX A: Survey Respondents on page 32 for the complete list of respondents.

There was a broad range of respondents; varying widely in size and jurisdiction. LPHA respondents included cities (e.g. Long Beach, population: 487,000), rural counties (e.g. Alpine, population: 1,280) and large, urban counties (e.g. Los Angeles, population: 10,103,000). In addition, NGO respondents varied in mission and their geographic scope of services ranged from small communities (Pacoima Beautiful) to international (Pesticide Action Network).



### 5.A.1. What are the activities and focus areas in which respondents are engaged?

Overall, respondents engage in a variety of initiatives and activities related to Environmental Health Tracking. A majority of respondent organizations were involved in public education/outreach/advocacy (93%) and building/fostering partnerships/coalitions (83%). Many NGOs were also involved in accessing, interpreting, and analyzing environmental health data, and environmental justice. Many LPHAs were also involved in risk communication, program evaluation, and environmental hazard/exposure assessments. Respondents were least frequently engaged in occupational health issues and biomonitoring.

TABLE 1: Common functions and activities of respondents	
NGO	LPHA
<ul style="list-style-type: none"> <li>■ Public education/outreach/advocacy</li> <li>■ Building/fostering partnerships/coalitions</li> <li>■ Accessing environmental health data</li> <li>■ Interpreting/analyzing environmental health data</li> <li>■ Environmental justice</li> </ul>	<ul style="list-style-type: none"> <li>■ Public education/outreach/advocacy</li> <li>■ Risk communication</li> <li>■ Program planning/development</li> <li>■ Building/fostering partnerships/coalitions</li> <li>■ Program evaluation</li> <li>■ Environmental hazard/exposure assessments</li> </ul>

## 5.B. Capacity Building and Training Issues Related to Environmental Health Tracking

### 5.B.1. What are areas of strong capacity and needs for training?

This needs assessment was designed to inform both short-term and long-term strategies to increase stakeholder capacity in environmental health issues. In order to better understand issues around organizational/workforce capacity, we ascertained respondents' priority focus areas and functions (see TABLE 2). We also asked respondents to identify the top three areas in which they had strong capacity and the top three priority areas for training (TABLE 3 and TABLE 4).

TABLE 2: Priority focus areas related to environmental health	
NGO	LPHA
<ol style="list-style-type: none"> <li>1. Public education/outreach/advocacy</li> <li>2. Building/fostering partnerships/coalitions</li> <li>3. Environmental justice</li> <li>4. Interpreting/analyzing environmental health data</li> <li>5. Studies to determine correlation between environmental hazards/exposures and health effects</li> </ol>	<ol style="list-style-type: none"> <li>1. Risk communication</li> <li>2. Public education/outreach/advocacy</li> <li>3. Building/fostering partnerships/coalitions</li> <li>4. Program planning/development</li> <li>5. Program evaluation</li> </ol>

TABLE 3: Areas of strong capacity	
<u>NGO</u>	<u>LPHA</u>
1. Public education/outreach/advocacy	1. Public education/outreach/advocacy
2. Building/fostering partnerships/coalitions	2. Risk communication
3. Environmental justice	3. Interpreting/analyzing environmental health data
4. Regulation/public policy development	4. Environmental hazard/exposure assessments
5. Interpreting/analyzing environmental health data	5. Program planning/development
6. Program planning/development	6. Regulation/public policy development

TABLE 4: Priority areas for training	
<u>NGO</u>	<u>LPHA</u>
1. Interpreting/analyzing environmental health data	1. Risk communication
2. Collecting environmental health data (primary data)	2. Public education/outreach/advocacy
3. Accessing data on environmental hazards/exposures	3. Environmental hazard/exposure assessments
4. GIS mapping and spatial statistics	4. Regulation/public policy development
5. Accessing data on environmentally related health effects	5. Building/fostering partnerships/coalitions
6. Biomonitoring	6. Program planning/development
7. Studies to determine correlation between environmental hazards/exposures and health effects	7. Studies to determine correlation between environmental hazards/exposures and health effects
8. Public education/outreach/advocacy	8. GIS mapping and spatial statistics

**5.B.2. What is being asked of respondents by the community?**

In an attempt to better understand strengths and limitations of respondents as well as to assess the needs of other stakeholders, we asked about the types of information or assistance that communities commonly sought from the respondents. Both NGOs and LPHAs were most likely to be asked for basic information on environmental health, data on environmental hazards/exposures or health effects, and assistance in utilizing data for action. NGOs were frequently asked for data on environmental hazards and/or exposures and LPHAs were frequently asked for data on health effects. Overall, NGOs more frequently reported being asked for information/assistance than the LPHAs.

TABLE 5: Groups frequently cited as requesting information or assistance related to environmental health
<ul style="list-style-type: none"> <li>■ General public/community members</li> <li>■ NGOs/CBOs/Advocacy groups</li> <li>■ Other public agencies</li> <li>■ Media</li> <li>■ Businesses (regulated community)</li> <li>■ Local Government/Commissions/Councils/Supervisors</li> </ul>

Respondents were also asked to self report their ability to meet external requests. For each of the categories, they were asked to state whether they are able to meet the request most of the times, sometimes, or rarely. Overall, respondents were most likely to be able provide basic information on environmental health and provide assistance in utilizing data for action. The weakest capacity appeared to be in meeting requests for assistance in collecting community data and conducting community-based research/studies.

TABLE 6: External requests for information/assistance	
<ul style="list-style-type: none"> <li>■ Frequently asked of NGO:               <ul style="list-style-type: none"> <li>● Basic information on environmental health</li> <li>● Data on environmentally related health effects</li> <li>● Assistance in utilizing data for action</li> <li>● Data on environmental hazards/exposures</li> </ul> </li> <li>■ NGO most able to provide:               <ul style="list-style-type: none"> <li>● Basic information on environmental health</li> <li>● Assistance in interpreting research findings/results</li> <li>● Assistance in finding/locating research studies/results</li> </ul> </li> <li>■ NGO least able to provide:               <ul style="list-style-type: none"> <li>● Assistance in conducting community-based research/studies</li> <li>● Assistance in collecting community data</li> <li>● Data on environmental hazards/exposures</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ Frequently asked of LPHA:               <ul style="list-style-type: none"> <li>● Basic information on environmental health</li> <li>● Data on environmental hazards/exposures</li> <li>● Assistance in utilizing data for action</li> <li>● Linguistically/culturally appropriate information and resources</li> </ul> </li> <li>■ LPHA most able to provide:               <ul style="list-style-type: none"> <li>● Basic information on environmental health</li> <li>● Assistance in utilizing data for action</li> <li>● Assistance in interpreting research findings/results</li> </ul> </li> <li>■ LPHA least able to provide:               <ul style="list-style-type: none"> <li>● Assistance in collecting community data</li> <li>● Assistance in conducting community-based research/studies</li> </ul> </li> </ul>

The NGO survey also asked about the types of requests that they made to public (state or local) agencies. They looked most often to public agencies for data on environmentally related health effects and data on environmental hazards/exposures. NGOs reported that public agencies were least able to assist in collecting community data, analyzing/interpreting data, and utilizing data for action. For complete summaries see APPENDIX E, TABLE E-3.

For each of the category of requests, LPHAs listed examples of who was asking for information/assistance. The general public/community members as well as non-governmental organizations were cited most frequently. Other groups cited as frequently requesting information/assistance were other public agencies and the media (see TABLE 5, right). For a complete list for each category see APPENDIX E, TABLE E-4.

## 5.C. Issues Related to Access, Utility, and Dissemination of Data/Information

### 5.C.1. How are respondents sharing information about environmental health?

Overall, many respondents utilized various methods for dissemination and outreach regarding environmental health information. Websites, fact sheets, and newspapers (and media in general) were most often cited as ways respondents disseminated information/data about hazards/exposures and health effects. Those three methods were also most often cited as effective ways to educate or outreach to target audiences (see TABLE 7, right). Although less commonly used by respondents as a means of dissemination and outreach, workshops and public meetings were cited as effective methods.

TABLE 7: Most effective ways to educate or outreach to target audiences
<ul style="list-style-type: none"> <li>■ Organization's website</li> <li>■ Newspaper</li> <li>■ Media in general</li> <li>■ Fact sheets</li> <li>■ Workshops</li> <li>■ Public meetings/hearings</li> </ul>

### 5.C.2. What audiences do NGOs target?

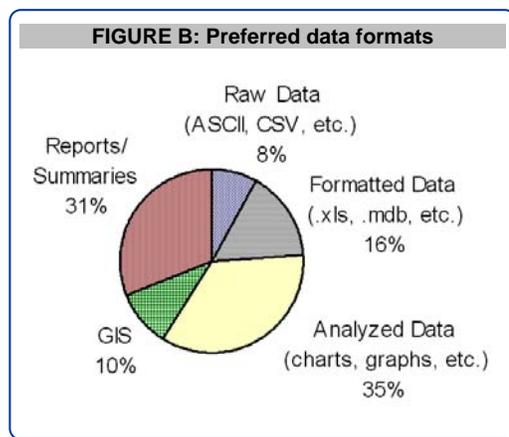
NGOs were given categories of target groups and asked whether each was a target audience. Respondents were also asked to list specific target audiences for certain broad categories. Listed in TABLE 8 are the categories of target audiences for NGOs and the number of times they were indicated. See on page for a complete table of responses, including examples for certain categories.

TABLE 8: Target audiences and partners for NGOs	
Target Audiences	Partners
1. At-Risk Groups	1. Researchers/Scientists
2. General Public	2. Environmental Justice Communities
3. Health Affected Populations	3. Foundations/Endowments
4. Legislators/Policy Makers	4. Health Care Professionals
5. Local public agencies	5. Legislators/Policy Makers
6. Regulators, Environmental	6. Non-Governmental Organizations
7. Media	7. Local public agencies
8. Environmental Justice Communities	8. State public agencies
	9. General Public

### 5.C.3. What data formats are being utilizing and what are the preferred data formats?

Overall, respondents indicated working with various forms of data including: data, such as ASCII or CSV, which has not been formatted for a specific application; data, such as .mdb, that has been formatted for specific applications like Microsoft Access; analyzed data such as charts; GIS Maps; and reports/summaries.

A majority of respondents indicated utilizing analyzed data and reports/summaries while fewer respondents indicated working with unanalyzed data sets. FIGURE B indicates, in proportions, the preferred data formats for respondents.



### 5.C.4. What data sources are respondents accessing and using?

Organizations were asked about which sources of data they accessed for health effects and environmental hazards/exposures. They were also asked to evaluate the accessibility and utility of the data sources on a scale. Among the most utilized health effects data were: locally generated data, the California Cancer Registry (CCR), and the California Health Interview Survey (CHIS). (See TABLE 9). Locally generated data, Vital Statistics data, and OSHPD's Patient Discharge data were rated among the most useful. Reported accessibility of the data sources varied considerably and could not readily be rated.

For environmental hazards/exposures data, *Scorecard* was the most accessed source of data. Other notable databases include: California Integrated Waste Management Board databases; GeoTracker (Groundwater Resources Information Database); National Toxics Inventory database; and Toxic Release Inventory. Again, accessibility and utility ratings varied considerably with the exception of *Scorecard* which respondents found very accessible and useful.

TABLE 9: Frequently utilized data sources	
<p><u>Health effects data sources:</u></p> <ul style="list-style-type: none"> <li>■ Local/Community generated source (e.g. community health surveys)</li> <li>■ California Health Interview Survey</li> <li>■ California Cancer Registry</li> <li>■ Vital Statistics</li> <li>■ Patient Discharge Database – California Office of Statewide Health Planning and Development (OSHPD)</li> </ul>	<p><u>Environmental hazards/exposures data sources:</u></p> <ul style="list-style-type: none"> <li>■ Scorecard.org – Environmental Defense</li> <li>■ Toxic Release Inventory – US EPA</li> <li>■ National Toxics Inventory database – US EPA</li> <li>■ Other federal data sources</li> <li>■ California Integrated Waste Management Board databases</li> <li>■ GeoTracker (Groundwater Resources Information Database)</li> </ul>

### 5.C.5. What are useful sources of data for NGOs and LPHAs?

The survey also asked respondents to list three exemplary (most useful, best quality, easiest to access, etc.) sources of data and why they were good sources of data. TABLE 10 lists some frequently cited sources as well as the respondents’ rationale. Both health effects and hazards/exposures data sources were cited by NGOs and LPHAs as exemplary data sources. There was little overlap among NGOs and LPHAs in terms of specific data sources. The Response and Surveillance System for Childhood Lead Exposure (RASSCLE) and the California Health Interview Survey (CHIS) were the only data sources cited multiple times by both target groups. NGOs listed *Scorecard* most often as one of best sources of data. The top three sources cited by LPHAs were health effects data sources: the Cancer Registries (including regional), vital statistics, and CHIS. The reasons why certain data sources were exemplary fell into two major categories: Easy to access/use and specific/relevant data.

**TABLE 10: Exemplary data sources (including frequency and rationale)**

Cited by NGOs	Cited by LPHAs
<ul style="list-style-type: none"> <li>■ Scorecard x12                             <ul style="list-style-type: none"> <li>● Easy to use; very user friendly; good visuals; easy to access; understandable by lay people; neighborhood/local level information; free; many kinds of data available; community specific data.</li> </ul> </li> <li>■ Behavioral Risk Factor Surveillance System (BRFSS) x3                             <ul style="list-style-type: none"> <li>● Quality; relevance to cancer; broken down by age groups.</li> </ul> </li> <li>■ Patient Discharge x3                             <ul style="list-style-type: none"> <li>● By zip code; technical assistance; gives an idea of what the needs are in the community.</li> </ul> </li> <li>■ Response and Surveillance System for Childhood Lead Exposure (RASSCLE) x3                             <ul style="list-style-type: none"> <li>● Number of cases and general locations; specific lead data by site; relevant to agency mission.</li> </ul> </li> <li>■ California Health Interview Survey (CHIS) x2                             <ul style="list-style-type: none"> <li>● Local; up-to-date.</li> </ul> </li> <li>■ HUD (US Department of Housing and Urban Development) E-Maps x2                             <ul style="list-style-type: none"> <li>● Easy to use for lay persons; good source for housing maps.</li> </ul> </li> <li>■ Toxic Release Inventory x2                             <ul style="list-style-type: none"> <li>● Gives state breakdowns.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ California Cancer Registry and 3 regional registries x8                             <ul style="list-style-type: none"> <li>● Thorough; easily available; good staff back-up; data specific to region; usually has the cooperation of the physicians and can be analyzed in several ways such as age, geographic, etc.; very complete; technical assistance; valid source of information on incidence and trends; annual.</li> </ul> </li> <li>■ Vital Statistics x7                             <ul style="list-style-type: none"> <li>● Annual; broken down by causes of death and by zip, city and age; consistent data; population based; readily available; local data.</li> </ul> </li> <li>■ California Health Interview Survey (CHIS) x5                             <ul style="list-style-type: none"> <li>● Free; easy to obtain; large variety of health topics; looks at attitudes and behaviors - information we don't have otherwise; county specific data; data can be compared with other counties.</li> </ul> </li> <li>■ California Integrated Waste Management Board (CIWMB) databases x4                             <ul style="list-style-type: none"> <li>● Centralized information; information pertinent to State regulations; up-to-date; well organized and maintained; comprehensive.</li> </ul> </li> <li>■ GeoTracker (Groundwater Resources Information Database) x3                             <ul style="list-style-type: none"> <li>● Computer friendly; source of information on contaminated sites/locations; up-to-date.</li> </ul> </li> <li>■ Pesticide Use Report database x2                             <ul style="list-style-type: none"> <li>● Information on chemicals being used statewide; lists pesticides used, amounts, and effects.</li> </ul> </li> <li>■ Response and Surveillance System for Childhood Lead Exposure (RASSCLE) x2                             <ul style="list-style-type: none"> <li>● Local assessment of lead exposure; provides distribution of lead levels; demographic data including age.</li> </ul> </li> </ul>

**5.C.6. What would improve the usefulness of data?**

We asked for comments on how to improve the usefulness of data that are utilized by respondents. Sample responses, grouped into emergent themes, are listed in TABLE 11. In short, respondents need quality (specific, valid, reliable, representative, etc.) data; information about where and what the data sources are; and easier access to the data (transportability, free, navigation, etc.).

**TABLE 11: How to improve usefulness of data**

<ul style="list-style-type: none"> <li>■ Data Accessibility           <ul style="list-style-type: none"> <li>● Easier navigation on websites.</li> <li>● Need knowledge of where data and websites are. More people should know they exist and are available.</li> <li>● Technical assistance related to data access.</li> <li>● Some data cost money to access. This is very prohibitive for community based organizations.</li> <li>● Easier to find and read. More information about how to access data.</li> <li>● Centralize access point. Provide directory of content and train in application.</li> <li>● Transportability between different file types.</li> <li>● Data with fixed-width fields makes it extremely difficult for non-experts to deal with.</li> <li>● State should network their data together and their external links.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ Data Quality           <ul style="list-style-type: none"> <li>● Improve geographic scale of data: need data by zip code or census tract or some other small area.</li> <li>● Timely and up-to-date: not less than two years old.</li> <li>● All sources should make it easier to do small area analysis and compile statewide information and local "hotspots" or geographic abnormalities.</li> <li>● Need to address severe validity and reliability problems.</li> <li>● Better data by race/ethnicity, not just for major population groups.</li> <li>● Larger samples in surveys.</li> </ul> </li> </ul>
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## 5.D. Issues Related to Utilizing Environmental Health Data for Public Health Actions

### 5.D.1. How are respondents using environmental health data?

Respondents were asked to describe the type of initiatives/activities in which they engaged using environmental health data. The responses were categorized into five broad categories. See TABLE 12 for a sample of responses for each of the categories.

**TABLE 12: Examples of activities utilizing environmental health data**

<ul style="list-style-type: none"> <li>■ Programs/Initiatives:           <ul style="list-style-type: none"> <li>● Childhood lead prevention</li> <li>● Safer Homes for a Healthy Community - prevent lead poisoning, asthma, and home hazards</li> <li>● Environmental Justice</li> </ul> </li> <li>■ Assessment/Research           <ul style="list-style-type: none"> <li>● Drinking water and groundwater contamination assessment</li> <li>● Housing, land contamination, arsenic, and lead study</li> <li>● Farm worker Survey by Farm worker Safety Initiative</li> <li>● Reports: Fields of Poison: California Farm workers and Pesticides (1999 and 2002) and Secondhand Pesticides</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ Outreach and Education           <ul style="list-style-type: none"> <li>● Physician outreach.</li> <li>● Community Asthma and clean air forums.</li> <li>● Outreach events at farmer's markets, community meetings, etc.</li> </ul> </li> <li>■ Policy development           <ul style="list-style-type: none"> <li>● Precautionary Principle advocacy, policy development, and implementation</li> </ul> </li> <li>■ Advocacy           <ul style="list-style-type: none"> <li>● Advocacy on diesel exhaust and pesticides.</li> <li>● Advocate for renewable energy policies using air pollution and asthma data.</li> </ul> </li> </ul>
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### 5.D.2. What factors impact respondents' ability to take action using environmental health data?

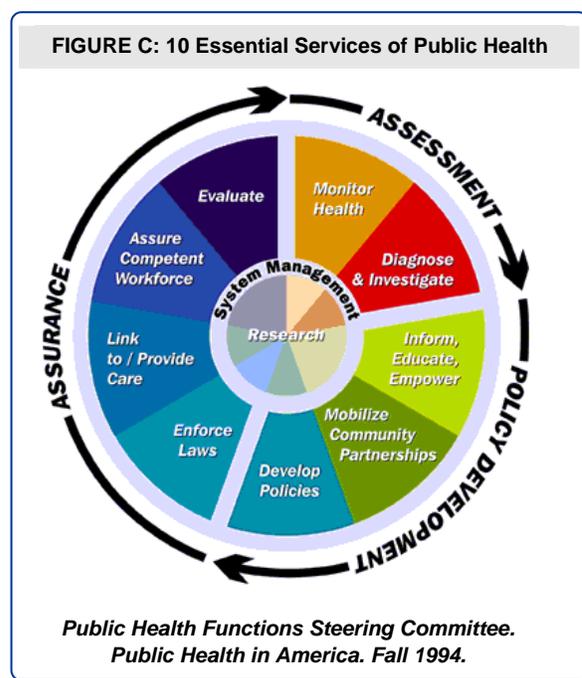
We asked respondents to comment on factors for utilizing data for public health action. Five major categories of factors emerged. A list of the categories and examples under each category is included in TABLE 13. See TABLE 28 on page 1 for a complete list of responses.

TABLE 13: Factors for utilizing environmental health data for action	
<ul style="list-style-type: none"> <li>■ Quality of data                             <ul style="list-style-type: none"> <li>● Need data at the zip code or city levels (data specific to particular communities).</li> <li>● Validity of data.</li> <li>● Data needs to be continually updated.</li> </ul> </li> <li>■ Availability of and access to data                             <ul style="list-style-type: none"> <li>● Need a single database with one search engine.</li> <li>● More knowledge about the type of data being collected and how to access the data.</li> <li>● Knowing what the data sources are and learning how they could be useful.</li> <li>● The development of a database that can integrate environmental health data with other departmental information (census tract info, location of residence, STDs, WIC, prenatal info., health insurance status, health care utilization, etc.).</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ Resource/Capacity/Infrastructure                             <ul style="list-style-type: none"> <li>● Lack of time, personnel, skills, and money.</li> <li>● Funding. GIS capacity. Hardware and software infrastructure. Staffing.</li> </ul> </li> <li>■ Understanding and Interpreting data                             <ul style="list-style-type: none"> <li>● Need laymen summaries of the data.</li> <li>● Difficulties in interpretation.</li> <li>● Ability to present data in a manner that would impact the outcome of agency decisions.</li> </ul> </li> <li>■ Other                             <ul style="list-style-type: none"> <li>● Lack of information on the links between health and environmental pollution</li> <li>● Lack of scientific studies showing human health effects of low levels of chemical exposure.</li> <li>● Easy ways to compare geographic areas.</li> <li>● Bilingual information must be made available.</li> </ul> </li> </ul>

### 5.D.3. What would Environmental Health Tracking enable respondents to do?

Respondents were asked what Environmental Health Tracking would enable for their organization/agency. They were asked to comment on how information from Environmental Health Tracking would enhance existing or enable new activities/initiatives. This open-ended question received the most significant (both in quantity and range) responses. The breadth of responses speaks to the potential of an EHTS for respondents. The responses also indicate that respondents have various uses for environmental health data and confirm our belief that NGOs and LPHAs are key partners in Environmental Health Tracking.

We have attempted to categorize the respondent comments into the 10 Essential Services of Public Health (FIGURE C). Many of the responses fall into multiple categories; however, each response was assigned to one primary category. TABLE 14 includes selected comments regarding what Environmental Health Tracking would enable for participants.



**TABLE 14: How environmental health tracking information would enhance activities/initiatives**

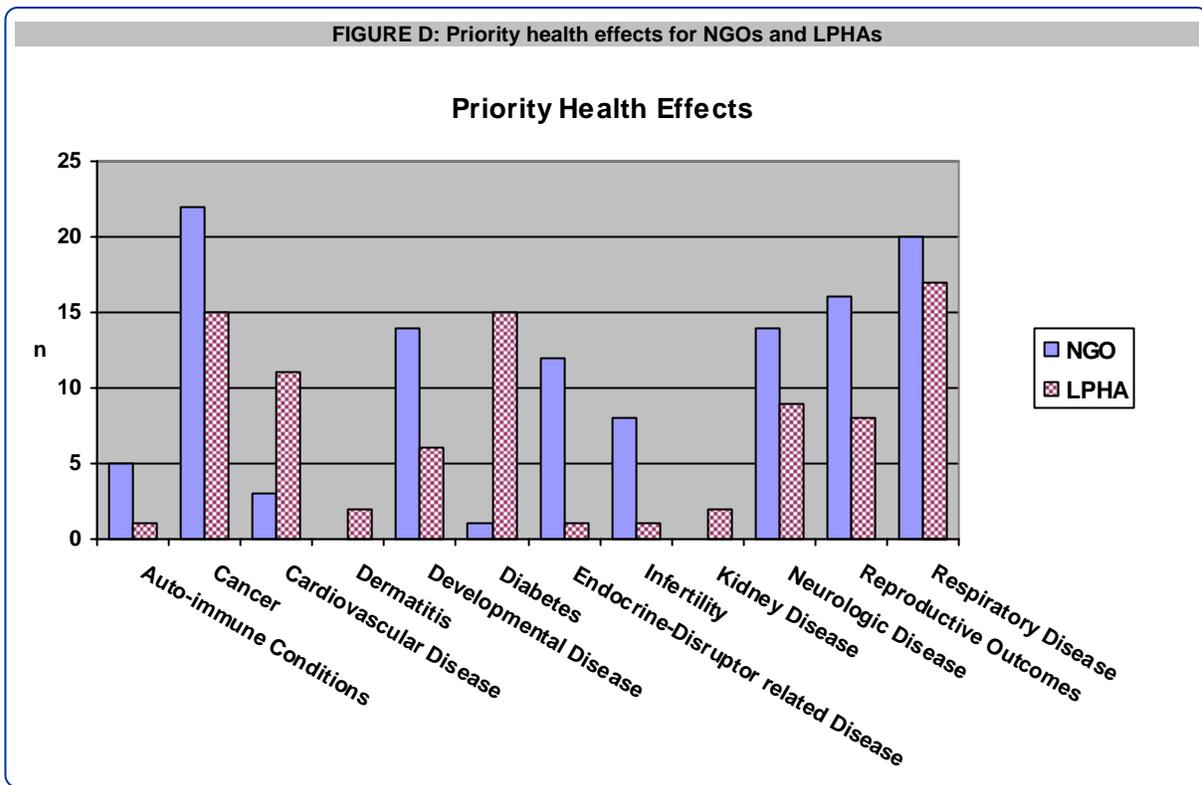
- Monitor health status to identify community health problems
  - Obtain more data pertinent to locality/jurisdiction.
  - Make source data collection more routine.
  - Identification of trends.
- Diagnose and investigate health problems and health hazards in the community
  - Track changes or improvements in air quality, especially toxics, and changes in the health status of residents.
  - Make correlations between pesticide use and public health; better understand connection between agricultural chemical use and water quality.
  - Improve understanding of the relationship between exposures/hazards and health effects.
- Inform, educate, and empower people about health issues
  - Share information with asthma groups, promote program activities, raise awareness, and influence policymakers.
  - Better educate the public and change conversation about breast cancer with an emphasis on true prevention.
  - Educate public about relationship between environmental hazards and lung disease.
  - Educate families and clinical professionals as to exposure risks for prevention and knowledgeable decision-making.
- Mobilize community partnerships to identify and solve health problems
  - Share data with community and use it to bring about positive change in their communities. Use data for policy and advocacy.
  - Make data available and accessible to CBOs, labor orgs, faith based orgs, and others that request data and use it in their campaigns.
  - Encourage local and city reps to be more active participants in creating policy and actions that would protect our community's health.
- Develop policies and plans
  - Advocate for changes in land use policies locally.
  - Work with Legislators on specific, targeted policy reforms. Influence public policy more effectively. Ultimately help the department make more informed decisions when it comes to policy making.
  - Better target leverage points in the water policy arena that would guarantee environmental justice communities safe, clean, and accessible water.
  - Improve the competitiveness of grant applications by improving the access to data.
- Enforce laws and regulations that protect health and ensure safety
  - Implement environmental justice policies in communities.
  - Enforcement of healthy homes, public facilities. Reduce environmental hazards. More effective in influencing policies and legislation.
- Link people to needed personal health services and assure the provision of health care when otherwise unavailable
  - Establish a rural health, home health and environment testing for asthma patients. Identify migrant farm workers and their children and stop all ER visits for a very preventable disease.
- Evaluate effectiveness, accessibility, and quality services
  - Give clearer direction of program effectiveness.
  - Assist in prioritizing issues, workload, and staffing.
  - Develop more effective program interventions. Improve decision-making and guide program planning efforts.
- Research for new insights and innovative solutions to health problems
  - Correlate Asthma symptoms with agricultural and chemical use. Correlate school absenteeism (asthma) with air quality issues.
  - Be able to make better connections between health outcomes and upstream behaviors/activities/policies.
  - Better demonstrate the link between environment and health.
  - Better understand which chemicals or exposures to target (those with greatest health threat) and focus policy efforts on decreasing those exposures.

## 5.E. Health Effects and Environmental Hazards/Exposures of Concern

### 5.E.1. What are the priority health effects?

Respondents were given categories of health effects identified by the California Senate Bill 702 (Escutia) Expert Working Group on Environmental Health Surveillance and asked to indicate, for each category, whether it was a

priority (FIGURE D). They were also asked to list three priority health effects (TABLE 15). Overall, cancer and respiratory diseases were frequently cited as priorities by both NGOs and Local Health Departments. Those health effects were also most frequently cited as one of the top three priorities. Reproductive outcomes, neurologic diseases, and developmental diseases were also high priorities for NGOs; and Diabetes and Cardiovascular disease were high priorities for Local Health Departments.



Major differences in priorities were cardiovascular disease and diabetes which were much more of a priority for Local Health Departments; and developmental diseases, endocrine-disruptor related diseases, and infertility which were more of a priority for NGOs.

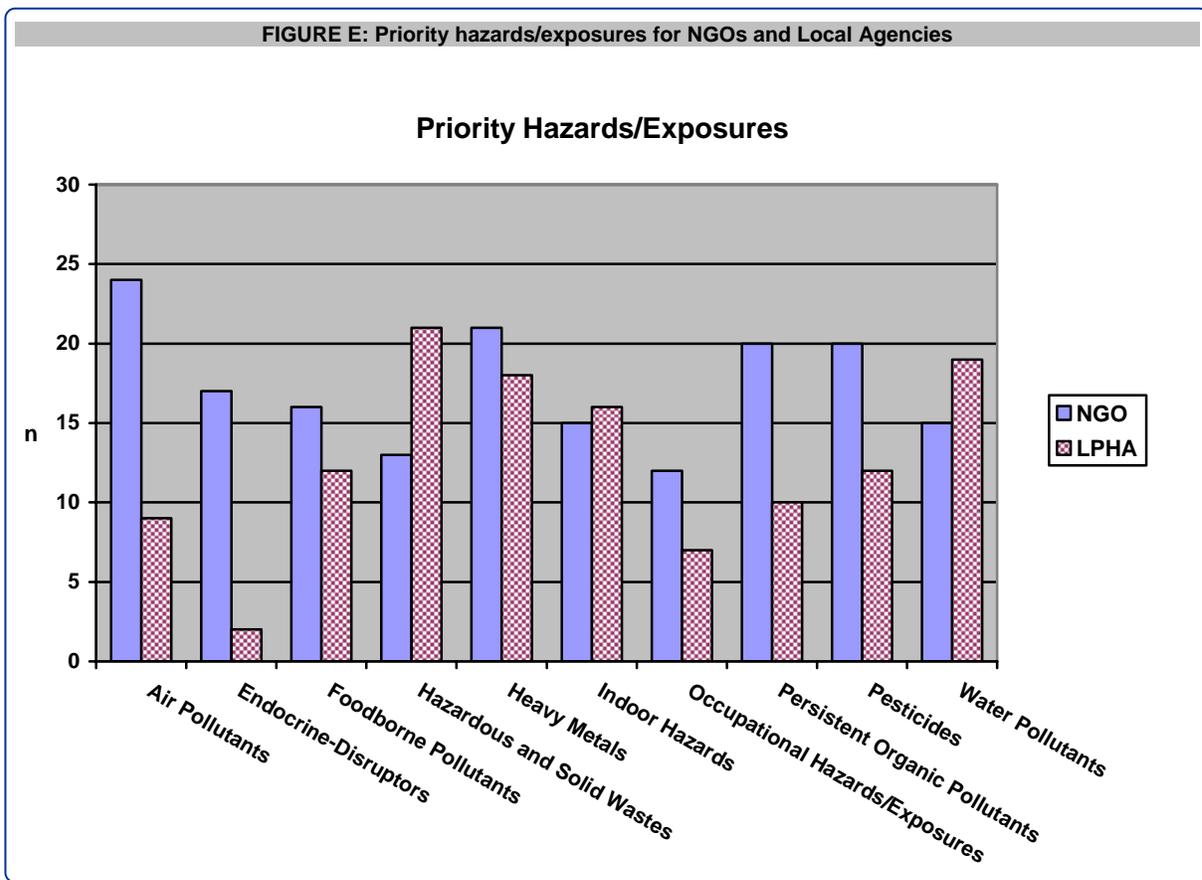
Not surprisingly, respondents most often access data pertinent to their priority health effects. Local Health Departments were more likely to be engaged in collecting health effects data than NGOs. Very few NGOs were involved in collecting health effects data (with the exception of respiratory disease data). Neither NGOs nor LPHAs were involved in collecting data on auto-immune conditions, endocrine-disruptor related diseases, or infertility.

**TABLE 15: Priority health effects**

<u>Frequently listed as one of the top three priorities by NGOs</u>	<u>Frequently listed as one of the top three priorities by LPHAs</u>
■ Respiratory disease <b>x18</b>	■ Respiratory disease <b>x13</b>
■ Cancer <b>x14</b>	■ Cancer <b>x13</b>
■ Reproductive outcomes <b>x10</b>	■ Diabetes <b>x9</b>
■ Developmental disease <b>x8</b>	■ Cardiovascular disease <b>x5</b>
■ Neurologic disease <b>x7</b>	

### 5.E.2. What are the priority environmental hazards/exposures?

Again, respondents were asked to indicate, for each category of environmental hazards/exposures, whether it was a priority (FIGURE E); and asked to list three priority categories (TABLE 16). Heavy metals were commonly cited as priorities by both NGOs and LPHAs. Other common priorities were foodborne pollutants, indoor hazards, and water pollutants. According to the list of top three priorities; however, the common priorities were indoor hazards and pesticides. The major differences were endocrine disruptors, air pollutants, persistent organic pollutants, and pesticides which NGOs often identified as priorities and hazardous and solid waste which LPHAs often identified as priorities.



**TABLE 16: Priority hazards/exposures**

Frequently listed as one of the top three priorities by NGOs	Frequently listed as one of the top three priorities by LPHAs
<ul style="list-style-type: none"> <li>■ Air pollutants x14</li> <li>■ Pesticides x13</li> <li>■ Indoor hazards x11</li> <li>■ Persistent Organic Pollutants (POPs) x9</li> <li>■ Heavy metals x8</li> </ul>	<ul style="list-style-type: none"> <li>■ Water pollutants x16</li> <li>■ Hazardous &amp; solid waste x14</li> <li>■ Indoor hazards x10</li> <li>■ Foodborne pollutants x8</li> <li>■ Pesticides x7</li> </ul>

Overall, respondents reported accessing data regarding hazards/exposures more than they do for health effects. Once again, the type of data accessed was related to whether it was a priority hazard/exposure. NGOs more often engaged in collecting hazards/exposures data than health effects data; however, LPHAs were still more often collectors of data.

## 5.F. Issues Related to Collecting, Accessing, Analyzing, and Reporting Data<sup>4</sup>

### 5.F.1. What factors impact respondents' ability to access data?

As evident from responses regarding priority health effects and environmental hazards/exposures, many NGOs and LPHAs were involved in accessing data. Because accessing data is a vital step that precedes using data for action, it was important that we ascertain factors that may enable or hinder respondents' access to data. Responses ranged from broad issues such as limited resources to specific issues such as ability to query hospital discharge data by ICD code. TABLE 17 includes select comments (grouped into four major themes) on enabling and hindering factors for accessing data.

TABLE 17: Factors that affect ACCESSING data	
<ul style="list-style-type: none"> <li>■ Resource/Capacity/Infrastructure               <ul style="list-style-type: none"> <li>● Lack of time, personnel, skills, and funding.</li> </ul> </li> <li>■ Awareness/knowledge of data and data sources               <ul style="list-style-type: none"> <li>● Not knowing all the data sources that are out there.</li> <li>● Awareness of existing data.</li> <li>● Knowing what the data sources are and learning how they could be useful.</li> <li>● Need a directory of resources.</li> <li>● Experience level and familiarity with the various data sources.</li> </ul> </li> <li>■ Quality and format of data               <ul style="list-style-type: none"> <li>● Need to put more raw data online.</li> <li>● Updated information in report format.</li> <li>● Need access to variety of readily accessible formats (Excel, tab-delimited text, etc.).</li> <li>● Need laymen summaries of the data.</li> <li>● Easy ways to compare geographic areas.</li> <li>● Need data in different formats (web, files, reports)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ Processes/procedures related to accessing data               <ul style="list-style-type: none"> <li>● More robust query functions: for example, hospital discharge data by zip code, age, and by ICD instead of just by hospital.</li> <li>● Make data sets available on the web in a variety of readily accessible formats.</li> <li>● Need a single database with one search engine.</li> <li>● On-line access and user friendly.</li> <li>● Cost; long process to access data.</li> <li>● Site navigations issues.</li> <li>● Need a central website that link to all federal and state and university databases.</li> <li>● Compilation of various databases in one convenient physical location and on one website.</li> <li>● Some data is deemed private because it involves personal identifiers; however, we only need broad data so that it doesn't impact a person's rights.</li> </ul> </li> </ul>

<sup>4</sup> For questions regarding enabling and hindering factors, respondents were asked to consider and address various perspectives and categories of internal and external factors such as technology, infrastructure, skills, policy, regulations, behaviors/practices, perceptions, etc.

### 5.F.2. What factors impact respondents' ability to collect data?

Data collection is a foundation of any surveillance program, including Environmental Health Tracking. Traditionally, public agencies have been at the forefront of collecting data that are used for public health activities; however, NGOs are increasingly involved in collecting information about environmental and health status of communities. Data generated at the local level could be valuable in Environmental Health Tracking.

It was important that we get a glimpse into the types of data collected as well as factors related to data collection. Responses indicate that data collection is a more resources intensive and complex/specialized function than accessing existing data. Those issues, along with the fact that data collection is often driven by regulation and mandates, contributes to how, why, and what types of data are collected. Select comments on enabling and hindering factors for collecting data are listed in TABLE 18.

TABLE 18: Factors that affect COLLECTING data	
<ul style="list-style-type: none"> <li>■ Resource/Capacity/Infrastructure               <ul style="list-style-type: none"> <li>● Funding for staff and consultation</li> <li>● Resource limitations.</li> <li>● Lack of time, money, infrastructure, capacity, expertise, skills, etc.</li> <li>● Unsuitable hardware and software for field work inspectors. Need handheld computers.</li> <li>● Laboratory facilities.</li> </ul> </li> <li>■ Agency scope/function/priority               <ul style="list-style-type: none"> <li>● The priority involves collecting data to meet reporting requirements.</li> <li>● Generally not a part of our daily work and therefore not prioritized for action.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● Most data collection is mandated.</li> <li>● Statutory and regulatory mandates.</li> <li>■ Processes/procedures related to collecting data               <ul style="list-style-type: none"> <li>● Methodological challenges in collecting environmental data. Need to include biomonitoring into community-based participatory projects.</li> <li>● Excessive paperwork.</li> <li>● Getting communities to trust us.</li> <li>● Lack of coordination of databases. State agency requests for data in different formats.</li> <li>● Need more help designing protocols for using and validating results of simpler sampling devices.</li> <li>● Engaging researchers to help collect data.</li> </ul> </li> </ul>

### 5.F.3. What factors impact respondents' ability to analyze/interpret data?

Depending on the user, the type of data, and the data source, it may be necessary to analyze and/or interpret the data in order to utilize it for actions. Because there is a wide range of data formats available and various reasons and needs for using data, it was important to discover any issues surrounding data analysis and interpretation.

Similar to data collection, data analysis appeared to be comparatively more resources intensive and complex/specialized. Major factors related to data analysis revolved around expertise/competency and resource issues. Another major factor related to analyzing data is being able to first obtain/access the data. Select comments, categorized by common themes, on factors for analyzing/interpreting data are included in TABLE 19.

**TABLE 19: Factors that affect ANALYZING/INTERPRETING data**

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>■ Expertise/Competency/Technical Assistance           <ul style="list-style-type: none"> <li>● Having access to an expert who could help translate the data into a user-friendly format.</li> <li>● Time and expertise. Need for experts in GIS, SPSS, etc. Need workshops and trainings. Access to scientific interpreter, doctors, nurses.</li> <li>● Sometimes, the information is too technical. Need access to experts.</li> <li>● The reliance on third party interpretation. Funding. Health tracking program must have staff that are willing to work with NGOs on interpreting data.</li> <li>● Workshop for those interested in the particular data you plan to collect. There are always idiosyncrasies of data sets that are important to understand before you can draw conclusions from them.</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>■ Data Access (acquiring data)           <ul style="list-style-type: none"> <li>● Not knowing which databases to access. Not knowing how to quickly find relevant information.</li> <li>● Getting the data is more of a challenge because we are good at finding people who can analyze data.</li> <li>● Lack of state and federal networked information. Lack of summarized information.</li> </ul> </li> <li>■ Quality and format of data           <ul style="list-style-type: none"> <li>● Lack of clear statements about limitations and assumptions. Out-of-date information. Data validity and reliability problems.</li> </ul> </li> <li>■ Resource/Capacity/Infrastructure           <ul style="list-style-type: none"> <li>● Lack of staff capacity and access to data.</li> <li>● Staff time and capacity.</li> <li>● Time and priorities.</li> </ul> </li> </ul> |
|---|---|

#### 5.F.4. What factors impact respondents' ability to report data?

It is essential that we learn about issue related to reporting data for several reasons: (1) a future Environmental Health Tracking Network may integrate and utilize data generated at the local level; (2) statewide databases and registries that may be utilized by an Environmental Health Tracking Network often contain data reported by LPHAs. Below are select comments on factors for reporting data.

**TABLE 20: Factors that affect REPORTING data**

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>■ Processes/procedures related to reporting data           <ul style="list-style-type: none"> <li>● Maze of local, state and federal agencies and different reporting criteria.</li> <li>● Need consistency in state's data formats. State needs to adopt xml formats.</li> <li>● Interface problems with Envision/GeoTracker.</li> <li>● We report data when it is required by state or federal agencies.</li> <li>● Timely submission of data from approved sources and chain of custody issues.</li> <li>● Lack of effective interagency database interface and difficulties with data extraction.</li> <li>● Compliance from community reporters.</li> <li>● There are too many diverse organizations to report to. Environmental Health is fragmented at the state level.</li> <li>● Many other agencies are unable to receive data that is electronically reported. Health and regulatory agencies' ability to accept electronic data.</li> <li>● Easy-to-use reporting forms that captured existing or new data would facilitate reporting.</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>■ Resource/Capacity/Infrastructure           <ul style="list-style-type: none"> <li>● Lack of technology.</li> <li>● Lack of resources.</li> <li>● Lack of human resources</li> <li>● Staff, skills, time, money.</li> <li>● Infrastructure, GIS technology, lack of human resources.</li> <li>● Resources needed for data input.</li> <li>● We prioritize mandated responsibilities (e.g. regulatory) before all others.</li> </ul> </li> </ul> |
|--|---|

## 5.G. Other Comments and Concerns

### 5.G.1. What are other/general comments and concerns regarding Tracking?

Many of the general comments reinforced some of the former findings while others were related issues that were not covered specifically in the survey questionnaire. Below are select general/other comments.

**TABLE 21: General comments and concerns**

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>■ Importance of Environmental Health Tracking           <ul style="list-style-type: none"> <li>● An EHTS would improve the transfer and accessibility of information from database to point-of-use.</li> <li>● Data on risk and exposure, which is at this time difficult to track and retrieve in a timely and user-friendly manner, would support environmental health policy decisions.</li> <li>● Integrating existing and new databases could be valuable.</li> <li>● In general, health tracking is immensely important.</li> <li>● Encouragement over opportunities for local communities to utilize larger data sources.</li> </ul> </li> <li>■ Role of Agency in Environmental Health Tracking           <ul style="list-style-type: none"> <li>● Collecting and providing chemical data.</li> <li>● Responding to the data produced by Environmental Health Tracking.</li> <li>● Prevent panic and hysteria and give a true risk analysis to the community, with suggestions for action.</li> <li>● Implement preventive and ameliorative activities and education in the County.</li> <li>● Limited/minimal role.</li> <li>● As a rural environmental health agency, our primary mandate is to enforce existing laws and regulations. We have no role with respect to air quality or pesticide use, which are assigned to other agencies. Hence our need for environmental health tracking data is quite limited.</li> <li>● At the present time, we use external data primarily to meeting reporting requirements. Additional data uses (e.g. planning, forecasting, relating hazard exposure to health effects) would probably require collaborations with other agencies or universities and/or additional funding for specific positions responsible for collecting, analyzing, and interpreting environmental health data.</li> <li>● Classic biological epidemiology is equally, if not more, than the environmental epidemiology. Our critical role is in food borne disease outbreak, waterborne diseases, and vector borne diseases.</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>■ Concerns about Environmental Health Tracking           <ul style="list-style-type: none"> <li>● We're still not fully aware of all information EHT would provide. What information would be collected for this system and how fast would it be available?</li> <li>● Environmental analysis being released without any health effects put into the context of exposure (dose), long and short term effects, and correlations with populations with similar histories of exposure.</li> <li>● We hope that it is scientifically accurate and not just a vehicle for advocacy and hidden agendas.</li> <li>● Concern that Environmental Health Tracking will require and use scarce local resources without a corresponding benefit at the local level.</li> <li>● Concerns about available funding at the State and local level to achieve the stated goals of Environmental Health Tracking.</li> <li>● Data may be used/misinterpreted out of context.</li> <li>● Privacy/Confidentiality issues.</li> <li>● Concerns of lawsuits and blame that will impede collecting further data.</li> <li>● Political ramifications, primarily from business community.</li> </ul> </li> <li>■ Comments Related to the Survey Questionnaire           <ul style="list-style-type: none"> <li>● The survey is long and very specific. There are many barriers to finding and using data not addressed here.</li> <li>● Most of the questions were directed to scientific based organizations which made it difficult for CBOs to answer.</li> <li>● Although the information requested in the survey is important, the survey was too long and time consuming. Interest in Phase 2 of the needs assessment will depend upon whether time and resources to participate.</li> <li>● This type of survey is not particularly germane to a small health department in a county of 3000+.</li> </ul> </li> <li>■ Considerations in Designing and Implementing an EHTS           <ul style="list-style-type: none"> <li>● Uniform data format statewide is essential.</li> <li>● If information is to truly serve the community, then it must be made available in a format that is easily understood by the lay person. To keep information in data only available for interpretation by the epidemiological community make conversion to public policy all but impossible.</li> <li>● Please help lay people and policy makers understand what information is contained in each database and make sure that each is available to have information available for extraction in a meaningful way that will not require third party interpretation.</li> </ul> </li> </ul> |
|--|---|

## 6. Limitations/Caveats

This phase of the needs assessment yielded responses from a limited sample of LPHAs (local health and environmental health agencies) and NGOs across California. Responses from LPHAs represent less than half of all the Counties/Cities; however, represent 75% of California's population<sup>5</sup>. The largest gap in responses was in Northern California and the Central Valley.

NGOs were selected in a non-random manner through existing contacts as well as through referrals. The 29 NGO respondents, while diverse in size, mission and jurisdiction, make up a small percentage of the NGOs in California that are stakeholders in Environmental Health Tracking. Especially underrepresented were organizations whose main focus is minority/ethnic group issues. It should be noted; however, that many of the respondents indicated that they targeted (outreached to) minority, underrepresented, and specific ethnic groups.

Due to the length and comprehensiveness of the surveys and the complexities surrounding Environmental Health Tracking, we speculate that there were gaps and missed opportunities to hear from a wider group of stakeholders. This resulted in the insufficiency of data for quantitative themes such as priority health effects and environmental hazards/exposures, where we could not derive definitive priorities representative of the state. Possible activities to address these gaps include targeted assessments of NGOs whose primary scope/mission may not be environmental health and smaller CBOs with limited capacity/functions and other entities that provide data related services/consulting (e.g. [DataCenter](#) in Oakland). Likewise, we plan to seek targeted information from a broader group of target audiences via shorter and more manageable survey questionnaires.

Given the qualitative nature of much of the data, detailed analyses and comparisons was a challenge. We are continuing to make comparisons (stratify) for LPHA and NGO responses and should have better cross-analysis findings by the final draft.

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<sup>5</sup> State of California, Department of Finance, E-1 City/County Population Estimates, with Annual Percent Change, January 1, 2002 and 2003. Sacramento, California, May 2003.

## 7. Conclusion/Discussion

Phase 1 of the needs assessment yielded valuable information that will be used to facilitate the development of a strategic plan for an Environmental Health Tracking Network in California as well as to inform the development of outreach and training strategies. For example, findings related to data access, utility, and dissemination will inform the CEHTP Technical Team which is charged with developing technical specifications for an Environmental Health Tracking Network. More immediately, the survey results serve as a springboard for determining other information needs and developing respective strategies.

Based on Phase 1 findings, we will continue developing strategies for other components of the statewide needs assessment, including Phase 2 and the Tribal needs assessment (both planned for May-June 2004). Phase 2 of the needs assessment will involve in-depth interviews/focus groups with a sample of respondents and will provide an opportunity to follow up on and better understand the information gathered in Phase 1 and obtain more specific and detailed information.

We captured both quantitative and qualitative information; each useful in its own way. Furthermore, we captured both recognized needs (people are aware of the needs) such as limitations in resources and latent needs (people are not aware of the needs) such as unawareness of many existing environmental health data sources. Understanding latent needs was important for this assessment because environmental health tracking is in its planning stages and is a fairly new concept.

Overall, the results demonstrate the need to further engage stakeholders via outreach/education and training as there is tremendous potential for and interest in utilizing Environmental Health Tracking information. We found that NGOs and LPHAs play pivotal roles in identifying and addressing public health problems for their constituencies or jurisdictions. Also, NGOs and LPHAs are often the conduit of information to the public and can better mobilize the public for action. They also are integral to an Environmental Health Tracking Network because they usually have more latitude in the types of actions they can take using environmental health data; have a better audience with policy makers and other groups that can effectively utilize information generated by Environmental Health Tracking; and can address needs specific to communities or issues. Both LPHAs and NGOs are engaged in a breadth of activities that are critical for Environmental Health Tracking and they appear well poised to utilize information generated by an Environmental Health Tracking Network, especially communicating information to various audiences. In order to facilitate these actions; however, key concerns regarding data quality and accessibility must be considered in designing an Environmental Health Tracking Network.

Findings also indicate that the NGOs and LPHAs may contribute to an Environmental Health Tracking Network via other functions such as collecting and analyzing data. In order for stakeholders to participate in other aspects of Environmental Health Tracking, we must address issues related to their ability to collect, analyze and report data. Resource limitations are much more of a barrier for many aspects compared to accessing and using data; however, it is important to begin addressing key issues through targeted outreach, education and training/capacity building.

In developing outreach/education and training strategies, we must be aware of and responsive to the needs of the various target groups. To that end, we have begun to identify similarities and differences in the needs, concerns, and issues among the groups. Although further analysis will be performed in the future, below are a few evident areas.

Findings point to many similarities between NGOs, local health agencies, and local environmental health agencies. Examples include:

- They more frequently utilize analyzed/summarized data as opposed to unanalyzed data.
- Utility of data sources depend on accessibility, quality and specificity of data.
- Each target group is engaged in a variety of activities utilizing environmental health data.
- All are faced with limitations in resources, capacity, and infrastructure.

There were also key differences for each of the target groups:

- NGOs are more frequently asked to provide, by the community, data on environmental hazards/exposures while LPHAs are more frequently asked to provide data on health effects.
- NGOs utilize data much more for advocacy.
- The perceived role in Environmental Health Tracking was least articulated by local environmental health agencies – they activities/initiatives are driven much more by regulations and mandates.
- LPHAs are generally more involved in data collection and reporting.
- LPHAs had many more concerns about Environmental Health Tracking such as misuse and misinterpretation of data.

The survey results are a good starting point for understanding the priority health effects and environmental hazards/exposures; however, they did not yield definitive priorities representative of the state. More information about the priorities should be sought through targeted methods and secondary data sources. Priorities listed in this report should not be inferred to be priorities that we are recommending program activities or an Environmental Health Tracking Network in California. Priorities in this report are meant to provide a preliminary understanding for informing other endeavors which will eventually enable us to make informed decisions and recommendations.

Although the findings are by no means exhaustive, results clearly illustrate the need to engage in intermediate outreach and education activities prior to completing the overall needs assessment. Preliminary findings have already informed on-going outreach activities. For example, one of the key findings of Phase 1 is the unawareness of many of the existing health and environmental data sources. This prompted us to provide a list of data sources and accompanying web addresses (URLs) in an issue of the CEHTP Newsletter. Phase 1 findings will also inform other Environmental Health Tracking initiatives such as the UC Berkeley Center for Environmental Public Health Tracking Program’s environmental justice training project. In addition to employing Phase 1 results to inform Phase 2 and the Tribal component of the needs assessment, we recommend widely disseminating the final Phase 1 report (to the CEHTP Planning Consortium, other program partners and stakeholders); assembling a workgroup to begin addressing outreach/education and training issues; and comparing compare Phase 1 findings with findings from other relevant secondary data sources.

## 8. Appendices

### 8.A. APPENDIX A: Survey Respondents

Non-Governmental Organizations	Geographic Scope of Services
1. American Cancer Society, California Division	National with California Focus
2. American Lung Association of Central California	Multiple Counties: Merced, Mariposa, Madera, Fresno, Tulare, Kings
3. American Lung Association of San Diego and Imperial Counties	Multiple Counties: San Diego and Imperial County
4. Breast Cancer Action	National with California Focus
5. Breast Cancer Fund	National with California Focus
6. California Communities Against Toxics	California
7. California Environmental Rights Alliance	California
8. Center for Environmental Health	California
9. Clean Water Action and Clean Water Fund	National with California Focus
10. Commonweal	National with California Focus
11. Environment California	California
12. Environmental Center of San Luis Obispo	County: San Luis Obispo
13. Environmental Health Coalition	County: San Diego/Tijuana
14. Environmental Justice Coalition for Water	California
15. Families for Early Autism Treatment	National with California Focus
16. Healthy Children Organizing Project	County: San Francisco
17. Healthy Homes Collaborative	County: Los Angeles
18. Legal Aid Foundation of Los Angeles	County: Los Angeles
19. Marin Breast Cancer Watch	County: Marin
20. Marin Cancer Project	County: Marin
21. Merced/Mariposa County Asthma Coalition	Multiple Counties: Merced, Mariposa
22. Natural Resources Defense Council	National
23. Pacific Institute	International with some local emphasis (West Oakland)
24. Pacoima Beautiful	City: Pacoima
25. Pesticide Action Network	International, National, and California
26. Regional Asthma Management and Prevention Initiative	Multiple Counties : 6 Counties in the Bay Area
27. Silicon Valley Toxics Coalition	County: Santa Clara
28. Urban Habitat	Multiple Counties: Bay Area Region
29. Women's Cancer Resource Center	Multiple Counties: San Francisco, Alameda, Contra Costa

Local Environmental Health Departments		Local Health Departments	
30. Contra Costa County	37. Riverside County	43. Alpine County	52. San Benito County
31. Imperial County	38. Sacramento County	44. Berkeley City	53. San Bernardino County
32. Kings County	39. San Mateo County	45. Contra Costa County	54. San Joaquin County
33. Long Beach City	40. Santa Cruz County	46. Humboldt County	55. Santa Barbara County
34. Modoc County	41. Tulare County	47. Los Angeles County	56. Santa Cruz County
35. Mono County	42. Vernon City	48. Monterey County	57. Sierra County
36. Orange County		49. Orange County	58. Ventura County
		50. Placer County	59. Yolo County
		51. Sacramento County	

## 8.B. APPENDIX B: Needs Assessment and Stakeholder Involvement

### **Who are Stakeholders**

Stakeholders are individuals and organizations which may affect or be affected by the issues addressed by the program. In other words, they have a vested interest in the goals, activities, and outcomes of the program.

### **Why involve stakeholders?**

- Stakeholders help to identify issues that may not be obvious to program staff.
- It facilitates better decisions and better implementation of decisions.
- It facilitates their buy-in and support for the program.
- It allows greater ownership of the program.
- It guards against the program becoming too inwardly focused and aids decentralized decision making.

### **What is a Needs Assessment?**

The term “needs assessment” refers to an essential set of formative activities associated with program planning. In the program planning process, the needs assessment is a critical first step of systematically gathering information to identify, prioritize, and document relevant community and/or organizational needs (both human and material resources) to effectively meet the program goals and objectives and facilitate the design of various components of a program. In other words, a needs assessment answers questions about the situation that a program is intended to address by generating ideas, documenting perceptions, and creating profiles about various issues.

### **Why conduct a Needs Assessment?**

- A needs assessment helps to discover current conditions, capacity, resources, gaps, and limitations, thereby answering the first key question in the planning process:
  - “Where are we now?” (Assessment)
  - “Where do we want to go?” (Goals, objectives, priorities)
  - “How will we get there?” (Strategy, organization, implementation)
  - “How will we know when we get there?” (Evaluation)
- It not only drives the planning process but also helps to gain guidance, participation, and acceptance from the stakeholders/community.
- It helps to provide as complete a profile as possible about the target audiences so that programs can be customized to address their needs.
- It provides justification for a program and enables people to be involved early in the planning process.
- It prevents addressing problems that do not exist or addressing the wrong problems (i.e. it prevents actions based solely on assumptions).
- It helps to market and promote the program at an early stage.
- It helps to address the feasibility of programs.
- It helps to identify potential partners in carrying out program activities.

## 8.C. APPENDIX C: Summary Tables of Responses

**TABLE 22: Target Audiences and Partners for Non-Governmental Organizations**

Target Audiences and Partners for NGOs	Audiences		Partners	
	n	%	n	%
A. At-Risk Groups <i>(Examples: Children, Elderly, Low-income communities, Women, Pregnant women, Low income tenants, Farmworkers, Disadvantaged youth, Communities near agriculture, Medically underserved, Minority groups)</i>	27	93%	13	45%
B. Businesses/Industry	10	34%	10	34%
C. Environmental Justice communities <i>(Examples: People of color, Low-income communities, Underserved communities, Rural, African-American and Latino, Families near industry and other health treats, Poor urban communities, Immigrants, Farmworkers)</i>	17	59%	21	72%
D. Federal public agencies <i>(Examples: EPA, HUD, NIEHS, FDA, NCI)</i>	13	45%	13	45%
E. Foundations, Endowments, and other philanthropic organizations	8	28%	21	72%
F. General Public	24	83%	5	17%
G. Health Affected Populations <i>(Examples: People with Cancer, Parents of children with asthma, Parents of children with disabilities, Breast cancer groups, Lead poisoned children, Chemically sensitive population)</i>	24	83%	16	55%
H. Health Care Professionals <i>(Examples: Nurses, Physicians, Midwives)</i>	17	59%	21	72%
I. Legislators/Policy Makers <i>(Examples: Board of supervisors, City Commissions, City Councils, Government Associations, Assemblymembers, State Senators)</i>	22	76%	21	72%
J. Local (City/County) public agencies <i>(Examples: County Public Health Departments, County Water Districts, Air Quality Management Districts, Cities/Counties interested in Precautionary Principle, Local housing departments, County agricultural commissions)</i>	20	69%	20	69%
K. Media	19	66%	7	24%
L. Non-Governmental Organizations	10	34%	21	72%
M. Occupational Groups	7	24%	7	24%
N. Regulators, Environmental	20	69%	8	28%
O. Researchers/Scientists	11	38%	22	76%
P. Schools	15	52%	6	21%
Q. State public agencies <i>(Examples: CDHS, Cal/EPA, CALFED, DPR, OPR, OSHA)</i>	14	48%	18	62%

**TABLE 23: Focus Areas Related to Environmental Health Tracking**

FOCUS AREAS:  (Functions, Activities, Initiatives, and Issues <u>related to Environmental Health Tracking</u> )	Organization works on?  (mark if YES)	Priority level (select one response)			Strongest Capacity			Priority for Training		
		High Priority	Medium Priority	Low Priority	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
A. Collecting primary data on environmentally related health effects	n=19 NGO x10 County x9	10 6 4	12 7 5	8 3 5	1			3		4
B. Collecting primary data on environmental hazards/exposures	n=25 NGO x10 County x15	16 8 8	12 5 7	6 3 3	1	1		3	3	
C. Accessing secondary (existing) data on environmental hazards/exposures	n=39 NGO x23 County x16	18 14 4	21 9 12	3 1 2	4	1	1	4	2	2
D. Accessing secondary (existing) data on environmentally related health effects	n=42 NGO x24 County x18	12 9 3	28 15 13	2 2 2		4	2	1	4	3
E. Interpreting/analyzing environmental and/or health data	n=39 NGO x23 County x16	24 15 9	14 8 6	4 2 2	1	9	2	4	5	6
F. Studies to determine correlation between environmental hazards/exposures and health effects	n=27 NGO x19 County x8	17 15 2	14 8 6	3 1 2		1	1	4	3	1
G. Public education, community outreach, advocacy, and development and dissemination of educational materials	n=55 NGO x28 County x27	36 24 12	14 2 12	4 4 4	18	12	8	7	3	3
H. Risk communication	n=38 NGO x14 County x24	21 5 16	15 9 6	5 3 2	4	4	6	4	4	2
I. Environmental hazard/exposure assessments (e.g. site assessments/investigations)	n=30 NGO x10 County x20	12 3 9	17 8 9	5 2 3	5		3	3	6	3
J. Environmental Justice (e.g. identifying and addressing disparities in environmental exposures and health effects by population subgroups)	n=34 NGO x22 County x12	20 18 2	14 4 10	3 1 2	4	1	5	3		5
K. Building/fostering partnerships/coalitions	n=49 NGO x27 County x22	33 23 12	13 4 9	1 1 1	7	11	10	2	4	
L. Program planning/development	n=42 NGO x18 County x24	24 12 12	16 6 10	2 2 2	2	3	7	3		5
M. Program evaluation	n=39 NGO x18 County x21	23 11 12	14 6 9	1 1 1		1	1		5	1
N. Biomonitoring (measuring environmental chemicals in human specimens, such as blood or urine)	n=18 NGO x13 County x5	10 10 3	6 3 5	10 5 5		1	2	3	2	3
O. GIS mapping (visually representing geographically based information) and other spatial statistics/epidemiology	n=32 NGO x14 County x18	11 6 5	14 7 7	10 3 7	1	1		3	5	5
P. Occupational health	n=18 NGO x11 County x7	7 3 4	12 8 4	3 3 4	1	1		1	1	2
Q. Regulation/Public policy development (e.g. land use planning, urban and regional planning, etc.)	n=36 NGO x19 County x17	22 13 9	12 6 6	2 2 2	6	3	5	3	4	2
R. Other – Please specify:	n=7 NGO x6 County x1	6 5 1			1	1		2		

**TABLE 24: Request for Information or Assistance**

Information or assistance related to Environmental Health	Asked of your organization by the community? (mark if YES)	Is your organization able to meet the requests?			Asked of state or LPHAs by your organization? (mark if YES)	Are they able to meet your request?		
		Most of the times	Sometimes	Rarely		Most of the times	Sometimes	Rarely
A. Basic information on Environmental Health (e.g. fact sheets, pamphlets, etc.)	n=57 NGO: x28 County: x29	38 12 23	17 15 5	1 1	NGO: x16	3	10	3
A. Linguistically and/or culturally appropriate information/resources on Environmental Health	n=44 NGO: x25 County: x19	13 4 9	22 15 7	9 6 3	NGO: x14	8	6	
B. Assistance in finding/locating research studies/findings	n=42 NGO: x24 County: x18	15 8 7	24 14 10	4 2 2	NGO: x17	3	10	4
C. Assistance in interpreting research findings/results	n=39 NGO: x22 County: x17	22 14 8	15 7 8	1 1	NGO: x10	2	4	4
D. Data on environmentally related health effects (e.g. incidence rates, trends, & ethnic disparities)	n=44 NGO: x27 County: x17	14 7 7	25 17 8	5 3 2	NGO: x22	1	14	7
E. Data on environmental hazards and/or exposures (e.g. source, amount, concentration, & geographic distribution of chemicals)	n=48 NGO: x25 County: x23	14 5 9	22 13 9	10 7 3	NGO: x18	1	12	5
F. Assistance in collecting community data (primary data)	n=30 NGO: x17 County: x13	6 2 4	14 10 4	10 5	NGO: x13	1	4	8
G. Assistance in accessing existing data (secondary data)	n=35 NGO: x19 County: x16	13 6 7	15 9 6	6 3 3	NGO: x12	1	9	2
H. Assistance in analyzing and interpreting data	n=34 NGO: x19 County: x14	13 6 7	17 9 8	3 3	NGO: x9	3	6	
I. Assistance in utilizing hazards/exposures or health effects data to take public health actions (e.g. policy development, advocacy, & risk communication)	n=45 NGO: x26 County: x19	22 10 11	20 12 8	5 4 1	NGO: x12	3	9	
J. Assistance in conducting community-based research, epidemiological studies, or investigations	n=30 NGO: x16 County: x14	9 2 7	9 7 2	12 7 5	NGO: x12	6	6	
K. Other – please specify:	n=7 NGO: x3 County: x4	3 3 3	4 3 1		NGO: x3	2	1	

**TABLE 25: List of Groups that Request Information/Assistance from LPHAs**

Information or assistance related to Environmental Health	Requested by Whom?		
B. Basic information on Environmental Health (e.g. fact sheets, pamphlets, etc.)	<ul style="list-style-type: none"> <li>• Businesses (regulated community) x7</li> <li>• Consultants? X1</li> <li>• County supervisors</li> <li>• Doctors</li> <li>• Grand jury</li> </ul>	<ul style="list-style-type: none"> <li>• General public/community members: x27</li> <li>• Local government</li> <li>• Media x9</li> <li>• NGOs/CBOs/Advocacy groups x6</li> </ul>	<ul style="list-style-type: none"> <li>• Other public agencies x6</li> <li>• Policy makers x3</li> <li>• Real estate agents</li> <li>• Students</li> </ul>
C. Linguistically and/or culturally appropriate information/resources on Environmental Health	<ul style="list-style-type: none"> <li>• Businesses (regulated community) x5</li> <li>• Consultants</li> <li>• County supervisors</li> <li>• Food safety training recipients</li> </ul>	<ul style="list-style-type: none"> <li>• General public/community members: x14</li> <li>• Local Government</li> <li>• Media x3</li> <li>• NGOs/CBOs/Advocacy groups x7</li> </ul>	<ul style="list-style-type: none"> <li>• Other public agencies</li> <li>• Policy makers</li> <li>• Real estate agents</li> </ul>
D. Assistance in finding/locating research studies/findings	<ul style="list-style-type: none"> <li>• Businesses (regulated community) x2</li> <li>• Consultants x2</li> <li>• Contractors/Developers x2</li> <li>• County supervisors</li> <li>• Environmental companies</li> </ul>	<ul style="list-style-type: none"> <li>• General public/community members: x11</li> <li>• Intradepartmental groups</li> <li>• Legal reps</li> <li>• Local Government</li> <li>• Local health care providers</li> </ul>	<ul style="list-style-type: none"> <li>• Media x3</li> <li>• NGOs/CBOs/Advocacy groups x6</li> <li>• Other public agencies x5</li> <li>• Real estate agents</li> <li>• Students</li> </ul>
E. Assistance in interpreting research findings/results	<ul style="list-style-type: none"> <li>• Businesses (regulated community) x3</li> <li>• Consultants x3</li> <li>• Contractors/Developers x2</li> <li>• Environmental companies</li> <li>• General public/community members: x11</li> </ul>	<ul style="list-style-type: none"> <li>• Intradepartmental groups</li> <li>• Legal reps</li> <li>• Local Government</li> <li>• Media x3</li> <li>• NGOs/CBOs/Advocacy groups x7</li> </ul>	<ul style="list-style-type: none"> <li>• Other departments</li> <li>• Other public agencies x4</li> <li>• Policy makers</li> <li>• Real estate agents</li> </ul>
F. Data on environmentally related health effects (e.g. incidence rates, trends, & ethnic disparities)	<ul style="list-style-type: none"> <li>• City Council</li> <li>• General public/community members: x13</li> <li>• Home buyers</li> <li>• Hospitals</li> </ul>	<ul style="list-style-type: none"> <li>• Intra-agency/departmental groups</li> <li>• Local government</li> <li>• Media x4</li> <li>• NGOs/CBOs/Advocacy groups x8</li> </ul>	<ul style="list-style-type: none"> <li>• Other public agencies x5</li> <li>• Policy makers</li> <li>• students</li> </ul>
G. Data on environmental hazards and/or exposures (e.g. source, amount, concentration, & geographic distribution of chemicals)	<ul style="list-style-type: none"> <li>• Businesses (regulated community)</li> <li>• City commissions</li> <li>• City council</li> <li>• Consultants x2</li> <li>• Contractors/Developers</li> <li>• Environmental companies</li> <li>• Fire department</li> </ul>	<ul style="list-style-type: none"> <li>• General public/community members: x16</li> <li>• HazMat division</li> <li>• Home buyers</li> <li>• Legal reps</li> <li>• Local government</li> <li>• Media x5</li> </ul>	<ul style="list-style-type: none"> <li>• NGOs/CBOs/Advocacy groups x9</li> <li>• Other public agencies x4</li> <li>• Police</li> <li>• Policy makers</li> <li>• Real estate agents</li> <li>• Schools</li> </ul>
H. Assistance in collecting community data (primary data)	<ul style="list-style-type: none"> <li>• Academic institutions</li> <li>• County supervisors</li> <li>• General public/community members: x9</li> </ul>	<ul style="list-style-type: none"> <li>• Hospitals</li> <li>• Intra-agency/departmental groups</li> <li>• Media</li> </ul>	<ul style="list-style-type: none"> <li>• NGOs/CBOs/Advocacy groups x6</li> <li>• Other public agencies x4</li> <li>• Schools</li> </ul>
I. Assistance in accessing existing data (secondary data)	<ul style="list-style-type: none"> <li>• Academic institutions</li> <li>• Contractors/Developers</li> <li>• County supervisors</li> <li>• General public/community members: x9</li> </ul>	<ul style="list-style-type: none"> <li>• Hospitals</li> <li>• Intra-agency/departmental groups x2</li> <li>• Media x5</li> <li>• NGOs/CBOs/Advocacy groups x8</li> </ul>	<ul style="list-style-type: none"> <li>• Other public agencies x5</li> <li>• Schools</li> <li>• Students</li> </ul>
J. Assistance in analyzing and interpreting data	<ul style="list-style-type: none"> <li>• Businesses (regulated community)</li> <li>• Consultants</li> <li>• County supervisors</li> <li>• General public/community members: x7</li> </ul>	<ul style="list-style-type: none"> <li>• HazMat Site Mitigation Case Workers</li> <li>• Intra-agency/departmental groups x2</li> <li>• Media x4</li> </ul>	<ul style="list-style-type: none"> <li>• NGOs/CBOs/Advocacy groups x5</li> <li>• Other public agencies x5</li> <li>• Schools x2</li> </ul>
K. Assistance in utilizing hazards/exposures or health effects data to take public health actions (e.g. policy development, advocacy, & risk communication)	<ul style="list-style-type: none"> <li>• Businesses (regulated community)</li> <li>• CDHS</li> <li>• Contractors/Developers</li> <li>• County Supervisors</li> <li>• General public/community members: x8</li> </ul>	<ul style="list-style-type: none"> <li>• Hospitals</li> <li>• Local Commissions</li> <li>• Local Government x2</li> <li>• Media x5</li> <li>• NGOs/CBOs/Advocacy groups x6</li> </ul>	<ul style="list-style-type: none"> <li>• Other public agencies x5</li> <li>• Police</li> <li>• Policy makers</li> <li>• Schools x2</li> </ul>
L. Assistance in conducting community-based research, epidemiological studies, or investigations	<ul style="list-style-type: none"> <li>• Academic institutions</li> <li>• Consultants</li> <li>• General public/community members: x6</li> </ul>	<ul style="list-style-type: none"> <li>• Intra-agency/departmental groups</li> <li>• Media x2</li> <li>• NGOs/CBOs/Advocacy groups x2</li> </ul>	<ul style="list-style-type: none"> <li>• Other public agencies x3</li> <li>• Students</li> </ul>

**TABLE 26: Ways in Which Environmental Health Data is Used**

Ways in which agency/organization utilizes environmental health data	NGO	LPHA
A. Internal (organizational) planning/decision making	x22	x19
B. Influencing external policy/decision making	x24	x14
C. Identifying hot-spots of hazards/exposures	x18	x17
D. Identifying disproportionately affected populations	x23	x8
E. Examining the relationship between health effects and the environment	x23	x13
F. Evaluating public health, environmental protection, and remediation programs/policies	x24	x16
G. Public education/outreach	x25	x20
H. Other – please specify: ( <i>Identify gaps in resources; Direct action for policy changes and enforcement activities; Community survey questions</i> )	x3	

**TABLE 27: Activities utilizing environmental health data**

Activities utilizing environmental health data
<p><u>Advocacy x4</u></p> <ul style="list-style-type: none"> <li>• Advocacy on diesel exhaust and pesticides</li> <li>• Use data for advocacy</li> <li>• Advocate for regulation of agricultural discharges into waterways using data on contaminated water wells.</li> <li>• Advocate for renewable energy policies using air pollution and asthma data.</li> </ul> <p><u>Outreach and Education x8</u></p> <ul style="list-style-type: none"> <li>• Physician outreach</li> <li>• Community Asthma and clean air forums</li> <li>• Public education/outreach of potential health risks associated with swimming in ocean water containing high concentrations of bacteria.</li> <li>• Outreach events at farmer’s markets, community meetings, etc.</li> <li>• outreach, education</li> <li>• Popular education materials</li> <li>• Asthma: identify children with asthma in the City of Long Beach through collaborative outreach and education program; enroll in various community programs: education-based; provide housing intervention to reduce triggers that lead to or worsen asthma (healthy homes program)</li> <li>• Public awareness campaigns (radio and newspaper)</li> </ul> <p><u>Policy development x6</u></p> <p><u>Precautionary Principle advocacy, policy development, and implementation x4</u></p> <p><u>Programs/Initiatives x4</u></p> <ul style="list-style-type: none"> <li>• Asthma: identify children with asthma in the City of Long Beach through collaborative outreach and education program; enroll in various community programs: education-based; provide housing intervention to reduce triggers that lead to or worsen asthma (healthy homes program)</li> <li>• Childhood lead prevention</li> <li>• Safer Homes for a Healthy Community - prevent lead poisoning, asthma, and home hazards</li> <li>• Lead: lead poison prevention: track cases of lead-burdened children in Long Beach</li> </ul> <p><u>Assessment/Research x7</u></p> <ul style="list-style-type: none"> <li>• Assess threats to groundwater contamination</li> <li>• Drinking water contamination assessment</li> <li>• Beach and stream pollution studies</li> <li>• Housing, land contamination, arsenic, and lead study</li> <li>• Farm worker Survey by Farm worker Safety Initiative</li> <li>• Reports: Fields of Poison: California Farm workers and Pesticides (1999 and 2002) and Secondhand Pesticides</li> <li>• Examination of water quality issues - Marine Interest Group</li> </ul> <p><u>Other</u></p> <ul style="list-style-type: none"> <li>• Education and advocacy for public policy</li> <li>• Environmental Justice</li> <li>• Follow the Money Alliance</li> <li>• GeoTracker</li> <li>• Healthcare Without Harm</li> <li>• Healthy Building Network</li> <li>• Ocean Health Survey</li> <li>• Partner recruitment.</li> <li>• Prevention First</li> <li>• Program planning x4</li> <li>• Risk assessment</li> <li>• Sharing survey results with researchers</li> <li>• Vector: prevent the spread of encephalitis; track WNV data.</li> </ul>

**TABLE 28: Comments on Enabling and Hindering Factors for UTILIZING DATA**

UTILIZING DATA: comments on enabling and hindering factors	
NGO Comments	LPHA Comments
<ul style="list-style-type: none"> <li>• Public agencies are usually unwilling to acknowledge that a public health threat may exist. Need more community-specific data such as childhood cancer rates by census tract.</li> <li>• Zip code data only available upon request. Need someone to produce updated information in report form.</li> <li>• Must demonstrate cancer risk.</li> <li>• Lack of information on health effects. Bring existing data together in a useful way.</li> <li>• 1) not knowing about availability 2) Difficulty in access</li> <li>• Unless we raise funds to pay for professional assistance and have a university stamp of approval, we are viewed as reactionary. Assurance that the information was not the result of industry research and therefore not slanted to protect products.</li> <li>• Ability to interpret quality of information. Training staff. Easier access.</li> <li>• Lack of time, personnel, skills, and money. Need a single database with one search engine. User friendly, collective model. Need laymen summaries of the data.</li> <li>• Lack of information on the links between health and environmental pollution</li> <li>• Time. Knowing how to use data for public action. Knowing what the data sources are and learning how they could be useful.</li> <li>• Availability of useful and meaningful data. Capacity to access and interpret data.</li> <li>• Skills. Knowing what to do with the information.</li> <li>• Not knowing about the data sources. Having the data be in a complicated form without being translated.</li> <li>• No staff scientist. More knowledge about the type of data being collected and how to access the data.</li> <li>• Computers are slow and low-tech for member organizations. Need expertise and time to access information.</li> <li>• Too time consuming and cumbersome to access all of the available resources. One easily accessible source for risks and safe exposure levels for infants and children.</li> <li>• Time. The data needs to be user friendly to minimize time spent utilizing.</li> <li>• Some information is not specific enough to a particular community. Data needs to be continually updated.</li> <li>• Knowledge of what's out there. Funding to pay for services.</li> <li>• Having better information on the links between environmental hazards and health effects. Easy ways to compare geographic areas.</li> <li>• Data validity and accessibility. Ability to present data in a manner that would impact the outcome of agency decisions.</li> <li>• Understanding scientific lingo. Getting area specific data. The data need to be in one location. Data need to be simple and easy to understand. Bilingual information must be made available.</li> <li>• Funding. GIS capacity. Hardware and software infrastructure. Staffing.</li> <li>• lack of funding and staff</li> </ul>	<ul style="list-style-type: none"> <li>• Areas of jurisdiction limited to monitoring and reporting.</li> <li>• Funding and ability to interpret data.</li> <li>• Lack of resources.</li> <li>• Lack of time and funding. Our present funding does not allow us to look much beyond the trees.</li> <li>• Statutory and regulatory authorities, agencies' policies, and chain of custody issues result in delayed submission of data. Lack of resources and training.</li> <li>• Lack of scientific studies showing human health effects of low levels of chemical exposure.</li> <li>• Not having a designated EH person responsible for data collection, access, analysis, interpretation. Our Epidemiology department provides the most significant role in the department for data utilization. Consequently, the most prominent EH data usage is for reporting purposes. It is used discretely for trend analysis, planning, etc. We need: 1. Easier accessibility to hard to obtain data; 2. The development of an EH database that can integrate other departmental information ( census tract info, location of residence, STDs, WIC, prenatal info., WIC, health insurance status, health care utilization, etc) with EH data.</li> <li>• Lack of human resources</li> <li>• The use of data for regulatory needs is in place. We would rely on the Health Officer, Disease Control and Health Education to assess using data for public health action.</li> <li>• Lack of good data.</li> <li>• Finding useful data</li> <li>• Lack of staff and time. Need data at the city level.</li> <li>• Good local data does not exist and health effects of substances are generally from occupational exposures and there is very little studies on long term exposures or on "vulnerable populations." This makes for a political quagmire for reporting anything the public or popular press deems as toxic.</li> <li>• Infrastructure, skills, translating data into understandable terms.</li> <li>• Staff and funding.</li> <li>• Although we can analyze the existing data, we currently do all the education and utilization at the expense of other programs.</li> <li>• Limitations in staffing resources.</li> <li>• Time and personnel</li> <li>• Having experience staff to interpret the data. Funding for staffing to develop programs.</li> <li>• Statutory and regulatory authorities, agencies' policies, and chain of custody issues result in delayed submission of data. Lack of resources and training.</li> <li>• Small sample sizes. Lack capacity (staff).</li> <li>• Difficulties in interpretation.</li> </ul>

**TABLE 29: Comments on What Environmental Health Tracking Would Enable**

What Environmental Health Tracking would enable	
NGO Comments	LPHA Comments
<ul style="list-style-type: none"> <li>• We would be able to track changes or improvements in air quality, especially toxics, and changes in the health status of residents.</li> <li>• If we were aware of excess exposures, we could help inform community members and help discover alternatives for suggest avoidance.</li> <li>• Better demonstrate the link between environment and health.</li> <li>• We would be better able to focus our efforts in communities with the greatest need</li> <li>• We could use it in implementation of environmental justice policies in our communities.</li> <li>• Share information with asthma groups, promote program activities, raise awareness, and influence policymakers.</li> <li>• Better public education and a change in the conversation about breast cancer with an emphasis on true prevention. Hopefully this will lead to greater changes in the rates of breast cancer and even the treatment of the disease.</li> <li>• Educate public about relationship between environmental hazards and lung disease.</li> <li>• Educate families and clinical professionals as to exposure risks for prevention and knowledgeable decision-making.</li> <li>• Share data with community and use it to bring about positive change in their communities. Use data for policy and advocacy.</li> <li>• Make that data available and accessible to CBOs, labor orgs, faith based orgs, and others that request data and use it in their campaigns.</li> <li>• Be able to provide communities with better leverage to achieve pollution reductions.</li> <li>• Create solid linkages between our NGO members and the emissions in their respective communities. Help our member organizations collect relevant primary data focused for their communities' pollution sources. Tie data to policy change. Work with the media.</li> <li>• Share data with the community and use it to bring about positive change. Use data for policy and advocacy.</li> <li>• We could use it to advocate for changes in land use policies locally.</li> <li>• Easier to pass and implement legislation.</li> <li>• Educate and advocate for policy makers.</li> <li>• Develop more effective program interventions.</li> <li>• Influence public policy more effectively.</li> <li>• Get more involved in biomonitoring efforts.</li> <li>• Better target leverage points in the water policy arena that would guarantee Environmental Justice communities safe, clean, and accessible water.</li> <li>• Work with Legislators on specific, targeted policy reforms.</li> <li>• More effective in influencing policies and legislation. Enforcement of healthy homes, public facilities. Reduce environmental hazards.</li> <li>• Establish a rural health, home health and environment testing for asthma patients. Identify migrant farm workers and their children and stop all ER visits for a very preventable disease.</li> <li>• Correlate Asthma symptoms with agricultural and chemical use. Correlate school absenteeism (asthma) with air quality issues.</li> <li>• Be able to make better connections between health outcomes and upstream behaviors/activities/policies.</li> <li>• Better demonstrate the link between environment and health.</li> <li>• We're pretty happy with our capabilities right now, although having more funding to do our own air monitoring would allow us to do a more comprehensive job.</li> <li>• We would have a better sense of which chemicals or exposures to target (those with greatest health threat) and focus our policy efforts on decreasing those exposures. We would have stronger cases in pushing for progressive policies to either phase out the worst chemicals or to push for safer alternatives, and to reform chemical policy overall. Institute pre-market testing of chemicals or a more precautionary approach.</li> <li>• Save lives</li> <li>• We would be able to get local and city reps to be more active participants in creating policy and actions that would protect our community's health.</li> <li>• Eliminate Childhood lead poisoning, and slum housing. We would be able to ensure that all families would have access to decent safe affordable housing, and not have to choose between the health of their children and a roof over their head.</li> <li>• Save the planet! We would be better prepared to educate those living at the agricultural-urban interface; to educate communities about their rights and resources; ability to use health data to make correlations between pesticide use and public health; ability to better understand connection between agricultural chemical use and water quality.</li> </ul>	<ul style="list-style-type: none"> <li>• Access, streamlining of data, ability to make comparisons among data sets.</li> <li>• Give us more data than we currently have pertinent to our locality.</li> <li>• It would be another source of data.</li> <li>• Make source data collection more routine.</li> <li>• Identification of trends.</li> <li>• Enable linkage of health effects monitoring data to known sources of exposure under uniform guidelines for assessment.</li> <li>• Any assistance in identifying health hazards would be helpful.</li> <li>• Improve understanding of the relationship between exposures/hazards and health effects.</li> <li>• Potential for increasing visibility of EH programs and needs.</li> <li>• Would provide evidence to influence policy and regulations.</li> <li>• Improving knowledge base for health effects of various environmental substances, based on good science.</li> <li>• It could provide accurate and current information about environmental health issues across the state. This could ultimately help the department make more informed decisions when it comes to policy making.</li> <li>• Improve decision-making and guide program planning efforts.</li> <li>• Improve the competitiveness of grant applications by improving the access to data.</li> <li>• Assist in prioritizing issues, workload, and staffing.</li> <li>• Consistency in program implementation.</li> <li>• Give clearer direction of program effectiveness.</li> <li>• It may provide additional statistical data; however, without funds for staff and equipment, it may be a moot issue.</li> <li>• What is an EHTS?</li> <li>• We don't know if it may or may not.</li> <li>• We really don't understand the things you'll be monitoring.</li> <li>• It would be hard to translate data into action without specific funding.</li> </ul>

**TABLE 30: Methods Used to Disseminate Environmental Health Information**

Dissemination/Outreach methods for environmental health information/data	Uses method		Most effective ways to educate or outreach to target audiences
	n	%	n
A. Organization's Website	44	75%	14
B. Fact sheets	40	68%	10
C. Newspaper	37	63%	12
D. Public events (fairs, festivals, etc.)	35	59%	6
E. Brochures	31	53%	4
F. Radio	31	53%	4
G. Newsletters	30	51%	5
H. Reports	29	49%	5
I. Workshops	26	44%	9
J. TV	25	42%	2
K. Department initiated public meetings/hearings	25	42%	7
L. Other Websites	9	15%	2
M. Raw data	4	7%	0
N. Other <ul style="list-style-type: none"> <li>• grand rounds to physicians</li> <li>• conferences</li> <li>• email alerts</li> <li>• listserves</li> <li>• popular education</li> <li>• postings in hazardous areas in county</li> <li>• classes</li> <li>• community forum</li> <li>• direct contact between staff</li> <li>• community responses to inquiries</li> <li>• reverse 911 system</li> <li>• site lists</li> </ul>	18	31%	21 <ul style="list-style-type: none"> <li>• Conferences</li> <li>• Direct contact</li> <li>• Email/Listserve x2</li> <li>• Mass Mailing</li> <li>• Media x9</li> <li>• Outreach in impacted/targeted areas</li> <li>• Person-to-person</li> <li>• Popular education x2</li> <li>• Responses to inquiries</li> <li>• Reverse 911 system</li> <li>• Social Marketing</li> <li>• Training in EH and community Organizing for Promotoras</li> </ul>

**TABLE 31: Data Formats Utilized by Respondents and Preferred Data Formats**

DATA FORMATS	NGOs that currently utilizes the data formats	Preferred data format for NGOs	Local Agencies that currently utilizes the data formats	Preferred data format for Counties
A. Raw Data	5	2	3	2
B. Formatted Data	13	6	4	2
C. Analyzed Data	21	15	6	3
D. GIS	14	5	3	
E. Reports/Summaries	24	13	4	3

**TABLE 32: Data Sources Utilized by Respondents**

	Access or Use?  (mark if YES)	Data easy or difficult to access?			Usefulness of data? (Quality, timeliness, geographic specificity, completeness, etc.)		
		Easy	Moderate	Difficult	Very Useful	Somewhat Useful	Not Useful
<b>HEALTH EFFECTS DATA SOURCES</b>							
A. Birth Defects Monitoring Program – CDHS, Cancer Surveillance Section	7	1	4	2	2	6	
B. Behavioral Risk Factor Survey – Public Health Institute, Survey Research Group	7	3	4		4	4	
C. California Cancer Registry – CDHS, Cancer Surveillance Section	12	1	4	2	2	5	3
D. California Health Interview Survey – UCLA Center for Health Policy Research	14	7	6	1	6	6	2
E. California Women's Health Survey – Public Health Institute, Survey Research Group	2		2		1	1	
F. Medi-Cal Database – CDHS, Medi-Cal Statistics Section	7	2	3	2	3	4	
G. Occupational Asthma Database (SENSOR) – CDHS, OHB	3		1	1	1	1	
H. Patient (Hospital) Discharge Database - OSHPD	8		4	4	6	2	
I. Pesticide Illness Database (SENSOR) – CDHS, OHB, Agricultural Health and Safety Section	6		3	1	4		
J. Vital Statistics (birth & death), - DHS, OHIR, Vital Statistics Section	9	2	4	2	6	1	
K. Private sources (e.g. HMOs, pharmacies, etc.) – please specify:	2		1	1	2		
L. Other statewide or regional surveys (such as California Healthy Kids Survey, California Adult Tobacco Survey, etc.) please specify: <ul style="list-style-type: none"> <li>● California Healthy Kids Survey x4</li> <li>● RASSCLE</li> </ul>	6	3	2		3	2	
M. Local/Community generated source (e.g. community health surveys) – please specify: <ul style="list-style-type: none"> <li>● CAP</li> <li>● Community needs assessment</li> <li>● community surveys</li> <li>● County health assessment</li> <li>● Healthy Homes Survey</li> <li>● local clinic patient data</li> <li>● Marin</li> <li>● Mid-City survey</li> <li>● Our own tool kit surveys</li> <li>● Rabies test results from health department lab</li> <li>● SFDPH - asthma survey and lead prevalence</li> <li>● Susan Philliber Research, own data, ...</li> <li>● United Way Annual Community Survey for Santa Cruz</li> </ul>	18	7	5	3	11	5	
N. OTHER - please specify: <ul style="list-style-type: none"> <li>● Beach Use Interventions</li> <li>● Chronic toxicity data from EPA, NTP, IARC, etc.</li> <li>● Clinical research findings</li> <li>● communicable diseases data</li> <li>● DOE Fitness and Obesity Survey, CHDP Survey</li> <li>● FSI Farm worker Survey; Oceano Env Health Survey</li> <li>● LA DHC</li> <li>● LIF statewide reports</li> <li>● PANNAs pesticides health effects database</li> <li>● RASSCLE</li> <li>● Tobacco, BRFS</li> </ul>	11	6	4	1	7	4	

**TABLE 33: Data Sources Utilized by Respondents**

	Access or Use? (mark if YES)	Data easy or difficult to access?			Usefulness of data?		
		Easy	Moderate	Difficult	Very Useful	Somewhat Useful	Not Useful
<b>HAZARDS/EXPOSURES DATA SOURCES</b>							
a. Aerometric Data Analysis and Management System – Cal/EPA, ARB	7	3	3		4		
b. Air Quality System database – US EPA	9	3	6	1	2	4	2
c. California Emission Inventory Development and Reporting System (CEIDARS) – Cal/EPA, ARB	7	3	2	3	3	5	
d. California Integrated Waste Management Board databases: Waste Facilities, Sites, and Operations Database; Waste Characterization Database; Disposal Reporting System; etc.	11	4	6	1	4	4	2
e. Certified Unified Program Agencies (CUPA) or their Designated or Participating Agencies	7	4	3		2	3	1
f. Elevated Lead Visual Information System – CDHS, OHB, Occupational Lead Poisoning Prevention Program	5	2	2	1	3	2	
g. GeoTracker (Groundwater Resources Information Database) – Cal/EPA, State Water Resources Control Board	11	3	8		5	5	1
h. Highway Performance Monitoring System – Caltrans, Division of Transportation System Information	3	2	1		2	1	
i. Local Emergency Planning Committees	4	1	2		4	1	
j. Local/Regional Water (public utilities) departments/districts	8	4	3	1	2	6	
k. National Emission Inventory database – US EPA, Emission Factor and Inventory Group	7	1	5	1	3	4	1
l. National Toxics Inventory database – US EPA	13	4	7	3	2	11	
m. Pesticide Data Program (PDP) – national pesticide residue database program – USDA	5	2	3		1	5	1
n. Pesticide Use Report database – Cal/EPA, DPR	9	5	3	1	3	6	
o. Response and Surveillance System for Childhood Lead Exposure – CDHS, Childhood Lead Poisoning Prevention Branch	9	3	6		5	3	1
p. Scorecard.org – Environmental Defense	23	19	3		11	8	2
q. Superfund Information Systems (CERCLIS, RODS, SPIL, etc.) – US EPA	9	2	7		2	5	1
r. Toxic HOTSPOTS – Eco-Map Family – Silicon Valley Toxics Coalition	6	6	1		3	2	1
s. Toxic Release Inventory – US EPA	17	8	5	3	7	10	
t. Water Quality Monitoring Database – CDHS, Drinking Water Program	8	3	2	3	3	3	1
u. Private/Business/Industry data sources:							
v. Local/Community generated data source (e.g. neighborhood truck counts) – please specify: <ul style="list-style-type: none"> <li>• Community environmental sampling data</li> <li>• Community surveys</li> <li>• County level drinking water data</li> <li>• Local Air District Data</li> <li>• Neighborhood truck counts X3</li> </ul>		5	3	1	8	1	
w. Other California data sources please specify: <ul style="list-style-type: none"> <li>• ARB TAC monitoring reports, Pesticide Well Inventory database, Pesticide Illness Surveillance Program</li> <li>• Cal/EPA EIR/EIS X3</li> <li>• California Water Data Library, Pesticide Well Inventory Database</li> <li>• Prop 65 chemicals list</li> </ul>		2	3	2	1	5	
x. Other federal data sources please specify: <ul style="list-style-type: none"> <li>• CDC health stats X2</li> <li>• Envirofacts X2</li> <li>• HazDat, USGS NWQA Data warehouse</li> <li>• NATA</li> <li>• School lunch and WIC participants</li> <li>• STORET</li> <li>• USGS mapping layers</li> <li>• HUD X3</li> <li>• Mortality Atlas and Health Outcomes Atlas</li> <li>• CDC National Reports on Human Exposure to Environmental Chemicals</li> <li>• FDA Total Diet Studies</li> </ul>		3	7	1	6	4	

**TABLE 34: Exemplary Sources of Data Reported by Non-Governmental Organizations**

NGO		
Data Source 1	Specific Issue/Data	Reason
AQS EPA	Air quality index	Easy to use and updated regularly
CA PUR data	Pesticides	High spatial resolution, and although the data do have lots of errors, still very useful.
CARB emission inventories	Emissions of San Diego facilities	Local and specific
CCR	Cancer	Quality. Geographic and racial/ethnic breakdowns
CHIS	asthma stats	local and up-to-date
Community surveys	Cancer; pesticide exposure; environmental stressors	Local, accurate, unbiased
ELVIS	lead levels	Stats on low level exposures
GeoTracker	Groundwater contamination	Easy to access and use. Constructed with concerns about data validity.
NCCC	Cancer data	They have verified data
Patient Discharge x2	Asthma data	by Zip code, CDHS help, chartbook
RASSCLE	lead cases	Number of cases and general locations
Scorecard X9	Air toxics, environmental justice indicators, general information around a location/community location of impact, emissions, neighborhood information, environmental justice indicators	Easy to use, very user friendly, good visuals, easy to access and understand by lay people (although too general at times), easy to use for lay persons, neighborhood level information, free
SFDPH surveys	lead and asthma data	Local, local, local!!!
TRI	total chemical waste released/created	Gives state breakdown
University and Pacoima Beautiful collaborative data	lead and air	Specific to our community
Data Source 2	Specific Issue/Data	Reason
BRFS X2	Cancer, tobacco use	Quality, relevance to cancer, broken down in age groups
CA Prop 65 list	Cancer, Repro, Developmental, Cancer and reproductive toxins	Official list, easily accessible and easy to process, easy to use
California Healthy Kids Survey	Asthma data	
CEHRC - Community Environmental Health Resource Center	Housing hazards/health effects	Community based research, national data and local data
Census	demographics	very important in documenting inequities, and looking at per capita numbers for comparison
EnviroMapper	superfund and TRI information	Easy to access but hard to maneuver or slow speed
Environmental Working Group data		large data sets made accessible to read
NEI	EM Airs data	Easy to locate website
NTI		
Patient discharge		Good patient information. Gives an idea of what the needs are in the community.
PUR	Pounds of pesticide active ingredients in the county	Community health concerns
RASSCLE X2	lead levels	Specific lead data by site
San Diego CUPA HazMat inventories	HazMats and wastes on site at local businesses	Local and Specific
Scorecard	Neighborhood pollution	Good information. Easy access.
Toxic HOTSPOTS	location of impact	easy to use for lay persons
TRI		
Data Source 3	Specific Issue/Data	Reason
BRFS	Asthma data	
CHIS (2001)	Birth defect data by zip code	Local
First hand accounts	location of toxic sites	Takes into consideration community input
HUD X2	economic level of impacted communities, lead levels	Easy to use for lay persons, good source for housing maps
LIF statewide report	Asthma and indoor air quality for underserved populations	Specific to our population
Local Air Districts	PM10 and Ozone	Tracking system for two major pollutants
Medline		Relatively easy to search for studies.
Neighborhood truck counts	Truck counts	Local EHC group good at sharing data with our coalition
Scorecard X2	Air Quality, lead, other toxins	Many kinds of data, community specific, easy to use, local data
Tobacco survey	Tobacco	Quality. Breakdowns.

**TABLE 35: Exemplary Sources of Data Reported by LPHAs**

		LPHA	
Data Source 1	Specific Issue/Data		Reason
California Cancer Registry X4			Thorough, easily available, good staff back-up. Has information on cancer in our region. Usually has the cooperation of the physicians and can be analyzed in several ways such as age, geographic, etc. Very complete.
Cancer Surveillance Program of Orange County			Valid source of information on incidence and trends, but a temporal gap exists in terms of reporting.
CDC website			Easy access. Up-to-date information. Reliable sources.
CDHS Infectious Disease Branch			Very knowledgeable and helpful. Good response time.
CIWMB X4	Offsite chemical migration. Solid waste. Methane, solid waste		Centralized information. Local information pertinent to State regulations. Kept up-to-date. Contains latest regulations and guidance documents. Well organized, well maintained, and comprehensive with links
GeoTracker			Computer Friendly
Lead blood test in children			Allows us to investigate the possible source and work with other agencies to eliminate exposures
Local Annual Survey - United Way	150 indicators tracked		It was designed to meet local needs
Local Envision Database			All of our data is easily accessible regarding emergency contact information and inventories
MSDS			search engine
PUR	Pesticide use data		Provides information on chemicals being used statewide. This information is critical for vector specialist to plan regulatory activities.
PUR			Lists pesticides used, amounts, and effects
RASSCLE	lead exposure		local assessment of lead exposure
RIMS (Riverside, Inyo, Mono, San Bernardino) Cancer Registry			It's well run. We're well connected.
USC Cancer Surveillance Registry			Most complete registry of all reportable cancers diagnosed in Los Angeles.
Vital Stats X2	Birth Defects		Population based and collected on site, Many sources, readily available, local data
Data Source 2	Specific Issue/Data		Reason 2
AQMD			has the best air data
Birth outcomes data.			We enhance, combine and investigate the vital records data.
CCR			Provide assistance with identifying hazards to investigate
CDHS			Up-to-date information, reliable source, lists contact information.
CDHS Water Quality Monitoring Database	MCL, Bacteria		Centralized information. Accessible
CHIS X5	Asthma, cancer estimates All health data		Free and easy to obtain. Collects information on a large variety of health topics. Looks at attitudes and behaviors - information we don't have otherwise. Has county specific data. Data can be compared with other counties
GeoTracker	groundwater and soil contamination		source of information on contaminated sites/locations, LOP site information and status is fairly up-to-date
HHSDC			www.hhsdc.ca.gov has a lot of useful tools. Information available quickly.
Local CUPA	Chemical threats to ground water		Local specific
Los Angeles Health Survey.			Most comprehensive health survey performed in Los Angeles.
Orange County Mortality Data from CDHS			Data has underlying cause of death in ICD-10 format with very specific home information. Text format allows for import into various analysis packages.
RASSCLE	lead data		Provides distribution of lead levels. Contains good demographic data including age.
State codes on the internet			Search engine
Vital records			Consistent data, can compare trends
WQMD	water pollutants		Give overview of drinking water quality throughout the state and county
Data Source 3	Specific Issue/Data		Reason 3
California State Bacteria levels	Bacteria levels		Provides statewide comparison data across jurisdictions; provide uniformity; easy to use
Centralized information	Pesticide use		Centralized information
County health status profiles.			Long-term and geographic comparisons possible.
Department of Education	Fitness and obesity of Children		Excellent predictor of future health impairments of populations
Expert Health Data Programming www.ehdp.com			Contains health data links, birth data, cancer registry, infectious disease
Local drinking water agencies	Chemical, Biological, and Radiologic threats to water resources		Local ability to focus resources and planning efforts
Los Angeles County Department of Health Services.			Up-to-date information, reliable source, lists contact information.
Orange County Morbidity Data from AVSS			Data contains what is reported to the State. Good source of data from a passive reporting system.
Patient discharge	Cancer and other causes of hospitalization		Population based. Easy to obtain.
Regional Air Pollution and Water Boards			Access to general data
South Coast Air Quality Management District.			Centralized collection of data regarding outdoor air quality in Los Angeles.
Tri Counties Regional Cancer Registry			Annual
Vital statistics			Used frequently

**TABLE 36: Comments on How to Improve Data**

How to Improve the usefulness (quality, timeliness, geographic specificity, completeness, etc.) of data	
NGO Comments	LPHA Comments
<ul style="list-style-type: none"> <li>• Health data are rarely at the geographic scale that we need. We work in local neighborhoods and need data by zip code or census tract or some other small area.</li> <li>• Direct access to hospital discharge by zip code.</li> <li>• Ability to do small area analysis and look at neighborhood level indicators.</li> <li>• Data needs to be at neighborhood scale; not less than two years old; reliable and consistent.</li> <li>• RASSCLE needs to be much more timely and user friendly. It should become more complete with SB460 in effect.</li> <li>• TRI data is usually two years behind. All sources should make it easier to compile statewide information and local "hotspots" or geographic abnormalities.</li> <li>• Need to address severe validity and reliability problems.</li> <li>• It is difficult to narrow external data down to our community level. It is often general information for the entire city our county of Los Angeles.</li> <li>• Local data. Prevalence data. ER visit. Ethnicity data. Zip code data.</li> <li>• Better data by race/ethnicity, not just for major population groups.</li> <li>• We need 0-5 age group data, schools and absenteeism for 0-5 and school aged children. (State reason for missed school per a standard method of data tool).</li> <li>• Easier navigation (on EPA website).</li> <li>• 1) Knowledge of where data and websites are 2) Technical assistance related to data access 3) Easy navigation websites.</li> <li>• Some data, for example, Patient Discharge Database, cost money to access. This is very prohibitive for community based organizations. This information should be publicly available to all.</li> <li>• Anytime the front page interface of a website is user friendly, it improves the time spent looking for data. The fewer links to travel, the more effective.</li> <li>• More people should know they exist and are available.</li> <li>• Easier to find and read. More information about how to access data.</li> <li>• Ease of access and transportability between different file types is VERY important and was our biggest barrier when we started working with large data sets like the PUR. We now use MySQL to deal with the PUR data, but initial efforts started with more conventional and available software applications, which were not well suited to handling the data. Not every group will be willing or able to deal with MySQL, so you need to make data accessible in the lowest common denominator, like EXCEL. Since EXCEL does not support large files (&gt;66,000 records), this may mean breaking the data up into manageable and logical chunks. And please, please, please don't release data with fixed-width fields--this is what database experts like to do (even OURS) because it makes it easy for them, but it makes the data.</li> <li>• Extremely difficult for non-experts to deal with.</li> <li>• Most of the information that has been used in the name of our organization has been by experts in the field of epidemiology.</li> <li>• Establish a consistent message among organizations working to improve air quality. Get a single message and put it out there everyday.</li> <li>• Our organization generally contracts with scientists to access and analyze data. Just having the list of data sets you provide as part of this survey is quite useful. It also points to the fact that a LOT of useful data is being collected, some of which may be redundant. We need to start making connections between these sources of info in order to make the most of them.</li> <li>• Need research person on staff.</li> </ul>	<ul style="list-style-type: none"> <li>• If data were geocoded at the local level and made available by census tracts or at least at the city level.</li> <li>• Need larger samples in surveys to permit drill-down to subvariable. National data are often too old when finally published.</li> <li>• Centralize access point. Provide directory of content and train in application.</li> <li>• Our local data is networked together for our use. The state could work to network their data together and their external links. It seems that DHS and Cal/EPA are doing much of the same tasks.</li> <li>• To be more useful, external data would need to meet the reporting needs of the Bureau. At the present time, the Bureau uses external data primarily to meeting reporting requirements. Additional data uses (i.e. planning, forecasting, relating hazard exposure to health effects) would probably require collaborations with other agencies or universities and/or additional funding for specific positions responsible for collecting, analyzing, and interpreting environmental health data.</li> </ul>

**TABLE 37: Priority Health Effects**

Categories of Health Effects (example are listed where applicable)	Priority for your Department?	Priority			Access data?	Collect data?	Report data? (only local agencies asked)
	(mark if YES)	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	(mark if YES)	(mark if YES)	(mark if YES)
A. Auto-immune Conditions (e.g. Lupus, Multiple Sclerosis)	n=6 NGO: x5 County: x1		1	1		NGO: x1 County: x1	
B. Cancer (e.g. Breast, Testicular, Leukemia, Brain)	n=37 NGO: x22 County: x15	9 4	5 6			NGO: x16 County: x16	NGO: x3 County: x7 County: x9
C. Cardiovascular Disease	n=14 NGO: x3 County: x11	1 3	1	1 2		NGO: x2 County: x11	NGO: x1 County: x5 County: x6
D. Dermatitis	n=2 County: x2					County: x2	County: x1 County: x1
E. Developmental Disease (e.g. Cerebral Palsy, Autism, Mental Retardation, Learning Disabilities)	n=20 NGO: x14 County: x6	4 1	2	2		NGO: x7 County: x3	NGO: x2 County: x1 County: x1
F. Diabetes	n=16 NGO: x1 County: x15	3	4	2		County: x10	County: x7 County: x6
G. Endocrine-Disruptor related Disease (e.g. Early Menarche, Hypospadias)	n=13 NGO: x12 County: x1		3			NGO: x4 County: x1	
H. Infertility	n=9 NGO: x8 County: x1			1		NGO: x4 County: x1	
I. Kidney Disease	n=2 County: x2					County: x3	County: x1 County: x1
J. Neurologic Disease (e.g. Alzheimer's, Parkinson's, Lead poisoning)	n=23 NGO: x14 County: x9	2		5 1		NGO: x10 County: x6	NGO: x4 County: x5 County: x5
K. Reproductive Outcomes (e.g. Birth defects, Premature birth, Miscarriage)	n=24 NGO: x16 County: x8		3 1	7		NGO: x11 County: x6	NGO: x1 County: x8 County: x8
L. Respiratory Disease (e.g. Asthma, Bronchitis, Occupational asthma)	n=37 NGO: x20 County: x17	9 7	7 5	2 1		NGO: x15 County: x12	NGO: x7 County: x8 County: x7
M. OTHER – please specify: <ul style="list-style-type: none"> <li>● Encephalitis</li> <li>● ETS, STDs</li> <li>● Bacterial and viral diseases</li> <li>● Lead poisoning</li> </ul>							

**TABLE 38: Priority Environmental Hazards/Exposures**

Categories of Environmental Hazards/Exposures	Priority for your Department?	Priority			Access data?	Collect data?	Report data? (only local agencies asked)
	(mark if YES)	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	(mark if YES)	(mark if YES)	(mark if YES)
A. Air Pollutants (e.g. Toxic air pollutants, Criteria air pollutants)	n=33 NGO: x24 County: x9	10 4	1 1	3	NGO: x19 County: x9	NGO: x7 County: x3	County: x2
B. Endocrine-Disruptors (e.g. Phthalates, Alkylphenols, Bisphenol-A)	n=19 NGO: x17 County: x2	2	1	1	NGO: x9 County: x2	NGO: x1 County: x1	
C. Foodborne Pollutants (e.g. Dioxins, Mercury)	n=28 NGO: x16 County: x12	1 2	2 4	1 2	NGO: x11 County: x11	NGO: x1 County: x4	County: x4
D. Hazardous and Solid Wastes	n=34 NGO: x13 County: x21	7	5	2	NGO: x10 County: x18	County: x12	County: x12
E. Heavy Metals (e.g. Chromium, Mercury, Lead)	n=39 NGO: x21 County: x18	5 1	2 2	1 1	NGO: x17 County: x15	NGO: x7 County: x10	County: x8
F. Indoor Hazards (e.g. Environmental Tobacco Smoke, Radon, Molds, Biological/Animal)	n=31 NGO: x15 County: x16	2 3	7 2	2 5	NGO: x9 County: x15	NGO: x7 County: x5	County: x5
G. Occupational Hazards/Exposures (e.g. Lead, Radiation, VOCs, Other OSHA chemicals)	n=19 NGO: x12 County: x7		2 1	1 2	NGO: x8 County: x8	NGO: x2 County: x4	County: x3
H. Persistent Organic Pollutants (e.g. PCBs, Brominated Flame Retardants)	n=30 NGO: x20 County: x10	2	3	4 2	NGO: x12 County: x10	NGO: x2 County: x7	County: x3
I. Pesticides (e.g. Carbamates, Organophosphates, Organochlorines)	n=32 NGO: x20 County: x12	2 1	2 3	9 3	NGO: x13 County: x10	NGO: x3 County: x6	County: x4
J. Water Pollutants (e.g. Trihalomethanes, arsenic, Selenium)	n=34 NGO: x15 County: x19	1 9	4 4	2 3	NGO: x10 County: x19	NGO: x1 County: x11	County: x8
K. OTHER – please specify: <ul style="list-style-type: none"> <li>● Animal borne vectors</li> <li>● Injuries</li> <li>● Upstream indicators such as food access, housing stock, poverty</li> <li>● Persistent Bioaccumulative and Toxic (PBT) chemicals</li> <li>● Hazards/Exposures related to children’s growth, development, and behavior</li> <li>● EMF</li> </ul>							

**TABLE 39: Factors Impacting Access of Data**

ACCESSING DATA: comments on enabling and hindering factors	
NGO Comments	LPHA Comments
<ul style="list-style-type: none"> <li>• Not knowing all the data sources that are out there. Need to put more raw data online, with a query function. For example, hospital discharge data by zip code, age, and by ICD instead of just by hospital.</li> <li>• Zip code data only available upon request. Need someone to produce updated information in report form.</li> <li>• Making data sets available on the web and in a variety of readily accessible formats (Excel, tab-delimited text, etc.) is key.</li> <li>• Time and money to hire staff with expertise.</li> <li>• Ease of access</li> <li>• Staff. IT infrastructure.</li> <li>• Lack of information on health effects. Bring existing data together in a useful way.</li> <li>• Awareness of existing data.</li> <li>• Lack of time, personnel, skills, and money. Need a single database with one search engine. User friendly, collective model. Need laymen summaries of the data.</li> <li>• Lack of time Site navigation</li> <li>• Cost. Long process to access data.</li> <li>• Time. Knowing how to use data for public action. Knowing what the data sources are and learning how they could be useful.</li> <li>• Lack of response for public. Unwillingness of public agencies to work with CBOs. Lack of time and resources.</li> <li>• Skills and training.</li> <li>• Translating data into something useful for the community. Information on how to access data.</li> <li>• On-line access, usable format and user friendly.</li> <li>• Lack of staff time. Access needs to be easy and fast. Need a directory of resources.</li> <li>• Time and skill needed to analyze the data. Need a central website that link to all fed and state and university databases.</li> <li>• Some data is deemed private because it involves personal identifiers; however, we only need broad data so that it doesn't impact a person's rights. Need a portal website allowing a person to go to one place and access government and university data.</li> <li>• Knowledge of what's out there. Funding to pay for services.</li> <li>• Experience level and familiarity with the various data sources. Knowing what data sources are out there. Easy ways to compare geographic areas.</li> <li>• Lack of specific information on how to locate and use databases. Compilation of various databases in one convenient physical location and on one website.</li> <li>• Need training on how to interpret site information. For example, Superfund Sites found on EPA shows sites but there is conflict on whether or not a site is actually a "superfund" site or just a toxic site.</li> <li>• Limited staff expertise and funding.</li> <li>• lack of funding and staff</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of dedicated positions to review overall community health beyond mandatory functions.</li> <li>• EH staff almost exclusively access data we're mandated to report upon for program or grant requirements. EH is less likely to use data sources to plan public health actions. (We lack the resources to do so). We need more information regarding sources we may not regularly access, but that would significantly enhance our knowledge of exposures, health effects; knowledge regarding what information different resources provide.</li> <li>• Most data not available at the city level. Need data in different formats (web, files, reports)</li> <li>• Lack capacity (staff).</li> </ul>

**TABLE 40: Factors Impacting Analysis/Interpretation of Data**

ANALYZING/INTERPRETING DATA: comments on enabling and hindering factors	
NGO Comments	LPHA Comments
<ul style="list-style-type: none"> <li>• Getting the data is more of a challenge because we are good at finding people who can analyze data.</li> <li>• How about a workshop for those interested in the particular data you plan to collect. There are always idiosyncrasies of data sets that are important to understand before you can draw conclusions from them.</li> <li>• The reliance on third party interpretation. Funding. Health tracking program must have staff that are willing to work with NGOs on interpreting data.</li> <li>• Limited staff, time, funding and expertise.</li> <li>• Getting the data. Relationship between occupation and the cancer registry data.</li> <li>• Lack of training and TA.</li> <li>• Lack of training in GIS and database management.</li> <li>• Skills. I'm not sure our organization would want to take on this task.</li> <li>• Lack of staff capacity and access to data.</li> <li>• Need better collection of upstream data, making the connection to downstream illnesses. The data collected is far to narrow to be useful to communities impacted by cumulative, multiple exposures.</li> <li>• Having access to an expert who could help translate the data into a user-friendly format.</li> <li>• Staff time and capacity. Not knowing which databases to access. Not knowing how to quickly find relevant information.</li> <li>• Lack of specialized experts.</li> <li>• Expertise and time. Make the data more user friendly. Need to display data in map format.</li> <li>• Much of the data collected by university and governmental scientists are for others who are trained to analyze the data. We are often limited by lack of training in analyzing the data.</li> <li>• Sometimes, the information is too technical. Need access to experts.</li> <li>• Experience level and familiarity with the various data sources. Knowing what data sources are out there. Having better information on the links between environmental hazards and health effects. Easy ways to compare geographic areas. Lack of good conclusive health information on various pollutants. Lack of staff time.</li> <li>• Lack of clear statements about limitations and assumptions. Out-of-data information. Data validity and reliability problems.</li> <li>• Time and expertise. Need for experts in GIS, SPSS, etc. Need workshops and trainings. Access to scientific interpreter, doctors, nurses. Funding.</li> <li>• Limited staff expertise and funding. Accurate and timely data.</li> <li>• lack of funding and staff</li> </ul>	<ul style="list-style-type: none"> <li>• Time and priorities. Lack of state and federal networked information. Lack of summarized information.</li> <li>• Resources</li> <li>• While the department does engage in and provide data analysis and interpretation when solicited, some of the challenges involve a limitation of resources (time, personnel). Much of this work is time-consuming and labor intensive. EH prioritizes mandated responsibilities (i.e. regulatory) before all others. Partnerships and/or collaborations with other organizations; state or national level universities might facilitate the department's ability to have sound data analysis and interpretation without expending the resources internally.</li> <li>• Staff, skills.</li> <li>• Lack capacity (staff).</li> </ul>

**TABLE 41: Factors Impacting Collection of Data**

COLLECTING DATA: comments on enabling and hindering factors	
NGO Comments	LPHA Comments
<ul style="list-style-type: none"> <li>• Need more help validating results of simpler sampling devices such as bucket air samplers and vacuum samplers for elemental carbon. Need help designing protocols for using sampling devices. Need for publicly available labs that would analyze environmental samples. Some local commercial testing labs do not want environmental groups as clients.</li> <li>• Funding</li> <li>• Reliance on volunteers. Funding.</li> <li>• Methodological challenges in collecting environmental data. Need to include biomonitoring into community-based participatory projects.</li> <li>• Lack of expertise, funding, staff.</li> <li>• Funding for staff and consultation</li> <li>• Resource limitations.</li> <li>• Lack of time, money, infrastructure, skills.</li> <li>• Lack of skills, knowledge, and capacity.</li> <li>• Skills and infrastructure</li> <li>• Funding.</li> <li>• Staff.</li> <li>• Time consuming.</li> <li>• Getting communities to trust us. Funding and staff.</li> <li>• Staff time.</li> <li>• Funding</li> <li>• Engaging researchers to help collect data. Getting the data back.</li> <li>• Lack of resources, funding.</li> <li>• lack of funding and staff</li> </ul>	<ul style="list-style-type: none"> <li>• Laboratory facilities.</li> <li>• Funding. Most data collection is mandated.</li> <li>• Lack of resources.</li> <li>• Lack of time and funding.</li> <li>• Lack of resources. Statutory and regulatory mandates.</li> <li>• Lack of coordination of databases. State agency requests for data in different formats.</li> <li>• The priority involves collecting data to meet reporting requirements. Developing goals for data collection that were in alignment with programmatic needs. Additionally, having the additional resources to do so would be important.</li> <li>• Lack of human resources</li> <li>• Limited trained manpower</li> <li>• Excessive paperwork. Unsuitable hardware and software for field work inspectors. Need handheld computers.</li> <li>• Staff, skills, time</li> <li>• Lack of funding to do surveillance in the community; There is no cooperation with occupational health; Lack of funding and coordination to analyze biologic samples for pollutants in the public health laboratory</li> <li>• Establishing linkages; public indifference.</li> <li>• Staff and funding.</li> <li>• No funding for this activity. No personnel assigned to this activity.</li> <li>• Generally not a part of our daily work and therefore not prioritized for action</li> <li>• Time and personnel</li> <li>• Lack of human resources</li> <li>• Lack of funding.</li> <li>• Statutory and regulatory mandates, lack of expertise (e.g. sampling frames, etc.) and lack of financial resources.</li> <li>• Lack capacity (staff).</li> <li>• Accuracy concerns with birth and death data.</li> </ul>

**TABLE 42: Factors Impacting Reporting of Data**

REPORTING DATA: comments on enabling and hindering factors	
NGO Comments	LPHA Comments
	<ul style="list-style-type: none"> <li>• Maze of local, state and federal agencies and different reporting criteria.</li> <li>• Lack of technology.</li> <li>• Lack of resources.</li> <li>• Need consistency in state's data formats. State needs to adopt xml formats.</li> <li>• Interface problems with Envision/GeoTracker. Lack of set answers and inadequate resources.</li> <li>• Need for consistency of databases and ability to merge with GIS systems</li> <li>• While the department does engage in and provide data analysis and interpretation when solicited, some of the challenges involve a limitation of resources (time, personnel). Much of this work is time-consuming and labor intensive. EH prioritizes mandated responsibilities (i.e. regulatory) before all others. In order to contribute to a statewide EH tracking database, easy-to-use reporting forms that captured existing or new data would facilitate reporting.</li> <li>• Lack of human resources</li> <li>• Out data is available to anyone who wants it. The challenge may be formatting needs of the requesting agency.</li> <li>• Lack of interest in our community</li> <li>• Many other agencies are unable to receive data that is electronically reported. Health and regulatory agencies' ability to accept electronic data.</li> <li>• Staff, skills, time, money</li> <li>• There are too many diverse organizations to report to. Environmental Health is fragmented at the state level.</li> <li>• Risk communication, public perceptions of important health problems.</li> <li>• Compliance from community reporters.</li> <li>• No funding for this activity. No personnel assigned to this activity.</li> <li>• Resources needed for data input, lack of effective interagency database interface. Difficulties with data extraction, limitations in staff resources.</li> <li>• Time and personnel</li> <li>• Infrastructure, geographical technology, lack of human resources</li> <li>• We report data when it is required by state or federal agencies.</li> <li>• Timely submission of data from approved sources, chain of custody issues, and inadequate resources.</li> <li>• Lack capacity (staff).</li> </ul>

**TABLE 43: General Comments from NGOs**

General Comments from NGOs
<ul style="list-style-type: none"><li>• We're really glad you are doing this before collecting the data. Good planning.</li><li>• Survey difficult to complete. We don't rely on state data unless it is specific to San Francisco. Very few are specific.</li><li>• The survey is long and very specific. There are many barriers to finding and using data not addressed here.</li><li>• Most of the questions were directed to scientific based organizations which made it difficult for CBOs to answer.</li><li>• Although the information requested in the survey is important, the survey was too long and time consuming. Interest in Phase 2 of the needs assessment will depend upon whether time and resources to participate.</li><li>• This type of survey is not particularly germane to a small health department in a county of 3000+</li><li>• If information is to truly serve the community, then it must be made available in a format that is easily understood by the lay person. To keep information in data only available for interpretation by the epidemiological community make conversion to public policy all but impossible. Please help lay people and policy makers understand what information is contained in each database and make sure that each is available to have information available for extraction in a meaningful way that will not require third party interpretation.</li><li>• Integrating existing and new databases could be valuable. For example: cancer-occupation-yrs of residence.</li><li>• I know there is valuable data available but I don't know the full scope of what is available and how to easily access it.</li><li>• We are the consumers of exposure data and analysis. A more publicly known and easily accessible single source contact to educate the public is needed. Categorization by zip code would be helpful. The most educated amongst our population would not have a clue as to where to look for environmental exposure risk data. There is a false presumption that our governmental agencies will prevent through regulation, any dangerous exposures and notify the public and appropriate professionals of such dangers. Our organization is deeply concerned with the cumulative effect of exposures from unrelated multiple sources. Our constituents want to know what exposure risks are present in their own homes and from products that are used routinely. Cosmetics to pesticides. We appreciate the invitation to participate in this survey. Thank you.</li><li>• In general, health tracking is immensely important. In regards to lead poisoning, we need updated community-based data so that we can show that lead poisoning is still a problem and that housing conditions directly impact health. We can no longer rely on the sketchy data collected by DHS.</li><li>• We are encouraged that there may be opportunities for local communities to utilize larger data sources.</li></ul>

**TABLE 44: General Comments from LPHAs**

General Comments from LPHAs	
<ul style="list-style-type: none"> <li>• Implementing the expressed vision for EHTS is expected to improve the transfer and accessibility of information from database to point-of-use. EH policy decisions need to be supported by data on risk and exposure which is at this time difficult to track and retrieve in a timely and user-friendly manner.</li> <li>• At the present time, the Bureau uses external data primarily to meeting reporting requirements. Additional data uses (i.e. planning, forecasting, relating hazard exposure to health effects) would probably require collaborations with other agencies or universities and/or additional funding for specific positions responsible for collecting, analyzing, and interpreting environmental health data.</li> </ul> <p><b>Comments on Data Sharing Concerns</b></p> <ul style="list-style-type: none"> <li>• Data may be misinterpreted without context.</li> <li>• Uniform format statewide is essential.</li> <li>• Data updates - use and misinterpretation.</li> <li>• Confidentiality issues.</li> <li>• "Small cells" issues and making sure interpretation accompanies raw data.</li> <li>• If we had data there would be concerns of lawsuits and blame that will impede collecting further data. Also there are many community activists looking for a cause that can easily extrapolate false conclusions and cause panic.</li> <li>• Confidentiality, resource requirements.</li> <li>• Political ramifications, primarily from business community.</li> <li>• We have no concerns about sharing the data we collect, as long as we have had a chance to ensure its accuracy.</li> <li>• Misinterpretation. Terrorism (i.e. location of underground storage tanks). Confidentiality.</li> <li>• We do not have a formal data collection program</li> <li>• Tracking. Staff. Privacy issues.</li> <li>• Our data lead is personal health data, not community based data and is not representative of any population.</li> <li>• Timely reporting can be an issue when compromised by lack of resources of chain of custody issues; confidentiality issues; and interpretation of data fro nontechnical persons.</li> <li>• Interpretations are problematic.</li> </ul> <p><b>Agency role in Environmental Health Tracking</b></p> <ul style="list-style-type: none"> <li>• As a rural environmental health agency, our primary mandate is to enforce existing laws and regulations. We have virtually no standards-setting or risk assessment responsibilities. Furthermore, we have no role with respect to air quality or pesticide use, which are assigned to other agencies. Hence our need for environmental health tracking data is quite limited.</li> <li>• Collecting and providing environmental conditions (chemical data).</li> <li>• Data mall - come on in and shop for your data - take what you want and share results.</li> <li>• Responding to the data produced by Environmental Health Tracking.</li> <li>• To put the data into a context of practical medical effects. Prevent panic and hysteria and give a true risk analysis to the community, with suggestions for action.</li> <li>• Track progress and provide input from the Environmental Health perspective.</li> <li>• Monitoring for the occurrence of and trends in disease to implement preventive and ameliorative activities and education in the County.</li> <li>• Enhancing existing understanding of our problems/issues.</li> <li>• Data uses, local data collection.</li> <li>• Collaboration and cooperation as allowed be resources.</li> <li>• Limited role.</li> <li>• Very minimal.</li> <li>• Willing participant.</li> <li>• Need more education regarding our role.</li> </ul>	<p><b>Concerns about Environmental Health Tracking</b></p> <ul style="list-style-type: none"> <li>• Funding of programs is paramount to any new activities.</li> <li>• The major of "EH Tracking" is not currently a mandate/function of EH programs. Most of the tracking should be in public health where the staff expertise already exists.</li> <li>• You fail to recognize that classic biological epidemiology is equally, if not more, than the environmental epidemiology on the survey. Our critical role is in food borne disease outbreak, waterborne diseases, and vectorborne diseases. Tracking is critical, but not included in this survey. The medical and economic impact of the hepatitis outbreak currently occurring in Ohio makes our concern for the number of fish caught in the Delta that a person eats monthly small and almost meaningless. We won't be able to determine if there is a bioterrorism event if we don't keep better EH track of what a "normal" outbreak level is.</li> <li>• We're still not fully aware of all information EHT would provide. What information would be collected for this system and how fast would it be available?</li> <li>• Staff time to transmit data. Our data is available but we do not have the resources to format or coordinate for another database. Also concern regarding mandates for data that we do not currently collect. This would also lead to concerns of the burden put upon our businesses to sample and test for data currently not asked of them.</li> <li>• What will you be tracking?</li> <li>• That environmental analysis be released without any health effects put into the context of exposure (dose), long and short term effects, and correlations with populations with SIMILAR histories of exposure.</li> <li>• Technical sophistication required.</li> <li>• We hope that it is scientifically accurate and not just a vehicle for advocacy and hidden agendas.</li> <li>• Goals of the proposal were not clearly stated, unclear if the data will be relevant to real-world needs of EH practitioners (based on concerns about the esoteric focus of the survey), concern that the product will require and use scarce local resources without a corresponding benefit at the local level Example of concern: Questions about exotic chemicals in the water, but no reference to common bacteriological pollutants that are our primary concern with both drinking and recreational use water. Example of real-world data needs: We regulate temporary food facilities at community events and are often are challenged as follows: "No one gets sick from eating at a community fair!" There is very little available data to support what we are doing, even though large foodborne illness outbreaks are not uncommon at such events.</li> <li>• Time, personnel, funding</li> <li>• Staffing, budgeting for equipment, training. Cost.</li> <li>• I don't know enough about who will be tracked and how the data will be used.</li> <li>• Lack of available funding at the State and local level to achieve the stated goals.</li> <li>• Will our participation be supported?</li> </ul>

## 8.D. APPENDIX D: Survey Questionnaires

### 8.D.1. Non-Governmental Organization Survey

1. Please categorize your organization's jurisdiction, geographic scope/reach, service area, and/or constituency by selecting **one** of the following:

- National
- National (with a California focus, program, office, etc.)
- California
- County/City – please specify: \_\_\_\_\_
- Multiple counties, districts, or regions, please specify: \_\_\_\_\_
- Other, please specify: \_\_\_\_\_

2. Below is a list of possible audiences and/or partners for your organization. Please answer the questions in the table. Please mark all applicable boxes.

POSSIBLE AUDIENCES/PARTNERS	Target audience? (mark if YES)	Partner/Collaborator? (mark if YES)
A. At-Risk Groups (children, elderly, etc.) – please specify: _____	<input type="checkbox"/>	<input type="checkbox"/>
B. Businesses/Industry	<input type="checkbox"/>	<input type="checkbox"/>
C. Environmental Justice communities – please specify: _____	<input type="checkbox"/>	<input type="checkbox"/>
D. Federal public agencies – please specify: _____	<input type="checkbox"/>	<input type="checkbox"/>
E. Foundations, Endowments, and other philanthropic organizations	<input type="checkbox"/>	<input type="checkbox"/>
F. General Public	<input type="checkbox"/>	<input type="checkbox"/>
G. Health Affected Populations – please specify: _____	<input type="checkbox"/>	<input type="checkbox"/>
H. Health Care Professionals	<input type="checkbox"/>	<input type="checkbox"/>
I. Legislators/Policy Makers – please specify: _____	<input type="checkbox"/>	<input type="checkbox"/>
J. Local (City/County) public agencies – please specify: _____	<input type="checkbox"/>	<input type="checkbox"/>
K. Media	<input type="checkbox"/>	<input type="checkbox"/>
L. Non-Governmental Organizations (NGOs)	<input type="checkbox"/>	<input type="checkbox"/>
M. Occupational Groups	<input type="checkbox"/>	<input type="checkbox"/>
N. Regulators, Environmental	<input type="checkbox"/>	<input type="checkbox"/>
O. Researchers/Scientists	<input type="checkbox"/>	<input type="checkbox"/>
P. Schools	<input type="checkbox"/>	<input type="checkbox"/>
Q. State public agencies – please specify: _____	<input type="checkbox"/>	<input type="checkbox"/>
R. Other – please specify: _____	<input type="checkbox"/>	<input type="checkbox"/>
S. Other – please specify: _____	<input type="checkbox"/>	<input type="checkbox"/>

3. The table below lists possible requests for information or assistance related to environmental health. Please answer the questions in the table. Mark all applicable boxes.

Information or assistance related to Environmental Health	Asked of your organization by the community? (mark if YES)	Is your organization able to meet the requests?			Asked of state or local agencies by your organization? (mark if YES)	Are they able to meet your request?		
		Most of the times	Sometimes	Rarely		Most of the times	Sometimes	Rarely
A. Basic information on Environmental Health (e.g. fact sheets, pamphlets, etc.)	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B. Linguistically and/or culturally appropriate information/resources on Environmental Health	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C. Assistance in finding/locating research studies/findings	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D. Assistance in interpreting research findings/results	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E. Data on environmentally related health effects (e.g. incidence rates, trends, & ethnic disparities)	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
F. Data on environmental hazards and/or exposures (e.g. source, amount, concentration, & geographic distribution of chemicals)	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
G. Assistance in collecting community data (primary data)	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
H. Assistance in accessing existing data (secondary data)	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I. Assistance in analyzing and interpreting data	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
J. Assistance in utilizing hazards/exposures or health effects data to take public health actions (e.g. policy development, advocacy, & risk communication)	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
K. Assistance in conducting community-based research, epidemiological studies, or investigations	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
L. Other – please specify: _____	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. How does your organization disseminate information/data about hazards/exposures and health effects?

- Raw data       Newsletters       Newspaper       Workshops  
 Fact sheets       Organization's Website       TV       Public events (fairs, festivals, etc.)  
 Brochures       Other Websites       Radio       Department initiated public meetings/hearings  
 Reports       Other, please specify: \_\_\_\_\_

5. Of the categories in #4, what are the two most effective ways to educate or outreach to your target audiences?

A. \_\_\_\_\_

B. \_\_\_\_\_

6. Below is a list of functions, activities, initiatives, and issues related to Environmental Health Tracking. Please answer the questions in the table. Mark all applicable boxes.

FOCUS AREAS: (Functions, Activities, Initiatives, and Issues related to Environmental Health Tracking)	Organization works on? (mark if YES)	Priority level for your Organization? (select one response)		
		High Priority	Medium Priority	Low Priority
A. Collecting primary data on environmentally related health effects	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B. Collecting primary data on environmental hazards/exposures	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C. Accessing secondary (existing) data on environmental hazards/exposures	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D. Accessing secondary (existing) data on environmentally related health effects	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E. Interpreting/analyzing environmental and/or health data	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
F. Studies to determine correlation between environmental hazards/exposures and health effects	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
G. Public education, community outreach, advocacy, and development and dissemination of educational materials	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
H. Risk communication	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I. Environmental hazard/exposure assessments (e.g. site assessments/investigations)	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
J. Environmental Justice (e.g. identifying and addressing disparities in environmental exposures and health effects by population subgroups)	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
K. Building/fostering partnerships/coalitions	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
L. Program planning/development	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
M. Program evaluation	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
N. Biomonitoring (measuring environmental chemicals in human specimens, such as blood or urine)	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O. GIS mapping (visually representing geographically based information) and other spatial statistics/ epidemiology	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
P. Occupational health	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q. Regulation/Public policy development (e.g. land use planning, urban and regional planning, etc.)	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
R. Other – Please specify: _____	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
S. Other – Please specify: _____	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. Of the categories of focus areas in question #6 that relate to environmental health tracking, what are the top three areas in which your organization has the strongest capacity? (Please mark each box with the corresponding letter: for example, **K** for building/fostering partnerships)

- First Strongest Capacity  
 Second Strongest Capacity  
 Third Strongest Capacity

8. Of the categories of focus areas in question #6 that relate to environmental health tracking, what are your organization's top three priorities for which to build capacity or receive training? (Please mark each box with the corresponding letter: for example, **H** for risk communication)

- First Priority for Training  
 Second Priority for Training  
 Third Priority for Training

9. Below are categories of environmentally related **health effects**. Please answer the questions in the table. Mark all applicable boxes. (We recognize that the categories are broad – the purpose of this question is to get a general sense as to data related activities and priority issues. You will have an opportunity to note specific priority health effects in question #10)

Categories of Health Effects (example are listed where applicable)	Priority for your Organization? (mark if YES)	Do you access (locate & obtain) existing data? (mark if YES)	Do you Collect data? (mark if YES)
A. Auto-immune Conditions (e.g. Lupus, Multiple Sclerosis)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Cancer (e.g. Breast, Testicular, Leukemia, Brain)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Cardiovascular Disease	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Dermatitis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Developmental Disease (e.g. Cerebral Palsy, Autism, Mental Retardation, Learning Disabilities)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Diabetes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. Endocrine-Disruptor related Disease (e.g. Early Menarche, Hypospadias)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Infertility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I. Kidney Disease	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
J. Neurologic Disease (e.g. Alzheimer's, Parkinson's, Lead poisoning)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
K. Reproductive Outcomes (e.g. Birth defects, Premature birth, Miscarriage)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L. Respiratory Disease (e.g. Asthma, Bronchitis, Occupational asthma)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M. OTHER – please specify: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. Of the categories of environmentally related **health effects** (question #9), what are the priorities for environmental health tracking for your service area or target audience/constituency?

Priority Category	Specific health effects of interest
<b>E</b> EXAMPLE	Autism EXAMPLE
<input type="checkbox"/> First Priority	_____
<input type="checkbox"/> Second Priority	_____
<input type="checkbox"/> Third Priority	_____

11. Below are categories of **environmental hazards/exposures**. Please answer the questions in the table. Mark all applicable boxes. (The categories are major groups of hazards/media and may not be mutually exclusive. You will have an opportunity to note specific priority hazards/exposures in question #12)

Categories of Environmental Hazards/Exposures (example are listed where applicable)	Priority for your Organization? (mark if YES)	Do you access (locate & obtain) existing data? (mark if YES)	Do you Collect data? (mark if YES)
A. Air Pollutants (e.g. Toxic air pollutants, Criteria air pollutants)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Endocrine-Disruptors (e.g. Phthalates, Alkylphenols, Bisphenol-A)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Foodborne Pollutants (e.g. Dioxins, Mercury)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Hazardous and Solid Wastes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Heavy Metals (e.g. Chromium, Mercury, Lead)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Indoor Hazards (e.g. Environmental Tobacco Smoke, Radon, Molds, Biological/Animal)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. Occupational (e.g. Lead, Radiation, VOCs, Other OSHA chemicals)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Persistent Organic Pollutants (e.g. PCBs, Brominated Flame Retardants)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I. Pesticides (e.g. Carbamates, Organophosphates, Organochlorines)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
J. Water Pollutants (e.g. Trihalomethanes, arsenic, Selenium)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
K. OTHER – please specify: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. Of the categories of environmental **hazards/exposures** (question #11), what are the priorities for environmental health tracking for your service area or target audience/constituency?

Priority Category	Specific hazard/exposures of interest
<b>A</b> EXAMPLE	Criteria Air Pollutants EXAMPLE
<input type="checkbox"/> First Priority	_____
<input type="checkbox"/> Second Priority	_____
<input type="checkbox"/> Third Priority	_____

13. Below is a sample list of **data sources** for health effects and hazards/exposures. Please answer the questions in the table. Mark all applicable boxes. (Please note that some of these data sources contain the same data. Most of the data sources listed are national/statewide on-going programs, organizations/agencies, surveys and/or portals. If there are data sources of interest that are local/regional or short-term– relevant studies or reports – please list them in **OTHER**.)

	Access/ Use data source? (mark if YES)	Data easy or difficult to access?			Usefulness of data? (Quality, timeliness, geographic specificity, completeness, etc.)		
		Easy	Moderate	Difficult	Very Useful	Somewhat Useful	Not Useful
<b>HEALTH EFFECTS DATA SOURCES</b>							
A. Birth Defects Monitoring Program – CDHS, Cancer Surveillance Section	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B. Behavioral Risk Factor Survey – Public Health Institute, Survey Research Group	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C. California Cancer Registry – CDHS, Cancer Surveillance Section	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D. California Health Interview Survey – UCLA Center for Health Policy Research	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E. California Women's Health Survey – Public Health Institute, Survey Research Group	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
F. Medi-Cal Database – CDHS, Medi-Cal Statistics Section	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
G. Occupational Asthma Database (SENSOR) – CDHS, OHB	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
H. Patient (Hospital) Discharge Database - OSHPD	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I. Pesticide Illness Database (SENSOR) – CDHS, OHB, Agricultural Health and Safety Section	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
J. Vital Statistics (birth & death), - DHS, OHIR, Vital Statistics Section	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
K. Private sources (e.g. HMOs, pharmacies, etc.) – please specify: _____	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
L. Other statewide or regional surveys (such as California Healthy Kids Survey, California Adult Tobacco Survey, etc.) – please specify: _____	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
M. Local/Community generated source (e.g. community health surveys) – please specify: _____	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
N. OTHER - please specify: _____	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
P. OTHER - please specify: _____	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>HAZARDS/EXPOSURES DATA SOURCES</b>							
a. Aerometric Data Analysis and Management System – Cal/EPA, ARB	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Air Quality System database – US EPA	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. California Emission Inventory Development and Reporting System (CEIDARS) – Cal/EPA, ARB	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. California Integrated Waste Management Board databases: Waste Facilities, Sites, and Operations Database; Waste Characterization Database; Disposal Reporting System; etc.	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Certified Unified Program Agencies (CUPA) or their Designated or Participating Agencies	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Elevated Lead Visual Information System – CDHS, OHB, Occupational Lead Poisoning Prevention Program	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. GeoTracker (Groundwater Resources Information Database) – Cal/EPA, State Water Resources Control Board	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Highway Performance Monitoring System – Caltrans, Division of Transportation System Information	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. Local Emergency Planning Committees	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. Local/Regional Water (public utilities) departments/districts	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k. National Emission Inventory database – US EPA, Emission Factor and Inventory Group	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
l. National Toxics Inventory database – US EPA	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
m. Pesticide Data Program (PDP) – national pesticide residue database program – USDA	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
n. Pesticide Use Report database – Cal/EPA, DPR	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
o. Response and Surveillance System for Childhood Lead Exposure – CDHS, Childhood Lead Poisoning Prevention Branch	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
p. Scorecard.org – Environmental Defense	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
q. Superfund Information Systems (CERCLIS, RODS, SPIL, etc.) – US EPA	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
r. Toxic HOTSPOTS – Eco-Map Family – Silicon Valley Toxics Coalition	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
s. Toxic Release Inventory – US EPA	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
t. Water Quality Monitoring Database – CDHS, Drinking Water Program	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
u. Private/Business/Industry data sources – please specify: _____	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Access/ Use data source? (mark if YES)	Data easy or difficult to access?			Usefulness of data? (Quality, timeliness, geographic specificity, completeness, etc.)		
		Easy	Moderate	Difficult	Very Useful	Somewhat Useful	Not Useful
V. Local/Community generated data source (e.g. neighborhood truck counts) – please specify: _____	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
W. Other California data sources (examples: Air Quality and Meteorological Information System, California Air Toxics Emission Factor (CATEF) II database, California Pesticide Information Portal (CalPIP), Emission Inventory Development and Reporting System, Environmental Impact Report/Statement (EIR/EIS) Database, Pesticide Well Inventory Database – Cal/EPA; Radon database – CDHS; etc.) please specify: _____	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
X. Other federal data sources (examples: Environmental Atlas, Envirofacts Data Warehouse, EnviroMapper, National Air Toxics Assessment, STORET, Environmental Radiation Ambient Monitoring System –US EPA; HazDat Database – ATSDR; HazMat Incident data – US DOT; HUD E-MAPS/Enterprise Geographic Information System – US Department of Housing and Urban Development; National Water Information System Web, National Water Quality Assessment Data Warehouse – USGS; etc.) please specify: _____	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
y. OTHER - please specify: _____	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. For data sources that your organization **accesses/uses** (#13), please list 3 exemplary (most useful, best quality, easiest to access, etc.) sources of data and tell us why it's a good data source.

Data Source	Specific health effects or hazards/exposures of interest	Why is it a good source of data?
A. _____	_____	_____
B. _____	_____	_____
C. _____	_____	_____

15. Please comment on how the usefulness (quality, timeliness, geographic specificity, completeness, etc.) of external data that are **accessed** by your organization could be improved.

\_\_\_\_\_

16. Please answer the questions in the table regarding health and hazards/exposures data. (In answering the questions about enabling and hindering factors, please consider and address various perspectives and categories of internal and external factors such as technology, infrastructure, skills, policies, regulations, behaviors/practices, perceptions, etc.)

A. What would facilitate your <b>UTILIZING</b> data for public health action?	_____
What are your organization's challenges, limitations or barriers in <b>UTILIZING</b> data for public health action?	_____
B. What would facilitate your <b>ACCESSING</b> (locating and obtaining) existing data?	_____
What are your organization's challenges, limitations or barriers in <b>ACCESSING</b> data?	_____
C. What would facilitate your <b>ANALYZING</b> and <b>INTERPRETING</b> data?	_____
What are your organization's challenges, limitations or barriers in <b>ANALYZING</b> and <b>INTERPRETING</b> data?	_____
D. What would facilitate your <b>COLLECTING</b> primary data?	_____
What are your organization's challenges, limitations or barriers in <b>COLLECTING</b> primary data?	_____

17. Please describe your organization's collaborative efforts in data-related functions (e.g. data collection, reporting, analysis, etc.) as well as the respective partners.

Description of Activities	Partner Organizations
_____	_____
_____	_____
_____	_____

18. Please describe your organization's collaborative efforts in utilizing environmental health or hazards/exposures data for public health action (e.g. program planning, policy development, community outreach/education, advocacy, etc.) as well as the respective partners.

Description of Activities	Partner Organizations
_____	_____
_____	_____
_____	_____

19. What are some ways in which your organization utilizes environmental health data? Please mark all applicable boxes.

- Internal (organizational) planning/decision making
- Influencing external policy/decision making
- Identifying hot-spots of hazards/exposures
- Identifying disproportionately affected populations
- Examining the relationship between health effects and the environment
- Evaluating public health, environmental protection, and remediation programs/policies
- Public education/outreach
- Other – please specify: \_\_\_\_\_

20. If your organization had better access to environmental and health data as well as increased capacity to collect, analyze, and/or interpret data, what would your organization be able to do? (Please describe possible new activities and/or enhancements to existing activities)

21. Does your organization collect any community-level hazards/exposures or health effects data that you would be willing to incorporate into a statewide Environmental Health Tracking Network?

- Yes – please specify type of data collected: \_\_\_\_\_
- No

- 21a. If YES, in which of the following areas would your organization be interested for training?

- Data Standardization
- Data Reporting
- Data Access

22. Which of the following formats of data does your organization currently work with? (please mark all applicable boxes)

- Raw data files (ASCII, CSV, .txt, .sd2, .dta, etc.)
- GIS Maps (geographical representation of data)
- Formatted data (.xls, .mdb, .dbf, etc.)
- Reports/Summaries of analyzed data.
- Analyzed data (tables, charts, graphs, etc.)
- Other – please specify: \_\_\_\_\_

- 22a. Of the formats above, what are your preferred formats in which to access, retrieve or receive data?

23. Which of the following software/applications does your organization utilize? Please mark all applicable boxes.

- Statistical applications (such as SAS, STATA, SPSS, Epi-Info)
- GIS applications (such as ArcGIS)
- Relational Database Management Systems applications (such as SQL Server or Oracle)
- Web service applications (such as web servers, application servers, GIS servers)
- Other – please specify: \_\_\_\_\_

24. Are you interested in participating in a focus group (Phase 2 of the CEHTP needs assessment) to further discuss environmental health tracking issues and needs?

- Yes
- No

25. Please indicate any comments or questions you have about the survey, the needs assessment, the California Environmental Health Tracking Program, or environmental health tracking in general.



## 8.D.2. Local Health Department Survey

1. The table below lists requests for information or assistance related to environmental health that your department may receive. Please answer the questions in the table. Mark all applicable boxes.

Information or assistance related to Environmental Health	Asked of your department? (mark if YES)	Who is making the request? (Please provide an example – e.g. community member, media, advocacy group, etc.)	Department able to meet request? (select one response)		
			Most of the times	Sometimes	Rarely
A. Basic information on Environmental Health (e.g. fact sheets, pamphlets, etc.)	<input type="checkbox"/>	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B. Linguistically and/or culturally appropriate information/resources on Environmental Health	<input type="checkbox"/>	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C. Assistance in finding/locating research studies/findings	<input type="checkbox"/>	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D. Assistance in interpreting research findings/results	<input type="checkbox"/>	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E. Data on environmentally related health effects (e.g. incidence rates, trends, & ethnic disparities)	<input type="checkbox"/>	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
F. Data on environmental hazards and/or exposures (e.g. source, amount, concentration, & geographic distribution of chemicals)	<input type="checkbox"/>	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
G. Assistance in collecting community data (primary data)	<input type="checkbox"/>	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
H. Assistance in accessing existing data (secondary data)	<input type="checkbox"/>	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I. Assistance in analyzing and interpreting data	<input type="checkbox"/>	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
J. Assistance in utilizing hazards/exposures or health effects data to take public health actions (e.g. policy development, advocacy, & risk communication)	<input type="checkbox"/>	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
K. Assistance in conducting community-based research, epidemiological studies, or investigations	<input type="checkbox"/>	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
L. Other – please specify: _____	<input type="checkbox"/>	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. How does your department disseminate information/data about hazards, exposures, and health effects?

- |                                      |   |                                    |  |
|--------------------------------------|---|------------------------------------|--|
| <input type="checkbox"/> Raw data    | <input type="checkbox"/> Newsletters                  | <input type="checkbox"/> Newspaper | <input type="checkbox"/> Workshops                                     |
| <input type="checkbox"/> Fact sheets | <input type="checkbox"/> Department Website           | <input type="checkbox"/> TV        | <input type="checkbox"/> Public events (fairs, festivals, etc.)        |
| <input type="checkbox"/> Brochures   | <input type="checkbox"/> Other Websites               | <input type="checkbox"/> Radio     | <input type="checkbox"/> Department initiated public meetings/hearings |
| <input type="checkbox"/> Reports     | <input type="checkbox"/> Other, please specify: _____ |                                    |  |

3. Of the categories in #2, what are the two most effective ways to educate or outreach to your department's constituency?

A. _____
B. _____

4. Below is a list of functions, activities, initiatives, and issues related to Environmental Health Tracking. Please answer the questions in the table. Mark all applicable boxes.

FOCUS AREAS: (Functions, Activities, Initiatives, and Issues related to Environmental Health Tracking)	Department works on? (mark if YES)	Priority level for your Department? (select one response)		
		HIGH Priority	MEDIUM Priority	LOW Priority
A. Collecting primary data on environmentally related health effects	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B. Collecting primary data on environmental hazards/exposures	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C. Accessing secondary (existing) data on environmental hazards/exposures	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D. Accessing secondary (existing) data on environmentally related health effects	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E. Interpreting/analyzing environmental and/or health data	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
F. Studies to determine correlation between environmental hazards/exposures and health effects	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
G. Public education, community outreach, advocacy, and development and dissemination of educational materials	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
H. Risk communication	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I. Environmental hazard/exposure assessments (e.g. site assessments/investigations)	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
J. Environmental Justice (e.g. identifying and addressing disparities in environmental exposures and health effects by population subgroups)	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
K. Building/fostering partnerships/coalitions	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
L. Program planning/development	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
M. Program evaluation	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
N. Biomonitoring (measuring environmental chemicals in human specimens, such as blood or urine)	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O. GIS mapping (visually representing geographically based information) and other spatial statistics/ epidemiology	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
P. Occupational health	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q. Regulation/Public policy development (e.g. land use planning, urban and regional planning, etc.)	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
R. Other – please specify: _____	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. Of the categories of focus areas in question #4 that relate to environmental health tracking, what are the **top three areas in which your department has the strongest capacity?** (Please mark each box with the corresponding letter: for example, **K** for building/fostering partnerships)

- K** First Strongest Capacity  
 Second Strongest Capacity  
 Third Strongest Capacity

6. Of the categories of focus areas in question #4 that relate to environmental health tracking, what are your department's **top three priorities for which to build capacity or receive training?** (Please mark each box with the corresponding letter: for example, **H** for risk communication)

- First Priority for Training  
 Second Priority for Training  
 Third Priority for Training

7. Below are categories of environmentally related health effects. Please answer the questions in the table. Mark all applicable boxes. (We recognize that the categories are broad – the purpose of this question is to get a general sense as to data related activities and priority issues. You will have an opportunity to note specific priority health effects in question #8)

Categories of Health Effects (example are listed where applicable)	Priority for your Department? (mark if YES)	Access (locate & obtain) existing data? (mark if YES)	Collect data? (mark if YES)	Report data? (mark if YES)
A. Auto-immune Conditions (e.g. Lupus, Multiple Sclerosis)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Cancer (e.g. Breast, Testicular, Leukemia, Brain)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Cardiovascular Disease	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Dermatitis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Developmental Disease (e.g. Cerebral Palsy, Autism, Mental Retardation, Learning Disabilities)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Diabetes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. Endocrine-Disruptor related Disease (e.g. Early Menarche, Hypospadias)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Infertility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I. Kidney Disease	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
J. Neurologic Disease (e.g. Alzheimer's, Parkinson's, Lead poisoning)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
K. Reproductive Outcomes (e.g. Birth defects, Premature birth, Miscarriage)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
L. Respiratory Disease (e.g. Asthma, Bronchitis, Occupational asthma)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M. OTHER – please specify: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Of the categories of environmentally related health effects (question #7), what are the priorities for environmental health in your jurisdiction?

Priority Category	Specific health effects of interest
<input checked="" type="checkbox"/> <b>E</b> EXAMPLE	Autism EXAMPLE
<input type="checkbox"/> First Priority	_____
<input type="checkbox"/> Second Priority	_____
<input type="checkbox"/> Third Priority	_____

9. Below are categories of environmental hazards/exposures. Please answer the questions in the table. Mark all applicable boxes. (The categories are major groups of hazards/media and may not be mutually exclusive. You will have an opportunity to note specific priority hazards/exposures in question #10)

Categories of Environmental Hazards/Exposures (example are listed where applicable)	Priority for your Department? (mark if YES)	Access (locate & obtain) existing data? (mark if YES)	Collect data? (mark if YES)	Report data? (mark if YES)
A. Air Pollutants (e.g. Toxic air pollutants, Criteria air pollutants)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Endocrine-Disruptors (e.g. Phthalates, Alkylphenols, Bisphenol-A)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Foodborne Pollutants (e.g. Dioxins, Mercury)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Hazardous and Solid Wastes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Heavy Metals (e.g. Chromium, Mercury, Lead)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Indoor Hazards (e.g. Environmental Tobacco Smoke, Radon, Molds, Biological/Animal)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. Occupational Hazards/Exposures (e.g. Lead, Radiation, VOCs, Other OSHA chemicals)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Persistent Organic Pollutants (e.g. PCBs, Brominated Flame Retardants)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I. Pesticides (e.g. Carbamates, Organophosphates, Organochlorines)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
J. Water Pollutants (e.g. Trihalomethanes, arsenic, Selenium)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
K. OTHER – please specify: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. Of the categories of environmental hazards/exposures (question #9), what are the priorities for environmental health tracking for your jurisdiction?

Priority Category		Specific hazard/exposures of interest	
A	EXAMPLE	Criteria Air Pollutants	EXAMPLE
	First Priority	_____	
	Second Priority	_____	
	Third Priority	_____	

11. For health effects data sources that your department accesses/uses, please list 3 exemplary (most useful, best quality, easiest to access, etc.) sources of data and tell us why it's a good data source. *Examples include: Behavioral Risk Factor Survey; California Cancer Registry; California Health Interview Survey; Vital Statistics; National Emission Inventory database; Pesticide Use Report database; etc.*

Data Source	Why is it a good source of data?
A. _____	_____
B. _____	_____
C. _____	_____

12. Please answer the questions in the table regarding data. (Please consider and address various perspectives and categories of internal and external factors such as technology, infrastructure, skills, policies, regulations, behaviors/practices, perceptions, etc.)

A. What are your department's challenges, limitations or barriers in COLLECTING primary data?	_____
B. What are your department's challenges, limitations or barriers in REPORTING data?	_____
C. What are your department's challenges, limitations or barriers in UTILIZING data for public health action?	_____

13. What are some ways in which your department utilizes environmental health data? Please mark all applicable boxes.

- Internal (organizational) planning/decision making
- Influencing external policy/decision making
- Identifying hot-spots of hazards/exposures
- Identifying disproportionately affected populations
- Examining the relationship between health effects and the environment
- Evaluating public health, environmental protection, and remediation programs/policies
- Public education/outreach
- Other – please specify: \_\_\_\_\_

14. What are your concerns or issues with sharing data collected by your department?

\_\_\_\_\_

15. How could an Environmental Health Tracking Network enhance the work that your department is doing?

\_\_\_\_\_

16. What concerns or questions do you have about Environmental Health Tracking?

\_\_\_\_\_

17. What do you see as your department's role in Environmental Health Tracking?

\_\_\_\_\_

18. Are you interested in participating in an interview or focus group (phase 2 of the CEHTP needs assessment) to further discuss Environmental Health Tracking issues, concerns, and needs?

- Yes
- No

.....

### 8.D.3. Local Environmental Health Department Survey

1. The table below lists requests for information or assistance related to environmental health that your department may receive. Please answer the questions in the table. Mark all applicable boxes.

Information or assistance related to Environmental Health	Asked of your department? (mark if YES)	Who is making the request? (Please provide an example – e.g. community member, media, advocacy group, etc.)	Department able to meet request? (select one response)		
			Most of the times	Sometimes	Rarely
A. Basic information on Environmental Health (e.g. fact sheets, pamphlets, etc.)	<input type="checkbox"/>	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B. Linguistically and/or culturally appropriate information/resources on Environmental Health	<input type="checkbox"/>	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C. Assistance in finding/locating research studies/findings	<input type="checkbox"/>	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D. Assistance in interpreting research findings/results	<input type="checkbox"/>	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E. Data on environmentally related health effects (e.g. incidence rates, trends, & ethnic disparities)	<input type="checkbox"/>	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
F. Data on environmental hazards and/or exposures (e.g. source, amount, concentration, & geographic distribution of chemicals)	<input type="checkbox"/>	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
G. Assistance in collecting community data (primary data)	<input type="checkbox"/>	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
H. Assistance in accessing existing data (secondary data)	<input type="checkbox"/>	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I. Assistance in analyzing and interpreting data	<input type="checkbox"/>	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
J. Assistance in utilizing hazards/exposures or health effects data to take public health actions (e.g. policy development, advocacy, & risk communication)	<input type="checkbox"/>	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
K. Assistance in conducting community-based research, epidemiological studies, or investigations	<input type="checkbox"/>	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
L. Other – please specify: _____	<input type="checkbox"/>	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. How does your department disseminate information/data about hazards, exposures, and health effects?

- |                                      |   |                                    |  |
|--------------------------------------|---|------------------------------------|--|
| <input type="checkbox"/> Raw data    | <input type="checkbox"/> Newsletters                  | <input type="checkbox"/> Newspaper | <input type="checkbox"/> Workshops                                     |
| <input type="checkbox"/> Fact sheets | <input type="checkbox"/> Department Website           | <input type="checkbox"/> TV        | <input type="checkbox"/> Public events (fairs, festivals, etc.)        |
| <input type="checkbox"/> Brochures   | <input type="checkbox"/> Other Websites               | <input type="checkbox"/> Radio     | <input type="checkbox"/> Department initiated public meetings/hearings |
| <input type="checkbox"/> Reports     | <input type="checkbox"/> Other, please specify: _____ |                                    |  |

3. Of the categories in #2, what are the two most effective ways to educate or outreach to your department's constituency?

A. _____
B. _____

4. Below is a list of functions, activities, initiatives, and issues related to Environmental Health Tracking. Please answer the questions in the table. Mark all applicable boxes.

FOCUS AREAS: (Functions, Activities, Initiatives, and Issues related to Environmental Health Tracking)	Department works on? (mark if YES)	Priority level for your Department? (select one response)		
		HIGH Priority	MEDIUM Priority	LOW Priority
A. Collecting primary data on environmentally related health effects	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B. Collecting primary data on environmental hazards/exposures	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C. Accessing secondary (existing) data on environmental hazards/exposures	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D. Accessing secondary (existing) data on environmentally related health effects	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E. Interpreting/analyzing environmental and/or health data	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
F. Studies to determine correlation between environmental hazards/exposures and health effects	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
G. Public education, community outreach, advocacy, and development and dissemination of educational materials	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
H. Risk communication	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I. Environmental hazard/exposure assessments (e.g. site assessments/investigations)	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
J. Environmental Justice (e.g. identifying and addressing disparities in environmental exposures and health effects by population subgroups)	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
K. Building/fostering partnerships/coalitions	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
L. Program planning/development	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
M. Program evaluation	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
N. Biomonitoring (measuring environmental chemicals in human specimens, such as blood or urine)	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O. GIS mapping (visually representing geographically based information) and other spatial statistics/ epidemiology	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
P. Occupational health	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q. Regulation/Public policy development (e.g. land use planning, urban and regional planning, etc.)	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
R. Other – please specify: _____	<input type="checkbox"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. Of the categories of focus areas in question #4 that relate to environmental health tracking, what are the **top three areas in which your department has the strongest capacity?** (Please mark each box with the corresponding letter: for example, **K** for building/fostering partnerships)

**K** First Strongest Capacity  
 Second Strongest Capacity  
 Third Strongest Capacity

6. Of the categories of focus areas in question #4 that relate to environmental health tracking, what are your department's **top three priorities for which to build capacity or receive training?** (Please mark each box with the corresponding letter: for example, **H** for risk communication)

First Priority for Training  
 Second Priority for Training  
 Third Priority for Training

7. Below are categories of environmental hazards/exposures. Please answer the questions in the table. Mark all applicable boxes. (The categories are major groups of hazards/media and may not be mutually exclusive. You will have an opportunity to note specific priority hazards/exposures in question #8)

Categories of Environmental Hazards/Exposures (example are listed where applicable)	Priority for your Department? (mark if YES)	Access (locate & obtain) existing data? (mark if YES)	Collect data? (mark if YES)	Report data? (mark if YES)
A. Air Pollutants (e.g. Toxic air pollutants, Criteria air pollutants)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Endocrine-Disruptors (e.g. Phthalates, Alkylphenols, Bisphenol-A)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Foodborne Pollutants (e.g. Dioxins, Mercury)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Hazardous and Solid Wastes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Heavy Metals (e.g. Chromium, Mercury, Lead)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Indoor Hazards (e.g. Environmental Tobacco Smoke, Radon, Molds, Biological/Animal)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. Occupational Hazards/Exposures (e.g. Lead, Radiation, VOCs, Other OSHA chemicals)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Persistent Organic Pollutants (e.g. PCBs, Brominated Flame Retardants)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I. Pesticides (e.g. Carbamates, Organophosphates, Organochlorines)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
J. Water Pollutants (e.g. Trihalomethanes, arsenic, Selenium)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
K. OTHER – please specify: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Of the categories of environmental hazards/exposures (question #7), what are the priorities for environmental health tracking for your jurisdiction?

Priority Category	Specific hazard/exposures of interest
<b>A</b> EXAMPLE	Criteria Air Pollutants EXAMPLE
<input type="checkbox"/> First Priority	_____
<input type="checkbox"/> Second Priority	_____
<input type="checkbox"/> Third Priority	_____

9. For environmental health data sources that your department accesses/uses, please list 3 exemplary (most useful, best quality, easiest to access, etc.) sources of data and tell us why it's a good data source. Examples include: California Integrated Waste Management Board databases; GeoTracker; National Emission Inventory database; Pesticide Use Report database; Toxic Release Inventory; scorecard.org; etc.

Data Source	Why is it a good source of data?
A. _____	_____
B. _____	_____
C. _____	_____

10. Please answer the questions in the table regarding data. (Please consider and address various perspectives and categories of internal and external factors such as technology, infrastructure, skills, policies, regulations, behaviors/practices, perceptions, etc.)

A. What are your department's challenges, limitations or barriers in COLLECTING primary data?	_____
B. What are your department's challenges, limitations or barriers in REPORTING data?	_____
C. What are your department's challenges, limitations or barriers in UTILIZING data for public health action?	_____

11. What are some ways in which your department utilizes environmental health data? Please mark all applicable boxes.

- Internal (organizational) planning/decision making
- Influencing external policy/decision making
- Identifying hot-spots of hazards/exposures
- Identifying disproportionately affected populations
- Examining the relationship between health effects and the environment
- Evaluating public health, environmental protection, and remediation programs/policies
- Public education/outreach
- Other – please specify: \_\_\_\_\_

12. What are your concerns or issues with sharing data collected by your department?

13. How could an Environmental Health Tracking Network enhance the work that your department is doing?

14. What concerns or questions do you have about Environmental Health Tracking?

15. What do you see as your department's role in Environmental Health Tracking?

16. Are you interested in participating in an interview or focus group (phase 2 of the CEHTP needs assessment) to further discuss Environmental Health Tracking issues, concerns, and needs?

- Yes
- No



# Findings from Phase 2 of the Stakeholder Needs Assessment: SMALL GROUP DISCUSSIONS



30 October 2005

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# 1. Acknowledgements

We gratefully acknowledge the individual participants and their respective organizations for their valuable contributions. A list of the participating organizations can be found in APPENDIX A: Phase 2 Participants (p29).

We extend a special thanks to individuals and organizations that coordinated and hosted the regional meetings. They were invaluable in assisting CEHTP to identify and invite relevant participants as well as coordinating the outreach and logistics for each of the regions. The following organizations and individuals coordinated the regional meetings for the San Francisco Bay area, the Central Valley, and Southern California respectively.

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- Physicians for Social Responsibility, Los Angeles: Martha Arguello.

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## 2. Background and Overview

The Centers for Disease Control and Prevention (CDC) awarded California a three-year grant in 2002 to support the development of a statewide Environmental Health Tracking System (EHTS).

The goal of the resultant California Environmental Health Tracking Program (CEHTP) is to develop comprehensive plans for a standards-based, coordinated, and integrated EHTS that enables public health actions through linkage, monitoring, reporting, and sharing of information on environmentally related diseases and environmental hazards/exposure.

CEHTP is a collaborative initiative of the California Department of Health Services, the California Environmental Protection Agency, and the University of California.

An EHTS would lack much of its intended utility if key stakeholders are not involved in various stages of planning and implementation.

Ultimately, CEHTP hopes to design a system that is useful to stakeholders and to increase their readiness to take full advantage of this future resource and become stronger partners in achieving healthy people in healthy communities.

A key step in the planning process is to identify, document, and communicate needs, issues, and concerns among key stakeholders including: non-governmental organizations (NGO) and local public health agencies (LPHA).

Objectives of the Needs Assessment Include Identifying and Documenting:

- Environmental hazards/exposures and diseases of concern.
- Priority data and information needs.
- Needs and issues related to working with (collecting, accessing, managing, and analyzing) environmental health data.
- Needs and issues related to utilizing environmental health data for public health actions.
- Capacity building and training issues related to environmental health tracking.

Findings from the needs assessment will be used to inform the strategic plan for environmental health tracking in California. This includes community outreach and involvement strategies, data/information communication and dissemination strategies, data analysis and interpretation methods and priorities, and technical specifications for a future EHTS.

Needs assessment findings have already informed and continue to shape CEHTP's approaches and activities during the development stages of an EHTS.

The overall needs assessment consists of multiple components. This report describes activities and findings from the second component of the needs assessment, Phase 2.

For Phase 2, CEHTP conducted small group discussions with representatives of community-based/non-governmental organizations and local public health agencies.

These discussions were designed to obtain detailed information about data/information needs (end-user needs) and organizational/workforce capacity. They also provided opportunities to supplement and follow up on information gathered through Phase 1 of the needs assessment: survey

questionnaires. An executive summary of the survey results are included in APPENDIX C (pError! **Bookmark not defined.**) of this report.

For Phase 2, we conducted a total of seven small group discussions. We targeted four local public health agencies that varied by type, geography, and size. Participants included staff members that are involved in acquiring, analyzing, managing, and applying (policy development, education/outreach, planning, etc.) environmental health data. This included a combination of the following: Health Officers, Directors of environmental health, chronic disease epidemiologists, environmental epidemiologists, biostatisticians, program planners, health educators, and IT/GIS staff. We worked with each agency to establish the composition of the group.

For the Non-Governmental Organizations, CEHTP conducted three meetings for the following regions: San Francisco Bay Area, Central Valley, and Southern California. Unlike the LPHA discussions, each of these meetings was composed of participants from multiple organizations. For each of the regions, a host organization helped to identify and invite relevant participants (from organizations that varied across issues and programs) as well as coordinated the outreach and logistics for the meetings.

Overall, sixty three individuals participated in seven meetings. APPENDIX A: Phase 2 Participants on p29 includes the list of LPHAs (and programs within those agencies) and the NGO/CBOs that participated in the Phase 2 discussions.

### 3. Phase 2 Findings

This chapter catalogs participant comments from the small group discussions, with community-based and non-governmental organizations (CBO/NGO) and local public health agencies (LPHA), for Phase 2 of the California Environmental Health Tracking Program needs assessment. Due to the purpose and nature of this assessment, we did not quantify or prioritize results.

We have taken care to report participant comments as unadulterated as possible; avoiding any editorials, elaboration, or interpretation (beyond categorization). Exception include where clarifications, modifications, and/or supporting context were needed (e.g. defining acronyms, ensuring confidentiality, maintaining consistent voice, etc.). We also did not attempt to translate discussion results into recommendations. This document simply captures what we heard from stakeholders rather than what implications the results have for the program. We will incorporate these results along with those of other assessment activities in the development of future program strategies, recommendations, and plans.

We have attempted conceptualize and organize comments into multiple levels of relevant but overlapping categories in order to facilitate navigation, future analysis, and interpretation as well as integration into program strategies, recommendations, and plans. To the extent possible, we have categorized the responses in the context under which the discussion occurred; however, the discussions were often fluid and did not always adhere to the intended structure of the meetings.

Due to the overarching and interrelated nature of many of the issues, specific comments are applicable to various categories; however, we've minimized duplicate comments by selecting the most appropriate category.

#### 3.A. Data/Information needs

The following sections focus on issues related to environmental health data needs. The purpose of gathering this information was to better understand how various stakeholders were working with (collecting, managing, accessing, analyzing, interpreting, and utilizing) environmental health data, the role of data in their work, and what they perceived as needs and gaps in data.

The purpose of gathering this information is to ensure that data and information generated by a future tracking system is meaningful, appropriate, relevant, and useful to stakeholders.

##### 3.A.1. Role/functions related to environmental health data

This section describes participants' roles and functions that involve environmental health data. Prompts and probing questions related to this category included:

- ▶ *Please describe the type of initiatives/activities in which you engage using environmental health data.*

- ▶ *What is your role in working with environmental health data?*
- ▶ *How do you use environmental health data?*
- ▶ *What types of routine functions does your organization perform on environmental health data?*

#### Feedback Common to CBOs/NGOs and LPHAs

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>■ Using data to review and comment on land use documents, EIRs (Environmental Impact Reviews), etc.</li> <li>■ Conducting environmental monitoring/sampling. For example: diesel, PM (particulate matter), NOx (nitrogen oxides), and traffic counts.</li> <li>■ Producing data/statistical reports.</li> <li>■ Conducting health surveys.</li> </ul> | <ul style="list-style-type: none"> <li>■ Accessing environmental health data and information:               <ul style="list-style-type: none"> <li>● Accessing data specific to facilities/refineries.</li> <li>● Accessing information from disease registries.</li> <li>● Accessing and using information from scientific studies/journals.</li> </ul> </li> </ul> |
|--|--|

#### CBO/NGO Feedback

##### Primary data collection:

- Conducting community-based environmental health surveys. Collecting data on conditions, perceptions, priorities, and attitudes about health and environmental issues.
- Collecting primary data related to asthma in schools – including information on education levels, school days missed, suspected triggers, etc.
- Collecting primary data on environmental conditions (e.g. traffic counts) for research.
- Collecting information on asthma, locations of pollution sources, etc. in San Joaquin Valley, rural communities, and Colonias (small, unincorporated communities without municipal infrastructure) through surveys.
- Collecting data from clinics for asthma (hospital utilization, missed activities, second hand smoke) for use in education, media outreach, advocacy, grant seeking, etc.
- Generating and analyzing data for use by physicians. Looking at trends in order to evaluate and improve quality of health care.

##### Utilizing data for policy/advocacy:

- Using quantitative and qualitative data (e.g. neighborhood level surveys) to push policy.
- Translating existing/available data on asthma for advocacy and policy.
- Providing evidence for local planning/land use.
- Campaigning for housing and transportation issues.
- Promoting green businesses/policies and advocating for phasing out harmful products.
- Strengthening evidence for lawsuits. Educating the public and policy makers. Formulating convincing arguments.
- Advocating for toxic clean-ups.
- Developing policy recommendations and targeting individuals that have the power to influence policy decisions at the local, state, national levels.

##### Building community capacity:

- Developing alternate ways to collect data while also improving skills of the people that are burdened by pollution and illness.

- Assisting communities to analyze and interpret data. Providing research support to communities.
  - Collaborating with research partners.
  - Researching air quality in relation to SES (socio-economic status).
  - Conducting traffic studies.
  - Making the connection between housing, economic, demographics, and health - basically to reveal current conditions.
- Teaching community members to collect data.
- Working with the community to conduct power mapping (a framework for problem solving through identifying and building relationships between individuals, organizations, institutions, resources, etc.).
- Sharing/communicating information about the relationship between chemical exposures and diseases.

**Using data for outreach and education:**

- Providing information and conducting outreach to reporters/media.
- Using pesticide data to research pesticide drift. Findings are used as an educational tool.
- Improving home health in refugee neighborhoods. Educating residents about safety, indoor air quality, chemical storage, etc. Organizing with tenants to improve housing conditions.

- Compiling and communicating statistics on breast cancer.
- Translating and interpreting data and presenting information in useful and meaningful formats to constituents.

**Other data related functions:**

- Assessing data quality. Determining what types of data and information are credible and useful (usefulness of data often depends on the purpose for which it is being used).
- Evaluating the types of data that could support various constituencies (e.g. local coalitions).
- Conducting a community environmental indicators project (West Oakland Environmental Indicators Project).
- Utilizing secondary data such as birth defects and cancer data.
- Utilizing environmental data from AQMD and EPA.
- Incorporating data into grant proposals and providing data/information requested by funding agencies.
- Using findings/reports to guide various programs.
- Developing an environmental justice framework that includes cumulative impacts of environmental hazards.

**LPHA Feedback**

**Primary data collection:**

- Collecting data on:
  - Violations of CURFFL (California Uniform Retail Food Facilities Law), which include improper food temperatures, employee hygiene and illness issues, food from unsafe sources, and vermin problems.
  - Food borne illness complaints and investigations results.
  - Food samples and food-borne illnesses.

- Food-borne illness (using WebCMR, California Department of Health Services' web-based Confidential Morbidity Report form).
- Lead in Mexican candy.
- Recreational water quality.
- Chemical spills and BT (bioterrorism) chemicals.
- Mosquito control and surveillance.
- Hazardous waste generators (inspections).

- Above ground and under-ground storage tanks.
- Hazmat Emergency responses.
- Household hazardous waste.
- Complaints such as noise.
- Routine inspections, follow ups, complaints, violations
- Contamination (PCB, DDT) in white croakers.
- Under 4 housing general sanitation complaints including mold, vermin, standing water-West Nile Virus, sewage, lead paint, etc.
- Smoking in restaurants.
- Tracking blood lead levels (lead levels in dust, paint chips, and soil).
- Tracking quantities of materials, locations, incidents (qualitative) related to hazardous materials. This includes billing information for companies associated with the waste.
- Monitoring water quality:
  - Public beaches – NPDS (National Point Discharge System) permits; storm water; beach water.
  - Hazards in drinking water.

**Utilizing data:**

- Conducting a health risk assessment (agency was asked by the city council to provide a baseline report using existing data to analyze whether or not there are risks to the public’s health, or perceived risks due to local ambient air quality). The health assessment report also scopes various sources of air emissions such as diesel emissions from nearby freeways.
- Conducting limited statistical analysis: indoor air quality data (volatile organic chemicals [VOC], mold, etc.) for a Healthy Homes grant and lead data.

**Data management:**

- Developing data and data-input schemes and standards for the agency.
- Aggregating data: fair amount of routine data aggregation on health code inspection programs (violations related to housing, food, hazmat).
- Integrating internal (agency) data: spill accidents, LUFTs (Leaking Underground Fuel Tanks), etc.
- Manipulating data: data cleaning, aggregation, formatting, etc. Approximately 20% of the agencies time goes into these tasks.

**3.A.2. How data enhances/facilitates the work of the organization**

This section describes the role of data in stakeholders’ functions/activities. No questions were asked explicitly regarding this category; however, the role, uses, importance, and relevance of data were clearly articulated by participants during the discussions.

**Feedback Common to CBO/NGO and LPHA**

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>■ Data enables prioritization of limited resources. Resources can be geared towards areas of greatest concern to the public’s health.</li> </ul> | <ul style="list-style-type: none"> <li>■ Data facilitates the discovery and assessment of trends. This can lead to preventive strategies and measures.</li> </ul> |
|---|---|

### CBO/NGO Feedback

- More and better data and information enables outreach to elected officials about what communities need. Data enables communities to say to elected officials: “this is what’s going on; you need to pay attention and help.”
  - Data enables organizations to frame the environment as a health issue.
  - Data strengthens grant proposals/applications and helps to meeting reporting requirements.
  - Information on populations being served can bring in grants. If the information is “good” and substantiated, grant makers are more likely to fund projects. Data can be ammunition for grants.
  - Data can help to demonstrate environmental injustices.
  - Data is crucial to evaluating the impact/efficacy of programs. For example, has California reduced cancer mortality?
  - Information based on reliable data lends credibility to community groups.
  - Good data and useful information helps to level the playing field and balance power.
- Data is used to inform (and convince) governmental agencies and other decision-makers. It depends on who the audience is: certain audiences are persuaded by data and statistics.
  - Data can bring awareness to problems and enable agencies to look for answers.
  - Data serves to bring people together. Especially data on health disparities and disproportionate exposures.
  - Data can be a trigger for community action. Data can create an opportunity for communities to come together and organize.
  - Data enables organizations to look at trends in order to evaluate and improve quality of health care.
  - Data can assist organizations to better educate health care providers.
  - Data resulting from community surveys can inform and put a face to macro-level data.
  - Evidence in the form of data is needed to back up and supplement community expertise, knowledge, and experiences.

### LPHA Feedback

- Local agencies can use tracking data to facilitate land-use document reviews/comments. There are times that agencies could be making comments but are unable to or limited because of lack of data.
  - Data can enable discovery and investigation of certain health disparities (e.g. low birthweight babies among African American women).
  - Data could facilitate the evaluation of Healthy Homes programs.
- Data (when available) enables agencies to link (and analyze) health outcomes with built environment factors (transportation, land use, etc.).
  - Local regulatory agencies need relevant data to gain an overall perspective (especially those involved in multiple disciplines/issues) on environmental and public health issues.
  - Armed with data and information, local governing bodies could develop policies to mitigate impacts to public health.

### 3.A.3. Data and information needs for carrying out functions/activities

This section describes participant needs around data, including: types of data (e.g. specific issues, environmental hazards, health outcomes, etc.); data formats (e.g. level of analysis and interpretation); and quality of data (e.g. geographic resolution and specificity).

In addition to specific types of data, participants described data needs in terms of intended use or outcome (e.g. data to demonstrate environmental injustices) of data. In commenting on data needs, participants also spoke directly to limitations/gaps in existing data.

Prompts and probing questions related to this category included:

- ▶ *Please give an example of when the organization was interested in using data about the environment and environmentally related diseases but was limited or prevented due to lack of data; difficulty in accessing data; lack of analyzed data.*
- ▶ *In past Community Health Profiles, Community Assessments, etc. that you have produced, what type of information about environmental health would you like to have included but the data was absent, difficult to access, or difficult to interpret?*
- ▶ *Think about environmental health information/data requests that you have received from stakeholders such the public, media, or board members. What were some requests that were difficult or impossible to meet due to the lack of data?*
- ▶ *Please name a useful, exemplary, or ideal source of data. What makes it useful? Is it related to content (e.g. type of data, quality of data, timeliness, and geographic resolution)? Is it related to process (e.g. easy to access, communication/dissemination, interpreted/translated)?*

#### Feedback Common to CBO/NGO and LPHA

##### Data needs (issue/types of data):

- Environmental data (e.g. traffic and diesel pollution) related to asthma.
  - Environmental data (e.g. air pollution) related to birth outcomes.
  - Data on housing stock.
  - Indoor air quality.
  - Move and migration information. Information about transient communities.
  - Indicators and measures related to cumulative impacts.
  - Data that can reveal or demonstrate environmental injustices.
  - Data that can reveal and describe trends in pollution and health – trends that can be compared across jurisdictions.
- Data related to Healthy People 2010 environmental health objectives ([www.healthypeople.gov/Document/HTML/Volume1/08Environmental.htm](http://www.healthypeople.gov/Document/HTML/Volume1/08Environmental.htm)). Data relevant to these objectives are useful when available at the Census tract level.
  - Better air pollution information:
    - Air quality/pollution information is limited because the measurements are dependant on locations of air monitors, which may not be where the problem is occurring.
    - There are gaps in toxic emissions data at the state and regional (Air Quality Management Districts) levels.

- There are gaps in what and how air pollution is monitored (both in terms of locations and types of hazards). Existing air monitors are insufficient. There are not enough monitors in rural areas with Latino communities.

**Data needs (format and quality):**

- Data with better geographic resolution:
  - Local data such as community-level or Census tract or block group-level.
  - Most data are at the state level. At best some data are specific to cities and counties.
  - For small counties, data can become uncertain and ineffective due to sample size. This is the case for population based sample surveys – especially in rural areas.
- Wide spectrum of data at various stages of analysis and interpretation (e.g. raw data; tables, graphs, and maps; and summary reports).
- Raw (not analyzed or interpreted) data when appropriate. Data that can be imported and manipulated.
- Data aggregated by socio-economic status (SES).
- Timely data: by the time data is available and disseminated, it may be several years old. Some information on the web is up-to-date but not everyone has access.

- Data that meets nationally accepted standards.

**Data gaps:**

- There is an overall lack of relevant data. Existing data are often incomplete and have limitations.
- There is a critical lack of coordination and consolidation of data (across issues and agencies):
  - Data and data sources are scattered.
  - Data may exist in different organizations in Federal, State, and Local government; however, the information is not connected between the groups.

**Useful, exemplary, or ideal sources of data:**

- The California Health Interview Survey (CHIS) ([www.chis.ucla.edu/](http://www.chis.ucla.edu/)).
- The Behavior Risk Factors Surveillance System (BRFSS) ([www.cdc.gov/brfss/](http://www.cdc.gov/brfss/)).
- Census data ([www.Census.gov](http://www.Census.gov)). It is very comprehensive. Information is presented in a user friendly manner. Data can be downloaded into different formats. Query function is fairly easy to follow. Some of the advanced functions can be difficult to work with for users who are not familiar with the system.

**CBO/NGO Feedback**

**Data needs (by issue/types of data):**

- Data on asthma, asthma related school absenteeism, and indoor air quality.
- Data that can inform issues related to communities near landfills. Specific health outcomes of concern include cancers and birth defects.
- TRI (Toxic Release Inventory) and NATA (National Air Toxics Assessment) data. These sources alone; however, are insufficient.

- Data that are of value in court to meet an evidentiary standard, while being understandable to the judge and jury.
- Data that can help to answer questions such as:
  - How many children in the community have asthma?
  - What is causing or exacerbating asthma in the community?
  - Where are the hot spots of asthma?
  - How many children are absent from school due to asthma?

- How many school days missed are related to air quality or pesticides?
- Demographic data.
- Data on the impacts of low-level exposures.
- Data on toxic spills.
- Information on pesticide drift and how it actually happens.
- Information is needed for cumulative exposures, combined sources, and chemical sensitivity. At the same time, chemical specific data is necessary.
- Data generated by research studies – especially research done at the community level.
- Data that can help to frame housing as a public health issue. Framing housing conditions as a public health issue is more effective than framing it as a tenant rights issue, so data is needed to support and demonstrate this.
- Data that can shed light on cumulative impacts and levels of community vulnerability.
- Data that can inform rural issues/communities.
- Data that can help to meet grant requirements.

**Data needs (format and quality):**

- Data (both health and environmental data) at the Census tract and block group levels.
- Simple, basic, and public-friendly data that doesn't require advanced degrees to understand or use.
- Credible data/information.

- Data that are easily accessible.
- Data that are amenable to visualization such as mapping.
- Data that can be generalized to communities.
- Data for advocacy and media outreach. Data that can generate clear and simple messages for the public.

**Data gaps:**

- The California Air Resources Board's Community Health Air Pollution Information System (CHAPIS) inventory is not updated regularly enough for it to be useful to communities.

**Useful, exemplary, or ideal sources of data:**

- Information produced by Massachusetts' Toxic Use Reduction program ([www.mass.gov/dep/bwp/dhm/tura/turhome.htm](http://www.mass.gov/dep/bwp/dhm/tura/turhome.htm)).
- InfoOakland ([www.infooakland.org](http://www.infooakland.org)). It is community driven and a good place to look at health and social data.
- Office of Statewide Health Planning and Development ([www.oshpd.cahwnet.gov](http://www.oshpd.cahwnet.gov)) has useful information: especially for doing media work because county level data is available; however, more local data would be better.
- Scorecard ([www.scorecard.org](http://www.scorecard.org)) and InfoOakland are two examples of good data sources. InfoOakland is useful because it contains many data layers, includes Census data, is visually pleasing, and is easy to use. Any major data source should include demographic/Census data.

**LPHA Feedback**

**Data needs (by issue/types of data):**

- Asthma prevalence.
- Data on emergency room visits for various health outcomes.
- Pesticide usage in areas that may impact humans.

- Health disparities related to homeless populations.
- Data on environmental exposures and chronic disease.
- Biomonitoring data related to mercury exposure.

- Cleaned up, better version of RASSCLE's (Reporting and Surveillance System for Childhood Lead Exposure) data.
- Data related to mold and roaches.
- Data on trends of disease and pollution.
- Data related to urban sprawl and disease (especially obesity).
- Walkability, livability, and green space indicators.
- Data related to chemical use and exposures in homes. This information could help to determine contribution of household use of chemicals to health outcomes.
- Information about chemical use (could be tracked through sales).
- Data on the transportation of hazardous materials. Information on what is moving by rail or truck and locations of highest risk (potential accident/exposure).
- Local agencies need information that can drive environmental control measures to mitigate adverse health effects (e.g. road flares, asthma triggers, etc.)
- Information on the spectrum of associations (Strength of various associations) between health effects and environmental hazards or exposures.
- Data that can help to determine rates of asthma hospitalization during lettuce season.
- Projections on future levels of NOx (Nitrogen Oxides) would be useful. Traffic projections should be performed in order to forecast future NOx levels.
- Any data that can help provide direction for programs.

**Data needs (format and quality):**

- Data that is useful, easy to transfer, and easy to analyze.

**Data gaps:**

- The Air Quality Index needs improvement.
- Static health status reports are behind
- Asthma data is especially incomplete. Hospitalization data is insufficient.

**Useful, exemplary, or ideal sources of data:**

- The Vital Statistics Section (VSS), Office of Health Information and Research, Center for Health Statistics, California Department of Health Services ([www.dhs.ca.gov/hisp/chs/OHIR/default.htm](http://www.dhs.ca.gov/hisp/chs/OHIR/default.htm)). Such data sources are useful for local agencies because users can go in and analyze the data how they want to and export relevant data.
- Sierra Club's Zoomer ([www.zoomer.sierraclub.org](http://www.zoomer.sierraclub.org)) is a useful site.
- The West Nile Virus surveillance system ([www.westnile.ca.gov/maps\\_data.htm](http://www.westnile.ca.gov/maps_data.htm)) has good maps and adequate data.
- The Recreational Water Quality database. The data is high quality, relevant (used extensively by the public and other stakeholders), timely (results in 24-48 hrs), geographically based (latitude/longitude for 23 sample sites), easy to use and interpret, and easy to communicate and disseminate.
- Lead-based paint data (for the federal grant program) is important for many reasons (high quality, relevant, timely, geographically based, easy to use, easy to communicate).
- The Los Angeles County Health Survey ([www.lapublichealth.org/ha/survey/hasurvevintro.htm](http://www.lapublichealth.org/ha/survey/hasurvevintro.htm)). It enables comparisons across communities.

### 3.B. Capacity in working with and utilizing environmental health data

The following sections focus on issues related to stakeholder capacity in working with (collecting, managing, accessing, analyzing, interpreting, and utilizing) environmental health data. For the purposes of this report, “capacity” is used as an umbrella term that generally refers to a broad array of community and organizational factors including: resources, infrastructure, ability, strength, power, readiness, skill, knowledge, expertise, etc.

#### 3.B.1. Resources needed to effectively work with and utilize data

This section describes a broad range of resources that participants’ cited as needing (or is lacking) in order to better work with (collect, manage, access, analyze, etc.) environmental health data and utilize data for public health functions and services. For the purposes of this category, “resources” refers to: financial, human, and material resources such as tools, infrastructure, and technology. This section contains general comments related to staffing needs; however, comments about specific knowledge, skills, and expertise can be found in the next section (p15).

Prompts and probing questions related to this category included:

- ▶ ***Overall, what is the organizational capacity for accessing, analyzing, interpreting, and utilizing data?***
- ▶ ***What is one key area in which the organization could benefit from increased capacity?***

#### Feedback Common to CBO/NGO and LPHA

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| <ul style="list-style-type: none"><li>■ Statistical software/applications (e.g. SPSS).</li><li>■ Tools to analyze data</li><li>■ Data collection is often a prohibitive endeavor due to its resource intensive nature.</li></ul> | <ul style="list-style-type: none"><li>■ Data collection infrastructure.</li><li>■ Lack of personnel to work with data.</li><li>■ Funding for surveillance.</li><li>■ Lack of staff to focus on data.</li></ul> |
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#### CBO/NGO Feedback

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| <ul style="list-style-type: none"><li>■ Resources (literature, case studies, training opportunities, contacts) to affect/interject policy.<ul style="list-style-type: none"><li>● Publication of effective and/or successful interventions and policies.</li><li>● Case studies of how data has triggered or facilitated action/change. Examples include: Monsanto and PCB (Polychlorinated Biphenyl); and Alaska and the Army Corps of Engineers.</li><li>● Information about how communities are solving problems.</li></ul></li></ul> | <ul style="list-style-type: none"><li>● Case studies of how communities have used data for victories.</li><li>■ Database of alternatives to pollution/chemicals. For example, case studies or technologies.</li><li>■ Build data analysis software for community to use.</li><li>■ Environmental health assessment surveys and tools for use in Colonias.</li><li>■ Electronic mechanism/infrastructure to collect data. Much of the data collected locally are paper-based.</li></ul> |
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## LPHA Feedback

- Infrastructure (equipment, technology, supplies) for data collection.
- Tools for data mining and reporting (e.g. Crystal Reports).
- Funding and skilled staff for data collection.
- Some local environmental health departments are very small and have very little staff. These agencies have some data, though not extensive. It would be impossible for these agencies to collect new data. For a project like Tracking, the state needs to take the lead role and be the information processor and analyzer. In order for local agencies to collect new data, they would need additional resources.
- Barriers to effectively working with data include: lack of revenue/budget to purchase hardware/software needed for field inspection data systems and posting this information on the web.
- At the local level, environmental health is often a small department or division. There are little resources to collect data.
- Capacity in certain areas, where required by state or other mandates, is sufficient. However, there is minimal organizational capacity to be proactive about data collection. It's important to keep in mind that local agencies get resources only if the program/initiative is a requirement (mandated).
- In order to do any more work around data, local agencies would need to “staff up.”
- Local agencies would benefit from a GIS analyst and industrial hygienist along with various staff who can interpret data.
- Indoor air quality is difficult to assess (unable to perform mold analysis due to lack of expertise and equipment).
- Lack of quality and easy to use databases and data sources.
- Lack of both internal (local) and external (state and federal) definitions/protocols/measurements related to data collection is a barrier.
- Resources/publications on the health effects of pollution:
  - “Cancer in the Urban Environment” ([www.amazon.com/exec/obidos/ASIN/0124643515/qid=1120754607/sr=2-1/ref=pd\\_bbs\\_b\\_2\\_1/002-8086212-2140001](http://www.amazon.com/exec/obidos/ASIN/0124643515/qid=1120754607/sr=2-1/ref=pd_bbs_b_2_1/002-8086212-2140001)) is a useful resource.
- Local regulatory agencies staff can spend up to 20% of their time manipulating, cleaning, and analyzing data. Even though this is important, it takes away from other, more immediate needs. Resources that can assist in doing these functions would be helpful.

### 3.B.2. Skills/training needed to effectively work with and utilize data

This section describes knowledge, skills, and expertise as well as related training issues that participants' cited as needing (or is lacking) in order to better work with (collect, manage, access, analyze, etc.) environmental health data and utilize data for public health functions and services.

Prompts and probing questions related to this category included:

- ▶ ***What is a specific skill/workshop that would help you most in work that you do with data?***

- ▶ *Please give an example of a workshop or conference where you gained skills related to the core competencies in working with and utilizing data.*
- ▶ *Which of the following uses of data are most in need of development for your organization? Public education and outreach; program planning/development; public policy development; program evaluation; risk communication; community environmental health assessments; addressing health disparities; etc.*
- ▶ *What are the core competencies that staff needs to effectively access, analyze, and utilize data?*

#### Feedback Common to CBO/NGO and LPHA

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| <ul style="list-style-type: none"> <li>■ There is a general lack of skill/expertise in the full spectrum of working with data (collecting, managing, accessing, analyzing, interpreting, and utilizing data). An organization may be strong in one area such as accessing data but lacking in another such as collecting data.</li> <li>■ Environmental health education curricula based on different skill levels.</li> <li>■ Environmental health data curricula based on different skills levels.</li> <li>■ Researching population burdens (social, economic, health, etc.) related to pollution.</li> <li>■ Interpreting scientific data.</li> <li>■ Research skills: communities need skills to be their own researchers.</li> <li>■ Introductory course on data analysis (data analysis 101).</li> <li>■ General computer and technology skills.</li> <li>■ Generating GIS maps.</li> <li>■ Data collection:</li> </ul> | <ul style="list-style-type: none"> <li>● Basic overview of data collection (data collection 101).</li> <li>● Course on how to collect data: goals of data collection, what data should be collected, how data should be collected, etc.</li> <li>● Determining and prioritizing what data should be collected, given limited resources.</li> <li>■ Utilizing environmental health data for action: <ul style="list-style-type: none"> <li>● Data and information is valuable to the extent that people utilize them.</li> <li>● Using environmental health data</li> <li>● Effective use of existing data: <ul style="list-style-type: none"> <li>● Accessing current databases and making better sense of the information.</li> <li>● Presenting data to various, specific audiences: policy makers, public health professionals, the general public, etc.</li> </ul> </li> </ul> </li> </ul> |
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#### CBO/NGO Feedback

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| <ul style="list-style-type: none"> <li>■ Finding/accessing existing data. Communities often don't know which databases exist or which ones to use.</li> <li>■ Understanding what information/data is important.</li> <li>■ Evaluating the quality of data and research findings. Organizations and communities need a simple way to rate the quality of environmental health data – similar to the way physicians rate studies on how well they were done.</li> <li>■ Compiling and analyzing primary data.</li> </ul> | <ul style="list-style-type: none"> <li>● Increasing community capacity to do analysis will increase sustainability</li> <li>■ Training in designing and conducting environmental health surveys.</li> <li>■ Evaluating the impact of programs/interventions.</li> <li>■ Communicating complex environmental health issues to the public.</li> <li>■ Community-based organizations can often have adequate health education capacity; however, none to little capacity related to statistics and research.</li> </ul> |
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- Many social and environmental advocacy groups have limited experience working with health data. These groups may have skills and experience working with demographic data, but not health data. It would be helpful to learn how to analyze and use health data/information.
- Need a better understanding of what information/data is important. What information to include.
- Trainings and curricula need to be based on skill levels.

- Communities often don't have the capacity to sustain activities or follow up on findings after researchers complete their projects and leave.
- Limited capacity to perform health and environmental data analysis.
- Developing data collection standards and guidelines as well as electronic infrastructure (systems) for data collection and management.

### LPHA Feedback

- Interpretation, translation, and utilization of environmental health data by epidemiologists.
- Disseminating/communicating complex environmental health information to lay audiences.
- Developing and implementing community-based participatory research projects.
- Simpler and better ways to discuss and communicate risk. In many cases there are weak linkages between health and environmental data. Local agencies need simpler, better ways of talking about these issues.
- Environmental epidemiology and environmental health risk communication.
- Generating actual/underlying causes of death (e.g. tobacco, diet and physical inactivity, toxic agents, drug use, etc.) estimates for the jurisdiction.
- Producing social and economic data related to various health outcomes: YPLL (years of potential life lost) and AYLL (average years of life lost).
- Applying scientific data to resource targeting.
- Manipulating/converting various data formats such as Excel, comma-separated, tab-delimited, XML (extensible markup language), etc.

- Choosing presentation format such as graphs, tables, charts, or maps
- Incorporating data into program evaluations.
- Chronic disease epidemiology is a needed skill. The department received many cancer data requests and questions such as: "What are my risks? Is there a cancer cluster?" Local agencies need tools to respond to cancer cluster cancer risk questions.
- Applying data in program planning and development.
- Conducting health assessments.
- Informing and addressing health disparities and environmental justice issues.
- Environmental hazards/exposure modeling. Using existing modeling techniques.
- A challenge is establishing GIS standards for the agency. Some systems are good for working with latitude/longitude, but not for working in 3 dimensions.
- Public queries to local agencies can be very specific (e.g. I am moving to these cross streets, should I be concerned?). Local agency research, epidemiology, and outreach staff need better language to talk about risk when counties are queried.
- Training in advanced query languages and third party data mining tools.

### 3.B.3. Future assistance and support

This section is similar to the previous two sections in that it covers capacity related issues and needs; however, the comments are specific to assistance and support (including resources and training), that participants anticipate needing after an environmental health tracking system has been implemented. Prompts and probing questions related to this category included:

- ▶ ***What future (after an environmental health tracking system has been deployed) assistance, support, or workshops would enable your organization to take full advantage of an environmental health tracking system? What are some foreseeable areas of support and assistance that you would need from an Office of Environmental Health Tracking?***

#### Feedback Common to CBO/NGO and LPHA

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| <ul style="list-style-type: none"><li>■ Training on GIS (Geographic Information Systems).</li></ul> | <ul style="list-style-type: none"><li>■ Training on working with query functions on Tracking database/s.</li></ul> |
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#### CBO/NGO Feedback

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| <ul style="list-style-type: none"><li>■ In order to build community capacity, Tracking needs to invest in community-based organizations (e.g. Communities for a Better Environment, Pacific Institute, etc.) because they are much more effective at doing individual capacity training.</li><li>■ Need funding for software to do data analysis.</li><li>■ Better understanding of and training in interactive web-mapping.</li><li>■ Tracking could develop easy to use data analysis software for community use.</li><li>■ Communities would need general computer training.</li></ul> | <ul style="list-style-type: none"><li>■ Regardless of the topic or skill, it's important to have train-the-trainer types of workshops.</li><li>■ Organizations and individuals would need assistance in presenting data and information produced by Tracking system. For example, various PowerPoint presentation templates would be helpful. The template could include relevant materials and information but enable users to easily modify and add information.</li><li>■ Need training for various skills levels. Understanding statistics: basic data terminology, interpreting data, etc.</li></ul> |
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#### LPHA Feedback

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| <ul style="list-style-type: none"><li>■ Basic training on web-based system usage.</li><li>■ Assistance with data standards implementation and database design. Related training that is offered in different parts of the state.</li></ul> | <ul style="list-style-type: none"><li>■ Assistance with upload of information from the local agency.</li><li>■ Funding/resources for hardware needs.</li><li>■ Technical assistance with modeling at the county level.</li></ul> |
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### 3.C. Other issues related to environmental health tracking

Ensuring that a statewide EHTS will be relevant and useful to stakeholders requires seeking and incorporating their input on a wide range of issues beyond data and information that will be incorporated and produced by an EHTS and beyond the resources and services that could be made available.

The following sections focus on broader issues and considerations related to the development and implementation of an EHPS. Although the following categories and comments are related to the previous sections, they are not specific to environmental health data/information needs and organizational/workforce capacity.

#### 3.C.1. Considerations in designing an environmental health tracking system

This section describes factors that should be taken into account as CEHTP moves forward in designing and implementing an EHTS. It also includes priorities and concerns related to an EHTS or the California Environmental Health Tracking Program. Many of the issues in the following section are also process-related (e.g. how to disseminate information and ensure accessibility, with whom to collaborate, how to ensure stakeholder involvement and participation, etc.).

Prompts and probing questions related to this category included:

- ▶ *How should tracking data/information be disseminated/provided?*
- ▶ *Do current data dissemination efforts of surveillance systems meet your needs? What works well? What are the gaps?*
- ▶ *Who else should CEHTP be outreaching to?*
- ▶ *How would you like to be involved in the planning and implementation of an EHTS?*

#### Feedback Common to CBO/NGO and LPHA

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| <ul style="list-style-type: none"><li>■ Tracking needs to incorporate environmental justice principles all phases of the program (planning and implementation).</li><li>■ Links between environmental hazards and health outcomes are weak and not well understood. Tracking needs to find a way to deal with this issue.</li><li>■ It is hard to establish disease causality. Tracking needs to find a way to talk about it without minimizing community concerns.</li></ul> | <ul style="list-style-type: none"><li>■ Tracking is still in its infancy; however, there are still some good data/information out there. There needs to be an effort made to improve the dissemination of existing data.</li><li>■ Tracking needs to broaden and expand the definition of environment and environmental health. It is also important to keep in mind that the definition of environment varies by communities and cultures.</li></ul> |
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- It is important for various agencies and organizations to be part of the land use and transportation planning processes from the beginning. Tracking should take steps to incorporate data that can inform those processes.
- Federal, state, and local governments lack definitions, protocols, standards, and measurements for surveillance – this is a problem
- Tracking will have limitations in what it can do because it is essentially a surveillance program. Tracking needs to be mindful of and account for these issues:
  - A Tracking program lacks the authority to impact enforcement and regulation.
  - Tracking is not an intervention or service program.

- Tracking must examine how to bridge the gap between information and public health practice.
- Tracking need to be aware of and collaborate with other agencies and programs. An example is the BAAQMD (Bay Area Air Quality Management District) CARE (Community Air Risk Evaluation) program.
- Tracking needs to better coordinate with and get broad support from other programs and branches within the California Department of Health Services. Most important aspect of making tracking work is interagency cooperation.
- Data and information can be misinterpreted and misused by various audiences. It’s difficult to show health and environmental data together on one map – such visualizations can be misleading.

#### CBO/NGO Feedback

- Collaborating with stakeholders:
  - Tracking may not be the best source of other data relevant to communities. Tracking program needs to recognize collaborative opportunities such as InfoOakland (who incorporates other social, economic, and community data into their website and outreach initiatives).
  - Tracking should participate in other relevant initiatives such as the Cal/EPA Environmental Justice pilot projects.
- Stakeholder participation and involvement:
  - Tracking needs to ensure that any research about communities involves those communities.
  - Tracking need broad representation in advisory groups.
  - Communities often know what agencies and organizations don’t. A key component in the design and implementation of Tracking should be to elicit and incorporate community insight.

- There needs to be different dissemination channels for different topics/issues (e.g. asthma, research methods, county specific results, etc.) and different audiences (maternal/child health staff, epidemiologists, health officers, etc.) so that appropriate information reaches the right people.
- Tracking findings/results should be tied to policy and interventions. How will Tracking ensure that information will drive actions or lead to changes?
- Tracking data can also inform health economics.
- Because of the limitations of public data, Tracking needs to integrate private (hospitals, clinics, HMOs, etc.) data.
- Tracking needs to evaluate and integrate other, relevant data and indicators (e.g. housing, violence, economic indicators, social indicators, healthcare, and transportation).
- Need to track upstream factors. broader determinants of health

- Tracking needs to establish standards for data sufficiency.
- Communities need both quantitative and qualitative data to tell an effective story. Tracking also needs to consider how to incorporate community knowledge into Tracking.
- There is a need for community-level HANES projects that are linked to NHANES (National Health and Nutrition Examination Survey).
- Tracking data needs to account for that fact that community demographics change rapidly.
- Agencies and organizations must adopt and apply the Precautionary Principle.
- Health care providers have little or no idea of what's going on in the community. Beyond screening data, there is little information they use to protect communities. Tracking should produce information that is useful to health care providers and make sure that the information reaches them.

- Data can be a powerful tool for raising awareness and/or advancing issues. Historically, asthma efforts were mainly focused in urban areas. It wasn't until a study came out that showed Fresno to be an area of high asthma prevalence that it got attention, changed the dialogue, and expanded the focus.
- Tracking data/findings will have many implications. There's a need to address how communities will be protected from those who could use those findings to harm communities. Findings could lead to a negative stigma. Insurance companies and redevelopment agencies could misuse data.
- Some data are only available because of specific studies rather than ongoing surveillance and monitoring. Tracking could help to make such information available on a comprehensive, consistent, and ongoing basis.

#### LPHA Feedback

- Collaborations:
  - There is a lack of intra-agency coordination and cooperation within state agencies. Tracking can be a good foundation for such cooperation.
  - Tracking needs to work with existing chronic disease programs, the Maternal, Child and Adolescent Health (MCAH) branch, and the Office of Developmental Disabilities.
  - Tracking needs to collaborate with the Air Quality Management Districts to address port issues. There is traffic pollution and other risk factors associated with ports.
  - Tracking must collaborate with non-governmental organizations. It would be difficult for local agencies to point to disease causality; however, non-governmental organizations can.

- There is a general mistrust of government, especially in rural areas. Communities often don't believe findings produced by the government. This affects the way agencies do risk communication. Tracking should ensure that academic partners are getting and using the information because the public may consider their information more qualified and objective.
- Local agency participation and involvement:
  - Local agency participation in and contribution to Tracking would be possible if it was quick and easy: e.g. brief emails (not daily) with "what do you think?"
  - Agencies are happy to participate in the planning process for Tracking but are short-staffed and have limited time to offer. Local agencies need materials that are concise, understandable, and limited to 1-2 pages.

- Because of limitations in time and travel, teleconferencing may be practical.
- Local agencies are interested participating in the development of Tracking, but it is hard to prioritize spending time on advisory groups when there are other, more immediate issues to deal with (e.g. flu).
- GIS is the best tool to visualize a problem, but it is complex. There may be issues with privacy/confidentiality. Local agencies would need to protect themselves from liability. There are policy issues regarding what is or isn't appropriate information for the county to collect.
- There needs to be clear foundations and requirements for Tracking. For example, Tracking should collect data on the 5 leading causes of death.
- Some local environmental health departments are very small and have very little staff. These agencies have some data, though not extensive. It would be impossible for these agencies to collect new data. For a project like Tracking, the state needs to take the lead role and be the information processor and analyzer. Local agencies often look to state and federal agencies for data.
- Environmentally related diseases (and other chronic diseases) should be part of the WebCMR (California Department of Health Services' web-based Confidential Morbidity Report form). However, this information should be made simple to report.
- Tracking should build a tool that enables local agencies to upload street addresses or geo-coordinates and get back corresponding Tracking data on hazards/exposures (e.g. traffic volumes, exposure to toxic air pollutants, proximity to facilities, etc.).
- Some local agencies are working to integrate data internally (intra-agency data). These agencies have a lot more detail in their databases than other state databases and may be useful to various stakeholders. Tracking should look into how local agency data can be coordinated and integrated into a statewide Tracking system.
- In some cases, local agencies have information that can feed into a state database; however, it was not possible to change the system to match that of the state. Doing so would have been resource intensive and disruptive. In the end, the state accepted the local information as is and convert it. Most local agencies wouldn't object to sharing data/files, they just can't do it in someone else's format.
- Local agencies may have staff epidemiologists to look at data, but they need to know that data exist and where to access the data.
- Reporting the same data to multiple systems. It's a burden to input the same data into three different systems. These systems/processes should be combined and automated.
- Because disease causation is difficult to demonstrate – especially at the local level – it would be better to focus on communication, health education, and public education with Tracking data.
- Specific communities and populations:
  - Tracking can help to assess environmental conditions and impacts for the homeless. Cities/counties have some information (homeless are seen in clinics and Homeless programs have federal funding to collect data in these populations). Tracking and local information needs to be coordinated in order to plan preventive measures.
  - There needs to be some planning and thinking around how to collect data for populations for which there are no programs (e.g. immigrant populations). Tracking needs to take into account that health outcomes change over time with immigrant populations.
  - There are concerns about communities near landfills. Specific health outcomes of concern include cancers and birth defects.
  - Poverty-stricken, transitory populations make it challenging to characterize environmental health risks in local populations.

- In general, there is not enough knowledge about actual causes and determinants of diseases. Local agencies don't know very much about what contributes to morbidity and mortality.
  - Tracking would be a good step towards getting local agencies to focus on broader environmental health issues. Local agencies have traditionally focused on regulatory/enforcement aspects of environmental health. In addition, the main focus has been around infectious diseases.
  - Tracking should look at different aspects of the population and other socio-economic status (SES) indicators. SES indicators such as education can reveal something about populations.
  - Domestic violence is also associated with poor health outcomes.
  - Local agencies would like to be able to determine the risk of added traffic from new facilities. Data that can facilitate this process would be a tremendous benefit.
  - If the state wants all local agencies to do something (standardize something, collect something, report something, etc.), they will need to provide resources (funding, technical assistance, computers, etc). But this should also be for something in which the counties are interested.
  - Little is know about chemical exposures in homes. How much does household use of chemicals contribute to health outcomes? It would be possible to Track household chemical use through sales.
  - Tracking would benefit from incorporating biomonitoring data (especially mercury exposure data).
  - If Tracking can do one thing – it should be better monitoring disease prevalence.
  - Major barriers for local agencies in working with data include: lack of data, non-standard data (especially legacy data), and data on multiple databases.
- A barrier to effectively working with data and engaging in environmental health efforts is the lack of sufficient enforcement penalties in code.
  - Air quality in general is difficult to analyze due to the disparate data sources and lack of local data. There is only one AQMD air quality monitoring station for the entire city/county.
  - Public queries to local agencies can be very specific (e.g. I am moving to this cross street; should I be concerned?). Local agencies need to know whether Tracking would enable them to address these issues. If not, research, epidemiology, and outreach staff need better language to talk about risk when counties are queried.
  - GIS is a good tool for visualization. However, there is a need to protect privacy/confidentiality.
  - For small counties, some health surveillance data can become uncertain due to sample size. Therefore, some data sources (e.g. CHIS, which could end up interviewing 50 people in Yolo) are not necessarily useful.
  - One of the main priorities is using GIS to collect and analyze information. Currently, the technology out there is ripe for this type of endeavor.
  - Tracking needs to be careful with measurements, analyses, interpretations, and associations. For example, someone may find that an increase in prenatal care is associated with an increase in poor birth outcomes. Of course, this is probably wrong and the measurements/analysis will come into question. However, this type of situation could occur with something that is not as intuitive/obvious or less understood.
  - A concern is that although there are lots of forums for communication, the information/recommendations don't come out well enough for us to integrate into our small county plans (e.g. article on arsenic and chronic diseases).

- Different agencies have measures (e.g. public health and police department measures homicides differently and has different data for homicides).
- The concept and practice of environmental health tracking is somewhat overwhelming. There is a lot of information, many toxins, and many diseases. Linking all this information seems like a huge task. There are so many chemicals in the environment that it can be overwhelming for an agency to keep up.

### 3.C.2. Features and functions of an online data access/dissemination component

A major component of an EHTS will be a web-based data/information access and dissemination component. Although the web-based interface will not be the only feature or function, it will enable an EHTS to be a better steward of environmental health data by fostering: 1) coordination, consolidation, integration, analysis, and utilization of data; and 2) environmental health data/information accessibility and dissemination to a wide range of stakeholders.

The purpose of gathering this information is to guide the development of technical specifications (standards, protocols, procedures, guidelines, metadata, etc.) for a tracking system.

Prompts and probing questions related to this category included:

- ▶ *What should be the key features/functions of an online dissemination system?*
- ▶ *What visualization and analytical tools should be incorporated into a web interface?*
- ▶ *What are key characteristics (interface design, query functions, data formats, etc.) of a useful data access/dissemination website?*

#### Feedback Common to CBO/NGO and LPHA

- Tracking data and information must be available via an interactive web-interface.
- Website users should be able to save and retrieve query results (datasets).
- Users need to be able to compare county/city information with other counties/cities, state, and national statistics through the web-interface.

#### CBO/NGO Feedback

- Need comprehensive/interactive databases.
- A web-interface needs tools for data analysis.
- Users of a web-interface need to be able to look up disease rates by Census block groups as well as other user-selected boundaries.

- Access to data needs to happen at every level. Users need to be able to get raw data to analyze and interpret – not just access to maps.
- There needs to be a mechanism to alert providers about environmental health issues and Tracking findings and implications.

- Public health successes, such as the lead example (decline in blood-lead levels from phasing out leaded gasoline), needs to be communicated to the public.
- Scorecard ([www.scorecard.org](http://www.scorecard.org)) is a good model on which to base interactive websites. Tracking needs to field test (e.g. run focus groups with various intended users) interactive data/mapping site.

### LPHA Feedback

- Much of the data/information currently disseminated by data providers are on paper. Users of data should have an option to access data electronically: through online databases.
- The web-interface should have a tool that enables local agencies to upload street addresses or geo-coordinates and get back corresponding Tracking data on hazards/exposures (e.g. traffic volumes, exposure to toxic air pollutants, proximity to facilities, etc.).
- Website would need a robust but easy to use GIS, basic data querying, and statistical tools. Query functions must be fairly easy to follow.
- Data should be aggregated at various levels/areas (state, region, county, city, Census tract, zip code, Assessor's Parcel Number APN, assembly district, city council district, Service Planning Areas, and Health Districts, etc.)
- Local agencies should be able to upload their down data into the system through a web-interface. The function needs to be password protected so only authorized users can input data.
- There must be accompanying language with query results or outputs (e.g. interpretation of output and instructions for printing/downloading the outputs.)
- GIS:
  - GIS maps and interfaces are essential.

- Tracking should develop robust GIS modules and offer various data layers for local use.
- GIS layers should include US Census boundaries.
- Agencies could use their own statistical and data querying software for data analysis, but a simple GIS (average PC user could learn in few hours) would be great.
- GIS is good for presenting data to policy makers.
- GIS enables local agencies to visualize where the problems are.
- Although GIS is a good tool for visualization, measures should be in place to protect privacy/confidentiality.
- The website must include graphs showing trends data.
- The website (data, GIS maps, etc.) need to incorporate of various environmental health indicators such as air quality, food quality, housing, etc.
- Information about what substances have been introduced into the environment in the past 30 years would be useful.
- Online users must be given various levels of access to generate data reports, analyze and data, etc.
- Data and information must be presented in a user friendly manner.
- Users should be able to down and print presentation outputs with labels.

- Users should be able to download data in various formats. Another useful function would be converting to and from various data formats.
  - There needs to be a simple way to inform local agencies about associations between hazards and health outcomes.
    - Local agencies need to know which diseases are environmentally-related.
    - A good way to get local agencies' attention is to send them useful but brief information (e.g. one page summary regarding the relationship between autism and air pollution with links to articles, etc.).
    - There has to be a simpler way to get folks correctly informed. People don't have time to read journal articles.
  - The website (and reports) should be a data mart in which data are compared across jurisdictions and the state.
  - A useful tool would be an environmental dashboard that would indicate problem areas/issues at a glance. This could help to display the population burden and display changing (or improvements to) conditions. The dashboard would include air quality indicators at the community level.
- There needs to be a simple way to inform locals about associations between hazards and health outcomes.
  - Quick links to static sets of commonly requested statistics/profiles that do not require querying.
  - An environmental health indicators report would be valuable to local agencies:
    - The report should inform how the environment is affecting the health of residents in the jurisdiction.
    - The report should describe environmental conditions that could potentially have an effect on residents, even if the estimated effect is "nil."
    - The report needs to include exposure data/information.
    - The report should have a macro perspective as an overall assessment, but must take into account the diversity of the environmental conditions throughout jurisdictions.
    - The reports should be broken out into relevant cities/counties and into districts/reporting areas.

### 3.C.3. General questions and comments

This section includes questions regarding EHTS and the California Environmental Health Tracking Program. It also includes general comments that did not necessarily fall under the previous categories.

#### Feedback Common to CBO/NGO and LPHA

- How can organizations and agencies incorporate locally collected data into an environmental health tracking system? Will they be able to do that?
- How will tracking inform policy and interventions?

#### CBO/NGO Feedback

- What types of data are available locally? When was it collected? Who collected it?
- Many chemicals are not regulated. How will these chemicals be tracked?

- What is the moral/ethical duty of agencies with regards to using findings to protect communities?
- How were the environmental hazards and health outcomes for the pilot projects (Alameda County Pilot Project and the Central Valley South Coast Pilot Project) decided?
- How can the relationship between poor housing and poor public health be mapped? What indicators (e.g. broken windows, etc.) can be used for housing and health?
- How is Tracking relevant and useful to rural areas and Colonias (unincorporated communities)?
- What are the government's roles and responsibilities related to environmental health? Who regulates what? Who is accountable for what?
- How are the local health departments involved in tracking? Are there institutional barriers to their participating? Where do local agencies stand on environmental health issues?
- Data should be used to reduce exposures – not just emissions. Simply reducing emissions is insufficient because of the persistence of chemicals.
- Communities often feel powerless in issues related to research.
- There needs to be accountability for researchers. They need to do a better job with follow-up.
- Causes/determinants of health outcomes are not shown in the maps (Alameda County Pilot Project findings). It would be useful to have, along with the health outcomes, determinants of health mapped.
- There's a misconception that communities are not interested in credible and scientific data. When in fact, they want to use science-based information.
- In addition to gathering stakeholder feedback, these discussions (meetings to solicit stakeholder feedback) are a good form of outreach and education.

#### LPHA Feedback

- Is the California Environmental Health Tracking Program partnering with CARE (Community Air Risk Evaluation program of the Bay Area Air Quality Management District)?
- Is the California Environmental Health Tracking Program working to standardize data? Are data models being developed?
- Is the National Environmental Public Health Tracking program part of the National Health Information Network (NHIN)?
- Do you have any partnerships or are you getting resistance from industry? A local agency faced resistance from businesses (e.g. resistance from farmers when trying to look at water quality at a creek).
- Are others agencies being asked to standardize data?
- Will the local agencies be mandated to share data with the Tracking program?
- How is traffic pollution related to birth outcomes?
- Are there disease clusters associated with ports?
- The Tracking project is exciting. Prior to 1945, there were not that many industries; therefore, agencies dealt mainly with infectious diseases. Then industries sprung up so quickly that the government now has a lot of catching up to do. Tracking help to broaden local definitions and programs around environmental health. Much of the mandated local programs are around infectious diseases, regulation, and enforcement.

- The driving force behind local agency data is the requirements/mandates which forces departments to allocate resources to ensuring this data is captured, analyzed, and reported in a timely manner.

- Health status reports produced by the local health department are related to the services and programs administered by the department. Current reports have limited information on chronic diseases because there are limited programs and resources related to addressing those issues.
- Asthma is complex and has other triggers besides air pollution including housing stock and access to health care.

## 4. Appendices

### 4.A. APPENDIX A: Phase 2 Participants

#### CBOs/NGOs represented in the San Francisco Bay Area discussion:

- Bayview Hunters Point Community Advocates
- Center for Justice, Tolerance, and Community
- Commonweal
- Communities for a Better Environment
- Community Housing Development Corporation of North Richmond
- Environmental Indicators Project
- InfoOakland
- Marin Breast Cancer Watch
- Pacific Institute (host organization)
- Regional Asthma Management Program
- Urban Habitat
- West Oakland Environmental Indicators Project

#### CBOs/NGOs represented in the Central Valley discussion:

- American Lung Association of Central California (host organization)
- Center on Race, Poverty, and the Environment
- Fresno Interdenominational Refugee Ministries
- La Unión Del Pueblo Entero
- Latino Issues Forum
- Merced/Mariposa County Asthma Coalition
- San Joaquin Valley Health Consortium
- Sequoia Community Health Centers

#### CBOs/NGOs represented in the Southern California discussion:

- California Communities against Toxics
- Coalition for Clean Air (host organization)
- Del Amo Action Committee
- East Yard Communities for Environmental Justice
- Health Care without Harm
- Physicians for Social Responsibility

#### Programs represented in the discussion with the Contra Costa Health Services:

- Asthma Program
- Community Health Assessment Planning and Evaluation
- Community Health Assessment Planning and Evaluation
- Family, Maternal and Child Health Programs
- HazMat Program
- Homeless Program
- Lead Poisoning Prevention

**Programs represented in the discussion with the City of Long Beach Department of Health and Human Services:**

- Bioterrorism Program
- Bureau of Environmental Health
- Food Program
- Support Services (IT)

**Programs represented in the discussion with the Los Angeles County Department of Health Services:**

- Environmental Health
- Office of Health Assessment and Epidemiology
- Office of Health Assessment and Epidemiology, Epidemiology Unit
- Office of Health Assessment and Epidemiology, Toxics Epidemiology Program
- Public Health

**Programs represented in the discussion with the Yolo County Health Department:**

- Environmental Health
- Environmental Health
- Epidemiology
- Fiscal and IT
- Public Health Programs
- Public Health Housing

## 4.B. APPENDIX B: Presentation Slides for Phase 2 Discussions



**Environmental Health Tracking**  
::  
**Information for Action**

California Department of Health Services  
Environmental Health Investigations Branch

[www.catracking.com](http://www.catracking.com)

### Mission of Environmental Health Tracking

To provide information from a state-wide (and nation-wide) network of integrated environmental monitoring and public health surveillance systems so that all sectors can take action to prevent and control environmentally related health effects.

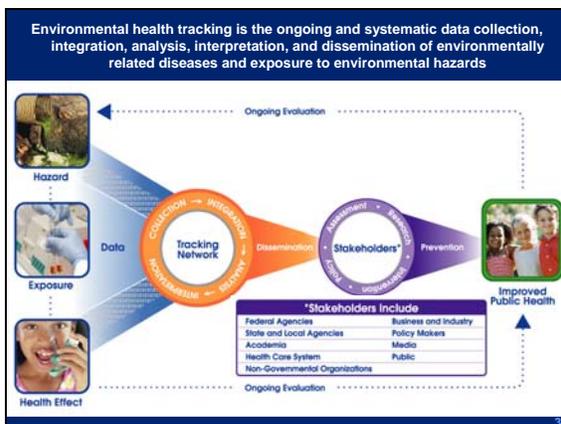
To provide **complete and accurate information** to facilitate **policies, programs, and services** that assure the **conditions** in which people can be healthy.

### Why are we here?

- To ensure that plans for an environmental health tracking system are developed with **local input and involvement**.
- We believe that you will be a prime user of environmental health tracking information.
- Change happens at the local level. **What you do as a local public health agency has perhaps the single greatest influence on the health of communities.**
- Your feedback will help the state to design a tracking system that **produces and communicates meaningful and relevant information**.
- Your feedback will also help us to better understand and address local **capacity to access and use information** produced by a tracking system.

### Why Track?

- “Reliable information is the most basic tool for prevention of chronic diseases that are related to the environment.”  
*Senator Martha Escutia*
- Effective public health and environmental policies begin with accurate information about exposures and disease.



### Information Gap

- Because of inadequate infrastructure, capacity, and funding, California lacks reliable information about many known and potential environmentally-related diseases.
- Incomplete data makes it impossible to make informed decisions.
- Paul Locke of the Pew Environmental Commission notes, “In this country we probably know more about the levels of PCBs in fish in the Hudson River than we do about the contamination in your body.”

### Weak ability to answer basic questions

- What environmental hazards are people exposed to?
- How much are they exposed to (e.g. concentration)?
- How do these exposures compare to other populations or communities?
- Is there an unusual rate of disease in a population or community?
- How have disease rates changed over time?
- Is there an unequal burden of disease in a specific population or community?
- What are the effects of pollution and disease prevention policies and programs?

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### Surveillance and Public Health

- Precautionary action: PBDE (Polybrominated diphenyl ether)
- South Coast Air Quality Management District
- Total systems change: motor vehicle safety
- Lead
- Public health achievements

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### Environmentally Related Non-Communicable Diseases

- Asthma: \$ 14 billion in 2000 in the U.S.
- Diabetes: \$ 132 billion in 2002
- Cancer: \$ 171 billion in 2002
- Heart Disease: \$ 368 billion in 2004
- Childhood asthma, cancer, birth defects and neurobehavioral disorders cost Californians an estimated \$10 billion per year.
- Some of these illnesses are on the rise. From 1984 to 2003, asthma prevalence increased 76%. Diagnoses of autism have nearly doubled in the last four years among children.
- Environmental exposures account for significant proportion of many chronic diseases (e.g. 30% of childhood asthma exacerbations and 10% of childhood neurobehavioral disorders).

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In 1854, John Snow - a London physician - helped to solve the city's cholera epidemic by mapping cholera deaths to locate the source of the outbreak: the Broad Street pump



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### Why Track?

- Environmental hazards are ubiquitous.
- Toxic agents\* were responsible for 60,000 deaths in the US in 1990.
  - \* Excluding environmental tobacco exposure
  - JAMA, March 10, 2004 - Vol 291, No. 10*
- Prevention is possible:
  - » During the 1996 Atlanta Olympic Games, alternative transportation policies that reduced traffic-related pollution resulted in a dramatic decrease in acute asthma attacks.
  - » Georgia Medicaid claims fell by 41% and pediatric emergency admissions dropped by 19%.

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### Why Track?

Tracking informs  
**ACTION,  
POLICY, &  
RESEARCH**

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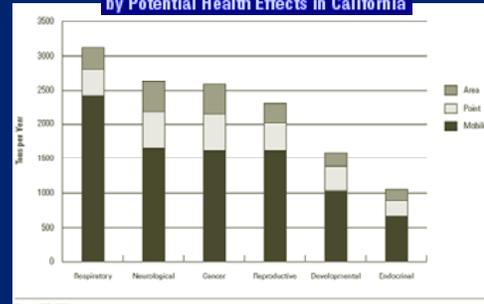
## FUNCTIONS of an environmental health tracking system:

1. Track environmental hazards to guide exposure prevention efforts.
2. Track disease distribution and trends over time.
3. Link environmental hazard information, exposure data, and disease data to support environmental health research.
4. Inform the development and evaluate the effectiveness of disease prevention and environmental protection programs and policies.
5. Facilitate access to and use of environmental health information.

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## 1. Track environmental hazards to guide exposure prevention efforts

Estimated Tons per Year of Hazardous Air Pollutants by Potential Health Effects in California



Source: ARB, 2003

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## 1. Track environmental hazards to guide exposure prevention efforts

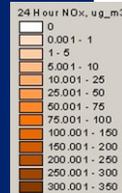
Table 1. Total pounds of pesticide active ingredients reported in each county during 2001 and 2002 and its rank among all 58 counties.

County	2001 Pesticide Use		2002 Pesticide Use	
	Pounds Applied	Rank	Pounds Applied	Rank
Alameda	306,658	39	318,298	39
Alpine	345	58	254	58
Contra Costa	425,762	36	578,451	35
Del Norte	350,262	37	373,171	37
El Dorado	81,552	46	96,860	45
Fresno	24,792,033	1	28,703,387	1
Glenn	2,076,482	20	2,230,564	20
Humboldt	68,148	48	38,364	50
Imperial	7,124,214	7	6,347,098	9
Inyo	9,395	56	9,700	53
Kern*	14,542,649	2	22,178,054	2
Ventura	6,430,535	9	6,482,850	8
Yolo	2,407,429	19	2,256,580	19
Yuba	972,243	29	1,432,139	28
<b>Total</b>	<b>151,124,888</b>		<b>172,086,290</b>	

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## 1. Track environmental hazards to guide exposure prevention efforts

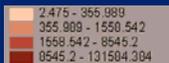
Modeled traffic pollution (ADMS-Urban)  
Modeled total NOx for 2000, San Diego County



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## 1. Track environmental hazards to guide exposure prevention efforts

Total Pounds of Aggregate of Respiratory Irritants



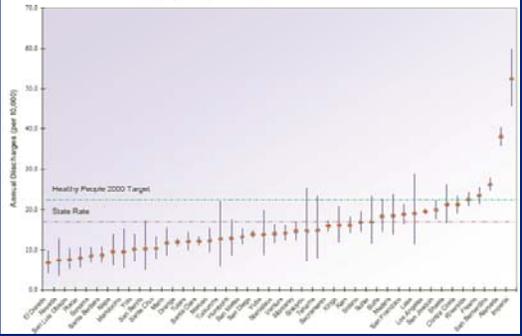
Private Schools (at least one K-8)

Public Schools (only Pre-6)

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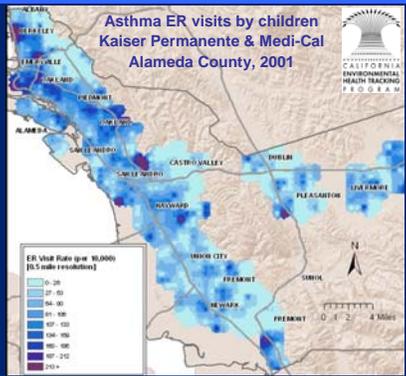
## 2. Track disease distribution and trends over time

Figure 7: Age-Adjusted\* Asthma Hospital Discharge Rates for Children (Ages 0-14 years) for All Races, by County, 1998-2000, with 95% Confidence Intervals.



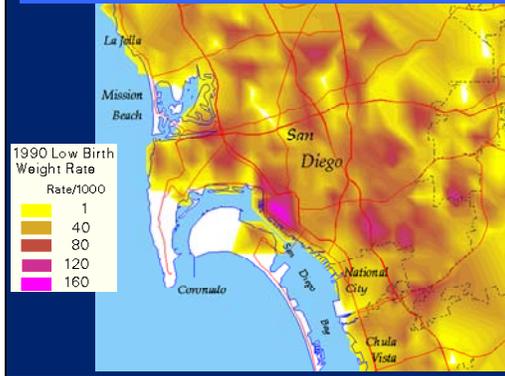
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2. Track disease distribution and trends over time



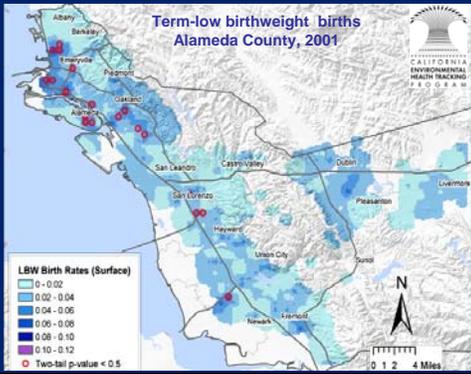
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2. Track disease distribution and trends over time



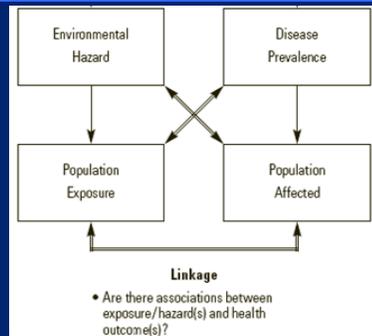
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2. Track disease distribution and trends over time



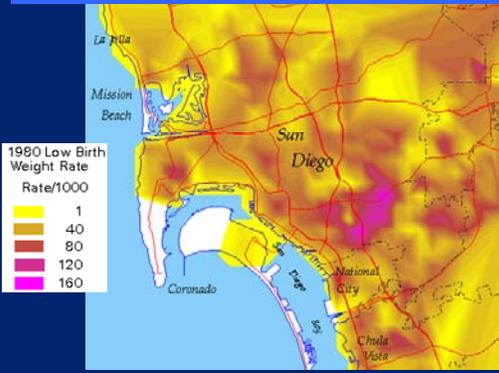
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3. Link environmental hazard information, exposure data, and disease data to support environmental health research



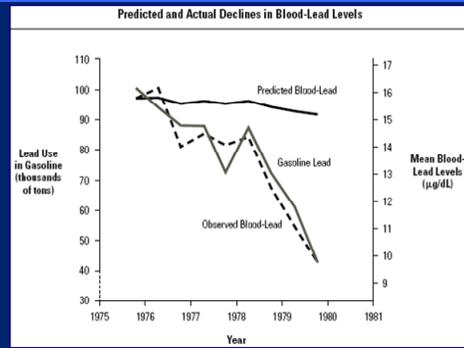
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2. Track disease distribution and trends over time



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4. Inform the development and evaluate the effectiveness of programs and policies



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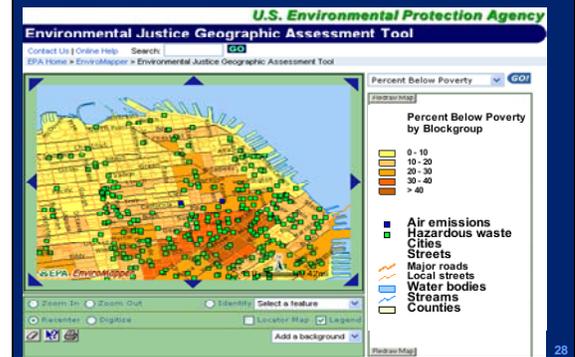
#### 4. Inform the development and evaluate the effectiveness of programs and policies

- A White House study concluded that environmental regulations result in significant public health improvements and other benefits to society.
- The value of reductions in hospitalization and emergency room visits, premature deaths and lost workdays resulting from improved air quality were estimated between \$120-\$193 billion October 1992 to September 2002.
- By comparison, industry, states and municipalities spent an estimated \$23 billion to \$26 billion to comply with new clean-air standards.
- "We don't have an adequate data set. If we did, the benefits would exceed the cost in a wider spread than the OMB report shows."

September 27, 2003 Washington Post

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#### 5. Facilitate access to and use of environmental health information



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#### 5. Facilitate access to and use of environmental health information



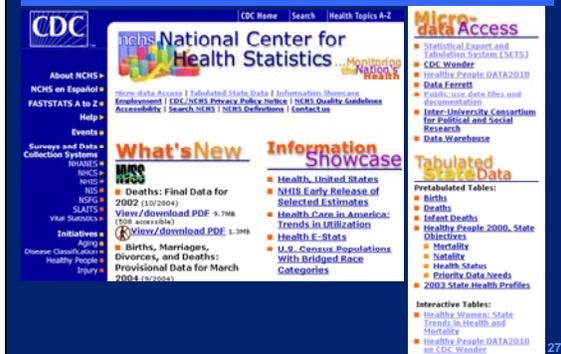
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#### 5. Facilitate access to and use of environmental health information



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#### 5. Facilitate access to and use of environmental health information



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#### Aren't we already tracking hazards, exposures, and diseases?

- It depends... on what you mean by tracking.
- Many individual pieces – some strong, some weak.
- Does not play well together.
- Many hazards and health outcomes are not tracked at all.

Current efforts are not

- Comprehensive
- Coordinated
- Systematic

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### Where does all this fragmentation leave us?

- No complete picture of environment or health.
- Very difficult and time consuming for stakeholders to find and use information.
- Next to impossible to determine cumulative burden of disease or cumulative impacts/exposures.
- All of which lead to uninformed actions/decisions or no action at all.

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### Key SB702 Report Findings

- State resources are eroding and inadequate.
- State needs complete hazard/exposure data and new/strengthened health surveillance systems.
- Need to coordinate and integrate environmental health data.
- Environmental health data need to be shared and communicated in a accessible and useful formats.
- Communities and community groups need training and other technical assistance to build their capacity to access, interpret, and effectively use tracking data.

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### What is California doing to close the information gap?

#### History of Environmental Health Tracking in California

- California Env. Health Surveillance System (SB 702-Escutia) 2001
- CDC Tracking Cooperative Agreement California Wellness Foundation award 2002
- CDC Data Linkage Demonstration Award 2003
- SB 702 Expert Working Group report released 2004

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### Priority Information Needs

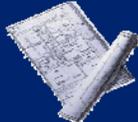
- | Health Outcomes                       | Hazards/Exposures               |
|---------------------------------------|---------------------------------|
| ■ Auto-immune Conditions              | ■ Air Pollutants                |
| ■ Cancer                              | ■ Endocrine-Disruptors          |
| ■ Cardiovascular Disease              | ■ Foodborne Pollutants          |
| ■ Dermatitis                          | ■ Hazardous and Solid Wastes    |
| ■ Developmental Disabilities          | ■ Heavy Metals                  |
| ■ Diabetes                            | ■ Indoor Hazards                |
| ■ Endocrine-Disruptor related Disease | ■ Occupational Hazards          |
| ■ Infertility                         | ■ Persistent Organic Pollutants |
| ■ Kidney Disease                      | ■ Pesticides                    |
| ■ Neurologic Disease                  | ■ Water Pollutants              |
| ■ Reproductive Outcomes               |                                 |
| ■ Respiratory Disease                 |                                 |

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### Strategies for Establishing an Environmental Health Surveillance System in California:

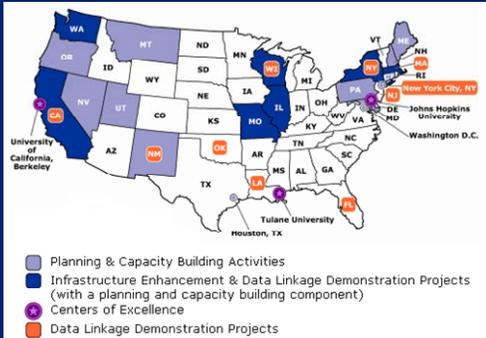
A Report of the SB 702 Expert Working Group

- A blueprint for California's tracking system

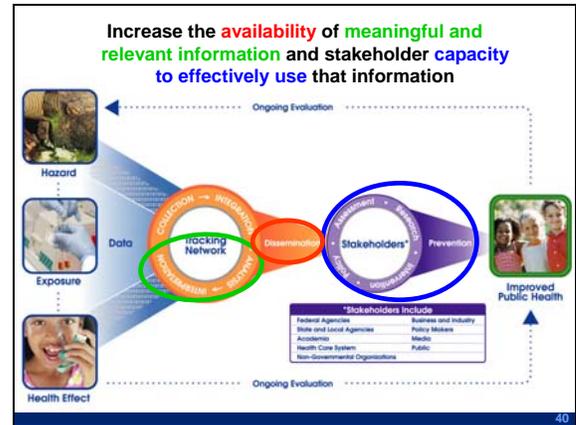
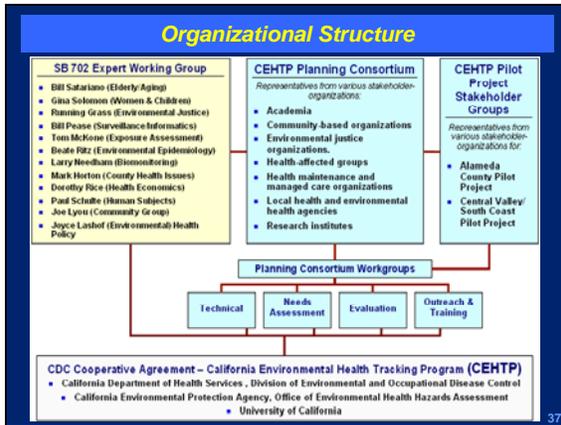


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### CDC's Environmental Public Health Tracking Program Grantees



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- ### CEHTP Pilot Projects
- **Alameda County Demonstration Project**
    - » Traffic Pollution
    - » Birth Outcomes (Preterm birth and Low birthweight)
    - » Asthma
  - **Central Valley/South Coast Demonstration Project**
    - » Airborne hazards, including pesticides
    - » Blood lead levels (limited)
    - » Birth outcomes
    - » Sudden Infant Death Syndrome (SIDS)
    - » Autism and Mental Retardation

- ### In Summary, Environmental Health Tracking...
- Falls under the first core function of public health - assessment
  - Is not research or intervention but information and tools for action
  - Will enhance our understanding of health and the environment
  - Brings unprecedented opportunity to redefine and broaden approaches to disease prevention and environmental protection
  - Will enable more effective, evidence-based, and defensible environmental and public health policies

- ### Statewide Needs Assessment
- Purpose:** To assess needs, capacity, resources, gaps, barriers, issues and priorities among non-governmental organizations, local public health agencies, and tribes.
- Components:**
- Phase 1: self-administered surveys of NGOs and Local Agencies
  - Phase 2: small-group discussions
  - Tribal needs assessment

- ### In Summary
- Tracking is complex
  - It is in its infancy of development
  - Tracking has tremendous potential
  - We can realize that potential
- if...
- We partner with stakeholders who can ultimately use tracking information to take action

# Findings from the KEY INFORMANT INTERVIEWS OF TRIBAL REPRESENTATIVES

30 October 2005

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## 2. Background and Overview

The Centers for Disease Control and Prevention (CDC) awarded California a three-year grant in 2002 to support the development of a statewide Environmental Health Tracking System (EHTS).

The goal of the resultant California Environmental Health Tracking Program (CEHTP) is to develop comprehensive plans for a standards-based, coordinated, and integrated EHTS that enables public health actions through linkage, monitoring, reporting, and sharing of information on environmentally related diseases and environmental hazards/exposure.

CEHTP is a collaborative initiative of the California Department of Health Services, the California Environmental Protection Agency, and the University of California.

A key step in the planning process is to identify, document, and communicate needs, issues, and concerns among key stakeholders including: non-governmental organizations (NGO), local public health agencies (LPHA), and tribal governments and agencies.

Findings from the needs assessment will be used to inform the strategic plan for environmental health tracking in California. This includes community outreach and involvement strategies, data/information communication and dissemination strategies, data analysis and interpretation methods and priorities, and technical specifications for a future EHTS.

Objectives of the Needs Assessment Include Identifying and Documenting:

- Environmental hazards/exposures and diseases of concern.
- Priority data and information needs.
- Needs and issues related to working with (collecting, accessing, managing, and analyzing) environmental health data.
- Needs and issues related to utilizing environmental health data for public health actions.
- Capacity building and training issues related to environmental health tracking.

The overall needs assessment consists of multiple components. This report describes activities and findings from key informant interviews with tribal representatives. The key informant interviews were part of our on-going efforts to identify and be responsive to stakeholder needs and perspectives.

The key informant interviews will inform the overall needs assessment and help to fill the gap in understanding stakeholder needs related to Environmental Health Tracking in California. Ultimately, CEHTP hopes to design an EHTS that is useful to stakeholders and to increase their readiness to take full advantage of this future resource and become stronger partners in achieving healthy people in healthy communities.

While CEHTP seeks to identify and describe issues and needs in a manner that enables cross comparison among local agencies, non-governmental agencies, and tribes, it is essential to identify issues, needs, aspects, and views that are unique to tribes.

To that end, we identified a cross section of eight California tribes and conducted telephone and in-person key informant interviews with representatives from tribal agencies.

### 3. Summary of Key Informant Interviews

This chapter catalogs results of the key informant interviews with tribal representatives. We have taken care to report participant comments as unadulterated as possible; avoiding any editorials, elaboration, or interpretation (beyond categorization). Exception include where clarifications, modifications, and/or supporting context were needed (e.g. defining acronyms, ensuring confidentiality, maintaining consistent voice, etc.).

Due to the purpose and nature of this assessment, we did not quantify results. We also did not attempt to translate discussion results into recommendations. This document simply captures what we heard from the key informants rather than what implications the results have for the program. We will incorporate these results along with those of other assessment activities in the development of future program strategies, recommendations, and plans.

We have attempted conceptualize and organize comments into multiple levels of relevant but overlapping categories in order to facilitate navigation, future analysis and interpretation, and integration into program strategies, recommendations, and plans. To the extent possible, we have categorized the responses in the context under which the dialogue occurred.

Due to the overarching and interrelated nature of many of the issues, specific comments are applicable to various categories; however, we've minimized duplicate comments by selecting the most appropriate category.

#### 3.A. Data/Information needs

The following sections focus on issues related to environmental health data needs. The purpose of gathering this information was to better understand how various stakeholders were working with (collecting, managing, accessing, analyzing, interpreting, and utilizing) environmental health data, the role of data in their work, and needs and gaps in data. The purpose of gathering this information is to ensure that data and information generated by a future tracking system is meaningful, appropriate, relevant, and useful to stakeholders.

##### 3.A.1. Role/functions related to environmental health data

This section describes key informant agencies' roles and functions that involve environmental health data. Prompts and probing questions related to this category included:

- ▶ *Is your department and/or tribe involved in the collection of environmental health data? What kind of environmental health data do you currently collect?*
- ▶ *Do you report data that you collect? What kind of data? When? To whom?*
- ▶ *How and to whom is environmental health data communicated and disseminated?*
- ▶ *What are some ways in which your department and/or tribe uses environmental health data?*

**Primary data collection:**

- Water quality monitoring/assessment:
  - Conducting well water assessments.
  - Collecting data on pesticides, perchlorates, nitrates, and microbes in water.
  - Operating state certified water labs.
  - Testing water quality of groundwater, surface water, and perennial streams.
  - Collecting water samples in streams.
  - Accessing secondary water data from counties.
  - Assessing drinking water quality.
  - Collecting data on the depths of wells and groundwater.
- Conducting Salmon surveys (counting redds, scale samples).
- Testing for endocrine disruptors.
- Evaluating non-point source pollution (golf courses).
- Air monitoring (trying to expand/develop, there is only one air monitor in the county).
- Collecting soil samples.

**Utilizing data:**

- Health advisories for boiling water in winter due to high turbidity.
- Groundwater modeling and other applications.
- Trends analysis.
- Food inspections, other regulatory activities.
- Evaluating non-compliant golf courses.
- Ensuring quality assurance plans
- Setting water quality standards
- Developing water quality standards for the reservation.

- Public health action when contaminant lead is too high.
- Outreach and education.
  - Meetings (quarterly tribal meetings, public meetings, etc.).
  - Websites.
  - Newsletters and memos.
  - Occasional public meetings.
  - Local tribal papers.
  - High school presentations.
  - Community gatherings.
- Sharing/communicating data to:
  - Funding agencies.
  - General tribal membership.
  - Tribal leaders.
  - Tribal business council.
  - Local/county agencies if requested.

**Reporting data:**

- Reporting data to meet grant requirements.
- Reporting data to tribal administrators and tribal business council (e.g. end of year report).
- Reporting data to governmental agencies:
  - Indian Health Service (I.H.S.)
  - U.S. Environmental Protection Agency (E.P.A.).
  - California Department of Pesticide Regulation (DPR).
  - Water Resource boards.
  - Fish & Game.
  - Fish & Wildlife Service.
  - Bureau of Indian Affairs (BIA).

### 3.A.2. How data could enhance/facilitate the work of the organization

This section describes the role of data in key informant agencies' functions/activities. Prompts and probing questions related to this category included:

► **What would better/more environmental health data enable you to do?**

- Learn how other tribes are doing things.
  - Conduct studies to explain long-term effects.
  - Get more funding to clean up dump sites.
  - Expand water monitoring.
  - Facilitate planning.
  - Identify public concerns.
  - Prioritize training.
  - Study other health data and issues.
  - Enable results driven planning processes.
  - Mitigate forest activities
  - Assess impacts to aquatic environment.
  - Determine the levels of particulates that are problems for human health.
  - Assess trends over time.
- Respond to situations and concerns in a timely/immediate manner.
  - Keep the public informed.
  - Facilitate grantwriting.
  - Ensure better service to the community.
  - Focus money and resources.
  - Secure more funding.
  - Inform tribal members about health risks and take action against the creator health risks.
  - Examine water quality issues.
  - Study other impacts (e.g. traditional diets).
  - Gain a broader picture of health.
  - Prevent anti-degradation of the reservation.
  - Enable early detection of contamination.

### 3.A.3. Data and information needs for carrying out functions/activities

This section describes participant issues needs around data. Prompts and probing questions related to this category included:

- **What data sources are you currently utilizing/accessing?**
- **What are your best sources of environmental health data and why? What makes it useful? Is it related to content: type of data, quality of data, timeliness, geographic resolution, etc.? Is it related to process: easy to access, communication, dissemination, etc.?**
- **Give an example of a time when you could have used good data but had difficulty finding or accessing the data.**
- **What kind of health and hazard data would you like to have that you do not currently collect or to which you do not have access?**

**Data sources currently being utilized:**

- Automated Vital Statistics System (AVSS).
- California Emissions Inventory Development and Reporting System (CEIDARS).
- Department of Family Services.
- Diabetic & Hypertension database.
- EUREKA (California Cancer Registry).
- IRIS (Integrated Risk Information System).
- PAN (Pesticide Action Network) database.

- Medical Care Statistics Section (MCSS) Database.
- Pesticide Use Report (PUR) database.
- Toxics Release Inventory (TRI).
- Water Quality Monitoring database.

**Other good/useful sources of data:**

- Data from other tribes if they are willing to share.
- Indian Health Service.
- Indian Health Clinics.
- California Environmental Protection Agency (Cal/EPA): Air Resources Board; Regional Water Quality Control Boards.
- U.S. Environmental Protection Agency (EPA).
- Humboldt State University.
- Fish and Wildlife: fisheries data.

**Data needs/gaps:**

- Air data for the reservation.
- Water data from the water districts.
- Data on lead in older homes.
- Data on air, water, pesticides, etc.

- Pesticide use among basketweavers.
- Particulate matter in water.
- Data related to solid waste, recycling, trash burning, and transfer stations.
- More access to health data in general.
- Data sources related to cancer (various) and Lupus.
- Community health databases (I.H.S.).
- Data from other local clinics or hospitals.
- Toxic data for fish.
- Cultural data.

**Barriers to accessing data:**

- Difficulty in getting certain agencies to share data.
- Relationships between tribes and counties.
- Poor relationships/collaboration with Cal/EPA.
- Lack of web-based data & information.
- Some data are not collected using standardized methods.
- Having to go through a Freedom-of-Information-Act request to access data.

### **3.B. Capacity in working with and utilizing environmental health data**

This section focuses on issues related to stakeholder capacity in working with (collecting, managing, accessing, analyzing, interpreting, and utilizing) environmental health data. For the purposes of this report, “capacity” refers to a broad array of community and organizational factors including: resources, infrastructure, ability, strength, power, readiness, skill, knowledge, expertise, etc. Prompts and probing questions related to this category included:

- ▶ *What would be helpful in building your capacity in working with and utilizing environmental health data?*
- ▶ *What would you say is your department’s three strongest capacities?*
- ▶ *What is your capacity to conduct public outreach and education about environmental hazards, exposures, and health outcomes?*
- ▶ *Name three priorities for training and/or capacity building in regard to environmental data that your department needs.*
- ▶ *Which of the following uses of data are most in need of development for your department? Public education and outreach; community organizing/mobilization; program planning/development; public policy development; program evaluation; risk communication; community environmental health assessments; addressing health disparities; addressing environmental justice issues; or community-based research?*

**Resources needed to work with data:**

- More money/funding.
- More staff.
- Staff that can work with (e.g. analyze and interpret) data.
- An air specialist.
- Full-time GIS staff.
- Database management staff.
- More educational resources.
- Equipment.
- Lab resources. Resources to analyze environmental monitoring samples.
- Risk analysis models that can integrate the community/culture.
- Risk and exposure assessment models.
- Tribal natural resources databases.

**Strong capacity in the following areas:**

- Water quality management.
- Habitat conservation.
- Air quality and water programs.
- Solid waste.
- Outreach.
- Planning and development.
- Maintaining compliance.

- Monitoring stream environment.
- Environmental compliance outreach.
- Data analysis.

**Priority areas for capacity building:**

- Conduct public education and outreach.
- Developing websites.
- Program planning/development.
- Community environmental health assessments.
- Dealing with environmental justice issues.
- Conducting environmental surveys.
- On-site training.
- GIS training for certification.
- Water quality, air quality, etc.
- Risk communication.
- Addressing health disparities.
- Community organizing/mobilization.
- Community-based research.
- Epidemiological training (what to do with data from clinics).
- Interpreting environmental health data.
- Establishing relationships and collaborating with other agencies.
- Developing useful/accessible databases.

### **3.C. Other issues related to environmental health tracking**

Ensuring that a statewide EHTS will be relevant and useful to stakeholders requires seeking and incorporating their input on a wide range of issues beyond data and information that will be incorporated and produced by an EHTS and beyond the resources and services that could be made available. The following sections focus on broader issues and considerations related to the development and implementation of an EHTS. Although the following categories and comments are related to the previous sections, they are not specific to environmental health data/information needs and organizational/workforce capacity.

### 3.C.1. Considerations in designing an environmental health tracking system

This section describes factors that should be taken into account as CEHTP moves forward in designing and implementing an EHTS. It also includes priorities and concerns related to an EHTS or the California Environmental Health Tracking Program. Many of the issues in the following section are also process-related (e.g. how to disseminate information and ensure accessibility, with whom to collaborate, how to ensure stakeholder involvement and participation, etc.).

Examples of prompts and probing questions related to this category:

- ▶ *If the State of California develops an environmental health tracking network, how could they involve and then maintain the involvement of tribal environmental departments, tribes, and tribal community members?*
- ▶ *What environmental hazards/exposures are of concern to your department and/or tribe?*
- ▶ *What environmental health effects are of concern to your department and/or tribe?*
- ▶ *In terms of traditional (cultural, religious, etc.) tribal practices, what are your concerns about hazards, exposures, and health effects?*

#### How to involve tribes:

- Notify tribes in a couple different ways.
- Letters to tribal chair might cause missed deadlines because he is so busy.
- Email notices.
- Continued outreach to the tribes.
- Provide funding to the tribes.
- Facilitate open dialogues.
- Let tribes communicate their needs.
- Don't make assumptions about tribes.
- Realize all tribal governments are separate.
- Deal with tribes on a government-to-government basis.
- Be as open and truthful as possible.
- Earn the trust of the tribes.
- Have a liaison for the project to inform tribes what is going on.

#### Environmental hazards/exposures of concern:

- Water:
  - Water overdraft in aquifers.
  - Sewage treatment plant (bacterial contamination, non-compliance).
  - Ground water running under the reservation.

- Perchlorate from CO river to the river basin.
- Section 303(d) list of water quality limited segments.
- Contaminated groundwater.
- Maximum Contaminant Levels (MCLs) in ground and drinking water.
- Old wells that needs to be tested.
- Animal grazing near water wells.
- Manganese in drinking water.
- Public supply wells.
- Private wells.
- Air:
  - Compliance with PM10/ozone.
  - Lack of air monitors on the reservation.
  - Air quality.
  - PM10 emissions.
  - Indoor & outdoor air.
  - Wildfires.
  - Lead and other substances when the wind blows.
- Pesticides:
  - Pesticides from golf courses.
  - Pesticide use (agriculture, wine region).

- Herbicides.
- Specific pollutants:
  - Tetrachloroethylene (PCE).
  - Mercury from gold mines.
  - Perchlorate.
  - Paints, oils, solvents, abandoned vehicles.
- Other hazards:
  - Non-point source run-offs.
  - Underground storage.
  - Illegal dumping.
  - Construction waste on vacant properties.
  - Decline in natural resources
  - Mining.
  - Mills on reservations (wood preservatives, highly carcinogenic in groundwater).
  - Household burning of hazardous materials.
  - Burning (agricultural & backyard) in spring & fall
  - Underground storage tanks.
  - Solid wastes.
  - Illegal dumping of hazardous materials
  - Mold in houses.
  - Impacts of damming of rivers.
  - Fish consumption (Eagle & Pyramid Lakes) possible high mercury content.

**Health effects (environmentally related diseases) of concern:**

- Cancer. Cancer clusters.
- Asthma.
- Health effects from secondary water sources (e.g. animals, vegetables).
- Gall bladder problems.
- Diabetes.
- Miscarriages.
- Flu-like symptoms.
- Rash.

**Concerns related to environmental health and traditional practices**

- Urban sprawl, impact on traditional gathering areas.
- Contaminants on baskets.
- Roadside gathering of basket making materials.
- Some fishing, clam gathering, etc.
- Impacts on vegetation and native plants due to no or shallow aquifer.
- Fishing & hunting and other subsistence practices.
- Spawning areas are mercury-ridden from gold mining (restoring habitat).
- Decrease in numbers of salmon.
- Lack of access to salmon.
- Contamination of salmon.
- Lack of access to river.
- Lack of plants due to overgrazing.
- Hunting and fishing.
- Pesticides: there are less gathering areas because of the pesticides.
- Loss of habitat.

### 3.C.2. General questions and comments

This section includes questions regarding EHTS and the California Environmental Health Tracking Program. It also includes general comments that did not necessarily fall under the previous categories.

#### Questions:

- Can a Tracking program be trusted with the data/information if provided by tribes?
- Will the Tracking program include CDC databases?

#### Concerns about environmental health tracking:

- Rural communities are not represented.
- Communication issues.
- Use of scientific language.
- Water districts have been unwilling to share data with tribes.

#### Other comments:

- Make sure tribes are involved in the Tracking program.
- There is so much pollution compared to 20-30 years ago.
- We can't drink water from streams anymore.
- Pollution anywhere (outside of tribes) affects tribes.
- Some tribes would be happy to share data with the state and other tribes.