



## Partnerships for Environmental Public Health Evaluation Metrics Manual

# Chapter 8: Appendices

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## Appendix 1: Methodology

A team of program staff in the Division of Extramural Research and Training at NIEHS worked closely with the Science and Technology Policy Institute (STPI) to develop the Partnerships for Environmental Public Health Evaluation Metrics Manual.

In 2008, the National Institute of Environmental Health Sciences (NIEHS) created PEPH as a network to promote greater interaction among grantees with a common focus on environmental public health. Grantees who are considered part of the PEPH program received funding from 17 different funding mechanisms or opportunities:

- Breast Cancer and the Environment Research Program (BCERP)
- Centers for Children’s Environmental Health and Disease Prevention Research
- Centers for Population Health and Health Disparities
- Environmental Health Sciences Core Centers
- Environmental Justice Program (EJ)
- Obesity and the Built Environment
- Research to Action (R2A)
- Superfund Basic Research Program (SRP)
- Worker Education and Training Program (WETP)
- American Reinvestment and Recovery Act (ARRA): STEM Education
- ARRA: Capacity Building
- ARRA: Community-linked Infrastructure
- Ethical, Legal, and Social Implications of Genomic Research
- NIH Partners in Research
- Community Participation Research Targeting the Medically Underserved
- Community Participation in Research
- Understanding and Promoting Health Literacy

We reviewed these programs and identified five cross-cutting program areas:

- (1) Partnerships
- (2) Leveraging
- (3) Products and dissemination
- (4) Education and training
- (5) Capacity building for communities, researchers, health care professionals and decision-makers

In 2009 and 2010, the team conducted literature reviews on these five program areas to identify metrics that have been used to evaluate them. Materials reviewed included NIEHS program documents, journal articles and evaluation manuals, as well as grantee websites, documents, and outreach and engagement materials.

The STPI team then developed standard interview protocols around partnerships, communication and capacity building and conducted a series of interviews and focus groups with NIEHS staff and PEPH grantees. NIEHS identified nine potential respondents with a broad spectrum of programmatic experience (see Appendices 2 and 3). The team worked together to develop logic models for each of the program areas. Based on the literature reviews, grantee materials and input, we identified evaluation metrics for each activity, output and impact listed, as well as common strategies grantees can use to collect relevant data for the metrics. Almost every metric also includes a narrative that illustrates the “metric in action,” a real world example of how a grantee measured a specific activity, output or impact.

In October 2010, the NIEHS published the draft Manual on the PEPH website. Throughout the fall and winter NIEHS staff presented the draft Manual at grantee meetings, scientific meetings, invited sessions and webinars (see list below). We sought comments from a wide range of stakeholders including grantees, federal and state government agencies, public health practitioners, and other NIH institutes. We estimate that over 350 individuals participated in the sessions. During the and Summer and Fall of 2011, comments received were discussed and incorporated into the final version of the Manual.

Outreach venues Meeting at which NIEHS staff presented the Manual:

- Superfund Grantee meeting (October, 2010)
- Worker training program meeting (October 2010)
- P30 Core Centers meeting (October 2010)
- Children’s Centers meeting (October 2010)
- Breast Cancer and the Environment Research Centers Grantee meeting (November 2010)
- American Evaluation Association Annual Meeting (November 2010)
- Society for Risk Analysis Annual Meeting (December 2010)
- NIEHS/EPA/Public Launch (January 2011)
- Association of State and Territorial Health Officials, Environmental Health Director’s Monthly Call (January 2011)
- NCI Evaluation Special Interest Group (January 2011)
- NIAID Evaluation Seminar (January 2011)
- PEPH Grantee Webinar (January 2011)
- NIH-wide Evaluation Special Interest Group (February 2011)
- NIAID Evaluation Work Group (February 2011)
- EPA Webinar (February and March 2011)
- NAEHS Council (February 2011)
- CDC Evaluation Workgroup (February 2011)

## Appendix 2: NIEHS Staff Discussants and Discussion Dates

**Anderson, Beth**, Program Analyst, Superfund Research Program, Division of Extramural Research and Training, NIEHS; August 11, 2009.

**Beard, Sharon D.**, Industrial Hygienist, Worker Education and Training Program, Division of Extramural Research and Training, NIEHS; August 13, 2009.

**Collman, Gwen**, Interim Director, Division of Extramural Research and Training, NIEHS; September 9, 2009.

**Dilworth, Caroline**, Health Science Administrator, Susceptibility and Population Health Branch, Division of Extramural Research and Training, NIEHS; August 19, 2009.

**Gray, Kimberly**, Program Administrator, Susceptibility and Population Health Branch, Division of Extramural Research and Training, NIEHS; September 18, 2009.

**Humble, Michael**, Health Science Administrator, Cellular, Organ Systems, and Pathobiology Branch, Division of Extramural Research and Training, NIEHS; September 9, 2009.

**Lawler, Cindy**, Program Administrator, Cellular, Organ Systems, and Pathobiology Branch, Division of Extramural Research and Training, NIEHS; September 3, 2009.

**O'Fallon, Liam**, Program Administrator, Susceptibility and Population Health Branch, Division of Extramural Research and Training, NIEHS; August 28, 2009.

## Appendix 3: Subject Expert Discussants and Discussion Dates

**Anderson, Henry;** State Health Official, Wisconsin Division of Public Health, Department of Health Services; November 30, 2009.

**Brody, Julia;** Executive Director, Silent Spring Institute; November 10, 2009.

**Carpenter, Hillary;** Division of Environmental Health, Minnesota Department of Health; November 20, 2009.

**Fryer-Edwards, Kelly;** Associate Professor, Department of Bioethics and Humanities at the University of Washington School of Medicine; November 20, 2009.

**Gray, Kathleen;** Director, Environmental Resource Program, UNC-Chapel Hill; November 19, 2009.

**Hricko, Andrea;** Associate Professor of Clinical Preventive Medicine, University of Southern California; November 19, 2009.

**Israel, Barbara;** Professor, Department of Health Behavior and Health Education, University of Michigan; November 23, 2009.

**Kiefer, Matt;** Prevention and Intervention Core Leader, Pacific Northwest Agricultural Safety and Health Center; November 10, 2009.

**Kyle, Amy;** School of Public Health, University of California Berkeley; November 18, 2009.

**Lewis, Johnnye;** Director, Community Outreach and Education Program, University of New Mexico; November 10, 2009.

**McCauley, Linda;** Dean, Emory University Nell Hodgson Woodruff School of Nursing; November 20, 2009.

**McQuiston, Thomas;** Tony Mazzocchi Center for Health, Safety and Environmental Education; November 17, 2009.

**Miller, Pamela;** Director, Alaska Community Action on Toxics (ACAT); November 20, 2009.

**Mirer, Frank;** Associate Professor, Environmental and Occupational Health Sciences, City University of New York, Hunter School; November 20, 2009.

**Osterberg, David;** Associate Clinical Professor, Department of Occupational and Environmental Health, University of Iowa; November 20, 2009.

**Sattler, Barbara;** Professor, University of Maryland School of Nursing; December 2, 2009.

**Serrell, Nancy;** Director of Outreach, Dartmouth College; November 17, 2009.

**Slatin, Craig;** Associate Professor and Department Chair, Community Health and Sustainability, University of Massachusetts Lowell; December 1, 2009.

**Wilson, Omega;** President, West End Revitalization Association, November 16, 2009.

**Wilson, Sacoby;** Assistant Research Professor Institute for Families in Society, University of South Carolina; November 23, 2009.

**Witherspoon, Nsedu;** Executive Director, Children's Environmental Health Network (CEHN); November 23, 2009.

**Wright, Beverly;** Director, Deep South Center on Environmental Justice, Dillard University; December 3, 2009.

## Appendix 4: Additional Evaluation Resources

The references in this appendix provide further information on the topics discussed in the Partnerships for Environmental Public Health Evaluation Metrics Manual. Sections include:

- General program evaluation
- Environmental health and health program evaluation
- Logic modeling
- Evaluation tools
- Process evaluation
- Impact/outcomes evaluation
- Online databases
- Partnership and coalition assessment resources
- Capacity building resources
- Bibliometric analyses

This list of references is meant to be informative, not prescriptive, and it does not preclude the use of other resources. NIEHS is interested in keeping the list of resources as current and complete as possible. Any suggestions for additional resources are greatly appreciated and should be sent to [peph@nieh.nih.gov](mailto:peph@nieh.nih.gov).

### General Program Evaluation

1. Barnes, H, Jordan G. Office of Planning, Budget and Analysis. 2006. EERE Guide for Managing General Program Evaluation Studies: Getting the Information You Need. Prepared for the Office of Energy Efficiency and Renewable Energy (EERE). Available: [http://www1.eere.energy.gov/ba/pba/pdfs/evaluation\\_mgmt\\_guide\\_final\\_2006.pdf](http://www1.eere.energy.gov/ba/pba/pdfs/evaluation_mgmt_guide_final_2006.pdf) [accessed 16 December 2011].
2. Boulmetis J and Dutwin P. 2005. The ABCs of Evaluation: Timeless Techniques for Program and Project Managers, 2<sup>nd</sup> Edition, San Francisco, CA: Jossey-Bass.
3. Chen HT. 2005. Practical Program Evaluation: Assessing and Improving Planning, Implementation, and Effectiveness, Thousand Oaks, CA: Sage Publications, Inc.
4. Fitzpatrick JL, Sanders JR, and Worthen BR. 2003. Program Evaluation: Alternative Approaches and Practical Guidelines, 3<sup>rd</sup> edition, Boston, MA: Allyn & Bacon.
5. Kellogg Foundation, W.K. Kellogg Foundation Evaluation Handbook. Available: <http://www.wkcf.org/knowledge-center/resources/2010/W-K-Kellogg-Foundation-Evaluation-Handbook.aspx> [accessed 16 December 2011].
6. Patton MQ. 2008. Utilization-Focused Evaluation. 4<sup>th</sup> edition, Thousand Oaks, CA: Sage Publications, Inc.
7. Rossi PH, Lipsey MW, Freeman HE. 2003, Evaluation: A Systematic Approach, 7<sup>th</sup> edition, Thousand Oaks, CA: Sage Publications, Inc.

8. Russ-Eft DR and Preskill H. 2001. *Evaluation in Organizations: A Systematic Approach to Enhancing Learning, Performance, and Change*, Cambridge, MA: Perseus Books Group.
9. U.S. Government Accountability Office (GAO). 2007. *Government Auditing Standards*. Available: <http://www.gao.gov/new.items/d07731g.pdf> [accessed 16 December 2011].
10. Weiss C. 1997. Theory-based evaluation: Past, present, and future. In *Progress and Future Directions in Evaluation: Perspectives in Theory, Practice and Methods, New Directions for Program Evaluation* (Rog D and Founier Deds.), San Francisco, CA: Jossey-Bass.
11. Frechtling J. 2002. The National Science Foundation, Division of Research, Evaluation, and Communication. *The 2002 User Friendly Handbook for Project Evaluation*. Available: <http://www.nsf.gov/pubs/2002/nsf02057/nsf02057.pdf> [accessed 16 December 2011].
12. Wholey JS, Hatry HP, Newcomer KE (eds). 2004. *Handbook of Practical Program Evaluation*, 2<sup>nd</sup> edition. San Francisco, CA: Jossey-Bass.

### **Environmental Health and Health Program Evaluation**

13. U.S. Department of Health and Human Services. Centers for Disease Control and Prevention, Office of the Assistant Secretary for Health, Office of Disease Prevention and Health Promotion. 1988. *Program Evaluation Handbook: Smoking Cessation*, Atlanta, GA: Centers for Disease Control and Prevention.
14. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Office of the Director, Office of Strategy and Innovation. 2005. *Introduction to Program Evaluation for Public Health Programs: A Self-Study Guide*. Atlanta, GA: Centers for Disease Control and Prevention.
15. U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry, Division of Health Education. 1994. *Guidelines for Planning and Evaluating Environmental Health Education Programs*, Atlanta, GA: Agency for Toxic Substances and Disease Registry.
16. U.S. Department of Health and Human Services, National Institutes of Health, National Institute of Environmental Health Sciences. *Worker Training Program and its Awardees and National Clearinghouse for Worker Safety and Health Training for Hazardous Material, Waste Operations, and Emergency Response*. 1997. *Resource Guide for Evaluating Worker Training: A focus on safety and health*.
17. Drew CH, van Duivenboden J, and Bonnefoy X. 2000. *Guidelines for Evaluation of Environmental Health Services*. World Health Organization. WHO Regional Publications, European Series No 90. Available: [http://www.euro.who.int/\\_data/assets/pdf\\_file/0003/98292/E71502.pdf](http://www.euro.who.int/_data/assets/pdf_file/0003/98292/E71502.pdf) [accessed 16 December 2011].

### **Logic Modeling**

18. Frechtling JA. 2007. *Logic Modeling Methods in Program Evaluation*. San Francisco, CA: Jossey-Bass.
19. Greenfield VA, Williams VL, Eiseman E. 2006. *Using Logic Models for Strategic Planning and Evaluation*. Santa Monica, CA: RAND Corporation. Available: [http://www.rand.org/pubs/technical\\_reports/2006/RAND\\_TR370.pdf](http://www.rand.org/pubs/technical_reports/2006/RAND_TR370.pdf) [accessed 16 December 2011].

20. Harris J. 2001. Logic models in real life: After school at the YWCA of Asheville. The Evaluation Exchange, vol. VII, no. 2, pp. 13-14. Available: <http://www.hfrp.org/var/hfrp/storage/original/application/54215cb424759345fe597991d399c466.pdf> [accessed 16 December 2011].
21. McLaughlin JA and Jordan GB. 1999. Logic models: A tool for telling your program's performance story. Evaluation and Program Planning, vol. 22, no. 1.
22. W.K. Kellogg Foundation. 2004. Logic Model Development Guide. Available: <http://www.wkkf.org/knowledge-center/resources/2006/02/WK-Kellogg-Foundation-Logic-Model-Development-Guide.aspx> [accessed 16 December 2011].
23. Watson S. 2002. Learning from logic models in out-of-school time. Harvard Family Research Project. Available: <http://www.hfrp.org/publications-resources/browse-our-publications/learning-from-logic-models-in-out-of-school-time> [accessed 16 December 2011].

### Evaluation Tools

24. American Evaluation Association. Qualitative Software. Available: <http://www.eval.org/Resources/QDA.asp> [accessed 16 December 2011].
25. Greene J. 2008. Chapter 33: Qualitative Program Evaluation. Collecting and Interpreting Qualitative Materials, 3<sup>rd</sup> edition, (Denzin NK, Lincoln YS, eds). Thousand Oaks, CA: Sage Publications, Inc.
26. Sanderson PM and Fisher C. 1994. Exploratory sequential data analysis: Foundations. Human-Computer Interaction, vol. 9, no. 3: 251-317.
27. Schonlau M, Fricker RD Jr, Elliott M. 2002. Conducting Research Surveys via E-mail and the Web, Santa Monica, CA: RAND. Available: [http://www.rand.org/pubs/monograph\\_reports/MR1480/index.html](http://www.rand.org/pubs/monograph_reports/MR1480/index.html) [accessed 16 December 2011].
28. U.S. General Accounting Office (GAO). 1992. Quantitative data analysis: An introduction. Report to Program Evaluation and Methodology Division. Available: <http://www.gao.gov/special.pubs/pe10111.pdf> [accessed 16 December 2011].
29. Yin RK. 2009. Case Study Research: Design and Methods 4<sup>th</sup> Ed., Thousand Oaks, CA: Sage Publications, Inc.

### Process Evaluation

30. Melanie JB, Emshoff JG. 2002. Workshop for Designing a Process Evaluation. Available: <http://health.state.ga.us/pdfs/ppe/Workbook%20for%20Designing%20a%20Process%20Evaluation.pdf> [accessed 16 December 2011].
31. Saunders RP, Evans MH, Joshi P. 2005. Developing a process-evaluation plan for assessing health promotion program implementation: A how-to guide. Health Promotion Practice, vol. 6, no. 2, pp. 134-47.
32. World Health Organization (WHO). 2000. Workbook 4: Process Evaluations. Available: [http://www.unodc.org/docs/treatment//process\\_evaluation.pdf](http://www.unodc.org/docs/treatment//process_evaluation.pdf) [accessed 16 December 2011].

## Impact/Outcomes Evaluation

33. Hatry HP. 2007. Performance Measurement: Getting Results, 2<sup>nd</sup> Ed., Baltimore, MD: Urban Institute Press.
34. Hatry HP and Kopczynski M. 1997. Guide to Program Outcome Measurement for the US Department of Education. Urban Institute Research Paper. Available: <http://www.eric.ed.gov/PDFS/ED407444.pdf> [accessed 16 December 2011].
35. Mullen EJ, Magnabosco JL, eds., 1997. Outcomes Measurement in the Human Services, Washington, DC: NASW Press.
36. Plantz MC, Greenway MT, Hendricks M. 1997. Outcome measurement: Showing results in the nonprofit sector. *New Directions for Evaluation*, no. 75, pp. 15-30.

## Online Databases

37. Centers for Disease Control Evaluation Working Group. Available: <http://www.cdc.gov/eval/index.htm> [accessed 16 December 2011].
38. Free Resources for Program Evaluation and Social Research Methods. Available: <http://gsociology.icaap.org/methods/> [accessed 16 December 2011].
39. United Way Outcome Measurement Resource Network. Available: [http://www.nationalserviceresources.org/filemanager/download/ProgramMgmt/Outcome\\_Measurement\\_Showing\\_Results\\_Nonprofit\\_Sector.pdf](http://www.nationalserviceresources.org/filemanager/download/ProgramMgmt/Outcome_Measurement_Showing_Results_Nonprofit_Sector.pdf) [accessed 16 December 2011].
40. Web Center for Social Research Methods. Available: <http://www.socialresearchmethods.net/> [accessed 16 December 2011].
41. World Bank. Available: <http://www.worldbank.org/ieg/nonie/index.html> [accessed 16 December 2011].

## Partnership and Coalition Assessment Resources

42. Renn O, Webler T, et al. 1995. Fairness and competence in citizen participation: evaluating models for environmental discourse, Kluwer Academic. Chapter 3.
43. Arnstein SR. 1969. A ladder of citizen participation. *JAIP*, Vol. 35, No. 4, pp. 216-224.
44. National Network for Collaboration. 1995. Collaboration Framework-Addressing Community Capacity. Available: <http://crs.uvm.edu/nngo/collab/framework.html> [accessed 16 December 2011].

## Capacity Building Resources

45. Nonaka I. 1991. The knowledge creating company. *Harvard Business Review*, 69, pp. 96–104. Available: <http://hbr.harvardbusiness.org/2007/07/the-knowledge-creating-company/es> [accessed 16 December 2011].
46. Alavi M, Leidner DE. 1999. Knowledge management systems: issues, challenges, and benefits. *Communications of the AIS*, 1 (2). Available: <http://portal.acm.org/citation.cfm?id=374117> [accessed 16 December 2011].
47. McAdam R, McCreedy S. 2000. A critique Of knowledge management: Using a social constructionist model. *New Technology, Work and Employment*, 15 (2). Available: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=239247](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=239247) [accessed 16 December 2011].

48. Thompson MPA, Walsham G. 2004. Placing knowledge management in context. *Journal of Management Studies*, 41 (5): 725–747. Available: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=559300](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=559300) [accessed 16 December 2011].
49. Laverack G and Labonte R. 2000. A planning framework for community empowerment goals within health promotion. *Health Policy and Planning*, vol. 15, no. 3, pp.259.

### **Bibliometric Analyses**

50. Sharif I, Nason E, Marjanovic S, and Grant J. 2009. Bibliometrics as a tool for supporting prospective R&D decision-making in the health sciences: Strengths, weaknesses and options for future development. RAND Technical Report. Available: [http://www.rand.org/pubs/technical\\_reports/TR685/](http://www.rand.org/pubs/technical_reports/TR685/) [accessed 16 December 2011].
51. Pendlebury DA. 2008. White Paper: Using Bibliometrics in Evaluating Research. Available: [http://isiwebofknowledge.com/media/pdf/UsingBibliometricsinEval\\_WP.pdf](http://isiwebofknowledge.com/media/pdf/UsingBibliometricsinEval_WP.pdf) [accessed 16 December 2011].
52. Environmental Protection Agency (EPA). 2007. Bibliometric Analysis for the U.S. Environmental Protection Agency/Office of Research and Development's Air (Particulate Matter, Ozone, Air Toxics, and Indoor Air) Research Program. Available: <http://www.epa.gov/airscience/pdf/Air-Bibliometric-Analysis-Sept-07.pdf> [accessed 16 December 2011].
53. Soteriades ES, Falagas ME. 2006. A bibliometric analysis in the fields of preventive medicine, occupational and environmental medicine, epidemiology, and public health. *BMC Public Health* 6: 301
54. Tarkowski SM. 2007. Environmental health research in Europe: Bibliometric analysis. *European Journal of Public Health*, 17, Supplement 1:14-8.

### **Social Media** (*Because this is an emerging field, resources include blogs and other non-peer reviewed sources.*)

55. Owyang J. 2010. Altimeter Report: Social Marketing Analytics. Available: [http://www.slideshare.net/jeremiah\\_owyang/altimeter-report-social-marketing-analytics](http://www.slideshare.net/jeremiah_owyang/altimeter-report-social-marketing-analytics) [accessed 16 December 2011].
56. Social Marketing Quarterly. 2011. Social Marketing Framework. Available: <http://www.socialmarketingquarterly.com/planning-and-evaluating-digital-media-campaigns-public-sector> [accessed 16 December 2011].
57. Paine KD. 2011. PR Measurement Blog. Available: <http://kdpaine.blogs.com/> [accessed 16 December 2011].
58. 2<sup>nd</sup> European Summit on Measurement. 2010. Barcelona Declaration of Measurement Principles. Available: <http://www.instituteforpr.org/wp-content/uploads/BarcelonaPrinciplesSlides.pdf> [accessed 16 December 2011].

## Appendix 5: Combined Bibliography of References Cited in the Manual

- Alliance for Nonprofit Management. 2010. About Capacity Building. Available: <http://www.allianceonline.org/resources> [accessed 16 December 2011].
- American Indian Environmental Office (AIEO), U.S. Environmental Protection Agency (EPA). 2011. Policy for Consultation and Coordination with Indian Tribes. 1. Available: <http://www.epa.gov/tp/pdf/cons-and-coord-with-indian-tribes-policy.pdf> [accessed 16 December 2011].
- Arnstein, SR. 1969. A ladder of citizen participation. *J Am Planners* 35(4):216-224.
- Backer TE, Rogers E, Sopory P. 1992. *Health Communication, Designing Health Communication Campaigns: What Works?* Thousand Oaks, CA: Sage Publications, Inc.
- Breen CM, Jaganyi JJ, van Wilgen BW, van Wyk E. 2004. Research projects and capacity building. *Water SA* 30(4):429-434. Available: <http://ajol.info/index.php/wsa/article/viewFile/5094/12684> [accessed 16 December 2011].
- Brown L, LaFond A, Macintyre K. 2001. *Measuring Capacity Building: MEASURE Evaluation Project for USAID*. Available: <http://www.heart-intl.net/HEART/Financial/comp/MeasuringCapacityBuilg.pdf> [accessed 16 December 2011].
- Center for Substance Abuse Treatment. 2008. *Sustaining Grassroots Community-Based Programs: A Toolkit for Community- and Faith-Based Service Providers*. HHS Publication No. (SMA) 08-4340. Rockville, MD: Substance Abuse and Mental Health Services Administration, U.S. Department of Health and Human Services.
- Centers for Disease Control and Prevention (CDC). 2008. *State Asthma Control Program Evaluation: Reference materials for designing and implementing evaluations, Module 1: Partnerships, Draft*. Available: [http://www.ct.gov/dph/lib/dph/hems/asthma/pdf/module1\\_partnerships\\_%282%29.pdf](http://www.ct.gov/dph/lib/dph/hems/asthma/pdf/module1_partnerships_%282%29.pdf) [accessed 16 December 2011].
- Centers for Disease Control and Prevention (CDC). 2010. *Health Impact Assessment*. Available: <http://www.cdc.gov/healthyplaces/hia.htm> [accessed 16 December 2011].
- Chandler S. 2008. *Writing Proposals for Capacity Building*. The Grantsmanship Center. Available: <http://www.tgci.com/magazine/Writing%20Proposals%20for%20Capacity%20Building.pdf> [accessed 16 December 2011].
- Crisp BR, Swerissen H, Duckett SJ. 2000. Four approaches to capacity building in health: consequences for measurement and accountability. *Health Promot Int* 15(2):99-107.
- Dixon M, Roubideaux Y. 2001. *Promises to Keep: Public health policy for American Indians and Alaska Natives in the 21st century*. 142-143. Washington, DC: American Public Health Association.
- Drew CD, van Duivenboden J, Bonnefoy X. 2000. *Environmental health services in Europe 5: Guidelines for evaluation of environmental health services*. European Series, No. 90. Copenhagen, DM: World Health Organization =Regional Publications. Available: [http://www.euro.who.int/\\_data/assets/pdf\\_file/0003/98292/E71502.pdf](http://www.euro.who.int/_data/assets/pdf_file/0003/98292/E71502.pdf) [accessed 16 December 2011].
- Engel-Cox JA, Van Houten B, Phelps J, Rose SW. 2008. Conceptual model of comprehensive research metrics for improved human health and environment. *Environ Health Perspect* 116(5). Available: <http://www.ehponline.org/ambra-doi-resolver/10.1289/ehp.10925> [accessed 16 December 2011].

Environmental Health Perspectives, International Program. 2010. Capacity Building. Available: <http://ehp.niehs.nih.gov/international/capacity.html> [accessed 16 December 2011].

Grembowski D. 2001. The Practice of Health Program Evaluation. Thousand Oaks, CA: Sage Publications, Inc.

Hawe P, Noort M, King L, Jordens C. 1997. Multiplying health gains: The critical role of capacity-building within health promotion programs. *Health Policy* 39(1): 29-42.

Hawe P, Noort M, King L, Jordens C. 1997. Multiplying health gains: the critical role of capacity-building within health promotion programs. *Health Policy* 39: 29-42.

Hazardous Materials Training and Research Institute (HMTRI). 2005. Protecting Yourself While Helping Others. Available: <http://www.elcosh.org/record/document/927/d000883.pdf> [accessed 16 December 2011].

Hricko A. 2008. Global trade comes home: Community impacts of goods movement. *Environ Health Perspect* 116:a78-A81; doi:10.1289/ehp.116-a78. Available: <http://ehsehp03.niehs.nih.gov/article/info%3Adoi%2F10.1289%2Fehp.116-a78> [accessed 16 December 2011].

IEHS. 2007. PEPH Request for Information. Available: <http://www.niehs.nih.gov/research/supported/programs/peph/about/rfi.cfm> [accessed 16 December 2011]; NIEHS. 2010. PEPH Workshop. Available: <http://www.niehs.nih.gov/research/supported/programs/peph/about/workshop.cfm> [accessed 16 December 2011].

Israel BA, Schultz AJ, Parker EA, Becker AB. 1998. Review of community-based research: assessing partnership approaches to improve public health. *Annu Rev of Publ Health* 19: 173-202.

Israel BA, Schulz AJ, Parker EA, Becker AB. 1998. Review of community-based research: Assessing partnership approaches to improve public health. *Annu Rev Publ Health* 19: 185.

Israel BA, Schulz AJ, Parker EA, Becker AB. 1998. Review of community-based research: Assessing partnership approaches to improve public health. *Annu Rev Publ Health* 19: 185.

Johnson A. 1999. Investigation of chemical contamination at Whitmarsh Landfill and Padilla Bay Lagoon. Olympia, WA: Washington State Department of Ecology; Johnson A. 2000a. Sediment quality on the west side of inner Fidalgo Bay. Olympia, WA: Washington State Department of Ecology

Johnson A. 2000b. Results of a screening analysis for metals and organic compounds in shellfish from Padilla Bay and vicinity. Olympia, WA: Washington State Department of Ecology

Johnson A, Serdar D, and Davis D. 1997. Survey for petroleum and other chemical contaminants in the sediments in Fidalgo Bay. Olympia, WA: Washington State Department of Ecology.

Jones L. 2000. Healthy African American Families. In: *Successful Models of Community-Based Participatory Research*, 29-31 March 2000: Final Report, Washington, DC. 38. (O'Fallon LR, Tyson FL, Dearth A, eds). Available: [http://www.hud.gov/offices/lead/library/hhhs/NIEHS\\_Successful\\_Models.pdf](http://www.hud.gov/offices/lead/library/hhhs/NIEHS_Successful_Models.pdf) [accessed 16 December 2011].

Liebow E, Phelps J, Van Houten B, Rose S, Orians C, Cohen J, et al. 2009. Toward the assessment of scientific and public health impacts of the National Institute of Environmental Health Sciences Extramural Asthma Research Program using available data. *Environ Health Perspect* 117(7). Available: <http://www.ehponline.org/ambra-doi-resolver/10.1289/ehp.0800476> [16 December 2011].

Mai E. 2007. Exercising is Healthy. Available: [http://www.youtube.com/watch?v=pKcL\\_LY2cel&feature=related](http://www.youtube.com/watch?v=pKcL_LY2cel&feature=related) [accessed 16 December 2011].

- Mccurdy LE, Roberts J, Rogers B, Love R, Etzel R, Paulson J, Witherspoon N, Dearry A. 2004. Incorporating environmental health into pediatric medical and nursing education. *Environ Health Perspect* 112(17). Available: <http://www.ehponline.org/ambra-doi-resolver/10.1289/ehp.7166> [accessed 16 December 2011].
- McLaughlin JA, Jordan GB. 1999. Logic Models: A tool for telling your program's performance story. *Eval Program Plann* 22(1).
- Minnesota Indian Affairs Council. 2011. Protocol When Working with Tribes. Available: [http://www.cdfa.ca.gov/ahfss/emergency\\_preparedness/pdfs/Protocol\\_Working\\_Tribes\\_condensed.pdf](http://www.cdfa.ca.gov/ahfss/emergency_preparedness/pdfs/Protocol_Working_Tribes_condensed.pdf) [accessed 16 December 2011].
- National Institute of Environmental Health Sciences (NIEHS). 2008. About: Partnerships for Environmental Public Health. Available: <http://www.niehs.nih.gov/research/supported/programs/peph/about/index.cfm> [accessed 16 December 2011].
- National Institutes of Health (NIH). 2011. 4th Annual NIH Conference on the Science of Dissemination and Implementation. Available: <http://conferences.thehillgroup.com/obssr/DI2011/index.html> [16 December 2011]. Click on the Resources tab for copies of conference presentations and materials.
- NIEHS. 2008. Partnerships for Environmental Public Health: RFI Executive Summary. 12. Available: <http://www.niehs.nih.gov/research/supported/programs/peph/about/rfi/index.cfm> [accessed 16 December 2011].
- Ogilvie D, Craig P, Griffin S, Mcintyre S, Wareham NJ. 2009. *BMC Public Health* 9(116); doi: 10.1186|1471-2458-9-116.
- Orians C, Rose S, Hubbard B, Sarisky J, Reason L, Bernichon T, et al. 2009. Strengthening the capacity of local health agencies through community-based assessment and planning. *Public Health Rep* 124: 879.
- Orians CE, Abed J, Drew CH, Rose SW, Cohen JH, Phelps J. 2009. Scientific and public health impacts of the NIEHS Extramural Asthma Research Program: insights from primary data. *Res Evaluat* 18(5): 375-385.
- Patton MQ. 1982. *Practical Evaluation*. Beverly Hills, CA: Sage Publications, Inc.
- Penslar RB, Porter JP. 1993. Office for Human Research Protections (OHRP) IRB Guidebook. United States Department of Health and Human Services (HHS) Available: [http://www.hhs.gov/ohrp/archive/irb/irb\\_guidebook.htm](http://www.hhs.gov/ohrp/archive/irb/irb_guidebook.htm) [accessed 16 December 2011].
- Pope AM, Snyder MA. 1995. *Nursing, Health and the Environment: Strengthening the Relationship to Improve the Public's Health*. Institute of Medicine (U.S.), Committee on Enhancing Environmental Health Content in Nursing Practice.
- Research Utilization Support and Help (RUSH) Project. 2001. Developing an Effective Dissemination Plan. Available: <http://www.researchutilization.org/matrix/resources/dedp/> [accessed 16 December 2011].
- Shuey K. 2008. Safe Home Cleaning Products. Available: <http://www.youtube.com/watch?v=yY6lKEYqRsE> [accessed 16 December 2011].
- Silka L. 2000. Evaluation as a strategy for documenting the strengths of community-based participatory research in: *Successful Models of Community-Based Participatory Research, 29-31 March 2000: Final Report*, Washington, DC. 49-54. (O'Fallon LR, Tyson FL, Dearry A, eds). Available: [http://www.hud.gov/offices/lead/library/hhhs/NIEHS\\_Successful\\_Models.pdf](http://www.hud.gov/offices/lead/library/hhhs/NIEHS_Successful_Models.pdf) [accessed 16 December 2011].

Susskind L, McKearnan S, Thomas-Larmer J. 1999. *The Consensus Building Handbook: A Comprehensive Guide to Reaching Agreement*. Thousand Oaks, CA: Sage Publications, Inc.

Swinomish Indian Tribal Community. 2010. Bioaccumulative Toxics in Native American Shellfish Project, 2002-2006. Available: <http://www.swinomish-nsn.gov/Resources/Environment/Shellfish/Bioaccumulate-Toxics-In-Native-American-Shellfish.aspx> [accessed 16 December 2011].

Tatalovic M. 2010. Policymakers to get hotline to climate expert. SciDev Net. Available: <http://www.scidev.net/en/news/policymakers-to-get-hotline-to-climate-experts.html> [accessed 16 December 2011].

TED. 2010. Majora Carter's Tale of Urban Renewal. Available: [http://www.ted.com/talks/lang/eng/majora\\_carter\\_s\\_tale\\_of\\_urban\\_renewal.html](http://www.ted.com/talks/lang/eng/majora_carter_s_tale_of_urban_renewal.html) [accessed 16 December 2011].

The Knowledge Portal. 2011. Working Effectively with Tribal Governments: Cross-Cultural Communication. Available: <http://tribal.golearnportal.org/nav3/index.html> [accessed 16 December 2011].

Thompson TL. 2003. *Handbook of Health Communication*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Trent TR, Davis RM. 2009. Scope, scale, and sustainability: What it takes to create lasting community change. *The Foundation Review* 1(1): 96-114.

U.S. Government Accountability Office (GAO). 2007. *Government Auditing Standards, July 2007 Revision*. Available: <http://www.gao.gov/new.items/d07731g.pdf> [accessed 16 December 2011].

American Evaluation Association (AEA). 2004. *Guiding Principles for Evaluators*. Available: <http://www.eval.org/publications/guidingprinciples.asp> [accessed 16 December 2011].

USC Children's Environmental Health Center. *Community Outreach*. Available: <http://hydra.usc.edu/cehc/conferences.html> [accessed 16 December 2011].

W.K. Kellogg Foundation. 2004. *Logic Model Development Guide*. Available: <http://www.wkkf.org/knowledge-center/resources/2006/02/WK-Kellogg-Foundation-Logic-Model-Development-Guide.aspx> [accessed 16 December 2011].

Wenger E. 1998. *Communities of Practice: Learning, Meaning, and Identity*. Cambridge: Cambridge University Press.

Woolf SH. 2008. The meaning of translational research and why it matters. *JAMA* 299(2): 211-13.

## Appendix 6: List of Examples by Chapter

Chapter	Section	Example	Organization	PEPH Program
2: Partnerships	Activity 1: Identify partners	2.1	University of Cincinnati	Research to Action
2: Partnerships	Activity 2: Build relationships with partners	2.2	Alaska Community Action on Toxics: Quarterly Board Meetings	Environmental Justice
2: Partnerships	N/A	N/A	University of Kentucky Kentucky Research Consortium for Energy and Environment	Superfund Research Program
2: Partnerships	Activity 3: Involve partners	2.3	Marine Resources for Future Generations	EHS Core Centers COEC
2: Partnerships	Activity 4: Communicate clearly with partners	2.4	The Silent Spring Institute	Environmental Justice
2: Partnerships	Output 1: Multi-directional communication with partners	2.5	Deep South Center for Environmental Justice: Communiversity	Worker Education and Training Program
2: Partnerships	Output 3: Translation of scientific findings among partners	2.6	Superfund Research Translation Core at University of California, Berkeley	Superfund Research Program
2: Partnerships	Output 4: Community involvement in research	2.7	Together for Agricultural Safety Project	CBPR
2: Partnerships	Impact 2: Increased awareness of issues and research processes	2.8	University of New Mexico Community Outreach and Education Program	EHS Core Centers COEC
2: Partnerships	Impact 3: Expanded research collaborations	2.9	Detroit Community-Academic Urban Research Center	Children's EH Centers
2: Partnerships	Case Study	Case Study	Community Environmental Health Program of the University of New Mexico	EHS Core Centers COEC

Chapter	Section	Example	Organization	PEPH Program
3: Leveraging	Activity 1: Leveraging infrastructure and funding	3.1	International Chemical Workers Union Council Center for Worker Health and Safety Education	Worker Education and Training Program
3: Leveraging	Activity 1: Leveraging infrastructure and funding	3.2	West Harlem Environmental Action	Environmental Justice
3: Leveraging	Output 1: Raised awareness and interest	3.3	West End Revitalization Association	Partners in Research
3: Leveraging	Output 2: Increased project scope	3.4	Somerville Immigrant Worker Health Project	Environmental Justice
3: Leveraging	Impact 1: Broader reach	3.5	Environmental Health Coalition Clean Air for Barrio Children's Health	Environmental Justice
3: Leveraging	Impact 3: Sustainability	3.6	Children's Environmental Health Network	Not affiliated
3: Leveraging	Case Study	Case Study	Environmental Health Sciences Core at the University of Southern California	EHS Core Centers: COEC
4: Products and Dissemination	Activity 2: Develop message content and format	4.1	Dartmouth Toxic Metals Research Program's Research and Translation Core	Superfund Research Program
4: Products and Dissemination	Activity 3: Disseminate messages	4.2	Southern California Environmental Health Sciences Center Community Outreach and Education Program	EHS Core Center: COEC
4: Products and Dissemination	Output 1: Findings communicated in various products	4.3	University of California, San Diego's Superfund Research Program	Superfund Research Program
4: Products and Dissemination	Output 1: Findings communicated in various products	4.4	Bay Area Breast Cancer and the Environment Research Center/ Zero Breast Cancer	Breast Cancer and the Environment
4: Products and Dissemination	Output 2: Access to messages	4.5	Outreach Core and Research Translation Core of Duke University Superfund Research Center	Superfund Research Program

Chapter	Section	Example	Organization	PEPH Program
4: Products and Dissemination	Output 3: Multi-directional communication and engaged partners	4.6	Aberdeen Area Tribal Chairman's Health Board and University of Iowa Environmental Health Sciences Research Center	EHS Core Centers COEC
4: Products and Dissemination	Impact 1: Awareness of messages	4.7	The Michigan State University Breast Cancer and Environment Research Center	Breast Cancer and the Environment
4: Products and Dissemination	Impact 2: Ability to act on messages	4.8	Alaska Community Action on Toxics	Environmental Justice
4: Products and Dissemination	Impact 3: Communication of messages to others	4.9	University of Cincinnati Center for Environmental Genetics	EHS Core Centers COEC
4: Products and Dissemination	Case Study	Case Study	Asian Communities for Reproductive Justice	Environmental Justice
5: Education and Training	Activity 1: Identify training needs	5.1	Society for Occupational and Environmental Health	Not affiliated
5: Education and Training	Activity 2: Develop and test programs and materials	5.2	American Federation of State, County and Municipal Employees	Worker Education and Training Program
5: Education and Training	Activity 3: Conduct training programs	5.3	Brownfield's Minority Worker Training Program: Increasing Awareness on the Worksite	Worker Education and Training Program
5: Education and Training	Activity 3: Conduct training programs	5.4	Western Region Universities Consortium	Worker Education and Training Program
5: Education and Training	Activity 4: Revise approach, program or materials as needed	5.5	Hazardous Materials Training and Research Institute	Worker Education and Training Program
5: Education and Training	Output 1: Training curricula or programs	5.6	Baylor College of Medicine	Science Education
5: Education and Training	Output 2: Training materials	5.7	The Community Outreach and Education Core (COEC) at Wayne State University	EHS Core Center: COEC
5: Education and Training	Output 3: Trained individuals	5.8	Laborers International Union of North America	Worker Education and Training Program

Chapter	Section	Example	Organization	PEPH Program
5: Education and Training	Impact 1: Knowledge of issues	5.9	Fox Chase Cancer Center and Mount Sinai School of Medicine: Breast Cancer and the Environment Research Center's Community Outreach and Translation Core	Breast Cancer and the Environment
5: Education and Training	Impact 3: Safer workplace	5.10	Center for Construction Research and Training	Worker Education and Training Program
5: Education and Training	Impact 3: Safer workplace	5.11	SEIU Education and Support Fund	Worker Education and Training Program
6: Capacity Building	Activity 1: Assess resources, knowledge and skills	6.1	Promoting the Occupational Health of Indigenous Farmworkers Project	Environmental Justice
6: Capacity Building	Activity 2: Build organizational capacity	6.2	University of Texas at El Paso	EHS Core Center: COEC
6: Capacity Building	Activity 3: Obtain and build physical and communication infrastructure	6.3	Superfund Research Program	Superfund Research Program
6: Capacity Building	Activity 4: Build knowledge and skills	6.4	Deep South Center for Environmental Justice	Worker Education and Training Program
6: Capacity Building	Output 1: Stronger individuals	6.5	University of Washington Center for Ecogenetics and Environmental Health	EHS Core Center: COEC, PEPH Supplement
6: Capacity Building	Output 2: Stronger organizations	6.6	Concerned Citizens of Tillery	Environmental Justice
6: Capacity Building	Impact 1: More effective and efficient individuals, organizations and projects	6.7	University of Texas Medical Branch-Galveston Center to Eliminate Health Disparities	Partners with the UTMB EHS Core Center COEC
6: Capacity Building	Impact 2: Empowered partners	6.8	The Brown University Superfund Research Program	Superfund Research Program

Chapter	Section	Example	Organization	PEPH Program
6: Capacity Building	Impact 3: Changes in environmental health policies and regulations	6.9	Occidental College Center for Food and Justice	Environmental Justice
6: Capacity Building	Impact 4: Project sustainability	6.10	Seattle Partners for Healthy Communities	Environmental Justice, Community-Based Participatory Research
6: Capacity Building	Case Study	Case Study	Swinomish Indian Tribal Community	EHS Core Centers COEC
7: Evaluation	Evaluation example	7.1	Detroit Community-Academic Urban Research Center	Community Based Participatory Research
7: Evaluation	Evaluation example	7.2	University of Texas Medical Branch-Galveston Center to Eliminate Health Disparities	Partners with the UTMB EHS Core Center COEC
7: Evaluation	Evaluation example	7.3	Columbia Center for Children's Environmental Health	Children's EH Centers

## Appendix 7: List of Acronyms

APHA:	American Public Health Association	IRB:	Institutional Review Board
API:	Asian and Pacific Islander	MWTP:	Minority Worker Training Program
ATSDR:	Agency for Toxic Substances and Disease Registry	NCI:	National Cancer Institute
BCERC:	Breast Cancer Environmental Research Centers	NGO:	Non-governmental organization
CAB:	Community Advisory Board	NIAID:	National Institute of Allergy and Infectious Diseases
CABCH:	Clean Air for Barrio Children's Health	NIEHS:	National Institute of Environmental Health Sciences
CBO:	Community-based organization	NIH:	National Institutes of Health
CBPR:	Community-based participatory research	NIOSH:	National Institute for Occupational Safety and Health
CCCEH:	Columbia Center for Children's Environmental Health	NTP:	National Toxicology Program
CDC:	Centers for Disease Control and Prevention	PCBs:	Polychlorinated biphenyls
COEC:	Community Outreach and Education Core	PCDFs:	Polychlorinated dibenzofurans
COEP:	Community Outreach and Engagement Program	PEPH:	Partnerships for Environmental Public Health
COTC:	Community Outreach and Translation Core	R2A:	PEPH Research to Action Grantees
DOT:	Department of Transportation	RTC:	Research Translation Core
EJ:	Environmental Justice	SRP:	Superfund Research Program
EPA:	Environmental Protection Agency	WETP:	Worker Education and Training Program
HAZWOPER:	Hazardous Waste Operations and Emergency Response		
HHS:	U.S. Department of Health and Human Services		
IPM:	Integrated Pest Management		
IRB:	Institutional Review Board		

## Appendix 8: Sample Memorandum of Understanding

(available online at: [http://depts.washington.edu/ccph/pdf\\_files/MOU10.pdf](http://depts.washington.edu/ccph/pdf_files/MOU10.pdf))

In Chapter 2, we discussed the how a Memorandum of Understanding might help groups clarify the roles and responsibilities of each partner. Below is a sample Memorandum of Understanding that provides the goals of the group, and documents the roles and responsibilities of each of the partners.

### MEMORANDUM OF UNDERSTANDING FOR THE COMMUNITY ORGANIZING PART OF COMMUNITY ACTION AGAINST ASTHMA 1-22-01

This is a Memorandum of Understanding between the University of Michigan School of Public Health, Detroiters's Working for Environmental Justice (DWEJ), the Detroit Hispanic Development Corporation (DHDC) and Warren Conner Development Coalition (WCDC). For the purposes of this Memorandum, these agencies will be called "host agencies." This Memorandum of Understanding sets forth the working relationship of these organizations including their roles and responsibilities as a part of their involvement in the community organizing part of Community Action Against Asthma, hereafter called CAAA.

**Philosophy/Principles:** Throughout the term of this partnership, these partner organizations agree to abide by the philosophy and principles spelled out in the Detroit Community Academic Urban Research Center's "Community-Based Public Health Research Principles" adopted on July 24, 1996, agreed upon by the Community Action Against Asthma Steering Committee on December 16, 1998, and listed here:

1. Community-based research projects need to be consistent with the overall objectives of the Detroit Community-Academic Urban Research Center (URC.) These objectives include an emphasis on the local relevance of public health problems and an examination of the social, economic, and cultural conditions that influence health status and the ways in which these affect life-style, behavior, and community decision-making.
2. The purpose of community-based research projects is to enhance our understanding of issues affecting the community and to develop, implement and evaluate, as appropriate, plans of action that will address those issues in ways that benefit the community.
3. Community-based research projects are designed in ways which enhance the capacity of the community-based participants in the process.
4. Representatives of community-based organizations, public health agencies, health care organizations, and educational institutions are involved as appropriate in all major phases of the research process, e.g., defining the problem, developing the data collection plan, gathering data, using the results, interpreting, sharing and disseminating the results, and developing, implementing and evaluating plans of action to address the issues identified by the research.
5. Community-based research is conducted in a way that strengthens collaboration among community-based organizations, public health agencies, health care organizations, and educational institutions.

6. Community-based research projects produce, interpret and disseminate the findings to community members in clear language respectful to the community and in ways which will be useful for developing plans that will benefit the community.
7. Community-based research projects are conducted according to the norms of partnership: mutual respect; recognition of the knowledge, expertise, and resource capacities of the participants in the process; and open communication.
8. Community-based research projects follow the policies set forth by the sponsoring organization regarding ownership of the data and output of the research (policies to be shared with participants in advance). Any publications resulting from the research will acknowledge the contribution of participants, who will be consulted with prior to submission of materials and, as appropriate, will be invited to collaborate as co-authors. In addition, following the rules of confidentiality of data and the procedures referred to below (Item #9), participants will jointly agree on who has access to the research data and where the data will be physically located.
9. Community-based research projects adhere to the human subjects review process standards and procedures as set forth by the sponsoring organization; for example, for the University of Michigan these procedures are found in the Report of the national commission for the Protection of Human Subjects of Biomedical and Behavioral Research, entitled "Ethical Principles and Guidelines for the Protection of Human Subjects of Research" (the "Belmont Report").

Adapted from Schulz, AJ, Israel, BA, Selig, S, and Bayer, I. 1997. Development and Implementation of Principles for Community-Based Research in Public Health. *Journal of Community Practice*.

**Program Objectives to be Accomplished:** The following are specific aims and objectives as stated in the grant as it was funded. CONEH refers to the community organizing activities of CAAA.

**Specific Aim 1: To identify, prioritize and translate the relevant findings of the current CAAA data collection activities, together with proposed, additional CONEH data collection activities, to guide the implementation and evaluation of an expanded, community-wide intervention.**

Objective 1: To identify specific sources of particulate matter (PM) and their association with childhood asthma severity.

Objective 2: To identify and prioritize the relevant findings of the CAAA project to guide the CONEH.

Objective 3: To translate the priority areas selected into intervention action plans to guide the CONEH.

**Specific Aim 2: To conduct and evaluate a multi-level community-based intervention in order to reduce exposure to physical environmental and psychosocial environmental stressors associated with asthma severity and exacerbations, and to strengthen protective factors (e.g., social support, community capacity) that may modify the effects of these stressors.**

Objective 1: To identify and engage existing community-based organizations, groups, institutions and agencies in an Inter-Organizational Network to address identified priorities.

Objective 2: To reduce identified physical environmental and psychosocial environmental stressors through community organizing intervention activities.

Objective 3: To strengthen neighborhood protective factors, such as social support and community capacity, through community organizing intervention activities.

Objective 4: To increase the capacity of organizations involved in the I.N. to work collectively to reduce physical and psychosocial environmental health hazards and strengthen protective factors associated with asthma.

**Specific Aim 3: To examine whether the conducted multi-level, community-based intervention enhances the effect of an intensive household intervention on the health and well being of children with asthma and their caregivers.**

**Specific Aim 4: To increase community awareness and knowledge of factors associated with the environment and asthma through the dissemination of research findings to community residents in ways that are understandable and beneficial to the community.**

**Dates for this Memorandum of Understanding:** The grant project period is from 9-18-2000 to 7-31-2005. This memorandum is intended to cover the entire grant period.

**Responsibilities of the University of Michigan, School of Public Health:**

1. Actively support the CAAA partnership.
2. Participate in the CAAA partnership through membership in the Steering Committee. Communicate with the Steering Committee members regarding administrative and programmatic issues related to the community organizing project in Detroit.
3. Provide overall program oversight.
4. Collect data, conduct preliminary analyses of existing and new data, and provide feedback to all partners and to staff as appropriate.
5. Provide financial and programmatic reports to the funder, NIEHS (National Institute of Environmental Health Sciences).
6. Serve as a point of contact with NIEHS.
7. Assist in the staff hiring process.
8. Develop and conduct an orientation to the project for partners and staff.
9. Work with the community organizers and administrative assistant in planning and conducting community forums.
10. Provide co-supervision of community organizing staff with each of the host organizations.
11. Serve as the fiduciary agent for this project. Pay the bills, dispense funds (see "Financial Arrangement" for more details).
12. Assist in providing resources and technical assistance in activities supporting the design and implementation of assessment, data collection, and evaluation systems.
13. Assist in the dissemination of results to the community.
14. Ensure that there is ongoing communication between the host organizations and the University of Michigan by sharing information regularly and frequently.

### **Responsibilities of Detroiters Working for Environmental Justice:**

1. Actively support the CAAA partnership.
2. Participate in the CAAA partnership through membership in the Steering Committee. Communicate with the Steering Committee members regarding administrative and programmatic issues related to the community organizing project in Detroit.
3. Develop and conduct an orientation to DHDC for all community organizing staff.
4. Provide co-supervision of Neighborhood Community Organizer housed in DHDC with the University of Michigan School of Public Health.
5. Provide office space for staff assigned to DHDC.
6. Facilitate communication and linkages between DHDC and other community organizations and groups.
7. Provide 10% of a staff person's time to serve as the "Host Agency Liaison." The responsibilities of this person will include:
  - Participating in the hiring of the community organizing staff using a process to be approved by the CAAA Steering Committee;
  - Participating in an orientation to the overall community organizing project;
  - Providing an orientation and integration of Neighborhood Community Organizer to the organization;
  - Providing co-supervision of the Neighborhood Community Organizer. This would include day-to-day supervision to ensure attendance and adherence to the agency's policies, and oversight and assistance in his or her conduct of day to day job responsibilities as per the job descriptions.
8. Assist in providing resources and technical assistance in activities supporting the design and implementation of assessment, data collection, and evaluation systems.
9. Meet deadlines to ensure that the reporting process for the grant is a timely one.
10. Participate in the process of analyzing and translating the data collected to guide the efforts of the community organizers.
11. At all times, assure that the community organizers are carrying out their responsibility to focus on the community, with the goal of seeking ongoing, continuous input from the community.
12. Assist in the dissemination of results to the community.
13. Ensure that there is ongoing communication between the host organizations and the University of Michigan by sharing information regularly and frequently.
14. Provide necessary training on an ongoing basis to community organizing staff and Administrative Assistant.

### **Responsibilities of Detroit Hispanic Development Corporation:**

1. Actively support the CAAA partnership.
2. Participate in the CAAA partnership through membership in the Steering Committee. Communicate with the Steering Committee members regarding administrative and programmatic issues related to the community organizing project in Detroit.
3. Develop and conduct an orientation to DHDC for all community organizing staff.
4. Provide co-supervision of Neighborhood Community Organizer housed in DHDC with the University of Michigan School of Public Health.
5. Provide office space for staff assigned to DHDC.
6. Facilitate communication and linkages between DHDC and other community organizations and groups.
7. Provide 10% of a staff person's time to serve as the "Host Agency Liaison." The responsibilities of this person will include:
  - Participating in the hiring of the community organizing staff using a process to be approved by the CAAA Steering Committee;
  - Participating in an orientation to the overall community organizing project;
  - Providing an orientation and integration of Neighborhood Community Organizer to the organization;
  - Providing co-supervision of the Neighborhood Community Organizer. This would include day-to-day supervision to ensure attendance and adherence to the agency's policies, and oversight and assistance in his or her conduct of day to day job responsibilities as per the job descriptions.
8. Assist in providing resources and technical assistance in activities supporting the design and implementation of assessment, data collection, and evaluation systems.
9. Meet deadlines to ensure that the reporting process for the grant is a timely one.
10. Participate in the process of analyzing and translating the data collected to guide the efforts of the community organizers.
11. At all times, assure that the community organizers are carrying out their responsibility to focus on the community, with the goal of seeking ongoing, continuous input from the community.
12. Assist in the dissemination of results to the community.
13. Ensure that there is ongoing communication between the host organization by sharing information regularly and frequently.
14. Provide necessary training on an ongoing basis to community organizing staff.

### **Responsibilities of Warren Conner Development Coalition:**

1. Actively support the CAAA partnership.
2. Participate in the CAAA partnership through membership in the Steering Committee. Communicate with the Steering Committee members regarding administrative and programmatic issues related to the community organizing project in Detroit.
3. Develop and conduct an orientation to WCDC for all community organizing staff.
4. Provide co-supervision of Neighborhood Community Organizer housed at WCDC with the University of Michigan School of Public Health.
5. Provide office space for staff assigned to WCDC.
6. Facilitate communication and linkages between WCDC and other community organizations and groups.
7. Provide 10% of a staff person's time to serve as the "Host Agency Liaison." The responsibilities of this person will include:
  - Participating in the hiring of the community organizing staff using a process to be approved by the CAAA Steering Committee;
  - Participating in an orientation to the overall community organizing project;
  - Providing an orientation and integration of Neighborhood Community Organizer to the organization;
  - Providing co-supervision of the Neighborhood Community Organizer. This would include day-to-day supervision to ensure attendance and adherence to the agency's policies, and oversight and assistance in his or her conduct of day to day job responsibilities as per the job descriptions.
8. Assist in providing resources and technical assistance in activities supporting the design and implementation of assessment, data collection, and evaluation systems.
9. Meet deadlines to ensure that the reporting process for the grant is a timely one.
10. Participate in the process of analyzing and translating the data collected to guide the efforts of the community organizers.
11. At all times, assure that the community organizers are carrying out their responsibility to focus on the community, with the goal of seeking ongoing, continuous input from the community.
12. Assist in the dissemination of results to the community.
13. Ensure that there is ongoing communication between the host organization by sharing information regularly and frequently.
14. Provide necessary training on an ongoing basis to community organizing staff.

**Financial Arrangements:**

Each of the community partners involved in the Community Organizing part of CAAA: DWEJ, DHDC, and WCDC will receive funds from The University of Michigan, School of Public Health for services rendered as host agencies, as a part of this agreement. For year one, each agency will received \$13,000. There will be a slight increase each year (e.g., \$13,200 for year two, \$13,408 for year three). These funds are for community field costs, which include:

- Liaison – 10% x 3 locations \$15,000
- Facilities Rental x 3 locations \$9,000
- Community Organizing Activities x 3 locations \$11,100
- Field Office Supplies \$1,200
- Copying, printing \$900
- Telephone \$1,200
- Postage, express mail \$600
- Total Community Field Costs \$39,000 divided by three = \$13,000 each

To obtain the funding, after staff is hired, each agency will submit an invoice for the first six months of the first year, or \$6,500. An invoice for the second six months will be submitted five months later. It will take approximately one month from the time the University of Michigan receives the invoice for it to be processed and for the agencies to receive the funding. Agencies do not need to keep a detailed track of the expenditures as a part of this agreement.

The University of Michigan School of Public Health will also provide a computer at a cost of no more than \$2500 for each of the four staff persons hired.

**Memorandum of Understanding Amendments:**

The agreement shall be renewed annually by the signatories.

**Termination of Memorandum of Understanding:**

This agreement may be terminated by either party provided not less than thirty days (30) written notice of intent to terminate is given and an opportunity for prior consultation is provided.

In the event of termination, accounts shall be reconciled as of the date of termination.

**Signatures:**

This Memorandum of Understanding is entered into on \_\_\_\_\_ (date)

*(signatures)*

- \_\_\_\_\_ (for the University of Michigan, School of Public Health)
- \_\_\_\_\_ (for Detroiters Working for Environmental Justice)
- \_\_\_\_\_ (for Detroit Hispanic Development Corporation)
- \_\_\_\_\_ (for Warren Conner Development Coalition)

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