5.c. Recipient Activity c: Develop Partnerships

Develop partnerships related to the development and implementation of the environmental public health tracking (surveillance) network with local, state, tribal, and Federal governments, health care providers and non-governmental organizations and other for-profit and nonprofit groups.

5.c.1. Results and Accomplishments

We have invested significant time and resources towards developing meaningful partnerships that will forge the foundations for the implementation of an EPHTN. Developing and maintaining partnerships is one of the most challenging aspects of the program; however, it is also the most valuable. We consider all groups and individuals that have been involved in aspects of the EPHT planning process to be our partners. This includes the various advisory groups (the Planning Consortium and its workgroups as well as the Pilot Project Advisory Group), other EPHT state and local grantees, our mini-grant recipients, and other branches within the California Department of Health Services just to name a few. To see a complete list of our partners, please see APPENDIX A: Partners that Contribute to or Support the Program.

In this section, we describe a few examples of partnerships in the following categories:

1. Partnerships with State, Local, and Academic EPHT Grantees.
2. Partnerships with Governmental Agencies.
3. Partnerships with Non-Governmental Organizations.
4. Partnerships for the Alameda County Pilot Project.

Partnerships with State, Local, and Academic EPHT Grantees

Western States & Academic Partners for Excellence

We have collaborated with the Western State EPHT programs and the UC Berkeley Academic Partner for Excellence (UCBAPE) to develop expertise in key areas related to program implementation. Two key areas of collaboration were (1) environmental public health measures/indicators and (2) communication. The potential to develop environmental public health indicators at a regional level developed because the Western states have interest in tracking a number of related hazards and health outcomes. California and Washington State EPHT programs co-developed an indicators workshop at CSTE and are involved with the USEPA Report on the

Environment indicator development process. These same states, in collaboration with UCBAPE and Oregon EPHT facilitated further discussion at an EPHT workshop to continue the indicator development process. These efforts enhance program sustainability by providing policy-relevant data that has regional applicability.

Many of the Western state partners and UCBAPE are involved in ongoing deliberation about effective methods for risk/hazard communication and stakeholder participation. These deliberations have cumulated in a series of trainings and workshops intended to describe effective practices for communicating tracking-related information to diverse audiences. These efforts culminated with a workshop at the October 2004 CDC Partners meeting and a UCBAPE-CEHTP co-sponsored environmental justice workshop. In developing capacity and expertise on issues related to indicators, stakeholder participation and communication support program development because these are core capacities essential to EPHT, research and interventions. We further expect these capacities can be applied to other funding opportunities.

We also collaborated with UCBAPE on an advanced GIS Workshop. Details regarding this initiative can be found in SECTION 5.f: Recipient Activity f: Training/Tools for Surveillance and Related Issues on p93.

Multi-State Consortium for Tracking Exposures to Contaminants in Drinking Water

We have partnered with several state grantees (NM, NJ, WA, WI) to develop a proposal to explore methods for tracking exposures to contaminants in drinking water. This partnership resulted in a one year supplementary project funded by CDC (the proposal to CDC can be found in APPENDIX S: Tracking Drinking Water Contaminants). The impetus for this partnership was the fact that various states are facing similar, specific technical problems with developing methods to track population exposures to drinking water contaminants. Rather than each state trying to solve these problems independently, we developed a plan to work collaboratively on a number of these issues. Initially, we will assess different potential methods as well as share specialized technical resources.

Partnerships with Governmental Agencies

California Air Resources Board (ARB), Cal/EPA

Our partnership with the California Air Resources Board (ARB) demonstrates infrastructure-building components and was initiated through activities in PA03074. The final result is the spatial linkage of modeled air contaminant data with health event data. In an effort to avoid the maintenance of multiple large database copies, our program and ARB agreed that the most efficient and automated way to link individual-level health data to air hazard data would be

through the use of value-added web services. In this case, however, the value-added service would be hosted by ARB, since they maintain a huge and continuously updated air hazard dataset. After agreeing on an architecture and coding division of labor, our partnership resulted in a service that returns estimated ground level concentrations of air contaminants around coordinate points submitted as batch processes.

We developed generic methods for intersecting polygon GIS coverages with a geocoded address location buffered to a specified radius. The ARB, through their contractor, Vestra, Inc., extended these methods to account for their GIS storage architecture, returning concentration levels for one or more requested contaminants or contaminant category aggregations. Both our program and ARB were responsible for various tasks involved in exposing and deploying these methods as web services. Vestra, Inc. improved the resolution of ARB's modeled ground-level concentration data and extended ARB's air contaminant databases to synchronize more systematically with their Hot Spots Analysis and Reporting Program.

USEPA Region IX

USEPA Region IX has been actively involved in the Planning Consortium and our pilot project advisory teams. This participation has resulted in more extensive discussions with regional staff about the potential to co-develop activities related to indicator development and community based participatory research. EPA staff report that the indicators and expertise developed to date in California are potentially useful. In addition, we and EPA Region IX recently convened senior staff from EPA and California's health and environmental agencies to identify common interests and needs and consider joint initiatives. These efforts increase program sustainability by creating opportunities for collaboration and funding.

Cal/EPA Environmental Justice Program

We organized a meeting between Cal/EPA Subsecretary Shankar Prassad, Cal/EPA EJ pilot project coordinators and our program staff. The goal of the meeting was for Cal/EPA's Environmental Justice Program (including the Pilot Projects) and our program to become acquainted with each others' work and to share experiences and methodologies within an Environmental Justice framework. The summary of the meeting as well as next steps for the parties are included in APPENDIX J: Cal/EPA – CEHTP Meeting Summary.

San Francisco Department of Public Health

We co-sponsored, with the San Francisco Department of Public Health, a workshop entitled "Minimizing poor air quality exposure in residential construction." The goal of this workshop was to collaboratively identify strategies for mitigating traffic related air quality concerns. This included identifying the range of possible land use, building design, and transportation strategies appropriate for urban areas that may mitigate air quality concerns due to busy roadways and

sensitive land uses. The workshop was attended by regional experts working on environmental health, epidemiology, indoor and outdoor air quality, industrial hygiene, and planning and architecture.

Partnerships with Non-Governmental Organizations

Marin Breast Cancer Watch

We co-sponsored a "Critical Issues in Biomonitoring" conference with Marin Breast Cancer Watch. This Bay Area community forum brought together environmental health and breast cancer advocates, academic and community-based researchers, public health professionals, public policy leaders, health educators, ethicists and community members to facilitate dialogue on issues relevant to biomonitoring. Nearly one hundred speakers and participants representing a wide variety of important perspectives on biomonitoring, breast cancer research, environmental tracking, environmental contaminants and toxics, community-based participatory research, environmental justice, and environmental and breast cancer advocacy attended. The complete report from the forum can be found at: http://www-apps.niehs.nih.gov/outreach-education/Documents/an1401-1450/AN001402.pdf.

San Francisco Medical Society and the Collaborative on Health and the Environment

We collaborated with the San Francisco Medical Society and the Collaborative on Health and the Environment on a discussion on EPHT with Health Affected Groups. The rich discussion included strategizing to improve the Parkinson's disease data and health registry issues, as well as identification of tracking issues for outcomes that are not currently being addressed (such as infertility and learning and developmental disabilities). Participants also described what they would like to see from the current EPHT program, including better surveillance data to help examine the impacts of multiple exposures (especially radiation and possibly EMF), more GIS and historical mapping, more information being pulled from existing databases and resources, the addition of biomonitoring to health tracking efforts, and the ability to track disease recurrences. There was considerable interest in following up with this conversation, as well as in supporting health tracking and biomonitoring legislation. For complete meeting notes from the discussion with Health Affected groups, visit: http://www.catracking.com/resources/summary_of_discussion_with_health_affected_groups.pdf.

Partnerships for the Alameda County Pilot Project

Partnerships to Coordinate the Alameda County Pilot Project Advisory Group

IMPETUS FOR PARTNERSHIP

In order to develop strategies for future data dissemination, assess community needs, and foster relationships with stakeholders concerned with environmental health issues, a major component of the Alameda County Pilot Project was the assembly of a stakeholder Advisory Group (AG). Recognizing that government agencies are often unwelcome and distrusted, particularly in communities disproportionately affected by environmental hazards and health effects, it was important to establish partnerships with community representatives before assembling the AG. These partnerships would result in assistance in the recruitment of other stakeholders to the AG, participation in the AG by key community representatives, and guidance for facilitating AG meetings in a manner accessible and relevant to community stakeholders.

DESCRIPTION OF PARTNER ORGANIZATIONS

The Pacific Institute is an Oakland-based NGO that focuses on environmental health issues and has relationships with various NGOs and CBOs in Alameda County. The Pacific Institute has a strong relationship with the community of West Oakland, having previously engaged community groups in a participatory process to research and report on the status of community-relevant environmental indicators for the neighborhood. The West Oakland Environmental Indicators Project (WOEIP) is a committee of representatives from a number of West Oakland community groups that were involved in the indicators process.

APPROACH TO ESTABLISHING PARTNERSHIP

Because the major goal of this partnership was relationship-building, using an appropriate approach for establishing partnerships (particularly with WOEIP) was imperative. Residents of West Oakland have previously expressed wariness towards researchers, echoing the concerns and experiences of other impacted communities that researchers enter the community to conduct studies, but rarely provide assistance or return the results to the community. Furthermore, researchers will rarely engage the community in a participatory fashion, ignoring community goals and expertise in the development or implementation of project activities. Researchers are seen to benefit professionally and financially (i.e. increased standing within professional circles and improved opportunities for personal promotion or project funding) from work derived from the community's misfortune and suffering, while the community is left without any immediate benefit.

Informed by this backdrop, we used an approach that included:

- Using a trusted NGO intermediary (i.e. Pacific Institute) for introduction to the community
- Establishing an MOU to provide clarification and assurance about roles and responsibilities
- Agreeing on activities that use collaborators' respective skill sets and further mutual or complementary goals
- Providing resources upfront and accomplishing our activities early in the partnership

For more details on this process, see APPENDIX H: Establishing Relationships with Environmental Justice Communities

DESCRIPTION OF PARTNERSHIP ACTIVITIES

We assisted WOEIP with two main projects: the assembly of neighborhood-specific environmental health resource information and the planning of a Healthy Neighborhoods Festival. We lead the development of an environmental justice resource card in English and Spanish, to be distributed to residents of West Oakland, and an environmental health resource binder, which is now housed at 16 different sites including libraries, schools, and community centers. The resource card and a table of contents for the binder can be found in APPENDIX I: Materials Developed for West Oakland Community Partnership. Our staff also attended festival planning meetings and provided assistance with various planning activities. The festival was unfortunately postponed due to unexpected health problems with the director of the community group leading the planning effort.

The Pacific Institute and WOEIP assisted us in identifying, contacting, and recruiting potential AG members. WOEIP members also participated in the AG process and provided informal consultation throughout the project period. The Pacific Institute also assisted us in the development and review of materials for recruitment, the development of the meeting agendas and materials, and the facilitation of AG meetings. See SECTION 5.i - Recipient Activity i: Demonstration Project on p115 for detailed description of AG recruitment and meeting facilitation processes.

OUTCOMES

Partnership activities were successfully completed, and the Pacific Institute and WOEIP expressed satisfaction with our assistance on the project. The expertise, perspectives, and networks of the Pacific Institute staff and WOEIP members contributed greatly to the AG recruitment and meeting processes. Our staff furthermore benefited from working in community settings, acquiring insight into relationships, histories, and concerns of the community stakeholders. This partnership established and strengthened relationships between our program and both the Pacific Institute and WOEIP.

Partnership for the Alameda County Pilot Project Dissemination Plan

IMPETUS FOR PARTNERSHIP

Though an iterative process, program staff and the AG determined and prioritized dissemination activities for pilot project findings. Priority activities included web-based dissemination of findings using both an interactive GIS interface and downloadable modular materials. Additional priorities included technical assistance for understanding and using the information, as well as access to non- environmental health data. We decided to partner with Urban Strategies Council/InfoOakland to develop a web-based interactive GIS interface (called InfoAlamedaCounty). Urban Strategies Council, a local NGO, coordinates the development and maintenance of http://www.infooakland.org, a web-based interactive interface that provides demographic, housing, and other data on the city of Oakland to the public. This collaboration was reinforced by Urban Strategies Council's capacity to provide technical assistance to community groups and its experience working with non-environmental health data, for which we had limited time and expertise.

DESCRIPTION OF PARTNER ORGANIZATION

InfoOakland is a local collaborative effort to develop web-based information resources to promote equity and empowerment for low-income neighborhoods and communities of color in the city of Oakland. InfoOakland is one of 21 partners in the National Neighborhood Indicators Partnership, which is a national collaborative effort to further the development and use of neighborhood information systems in local policymaking and community building (http://www.urban.org/nnip.htm). Coordinated by Urban Strategies Council, InfoOakland also has a technical assistance and capacity building component.

APPROACH TO ESTABLISHING PARTNERSHIP

Our partnership with Urban Strategies Council/InfoOakland occurred serendipitously through the AG process. As a member of the AG, InfoOakland's coordinator was able to highlight potential overlaps in InfoOakland's mission and activities with our pilot project dissemination and capacity-building goals. Furthermore, the partnership would address much of the AG's feedback regarding dissemination strategies and was well-received when presented to the AG.

DESCRIPTION OF PARTNERSHIP ACTIVITIES

Urban Strategies Council developed a county-wide version of their InfoOakland.org site (called InfoAlamedaCounty.org), with the addition of new functionality and the pilot project data. We provided formatted data and input regarding the functionality and appearance of the site. Once the first iteration of InfoAlamedaCounty.org was completed, Urban Strategies Council also agreed to develop and implement trainings for community groups on how to use the web tool InfoAlamedaCounty.org, with a particular emphasis on the pilot project findings.

See SECTION 5.l - Recipient Activity l: Information Dissemination/Communication Strategies on p165 for detailed description of the InfoAlamedaCounty web tool and other pilot project dissemination strategies.

OUTCOMES

The first iteration of the site has been completed and the development of the training is currently underway. Staff loss and turnover within Urban Strategies Council complicated and delayed the completion of these activities, as did the developer's misjudgment of the time required to build the site as specified. However, as per the priorities of the project and the community, this process has increased capacity within the community to display and access data. It also allowed us to explore the use of data intermediaries as partners for data dissemination. Finally, this partnership and the development of the InfoAlamedaCounty site ensure that the pilot project data will remain with the community after the end of the pilot project in a manner that will be accessible and usable by the community.

Partnership for Alameda County Pilot Project Asthma Surveillance

RATIONALE FOR PARTNERSHIP

Among the primary motivations of the Alameda County Pilot Project was the exploration of more effective and useful approaches to asthma surveillance. Although this aspect of the Pilot Project is described more extensively in SECTION 5.l - Recipient Activity l: Information Dissemination/Communication Strategies on p165, we will briefly describe the partnership with the Kaiser Permanente of Northern California (KPNC) Division of Research in this section.

The establishment of a collaborative relationship with KPNC helped us to achieve several objectives. First, we were interested in the use of health services utilization events as indicators of asthma. This interest stemmed from recognition that conventionally-employed population measures of asthma were restricted either to non-sustainable research projects, employed indicators of extreme asthma outcomes (such as hospitalizations), lacked the geographic specificity to investigate asthma at the community level, or all three of these. Second, we understood that advances in the field of health surveillance, particularly as related to EPHT, would eventually require public-private partnerships between organizations such as the California DHS and KPNC.

DESCRIPTION OF KAISER PERMANENTE OF NORTHERN CALIFORNIA

KPNC is an integrated healthcare delivery system which is the region's largest single provider of health services. Out of the total 3.1 million members of KPNC, 577,687 were residents of Alameda County in 2001; approximately 40% of county residents received their care at KPNC during that year. Kaiser Permanente has been a pioneer in medical information technology, maintaining a complete list of enrollees (denominator data) and databases describing

hospitalizations, clinic visits, referrals, external claims, and medication purchases by members (numerator data) and utilizing these for both administrative and health services research purposes.[8]

NATURE OF THE COLLABORATION

Among the enabling factors for the establishment of a partnership with KPNC for the purposes of the project was the well-established Division of Research (DOR) maintained by the organization. With respect to administration, IT services, and clinical expertise, the DOR was thoroughly prepared to collaborate on research protocols, prepare data, and interpret findings. In this regard, KPNC was a particularly suitable partner to enlist, for whom the exploratory nature of EPHT was not an obstacle to involvement.

It should be noted, however, that the one-time, research-oriented nature of the collaborative with KPNC is quite different from the sustained, open-ended, public health surveillance orientation regarded as desirable for future expansion of EPHT. It is hoped that, with the success of the Alameda County Demonstration Project, including its clear utility in non-research areas such as public health planning and community organization, the present activities will help lay groundwork for new relationships with a variety of health services providers for future EPHT endeavors.

5.c.2. Challenges and Barriers

- As rewarding and informative as the process was, the coordination of the Alameda County Pilot Project Advisory Group was quite challenging for CEHPT staff. In general, historical distrust of government and researchers within underserved communities contributes to a reluctance to form partnerships, and this phenomenon was certainly evident. Differences in communication styles and backgrounds also complicated mutual understanding regarding each group's priorities.
- The dissemination plan was complicated by staff loss and turnover in the partner agency, which led to increased time required for completion of the project activities, as well as miscommunication regarding roles. Limited resources also constrained the extent to which the site could be developed (i.e., the number of functionalities that could be included).

[8] For examples, see Davis, R.L., et al., *MMR2 Immunization at 4 to 5 Years and 10 to 12 Years of Age: A Comparison of Adverse Clinical Events after Immunization in the Vaccine Safety Datalink Project,* Pediatrics 1997;100(5):767-771 and Schoen, E.J., C.J. Colby, and G.T. Ray, *Newborn Circumcision Decreases Incidence and Costs of Urinary Tract Infections During the First Year of Life,* Pediatrics 2000;105(4):789-793.

5.c.3. Lessons Learned

It was repeatedly demonstrated that collaborative activities can bring key stakeholders together around issues critical to the development of an EPHTN. Such work also has provided the CEHTP opportunities to share its expertise with organizations that perform legislative advocacy. Ideally, these partnerships will facilitate more effective policy development in California.

Additional, specific lessons learned from each partnership are mentioned below.

Key aspects to partnership with Western States & UCBAPE

- The partnership supported the development of hazard, exposure and health effect indicators.
- The development of core communication capacities essential to surveillance, research and interventions was enabled by the partnership.

Key aspects to partnership with USEPA Region IX

- There was strong collaborative potential due to the common interest in indicator development and effective practices for community based research.
- The USEPA is a potential funding source for EPHT programs.

Key aspects to partnerships with NGOs

- NGO partnerships provided a forum for our program to share expertise that supports effective policy development.
- Activities built trust and improved relationships between non-governmental organizations and our program.

Partnerships to Coordinate the Alameda County Pilot Project Advisory Group

- It is important to offer resources to community partners upfront. These resources can include staff time and skills, as well as monetary resources.
- The development of the partnerships was facilitated by having an NGO intermediary, which could act as a "cultural translator" between our program and WOEIP and facilitate discussions leading to the agreement for partnership.
- Programmatic support, flexibility, and commitment to the process were key contributors to the success of the partnerships and the relationships developed.

Partnership for the Alameda County Pilot Project Dissemination Plan

- Our ability to identify InfoOakland as a partner was facilitated by networks developed through our AG. Additionally, InfoOakland's participation in the AG process created a shared understanding of the pilot project results and dissemination goals, which further assisted establishment of our collaboration.
- It is worthwhile to explore local capacity to accomplish or assist in program activities. Partnerships have positive consequences beyond the partnership activities, including

relationship-building, sharing of resources and expertise, increased capacities for both partners, and so forth. Important items to consider for all partnerships include clarification of roles/responsibilities and management of priorities for each partner, even if priorities overlap.

5.c.4. Recommendations

- ARB and CEHTP should investigate an architecture and methodology that computes modeled contaminant levels within a buffer in real-time, rather than storing very large modeled output for all possible California locations.
- EPHT programs should explore opportunities for partnering with local organizations to develop or implement tracking-related activities.
- EPHT programs should clarify expectations for both the EPHT program and the partners. Find common ground/mutual interest. Determine and communicate what the benefits are for EPHT and work with partners to determine what the benefits are for them.
- EPHT programs should develop partnerships that increase capacity for local/community partners.
- EPHT programs should collaborate on a case-by-case basis with data system owners. Cooperative agreements should be formulated in order to work towards the mutual goal of improving data quality, timeliness, and completeness and of enhancing electronic-based data sharing mechanisms.
- EPHT programs should identify and collaborate with other partners and stakeholder who can utilize EPHT information for public health functions (especially functions that may be limited for governmental agencies: e.g. advocacy and policy).
- EPHT programs should identify key points of leverage for environmental health planning, policy, and interventions and determine the most effective data/information that can affect those issues. Provide relevant data and training to appropriate stakeholders who can most effectively leverage the data.
- EPHT programs should be required to develop data sharing agreements and temporal/spatial linkage methodologies with their health and environmental agency counterparts.