INDIAN HEALTH SERVICE
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

The Environmental Health Services Program

–of the–

INDIAN HEALTH SERVICE
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Annual Report **2013**

The DEHS Mission: "Through shared decision making and sound public health measures, enhance the health and quality of life of all American Indians and Alaska Natives to the highest level by eliminating environmentally related disease and injury."

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This Annual Report for Calendar Year 2013 was produced by the Indian Health Service Division of Environmental Health Services to provide relevant information about the Program. Additional information can be obtained by writing to the following address:

INDIAN HEALTH SERVICE
Division of Environmental Health Services
801 Thompson Avenue, TMP 610
Rockville, MD 20852

Web site: http://www.dehs.ihs.gov

On The cover: The 2013 DEHS Photo Contest winner was LT Jason Hymer. Here LT Hymer learns how to prevent injury to patients and employees during safe patient handling and mobility training at the Basic Course for Safety Officers.

Message from the Division Director

KELLY M. TAYLOR, M.S., R.E.H.S.
Division of Environmental Health Services

I am proud to present the Division of Environmental Health Services (DEHS) Annual Report for 2013. This report covers activities and projects conducted by Indian Health Service (IHS) and Tribal/Corporation environmental health partners throughout the nation. The intent of the report is two-fold: to capture historical program information so that it will not be lost to the ages; and to highlight activities and accomplishments that address the five DEHS national program focus areas and support the Indian Health Service priorities.

Each IHS Area is encouraged to continue to identify and work on local priorities using maximum stakeholder input, but when it comes to defining need and identifying roles and responsibilities nationally, we have agreed to focus on the following five areas: children's environment, safe drinking water, food safety, vectorborne and communicable diseases, and healthy homes. To allay any fears that the injury prevention and institutional environmental health specialty areas of our program were left out, I will point out that these specialty areas address most, if not all, of the five focus areas.

It has always been difficult to demonstrate the health impact of our activities when we prevent something from happening in the first place; but it is not impossible. Even though we may not be able to show that our activities directly improve morbidity and mortality rates, we can show that working with a tribe to pass a seatbelt law led to a reduced number of motor vehicle crash related emergency department visits or that having a tribal food code led to fewer risk factor violations than not having one. Throughout this report, we tried to highlight Area activities that demonstrate our program's impact. In this time of enhanced accountability, it is critical that we all demonstrate the effectiveness and impact of our actions.

Nationally, we accomplished many of the objectives planned for this year, but struggled with some. In 2012, DEHS revisited the strategic plan and developed a new sixth vision element to complete in 2013. After the Core team's membership was adjusted due to transfers and retirements, it developed clear expectations for the Workforce Development Vision Element team and staffed the team with DEHS staff from six Areas. This team produced their final draft of a competency model which was handed off to the Area DEHS Directors to complete in 2014.

In 2013, a "Change Control Board" (CCB) was formed from Area and Headquarters DEHS staff who reviewed and discussed suggested improvements to the Web-based Environmental Health Reporting System (WebEHRS) that were submitted through the "Feedback" feature of the system. Two proposed packages of recommended improvements to WebEHRS were submitted to the contractor for implementation.

We made good progress on ensuring that registration as an Environmental Health Specialist was an accepted requirement in all Area Environmental Health vacancies by including a credential requirement section in Part Three Chapter 11 of the Indian Health Manual, "Environmental Health", which was finally published in 2013. We still have a long way to go to ensure registration as a selective placement factor in job vacancy announcements is accepted by all Area Human Resources offices.

We offered 13 technical webinars to DEHS as well as other IHS and Tribal staff throughout the country. Hopefully, this effort improved communication and enhanced staff competencies and will be continued by the Environmental Health Support Center in Albuquerque Area in the coming years. DEHS embraced the use of "virtual" meetings to minimize travel, reduce costs, and improve staff participation.

Both the Injury Prevention and the Institutional Environmental Health programs conducted their national meetings using virtual facilitation methods. The Injury Prevention program also successfully conducted the Class of 2012 IHS Injury Prevention Specialist Fellowship Symposium and Graduation through virtual methods in 2013.

I hope you enjoy reading about IHS DEHS projects and activities across the country. I welcome your input into how we can better serve the American Indian and Alaska Native people and demonstrate our effectiveness.

Table of Contents

The Environmental Health Services Program Annual Report 2013

List of Acronyms

AI/AN:	American Indian/Alaska Native
ANTHC:	Alaska Native Tribal Health Consortium
BIA:	Bureau of Indian Affairs
CDC:	Centers for Disease Control and Prevention
CPSC:	Consumer Product Safety Commission
DEHS:	Division of Environmental Health Services
DHHS:	Department of Health and Human Services
DSFC:	Division of Sanitation Facilities Construction
EH:	Environmental Health
EHS:	Environmental Health Specialist
EHSA:	Environmental Health Services Account
EHSC:	Environmental Health Support Center
EHT:	Environmental Health Technician
FDA:	Food and Drug Administration
FEMA:	Federal Emergency Management Agency
HQ:	Headquarters
HS:	Head Start
IAA:	Inter-Agency Agreement
IEH:	Institutional Environmental Health
IHS:	Indian Health Service
IP:	Injury Prevention
LNF:	Level of Need Funded
MOU:	Memorandum of Understanding
MPH:	Masters of Public Health
MS:	Masters of Science
NDECI:	Notifiable Disease and External Cause of Injury
NHTSA:	National Highway Traffic Safety Administration
NISHC:	National Indian Safe Home Coalition
OCPS:	Office of Clinical and Preventive Services
OEHE:	Office of Environmental Health and Engineering
OSHA:	Occupational Safety and Health Administration
OWCP:	Office of Worker's Compensation Programs
PHS:	Public Health Service
REHS/RS:	Registered Environmental Health Specialist/ Registered Sanitarian
RMSF:	Rocky Mountain Spotted Fever
RRM:	Resource Requirement Methodology
TIPCAP:	Tribal Injury Prevention Cooperative Agreement Program
USUHS:	Uniformed Services University of the Health Sciences
WebCident:	Web Based Incident Reporting System
WebEHRS:	Web-based Environmental Health Reporting System

Ray Kenmotsu, Environmental Health Specialist at the Taos-Picuris Service Unit, administers rabies vaccine to a happy customer.

Profile of the DEHS Program

Program mission

The mission of the Division of Environmental Health Services (DEHS) is "Through shared decision making and sound public health measures, enhance the health and quality of life of all American Indians and Alaska Natives to the highest level by eliminating environmentally related disease and injury." In support of this mission, the DEHS provides a range of services to the American Indian and Alaska Native (AI/AN) communities.

Program History

The roots of the DEHS can be traced back to 1912, when the U.S. Department of the Interior's Office of Indian Affairs Commissioner Burke issued a circular directing agency Physicians to serve as Health Officers for their reservation. Over the next several decades, responsibility for community surveys shifted to the sanitary engineering staff. These surveys came to include a wide range of facilities, from water systems to community buildings to dairy plants.

By the time of the Transfer Act (Public Law 83-568), which moved the responsibilities for AI/AN health care from the Bureau of Indian Affairs (BIA) to the Indian Health Service (IHS), most of the components of the current Environmental Health Services Program were in place with agency policies for food handler training, radiological health, facility inspections, and water fluoridation. The emphasis was on establishing, expanding, and resolving basic sanitation services. The Sanitarian Aides were the workforce in the field, with a few supervisory Sanitarians at Area Offices.

In 1962, the first headquarters (HQ) Institutional Environmental Health (IEH) Officer was hired, providing advice and technical guidance on all community-based institutions.

In 1963, a joint conference of BIA and Division of Indian Health (renamed IHS in 1969) leadership discussed collaborative efforts to combat the community accident mortality problem among AI/AN. An Accident Prevention Program was established within the Division of Indian Health while calls for expanded funding and authority went to Congress. In 1969, Congress provided funding and positions for the Accident Prevention Program in the Health Education Program. The Accident Prevention Program continued as a collaborative effort with Health Education until 1979, when IHS Director Emery Johnson formally transferred responsibility to Environmental Health Services and the name changed to Community Injury Control, and later to Community Injury Prevention (IP).

LCDR Kyle Wright assists with disposal of formalin.

Program Structure

True to its historical beginnings, the DEHS is a field-based environmental health (EH) services program that takes pride in supporting the needs of individual tribal communities. The DEHS operates under a decentralized organizational structure, with most of its staff employed in district and field offices throughout the 12 IHS Areas. In 2013, the national DEHS program consisted of a total of 293 staff excluding the headquarters staff listed below. DEHS at an Area Office were typically staffed with a Division Director and one or two professional (IP Program Manager and/IEH Program Manager) staff. District Environmental Health Specialists (EHS) and their support staff are often located away from the Area Office and closer to the tribal communities. DEHS HQ, located in in Rockville, Maryland, is staffed similarly to the Areas. In 2013, the DEHS HQ staff consisted of:

- CAPT Kelly Taylor – Director
- CAPT John Smart – Deputy Director
- CAPT David McMahon – Institutional Environmental Health (IEH) Program Manager
- CAPT Nancy Bill – Injury Prevention (IP) Program Manager
- CDR Darren Buchanan – Environmental Health (EH) Data Systems Manager
- LCDR Jessica Otto – Staff EH Officer
- LCDR Katie Noonan-Hubbard – IEH resident
- LT Tim Taylor – IEH resident

Program Resources

The current budget of the DEHS Program is approximately $27.8 million; this funding is derived from three primary sources: congressional allocation; the IHS Director's Initiatives; and IP budget enhancements (see Table 1). DEHS funds support a wide variety of activities, including IP, IEH, safety management, industrial hygiene, food safety, vectorborne disease control, and technical assistance to community Water and Waste Disposal Facility Operators.

As presented in Table 1, on the next page, the DEHS budget is derived from the overall Environmental Health Support Account (EHSA) that supports the activities of both the DEHS as well as Division of Sanitation Facility Construction (DSFC) Programs. For 2013, and based on the workload-based Resource Requirement Methodology (RRM), the DEHS share of the EHSA budget was approximately 38%.

Table 1: DEHS Program Funding Sources

Fiscal Year	Total EHSA Budget	DEHS RRM Share	DEHS Budget*	OEHE Funds Provided to DEHS			IHS Director's Initiative	Injury Prevention Budget Enhancements	Total DEHS Budget
				COSTEP**	Injury Prevention**	Residency**			
1998	$42,159,000	33.80%	$14,249,742	$81,000	$116,000	$90,000	$304,000	$0	$14,840,742
1999	$44,244,000	33.80%	$14,954,472	$206,000	$174,100	$120,000	$304,000	$0	$15,758,572
2000	$49,162,000	33.20%	$16,321,784	$208,000	$175,000	$67,600	$304,000	$1,475,000	$18,551,384
2001	$50,997,000	34.20%	$17,440,974	$184,000	$69,000	$63,100	***	$1,779,000	$19,536,074
2002	$52,856,000	34.93%	$18,460,797	$224,000	$111,000	$100,000	***	$1,779,000	$20,674,797
2003	$54,437,000	36.62%	$19,937,064	$194,100	$88,000	$100,000	***	$1,779,000	$22,098,164
2004	$55,888,650	33.63%	$18,794,176	$240,000	$118,700	$100,000	***	$1,779,000	$21,031,876
2005	$56,328,611	32.80%	$18,475,968	$232,000	$74,000	$100,000	***	$1,779,000	$20,660,968
2006	$57,447,796	34.03%	$19,547,711	$208,000	$67,500	$100,000	***	$1,779,000	$21,702,211
2007	$63,235,458	35.68%	$22,564,290	$232,000	$98,000	$100,000	***	$2,779,000	$25,773,290
2008	$64,576,052	37.65%	$24,313,637	$216,000	$61,000	$100,000	***	$2,779,000	$27,469,637
2009	$67,022,000	38.97%	$26,117,871	$228,500	$66,782	$100,000	***	$2,779,000	$29,292,153
2010	$69,196,000	35.74%	$24,730,653	$176,000	$0	$100,000	***	$2,779,000	$27,785,653
2011	$69,057,608	32.00%	$22,098,435	$144,000	$84,000	$0****	***	$2,771,942	$25,098,377
2012	$69,703,294	34.00%	$23,699,120	$160,000	$49,000	$100,000	***	$2,763,473	$26,771,593
2013	$66,521,479	38.00%	$25,278,162	$128,000	$0	$100,000	***	$2,280,000	$27,786,162

COSTEP=Commissioned Officer Student Training Extern Program.
*Represents an approximation based on initial DEHS and DSFC RRM calculations.
**Office of Environmental Health and Engineering funds provided to DEHS.
***IHS Director's Initiatives; $304,000 was added to Injury Prevention Budget Enhancements (column to the right) starting in 2001.
****There were no Institutional Residents selected for Calendar Year (CY) 2011; therefore, no money was allocated.

Patrick Peck conducts a playground safety inspection.

Figure 1, below, depicts a historical comparison of the workload-based RRM versus the distribution of Program funds from 2002 to 2013.

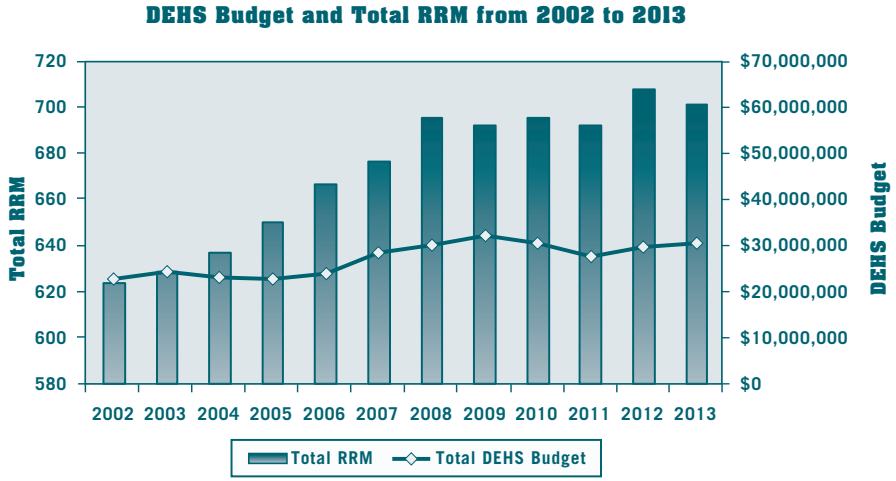


Figure 1: RRM (workload) vs. actual DEHS funding from 2002 to 2013

Table 2, on the next page, displays the current level of need funded (LNF) for each of the 12 Areas; the data represent both IHS staff and tribal staff.

Table 2: LNF for 2013

Level of Need Funded (LNF) 2013					
Area	# Tribal & IHS Staff *	RRM	%LNF	Federal Staff	Tribal Staff
Alaska	38	88.5	42.9%	0	38
Albuquerque	18	37	48.6%	14	4
Bemidji	25	50.5	49.5%	8	17
Billings	10	33.4	29.9%	4	6
California	13	48.8	26.6%	6	7
Great Plains	29	57.9	50.1%	14	15
Nashville	19	44.5	42.7%	2	17
Navajo	49	110.8	44.2%	30	19
Oklahoma	31	87.9	35.3%	11	20
Phoenix	40	67.9	58.9%	21	19
Portland	15	50.3	29.8%	7	8
Tucson	6	12.5	48.0%	6	0
Total**	293	690	42.5%	123	170

*Includes tribal staff hired with IHS Cooperative Agreement funds.
**This total is due to rounding.
Data from 2012 determines the 2013 LNF

As Table 2 shows, the DEHS Program strives to accomplish its tasks at a funding level of 42.5% of the estimated actual need. In order to maximize the utilization of available resources, the DEHS has established partnerships with federal agencies. Partnerships change, as needs are addressed or emerge. A few of the partners over the years include:

- Centers for Disease Control and Prevention (CDC);
- National Highway Traffic Safety Administration (NHTSA);
- Uniformed Services University of the Health Sciences (USUHS);
- National Institutes of Health (NIH);
- U.S. Fire Administration; and
- Consumer Product Safety Commission (CPSC).

Jose Velascosoltero measures the temperature of hot foods during a food safety sanitation survey.

Our Operating Philosophy

The operating philosophy of the DEHS is based on the Ten Essential Public Health Services first articulated in 1994 by a partnership of local, state, and national public health leaders. These services were used by the National Center for Environmental Health of the CDC as a basis for its six goals for the revitalization of environmental health in the 21st century. IHS has adapted the Ten Essential Public Health Services as the Ten Essential Environmental Health Services and has incorporated this set of strategies into the methods in which it delivers services to AI/AN communities across the country.

The Ten Essential Environmental Health Services are as follows:

ASSESSMENT:

1. Monitor health status to identify community health problems.
2. Diagnose and investigate health problems and health hazards in the community.

POLICY DEVELOPMENT:

3. Inform, educate, and empower people about environmental health issues.
4. Mobilize community partnerships to identify and solve environmental health problems.
5. Develop policies and plans that support individual and community environmental health efforts.

ASSURANCE:

6. Support laws and regulations that protect health and ensure safety.
7. a) Link people to needed environmental health services and
   b) Assure the provision of environmental health services when otherwise unavailable.
8. Assure a competent environmental health workforce.
9. Evaluate effectiveness, accessibility, and quality of personal and population-based environmental health services.

SYSTEM MANAGEMENT:

10. Conduct research for new insights and innovative solutions to environmental health problems.

Using the Ten Essential Environmental Health Services as a framework, the IHS DEHS developed five national focus areas: children's environment, safe drinking water, food safety, vectorborne and communicable diseases, and healthy homes. Details on projects conducted throughout the tribal communities served by the DEHS Program in 2013 can be found in the National Focus Area section of this document.

Education and Recognition

Education is a cornerstone of any successful public health program because it is the first step in raising awareness and empowering individuals and communities to participate in resolving community health issues. DEHS staff conducted training sessions during 2013 on a variety of topics. The Environmental Health Support Center (EHSC) in Albuquerque provided EH program management, IP, topic-specific EH, and IEH courses. Webinars were also utilized to maintain staff competencies without requiring travel. A total of 24 classes and 13 webinars with 814 attendees total. A breakdown of the courses can be found in Table 3, below.

Table 3: EHSC Sponsored Courses, 2013

EHSC Sponsored Courses - Calendar Year 2013					
Course	**Location**	**Number of Attendees**	**Course**	**Location**	**Number of Attendees**
Basic Course for Safety Officers	Phoenix, AZ	41	Introduction to Injury Prevention (Level I)	Tse Bonito, NM	13
Biology and Control of Vectors and Public Health Pests: The Importance of Integrated Pest Management	Tahlequah, OK	39	Managing Retail Food Safety	Phoenix, AZ	35
Environmental and Health Effects of Clandestine Meth Labs	Aberdeen, SD	21	NFPA 101 - Life Safety Code	Oklahoma City, OK	29
Environmental and Health Effects of Clandestine Meth Labs	Portland, OR	39	NFPA 101 - Life Safety Code	Duluth, MN	27
Group Facilitation Methods	Anchorage, AK	20	NFPA 101 - Life Safety Code	Phoenix, AZ	35
Healthcare Safety Accreditation	Billings, MT	21	NFPA 70E Hazard Analysis	Phoenix, AZ	13
Healthcare Safety Accreditation	Albuquerque, NM	28	NFPA 70E Hazard Analysis	Albuquerque, NM	7
Intermediate Injury Prevention (Level II)	Tse Bonito, NM	16	NFPA 70E Standards for Electrical Safety in the Workplace	Phoenix, AZ	23
Intermediate Injury Prevention (Level II)	Shawnee, OK	11	NFPA 70E Standards for Electrical Safety in the Workplace	Albuquerque, NM	23
Introduction to Injury Prevention (Level I)	Tse Bonito, NM	19	NFPA 99 Standards for Healthcare	Oklahoma City, OK	30
Introduction to Injury Prevention (Level I)	Tucson, AZ	25	NFPA 99 Standards for Healthcare	Duluth, MN	16
Introduction to Injury Prevention (Level I)	Shawnee, OK	12	NFPA 99 Standards for Healthcare	Phoenix, AZ	31
Total					**574**

Table 3: EHSC Sponsored Courses, 2013, (cont.)

Webinars		
EHS Webinars	**Month**	**Number of Attendees**
EHS Webinar – Conducting an Adobe Connect Meeting	October	26
EHS Webinar – Legionnaires Disease	July	21
EHS Webinar – WebEHRS - Discovering Discoverer	November	20
EHS Webinar Series – Introduction to CDP Mobile	March	39
EHS Webinar Series – Rocky Mountain Spotted Fever	May	21
Total Attendees		**127**
Sustainability Webinars	**Month**	**Number of Attendees**
Sustainability Webinar – HHS Green Champion - Data Center Upgrades	May	11
Sustainability Webinar – Bemidji Community Projects	November	16
Sustainability Webinar – CDC - Don't Mess with Mercury Program	December	6
Sustainability Webinar – Energy and Sustainability Audits	September	10
Sustainability Webinar – Energy Star Certification	January	9
Sustainability Webinar – Sustainability Hero - USPS Lean Green Team	July	13
Sustainability Webinar – Yurok Water Treatment Monitoring Project	June	27
Sustainability Webinar – Integrated Pest Management Program	March	21
Total Attendees		**113**
Total Webinar Attendees		**240**

Successful delivery of environmental health services to tribal communities rests on the foundation of a competent and motivated workforce. Figure 2, on the next page, shows the numbers of student externs hired for the past 22 years. In 1994, a mandated reduction in Full-Time staff resulted in a moratorium being placed on the recruitment of student externs. However, the program returned to normal in Fiscal Year (FY) 1996 and by FY 1999 was back to pre-1994 levels. During 2013, the DEHS supported 16 student externs.

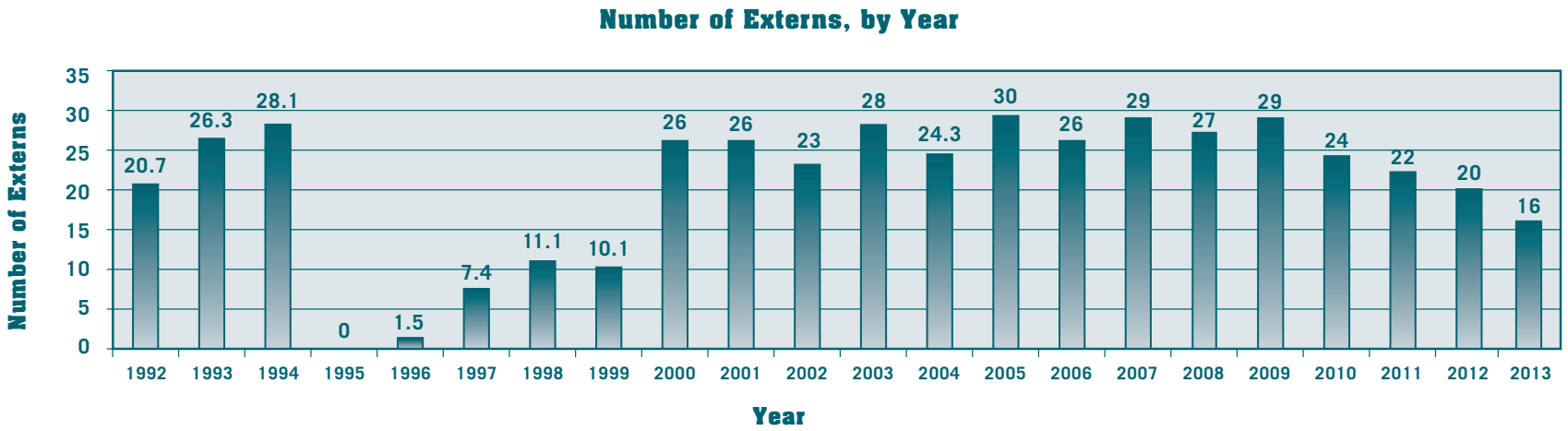


Figure 2: Number of college students participating in the DEHS extern program, by year

DEHS views the opportunity to offer financial support for long-term training as a major retention tool and has supported staff in master's programs for many years. Areas reported 12 DEHS staff funded by IHS for college courses in 2013. Of the 12, eight were federal employees and four were tribal employees. Staff in six of the 12 Areas received long-term training support.

Another program that builds capacity within IHS and tribes is IP Fellowship Program. The Fellowship is a 12-month advanced learning experience for individuals who want to address the single biggest killer of young AI/AN – injuries.

Building on the IHS IP Program core courses and the prior experiences of the participants the Fellowship offers advanced training in community injury intervention strategies, coalition building, injury epidemiology, program evaluation, presentation skills, and field work. Fellows apply the skills they've acquired by working on individual projects involving data collection and/ or program implementation and evaluation.

There are two Fellowship tracks, Program Development and Epidemiology. Although the two tracks have a similar structure, their emphasis, content, and prerequisites differ.

What do participants gain from the Fellowship?

- Enhanced skills in community injury prevention:
  - Designing a project,
  - Promoting community involvement,
  - Collecting and analyzing data, and
  - Conducting oral and written presentations;
- A knowledge of "best practices" for prevention of intentional and unintentional injuries;
- Individualized learning experiences (e.g., using Global Positioning System [GPS] devices);
- College credits from the University of Michigan (Epidemiology Fellowship); and
- Completion of a project that will help reduce injuries in their community.

There have been 278 graduates from the Fellowship since 1987. A list of the graduates by year can be found in Table 4, on the following pages.

Table 4: List of Injury Prevention Fellowship Program Graduates, by Year

2012*	Chris Chestnut Jennifer J. Jordan Jacqueline Kizer Nicole D. Thunder Desta Walker Donald B. Williams Tina A. Yazzie-Smiley	**2011**	Martin Stephens Tim Balderrama Bryan Reed Hillary Strayer Lisa Nakagawa Jacey McCurtain Dustin Joplin Jason Hymer David Bales Molly Madson Travis Bowser	**2009***	Sarah-Jean T. Snyder Rebecca Morris Laquita F. Fish Karen M. Ansera Pamela A. Michaelson-Gambrell Verlee White Calfe-Sayler Bernice Bert Amanda Parris Le Ray Skinner Jennifer L. Franks Annie Phare	**2008***	Fleurette Brown-Edison Mary Robertson-Begay Antoinette R. Short Amy R. Cozad Jason D. Hymer Darcy Merchant, Sr. Lyndon Endischee Robin Lee Janelle Trottier
2007	Sherron Prosser Janae Price Siona Willie Stephanie Peebles Coffey Theresa Yazzie Dr. Verlee K. White Calfe-Sayler Susan E.C. Ducore Belinda Aungie Michael E. Reed Jr. Bonny M. Weed Elisa DuBreuil	**2006**	Lisa Aguerro Sherron Prosser Charlotte Ann Branham Samantha Holmberg Bonita Paddyaker Belinda Aungie Kathey Wilson Helen Garcia-Sisneros Angelita Chee Arturo Calvo	**2005**	Michelle Begay Mark Brewer Kyla Hagan George Hupp Holly Kostrzewski Elvira Martin Ina Mickelson Stephen Piontkowski John Schmitz	**2004**	Larry Carlson Timothy P. Duffy Jim Ferguson Hayden R. Hardie Rebekah Hunkup Robert Morones Mark E. Pike Randolph G. Runs After Charles Wolds
2003*	Frances C. Anchondo Andee Beaver Keechi Maria A. Benton Mary Alice Clark Sybil K. Cochran Montell Elliott Eldon R. Espling Helen Gregorio Jodi R. Johnson Danny Joseph Norma McAdams Michael S. Struwin Minnie Yazzie	**2002**	Christopher W. Allen Jeff Dickson Myla Jensen Dan Kinsey Joseph LaFramboise Shirley Peaches Shelli Stephens-Stidham Sara A. Wagner Mona Zuffante	**2000**	Bruce Etchison Michael Boley Nicole Horseherder Martin Smith Mark Byrd Bobby Villines Sue Hargis Nate Quiring Andrea Horn Sharon John Richard Skaggs Molly Patton	**1999**	Bruce Chandler Arla Stroop Myrna Buckles Brian Johnson Ryan Hill Twyla “Zoe” Benally Dennis Renville Zahid Samad Tina Samm

Table 4: List of Injury Prevention Fellowship Program Graduates, by Year (continued)

1998	Karen Arviso Gary Carter Casey Crump David Hogner Brad Husberg Karin Knopp James Ludington JoAnn Perank Tish Ramirez Tina Russel	**1997**	Gordon Tsatoke, Jr Marjorie Winters Tom Fazzini Donna M. Nez Kathleen A. O'Gara Nellie Benally Jim Spahr Teri L. Sanddal Patricia Harris Smith Alex Hardin	**1996**	Holly Billie Robert Bialas Wenonya St.Cyr Rebecca Lawrence Vince Garcia Emily Watchman Jennifer Lincoln Don Williams David Cramer Lynn Cook Sherry Fredericks-King Shirley Brewer Debra Haines	**1995**	Mark D. Miller Diana M. Kuklinski Lovetta Phipps Chris B. Buchanan Barbara A. Spriggs Debra M. Meek Randy Benefield James R. Howell Angela Maloney
1994	Hayden Anderson Michael Keiffer Kenny Hicks Willard Dause Albert Locklear Patricia Rouen John Spriggs Dione Bartmess Dan Hanson Mary O'Connor Wayne Hall Mike Halko Phyllis Cooke-Green Sharan Freiberg	**1993**	Alta Bruce Matthew J. Powers Roxanne L. Ellingson Wendy Fanaselle Ward Jones Darla Tillman Shawn F. Sorenson Mark Jackson Mark H. Mattson John D. Smart Cynthia LaCounte Paul T. Young	**1992**	Michael M. Welch Daniel C. Strausbaugh Virginia Begay Christopher Krogh Jodee Dennison Deanne M. Boisvert Louise B. Wedlock Dale M. Bates Susan McCracken Charles Stewart Watson Margaret M. Simons Joe Maloney Duane Kilgus Theresa Botruff	**1991**	Kelly M. Taylor Evelyne Tunley Vurlene Notsinneh David Robbins Geoffrey G. Langer Craig A. Shepherd Debbie Burkeybile Keith Varvel Linda Thompson Kathi Gurule Gary J. Gefroh Jan Person Kiyomi Bird Steven G. Inserra Meda Nix Mildred Blackmon R. Cruz Begay

Table 4: List of Injury Prevention Fellowship Program Graduates, by Year (continued)

1990	1989	1988	1987
Carol L. Rollins	Melvin Clifford	John R. Weaver	Ray Van Ostran
Malcolm B. Bowekaty	Jeffrey J. Smith	Helen A. Hayes	William Bouwens, Jr.
John W. Leith	Sherron K. Smyth	Christine M. Jackson	Ronald Perkins
Russell L. Savage	Eusibeo Toya	Robert S.Newsad	Steve McLemore
Bernadette V. Hudnell	Lois Jean Bressette	David M. Mosier	Byron P. Bailey
Brenda J. Demery	Edward "Ted" Moran	Gary A. Schuettpelz	Edwin J. Fluette
Dwayne Reed	Glenn Frew	Jerry L. Lee	Jacqueline E. Moore
Kevin D. Meeks	Jimmie V. Stewart	Mark A. Kelty	Ralph Fulgham
Vivian Echavarria	David C. Martin	David C. Short	Larry Dauphinais
DeAnne Pete Hardy	Woody K. Begay	B. Kevin Molloy	Jack L. Christy
John P. Leffel	Fred E. Wiseman	Nancy M. Bill	
Lisa Lincoln	Richard A. Sullivan	Gail G. Buonviri	
Gina L. Locklear	Harold Cully	Elaine R. Bender	
David H. McMahon	Candice N. Bell	Alan J. Dellapenna	
Vanette R. Chase	Michael Rathsam	Jon S. Peabody	
	Darrel N. Whitman	Brian Cagle	
	L.J. David Wallace III	Douglas R. Akin	

* This Fellowship year was a Program Development Class. **There was not a Fellowship class in 2001 and 2010.

Another advanced educational program developed by the DEHS is the IEH Residency, which began in 1970 when IHS sent Public Health Service (PHS) Commissioned Officers to long-term training that was developed by the Federal Health Programs Service with Tulane University, School of Public Health and Tropical Medicine, and the New Orleans PHS Hospital. The New Orleans PHS Hospital was closed in 1986, so IHS took on responsibility for the IEH education and residency program at the Phoenix Indian Medical Center. In 1992, IHS entered into a Memorandum of Understanding (MOU) with the Uniformed Services University of the Health Sciences (USUHS), Department of Preventive Medicine and Biometrics, to participate in the Master of Public Health (MPH) degree program. A 12-month post- graduate residency was developed to provide training in the area of environmental and occupational safety and health.

Participants selected for the IHS Long-Term Training Program enter a 2-year assignment located in Bethesda and Rockville, Maryland (year 1, USUHS, and year 2, post-graduate residency), or a 1-year assignment for the post- graduate residency only.

The graduate program at USUHS is fully accredited by the Council on Education for Public Health. The second year is a post- graduate directed study residency. The residency utilizes a series of training and practical work experience rotations through federal healthcare organizations and other government and private institutions. The rotations are designed to develop the residents' skills in the core competencies of IEH by working with seasoned professionals in diverse IEH work environments. In addition to the rotations and training, residents will complete a research project designed to develop skills in a specific area of IEH, reinforce research techniques, and benefit the IHS.

The IEH Residency-only track is designed for those applicants who have already obtained a Master of Science (MS) or MPH degree in environmental health, industrial hygiene, occupational health, or safety management. The duration of the residency is generally 12 months and occasionally includes additional graduate-level course work. The IEH Program Manager works together with the participant to ensure the requirements of the residency are met and expected competencies have been achieved.

There have been 23 IEH Residency Graduates to date (1986 to 2013). They can be found in Table 5, below.

Table 5: IEH Residency Graduates

Graduate	Residency Year	Graduate	Residency Year
Valerie Herrera	2010	John Holland	1997
Ricardo Murga	2010	Jeff Morris	1995
Danny Walters	2009	Linda Tiokasin	1995
Charles Woodlee	2008	Gary Gefroh	1994
David Cramer	2005	David McMahon	1994
Mark Strauss	2005	Greg Heck	1993
Gary Carter	2003	Curt Smelley	1993
Brian Hroch	2003	Mark Kelty	1992
Kit Grosch	2001	Al Knapp	1991
Chris Kates	2001	Bob Berger	1989
Keith Cook	1999	Jim Spahr	1986
John Smart	1999		

Figure 3, on the next page, shows the distribution of DEHS staff (N=293) within the national program (this excludes headquarters staff). Environmental Health Specialists (EHS), Community Injury Prevention Specialists, and Institutional Environmental Health Specialists are the three types of staff.

Thirty percent (30%) of all DEHS staff, including federal and tribal employees, have master's degrees in Environmental Health or a related field. Fifty-eight percent (58%) of federal staff and nineteen percent (19%) of tribal staff have this advanced degree.

LCDR Kyle Wright and LT Katrina Burbage perform an inspection in a rural Alaska to identify bed bugs.

Figure 4, to the right, presents a breakout of DEHS staff with master's degrees by discipline. Eighty-nine (89%) of IEH staff have master's degrees. Generalists follow with twenty-seven percent (27%) and IP Specialists with twenty-three percent (23%).

Fifty-one percent (51%) of all DEHS staff are Registered Environmental Health Specialists or Registered Sanitarians (REHS/ RS), with seventy percent (70%) of federal staff and thirty-six percent (36%) of tribal staff registered. Figure 5, below, summarizes registration according to specialty. Registration is highest in the IEH Specialty, with sixty-eight percent (68%) of staff registered.

Twenty-two percent (22%) of all DEHS staff have completed the IHS IP Fellowship Program; twenty-four percent (24%) are Child Passenger Safety Technicians; and four percent (4%) have met Food and Drug Administration (FDA) standards to conduct retail food service inspections. Table 6, on the next page, summarizes these and other credentials.

LCDR Mike Reed uses Glo Germ™ to show students how to properly wash their hands to prevent illness.

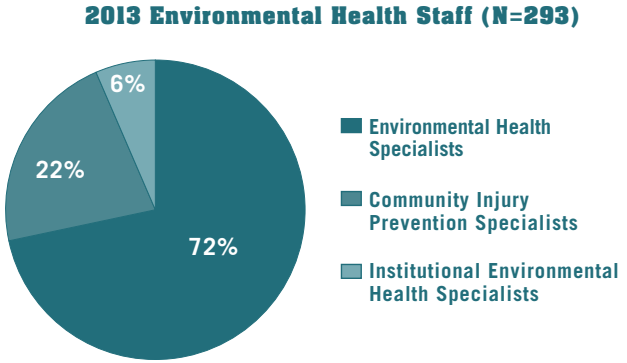


Figure 3: Distribution of DEHS staff within the national program

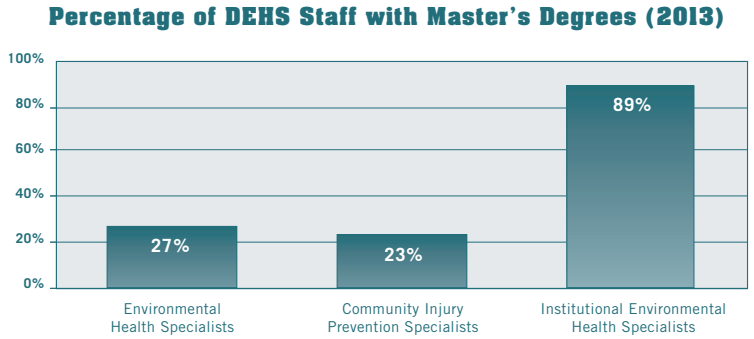


Figure 4: Percentage of DEHS staff with master's degrees

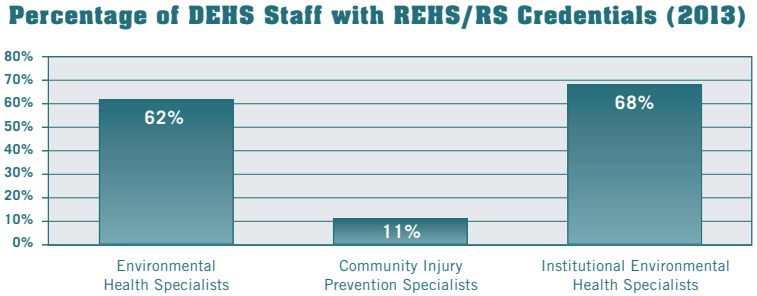


Figure 5: Percentage of DEHS staff with RS or REHS credentials

Table 6: Summary of DEHS Staff Certifications

Federal & Tribal Staff	Environmental Health Specialist	Community Injury Prevention Specialist	Institutional Environmental Health Specialist	Total	Percent of total
REHS/RS*	128	7	13	148	51%
IP Fellow	44	15	4	63	22%
Certified Safety Professional	0	0	2	2	1%
Certified Industrial Hygienist	1	0	4	5	2%
Certified in Infection Control	0	0	0	0	0%
Child Safety Passenger Safety Technician	38	31	0	69	24%
Certified Playground Safety Inspector	10	0	1	11	4%
Certified Radiation Protection Surveyor	4	0	5	9	3%
Certified Environmental Health Technician	5	0	0	5	2%
Diplomate, American Academy of Sanitarians	3	1	1	5	2%
CHEM**	0	0	2	2	1%
FDA Standard	11	0	1	12	4%
Lead/Asbestos Certification	4	0	3	7	2%
IEH Residency	1	0	12	13	4%
Certified Pool Operator	34	0	1	35	12%
OSHA HAZWOPER	4	0	6	10	3%
Healthy Homes Specialist	8	0	0	8	3%

*Registered Environmental Health Specialist/Registered Sanitarian.
** Certificate of Health Care Emergency Management

Beginning in 1993, DEHS has annually recognized an outstanding Environmental Health Specialist (EHS) for the year. Nominees are scored on three major categories: Special Achievements, Professionalism, and Innovation. The achievements of those individuals who have been selected as EHS of the Year are recognized by their peers as being instrumental in advancing the DEHS Program's vision of improving the lives of AI/AN people through model public health practices. A list of all the national EHS of the Year recipients to date can be found in Table 7, below.

Table 7: EHS of the Year, 2013 through 1993

2013	Martha Maynes, Bemidji Area IHS	2002	Pete Wallis, Tanana Chiefs Corporation
2012	Lisa Nakagawa, California Area IHS	2001	Molly Patton, Tanana Chiefs Corp.
2011	Bryan Reed, Bristol Bay Area Health Corp.	2000	Shawn Sorenson, South East Alaska Regional Health Corp.
2010	Amanda M. Parris, Phoenix Area IHS	1999	Mike Welch, Phoenix Area IHS
2009	Timothy Duffy, Bemidji Area IHS	1998	Diana Kuklinski, Phoenix Area IHS
2008	Holly Billie, Phoenix Area IHS	1997	Mark Mattson, Bemidji Area IHS
2007	Stephen Piontkowski, Phoenix Area IHS	1996	Harold Cully, Oklahoma Area IHS
2006	Troy Ritter, Alaska Native Tribal Health Consortium	1995	Keith Cook, Navajo Area IHS
2005	Andrea Horn, Phoenix Area IHS	1994	Carol Rollins, Ho-Chunk Nation
2004	Celeste Davis, Albuquerque Area IHS	1993	John Sarisky, Navajo Area IHS
2003	Casey Crump, Bemidji Area IHS		

Individuals who received Area EHS of the Year (2013) are highlighted below:

- Alaska Area, Brian Berube
- Albuquerque Area, Ray Kenmotsu
- Bemidji Area, Martha Maynes
- California Area, Tim Shelhamer
- Great Plains Area, Charles Mack
- Oklahoma Area, Jamison Honeycutt
- Phoenix Area, Kelsey Hustedt
- Tucson Area, Angela Hodge

From the above list of nominees, the selectee for the IHS EHS of the Year (2013) was Martha Maynes of the Bemidji Area. Her write-up can be found on the following pages.

INDIAN HEATLH SERVICE ENVIRONMENTAL HEALTH SPECIALIST OF 2013:

MARTHA MAYNES, REHS

INTRODUCTION

Mrs. Maynes began her career with Indian Health Service in the Bemidji Area, Rhinelander District Office, in 2011 after serving and working for the US Army. Upon arriving in the Bemidji Area she rapidly became an exceptional environmental health specialist who has voluntarily taken on the responsibility of mentoring junior staff. She also has been instrumental in ensuring the continuation of services for several tribes not assigned to her during staff vacancies. Most recently she played a crucial role in the development and orientation of a new Minnesota District Environmental Health Officer and a Service Unit Environmental Health Specialist for the Rhinelander District. She worked with new staff to assist them in understanding environmental health procedures and policies. She took the initiative to schedule surveys, handle ongoing environmental health issues, and plan meetings to orient the new staff.

SPECIAL ACCOMPLISHMENTS

Mrs. Maynes' dedication, motivation, and professionalism have substantially elevated the development, growth, and quality of the environmental health program in the Bemidji Area as a whole. In addition to her usual workload of providing field environmental health services to three tribal communities in Wisconsin, she has risen to assume a lead role in key tribal initiatives including sustainable solid waste management and resilience within tribal communities. This work included the documentation of over 80 open and closed dump sites into the Sanitation Tracking and Reporting System (STARS). She has made a significant contribution to our program's efforts to work with Tribal Environmental Protection Agency (EPA), Federal EPA, and State programs to end open dumping on reservations. This was accomplished

Martha Maynes, Environmental Health Specialist of the Year

by monitoring and closing dump sites, strengthening tribal laws and ordinances, cleaning up sites, and developing sustainable solid waste management programs. She has played a key role in identifying funding opportunities and resources to expand solid waste programs to include the realization of a comprehensive environmental sustainable solid waste program.

Mrs. Maynes worked with three tribes to identify community housing issues and develop resolutions for those issues. Her assistance was requested to document living conditions at the Bad River Tribal Elderly Living Apartment Complex. The documentation she provided and partnership with multiple agencies resulted in a $200,000 renovation of the Bad River Tribal Elderly Living Apartment Complex. This project

was scheduled for completion in December 2013 with residents returning to their homes in January 2014. This renovation improved the safety, security, and living conditions for 15 elderly residents. In addition to the apartment complex, fifteen private homes were assessed on the Bad River Reservation resulting in over $138,000 in remodeling efforts completed in 2013. Her participation was requested by the tribe in a community development planning project for 80 homes. This included attending meetings, providing site development information, sustainable housing ideas, community sustainability concepts, input on utility requirements, and community design concepts.

Mrs. Maynes provided 22 trainings to four tribes including one tribe in Minnesota to assist the new Minnesota District Environmental Health Specialist. The trainings were attended by 334 tribal staff and the topics included Serv-Safe, safe food handling, temporary venue safe food handling, Head Start (HS) health and safety, and housekeeper health and safety. In addition to the above, she completed 100% of the facility surveys determined by the Bemidji Area to be priority facilities. She worked with facilities to establish safety policies, employee health exclusion policies, and worked with several programs to ensure staff training was completed.

Mrs. Maynes worked with two tribes to develop environmental sustainability projects that not only reduced the tribe's impact on the environment, but also provided an opportunity to teach children about the sustainable environment and healthy active lifestyles by providing community gardens and natural walking paths. These projects have the potential to reach the entire tribal membership from young to the old. With her assistance the project was completed ahead of schedule and the project was able to obtain additional support and funding from the tribe. The total funding for this project exceeded $25,000.

Another sustainability project she was actively involved in was the expansion of the Lac Courte Oreilles (LCO) Tribal Farm. The farm was a successful project that provided naturally grown foods (meat and vegetables) to tribal members and programs that fed tribal communities (commodities and elder programs). She assisted them in developing a project to expand the existing facilities by adding a commercial cooking facility to begin processing and preparing their own products. The proposal also included the development of a picking and processing station to increase the efficiency and quality of produce when stored. This has allowed the farm to offer additional services and products to a greater number of tribal community members. The project was funded by a partnership between the LCO Tribe, University of Wisconsin, USDA, Farm Service Administration, and others. The total funding received for the project exceeded $20,000. In additional support of this project, she was able to assist the tribe in writing and receiving a $10,000 special project award from the Bemidji Area.

Mrs. Maynes began working with child care centers to decrease the amount and types of chemicals that are used in the facilities. This included smart purchasing and elimination or exchange of hazardous chemicals with safe alternatives. The purpose of this process was to eliminate any chemicals that contained endocrine disrupters that have been linked to developmental issues in day care and Head Start aged children. These centers include over 40 staff and provide services to over 150 children aged 6 months to head start age. With her help, all three Head Start and day care facilities have eliminated household pest control products. One facility replaced floors requiring constant waxing and cleaning with one that requires no wax, eliminating a product identified as being a high hazard. One facility reduced the amount of hazardous chemicals used to one product with no endocrine disruptors and all other cleaning products are now environmentally friendly, and safer for use in the child care centers.

PROFESSIONALISM

Mrs. Maynes has obtained the following credentials: REHS, Certified Playground Safety Inspector, HAZWOPER Certification, and Aquatic Facility Operator. She has a Master's of Science in Occupational Health and Safety and a Bachelor's in Natural Science.

INNOVATION

Mrs. Maynes' understanding and technical assistance on the use of the Web-based Environmental Health Reporting System (WebEHRS) database has served as an outstanding resource for Bemidji Area. She has utilized the tool to create new tracking methods and developed ways the database can be used in the field. She was also instrumental in suggesting improvements to the program to track inspections and activities. This provided staff in the Bemidji Area and at the national level the ability to reduce the time spent writing reports, and aided the Bemidji Area in tracking completion of surveys, number of deficiencies, trainings provided, number trained, and percentage of time spent on activities. Her input on the use of WebEHRS for tracking activities has increased the ability of the Area to focus limited resources and staff time on areas identified as having a greater impact on environmental health and safety.

Program Vision

The vision of the DEHS is "Every American Indian and Alaska Native will live in a safe, healthy environment. Community-based environmental health programs, developed in partnership with tribes, will utilize sound public health practices and resources to achieve the lowest disease and injury rates in the nation." Using this vision statement, DEHS identifies vision elements to help guide the program. The vision elements identified since 2007 are listed below:

DEHS VISION ELEMENTS

1. A nationwide clear and uniform definition of needs to make a compelling case for budget and prioritization of our work;
2. A dynamic, effective, and sustainable DEHS data system;
3. Standardized guidelines across the program that support uniform program management and result in positive outcomes;
4. Active involvement in budget and RRM discussions;
5. Increase the visibility, understanding, and value of the EHS program among internal and external stakeholders; and
6. Create a career competency roadmap promoting highly qualified, innovative and effective staff able to meet the DEHS mission.

In addition to Area efforts to develop policies and plans, program strategic planning continued to be a major national emphasis during 2013. Approximately 46 DEHS staff have been involved on teams formed to create significant, tangible progress on the six Vision Elements since the February 2007 annual meeting held in Nashville, Tennessee; program leadership (HQ and Area Environmental Health Services Directors) identified these initiatives as having the most positive impact on the DEHS Program over the next several years. Descriptions of these initiatives follow:

Vision Element Teams are supported by a Core

Group of HQ and Area-level staff. The Core Group is responsible for clearly defining the charge to the Team, reviewing work products, and for providing input to each of the teams.

In April 2008, over 31 DEHS staff from the 12 IHS Areas participated in a 3-day strategic planning workshop in Denver, Colorado. The objective of this workshop was to provide a working session for the first four teams. During this workshop the mission and vision statements were revisited, each team provided a progress update to the group-at-large, conducted work on their initiatives, and provided deliverables and/or a projection of deliverables for moving forward.

On August 18 and 19, 2009, a combination of DEHS senior leadership, mid-level management, and field office staff met in Tulsa, Oklahoma, to participate in a 2-day strategic planning workshop dedicated to informing, brainstorming, and continuing progress on key strategic initiatives for the DEHS Program. This workshop was designed as an opportunity for (1) the four Primary Vision Element Teams to share their progress; (2) capturing lessons learned from the past experiences of team members; and (3) identifying any additional strategic initiatives for the Program. The fifth Vision Element identified in this meeting was "increase the visibility, understanding, and value of the EHS program among internal and external stakeholders".

A summary of the accomplishments of all the teams can be found below:

- **Team 1 – An Improved Definition of Needs:** In 2009, this team developed five DEHS briefing documents for the five national priorities they established in 2008. These documents outline the public health significance of each of the priorities. These national priorities are children's environment, safe drinking water, food safety, vectorborne and communicable diseases, and healthy homes. Currently, IHS is using the priorities and templates to guide the DEHS Program.
- **Team 2 – A Dynamic, Effective, and Sustainable Data System**: Team 2 developed a feasibility study with five alternatives for replacing the existing DEHS data system, WebEHRS (the Web-based Environmental Health Reporting System). During the 2009 meeting in Tulsa, Area representatives approved alternative 5, a Commercial-Off-The-Shelf system that will be modified to meet IHS needs. Funds for the first year were secured at HQ, and staff has procured the services for this system. The contract for the development of the system was signed in 2010, and the new system is currently in use. A dynamic stage of implementation, including collecting and incorporating user feedback, continued into 2012.
- **Team 3 – Standardized Guidelines:** This team has taken on the task of rewriting Chapter 11 of the Indian Health Manual. This chapter establishes the policy, objectives, responsibilities, and functions of a comprehensive community-based Environmental Health and Engineering Program. During 2010, the team developed a new draft of Chapter 11 that was reviewed. In 2011, comments from IHS management were being addressed, and the chapter began the IHS policy approval process.
- **Team 4 – Resource Requirement Methodology (RRM):** In 2008, Team 4 began drafting a written document and a slide presentation that explain how the DEHS RRM is calculated. RRM is used, in part, to determine funds distribution nationally and in the Areas. At the 2009 meeting, the document was presented for review and input from the Core Group. Comments were received, and the document was updated and distributed to the (OEHE) and DEHS Directors for review and comment. The final document was completed in 2010 and is in use.
- **Team 5 – Effective Marketing to Internal and External Stakeholders:** In 2009, a Vision Element was added to the four Primary Vision Elements.

It was found that there was a need to develop communication tools in order to demonstrate to our customers (the communities served, HHS and IHS personnel, and external partners) the breadth of our Program and positive impacts made on the health and well-being of tribal members. The team was charged with the development of a DEHS informational toolbox that provides DEHS personnel with presentation materials for effective communication of Program components, capacity, strengths, and achievements to a variety of audiences. The team produced an informational slide presentation, brochure, publishing tips, "elevator" speech, and business card template.

- **Team 6 – Workforce Development:** In 2012 the directors gathered to revisit the strategic plan and refresh the list of vision elements. From the prioritized list one element was selected to be completed in 2013, workforce development. A workgroup has been formed to complete the following tasks:
    1. Create a competency model for staff;
    2. Create a list of opportunities to develop the workforce; and
    3. Develop an implementation plan.

The team's products will be practical, utilize current technology and resources, and include consideration of federal/tribal, specialties, and organizational levels. These products will result in a career competency roadmap promoting highly qualified, innovative and effective staff able to meet the DEHS mission. The efforts of this workgroup were slated to be completed in 2013, however refinements continue into 2014, and include recommendations for a competency model, a list of opportunities to develop the DEHS workforce, and suggested implementation steps.

Martha Maynes performs a food service survey.

Environmental Health Specialist LCDR Sarah Snyder monitors a mosquito trap

DEHS Services

Core Services to AI/AN Communities

The DEHS is a comprehensive, field-based program with an overarching responsibility to provide community environmental health support. We are leaders in the environmental health profession who provide a range of services on water quality, waste disposal, hazardous materials management, food safety, community injury prevention, vector control, occupational safety and health, and other environmental health issues.

For the DEHS, health monitoring activities not only include real-time surveys for a variety of public health-related issues but also the use of regional and national information systems to manage, track, and respond to trends and issues. Program staff had EH responsibilities for 18,994 facilities during 2013 (Source: WebEHRS Reports, National Establishment Counts*). Staff recorded 8,757 activities that monitored the environmental health status of these facilities (Source: WebEHRS Reports, Activities Summary*). A breakout of these activities can be found in figure 6, below. Also, staff reported in WebEHRS that there were 271 investigations conducted and 415 training sessions provided.

In 2008 five national focus areas were developed: children's environment, safe drinking water, food safety, vectorborne and communicable diseases, and healthy homes.

*All reports used a filter that excludes Headquarters items.

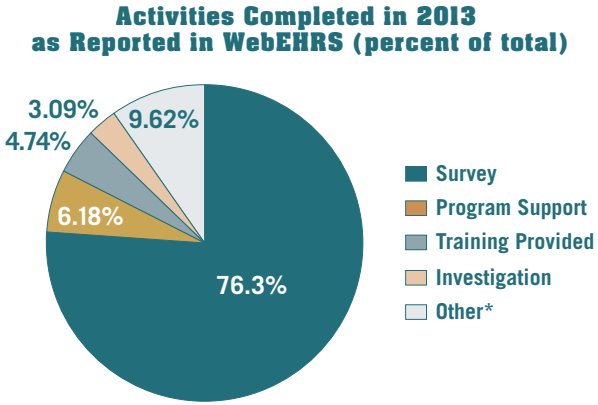


Figure 6: Activities completed in 2013 as reported in WebEHRS.

* Other includes Mobilize Community, Policy Development, Sample/Test, Evaluation, Control, Training Received, and Data Collection

Staff perform child safety seat inspections at a local event.

In 2010, an implementation team was created to serve as a board to address user interface problems and questions, and review and recommend enhancements and changes to the Notifiable Disease and External Cause of Injury (NDECI) web-based data retrieval system. The NDECI system retrieves specific injury or disease categories for tracking and reporting using passively exported Resource Patient Management System data to national programs. The application tracks and reports the targeted injury or disease categories via a Web-based application that can provide reports by national, Area, service unit, facility, and community levels. The application also supports a robust security system that allows designated national- or Area-level users to provide access to appropriate staff in their respective organizations. Data can be retrieved by International Classification of Diseases, 9th Revision, codes used to define the groupings for injuries, asthma, notifiable diseases, intestinal diseases, and vectorborne diseases.

In 2011, a team of subject matter experts from across the DEHS worked closely with a software vendor to address the need to revise WebEHRS so that the system could meet the dynamic requirements of EH in IHS. The outcome was a framework for an advanced and sustainable system with new features including enhanced eSurvey capabilities, improved report formatting, and a mobile application for field use. The system was rolled out in 2012. Further refining and customization occurred in 2013 to improve function and capabilities of the system. This process was driven primarily by staff input using the feedback feature embedded in the system.

Specialized Services to AI/AN Communities

The DEHS provides specialized services in IP and IEH through consultation and technical assistance. IP Specialists take the lead in working with communities to develop public health strategies to reduce the burden of injury experienced by AI/AN communities. IEH Specialists have skills to identify, evaluate, and respond to unique environmental safety hazards found in healthcare, educational, childcare, correctional, and industrial facilities. Accomplishments for the two specialized services can be found in the next section of this report.

COMMUNITY INJURY PREVENTION PROGRAM

A comprehensive IP intervention targets several strategies (education, legislation, enforcement, and environmental modification) rather than only one. Comprehensive interventions implemented by the Areas throughout 2013 included:

- Suicide prevention;
- Violence (with an emphasis on bullying) prevention;
- Elder Falls prevention;
- Methamphetamine and Suicide Prevention Initiative (MSPI);
- Provision of the NHTSA 32-hour "Technician Certification" course to staff who install car seats;
- Advocacy meetings with tribal councils;
- Awareness campaigns in communities;
- Implementation of primary seatbelt laws; and
- Implementation of the IHS Ride Safe Child Passenger Safety Program in HS Programs.

In 2013, tribes in five Areas (Alaska, California, Great Plains, Oklahoma, and Phoenix) received CDC funding to support comprehensive tribal motor vehicle intervention programs. Each program utilizes comprehensive effective strategies (education, legislation and enforcement, and environmental modification). Tribes in 10 Areas (Alaska, Albuquerque, Bemidji, California, Great Plains, Nashville, Navajo, Oklahoma, Phoenix, and Portland) received IHS Tribal Injury Prevention Cooperative Agreement Program (TIPCAP) funding to implement at least one component of a comprehensive motor vehicle occupant restraint program.

To assist tribes in building IP infrastructure and capacity, IHS began awarding Cooperative Agreements in 1997. During this initial funding cycle, 13 tribes or tribal organizations were each awarded $25,000 for three years to create injury prevention programs and four were awarded up to $8,000 each for training or conference attendance.

In 2000, this program was announced again, with increased program funding of $50,000 for 5 years with 25 awards; increased project funding $15,000 for 3 years with 11 awards; and 1-year training or conference attendance awards of $5,000 with 3 awards. In 2004, there was supplemental funding awarded to eight tribes for 1 year. Five of these awards were for program grants, and three were for projects. The 2005 to 2010 award cycle of 5-year Cooperative Agreements totals more than $1 million to 32 tribes, beginning in FY 2005. In 2010, the program was announced for another cycle that began in September and will run through 2015. The program included an increase from $50,000 to $65,000 for 5 years to 16 tribes. Seven tribes were awarded grants for small projects at $10,000 for 3 years. Continuing funding was awarded for $80,000 for 5 years to 17 tribes. In 2010, the IP Program distributed approximately $2.47 million through TIPCAP.

A summary of this funding, by tribe, is presented in Table 8, on the following pages.

Table 8: IHS TIPCAP Funding

Funding Cycle	1997 to 2000		2000 to 2005			2004		2005 to 2010			2010 to 2015		
Tribe	$25,000 for 3 yrs	Up to $8,000 for 1 yr	$50,000 for 5 yrs	$15,000 for 3 yrs	$5,000 for 1 yr	$50,000 for 1 yr	$15,000 for 1 yr	$75,000 for 5 yrs	$50,000 for 5 yrs	$10,000 for 3 yrs	$65,000 for 5 yrs	$80,000 for 5 yrs	$10,000 for 3 yrs
United Tribes Technical College	X		X										
Pueblo of Jemez	X		X					X				X	
Ysleta del Sur Pueblo	X												
Bristol Bay Area Health Corporation	X												
Pokagon Band of Potawatomi Indians	X												
Fort Peck Assiniboine & Sioux Tribes	X			X									
Hoopa Valley Tribe	X		X										
Miccosukee Corporation	X												
Osage Nation of Oklahoma	X								X				
Sac & Fox Nation	X												
Fallon Paiute Shoshone Tribe	X												
Yavapai-Prescott Indian Tribe	X												
Jamestown S'Klallam Tribe	X												
Ponca Tribe of Nebraska		X		X									
Aleutian Pribilof Islands Association		X											
Houlton Band of Maliseet Indians		X		X						X			
Ponca Tribe of Oklahoma		X	X										
Spirit Lake Tribe			X										
Three Affiliated Tribes			X										
Trenton Service Area			X										
South East Alaska Regional Health Consortium			X					X				X	
Kodiak Area Native Association			X										
Fond Du Lac Reservation			X					X				X	

Table 8: IHS TIPCAP Funding (cont.)

Funding Cycle	1997 to 2000		2000 to 2005			2004		2005 to 2010			2010 to 2015		
Tribe	$25,000 for 3 yrs	Up to $8,000 for 1 yr	$50,000 for 5 yrs	$15,000 for 3 yrs	$5,000 for 1 yr	$50,000 for 1 yr	$15,000 for 1 yr	$75,000 for 5 yrs	$50,000 for 5 yrs	$10,000 for 3 yrs	$65,000 for 5 yrs	$80,000 for 5 yrs	$10,000 for 3 yrs
Bad River Band of Lake Superior Tribe of Chippewa Indians			X									X	
Rocky Boy Tribal Health			X										
St. Regis Mohawk Tribe			X										X
Eastern Band of Cherokee Indians			X										
Hardrock Chapter			X					X				X	
Navajo Nation			X					X				X	
Colorado River Indian Tribes			X								X		
First Mesa Consolidated Villages			X										
Reno-Sparks Indian Colony			X								X		
California Rural Indian Health Board, Inc.			X					X				X	
Chickasaw Nation			X										
Caddo Nation			X					X					
Comanche Nation of Oklahoma			X										
The Kaw Nation			X					X				X	
Pascua Yaqui Tribe of Arizona			X										
Rosebud Sioux Tribe				X									
Southcentral Foundation				X									
Mille Lacs Band of Ojibwe				X									
White Earth Reservation Tribal Council				X						X			
Gerald L. Ignace Indian Health Center				X									
Stockbridge-Munsee Community Band Mohican Indians				X						X			X
Wichita and Affiliated Tribes				X									
White Mountain Apache Tribe				X					X				

Table 8: IHS TIPCAP Funding (cont.)

Funding Cycle	1997 to 2000		2000 to 2005			2004		2005 to 2010			2010 to 2015		
Tribe	$25,000 for 3 yrs	Up to $8,000 for 1 yr	$50,000 for 5 yrs	$15,000 for 3 yrs	$5,000 for 1 yr	$50,000 for 1 yr	$15,000 for 1 yr	$75,000 for 5 yrs	$50,000 for 5 yrs	$10,000 for 3 yrs	$65,000 for 5 yrs	$80,000 for 5 yrs	$10,000 for 3 yrs
Ak-Chin Indian Community				X									X
Dakota Center for Independent Living					X								
Grand Traverse Band of Ottawa and Chippewa Indians					X								
Sault Ste. Marie Tribe of Chippewa Indians					X								
Winslow Indian Health Care Center, Inc.						X							
Oneida Tribe of Wisconsin						X			X			X	
Sisseton-Wahpeton Oyate of the Lake Traverse						X			X			X	
Norton Sound Health Corporation						X			X			X	
Pawnee Nation of Oklahoma						X							
Chilkoot Indian Association							X						
Mount Sanford Tribal Consortium							X						
Aroostook Band of Micmacs							X						
NNAHA Ojibwe Tribes								X					
Toiyabe Indian Health Project, Inc.									X				
Choctaw Nation of Oklahoma									X			X	
Bristol Bay Area Health Corporation									X			X	
San Felipe Pueblo									X			X	
Indian Health Council, Inc.									X			X	
Standing Rock Sioux Tribe									X				
Kiowa Tribe of Oklahoma									X			X	
Quechan Indian Tribe									X			X	
Lac Vieux Desert Band of Lake Superior Chippewa Indians										X			

Table 8: IHS TIPCAP Funding (cont.)

Funding Cycle	1997 to 2000		2000 to 2005			2004		2005 to 2010			2010 to 2015		
Tribe	$25,000 for 3 yrs	Up to $8,000 for 1 yr	$50,000 for 5 yrs	$15,000 for 3 yrs	$5,000 for 1 yr	$50,000 for 1 yr	$15,000 for 1 yr	$75,000 for 5 yrs	$50,000 for 5 yrs	$10,000 for 3 yrs	$65,000 for 5 yrs	$80,000 for 5 yrs	$10,000 for 3 yrs
Pyramid Lake Paiute Tribe										X			
Jena Band of Choctaw Indians										X			
Chitimacha Tribe of Louisiana										X			X
Nambe Pueblo										X			
Sapulpa Indian Health Center										X			
Seneca-Cayuga Tribe of Oklahoma										X			
Gila River Indian Community											X		
San Carlos Apache											X		
Hualapai Tribe											X		
Northwest Washington Indian Health Board											X		
Northwest Portland Area Indian Health Board											X		
Oglala Tribe											X		
Great Plains Tribal Chairmen's Health Board											X		
Maniilaq Association											X		
Tanana Chiefs Conference											X		
Ho-Chunk Nation											X		
Menominee Indian Tribe of Wisconsin											X		
Tule River Indian Tribe											X		
Tuba City											X		
Absentee Shawnee Tribe											X		
Southern Ute Indian Tribe													X
Walker River Paiute Tribe													X
Greenville Rancheria													X

The collaboration between the IHS IP Program and the IHS Primary Care Provider began in 2007. As an outgrowth of this collaboration, the July issue of each year is dedicated to IP. The 2007-2013 issues presented articles on cost of injuries, guiding principles of the IP Program, TIPCAP, a case study on partnerships, and strategies addressing issues such as lack of occupant restraint use in motor vehicles, gang violence, suicide, and community-based prevention. In 2013, the IP Program, continued the support for the Sleep Safe Program, which ultimately began as an IHS IP Fellowship project. The National Indian Safe Home Coalition (NISHC) began as an extension of Wendy Fanaselle's IHS IP Fellowship Project in 1993. Harold Cully, former Oklahoma Area IP Specialist, led this multiagency, multi-nonprofit organization coalition that provided funding, primarily through the U.S. Fire Administration, to AI/AN communities to reduce fire and burn injuries in their homes. In 1998, Diana Kuklinski, former Bemidji Area IP Specialist, led the development of a new program, Sleep Safe, which was based on the same concept of community mobilization used in the NISHC. The goal of the Sleep Safe Program is to reduce the fire and burn injury rate for AI/AN children, ages 0 to 5 years, by increasing the use of operable smoke alarms in homes, providing a fire safety curriculum in Head Start (HS) Programs, and developing and adopting tribal laws requiring fire safety codes in homes. The Sleep Safe Program is funded the IHS IP Program.

Building on the same concepts used in the Sleep Safe Program, Chris Allen, through his IHS IP Fellowship project, developed the Ride Safe Program in 2002. The goal of the Ride Safe Program is to reduce motor vehicle-related injuries to AI/AN children, ages 3 to 5 years, by increasing the correct use of child safety seats; providing child passenger safety instruction to HS staff, parents, and caregivers; and conducting home visits and observational safety seat surveys in communities. The Ride Safe Program has been funded through the NHTSA, the Health Resources and Services Administration, the IHS IP Program, and the IHS HS Program. For the 2013 to 2014 school year, in addition to parents and teachers, caregivers such as grandparents of children up to 5 years of age were included in the Sleep Safe Program. Seventeen HS Sleep Safe Programs received smoke alarms at a total cost of $32,000, and nearly 1,800 smoke alarms were distributed to HS families with children. In addition to the Sleep Safe Program, IHS continues to support the Ride Safe Program. Twenty-two HS programs received child safety seats at a total cost of $61,000 in the 2013 to 2014 HS school year. Over 2,000 child safety seats were distributed to HS families with children. Since 1999, the Sleep Safe Program has provided $2 million and more than 45,000 smoke alarms to AI/AN HS programs to reduce fire and burn injuries. Since 2002, the Ride Safe Program has provided $1.51 million and more than 13,500 child safety seats to AI/AN HS Programs to reduce motor vehicle deaths and injuries.

Staff conducts an accessibility assessment in a bathroom.

INSTITUTIONAL ENVIRONMENTAL HEALTH PROGRAM

One of the primary objectives of the Institutional Environmental Health Program is to support local safety programs. This is done through providing education opportunities, management of the IHS Web Based Incident Reporting System (WebCident), onsite technical support, accreditation assistance, and safety program evaluation.

One of the few existing metrics for measuring success of safety programs is the occupational injury rate. Table 9, below, illustrates the occupational injury rates for IHS federal employees. When compared to the 2012 Bureau of Labor Statistics data, IHS injury rates are consistently lower than the national healthcare industry injury rate. The table also indicates a trend of decreasing injury rates for IHS from 2010 through 2013.

Table 9: IHS Employee Injury Rates as Compared to BLS Data, 2010-2013

	Fiscal year				
	2010	2011	2012	2013	2012 BLS Comparative Data (Hospitals)
Number of Federal Civilian Employees	14,079	13,635	13,858	13,378	
Total Case Rate	3.72	3.46	3.19	3.39	6.6
Lost Time Case Rate	1.78	1.7	1.93	1.75	2.7

WebCident is a critical data collection and analysis tool supporting healthcare accreditation in the areas of information management, medication management, environment of care, and regulatory concerns for occupational safety and health reporting. Since its launch in 2002, WebCident has collected information on more than 219,837 worker, visitor, and patient incidents at 186 IHS and tribal hospitals, health

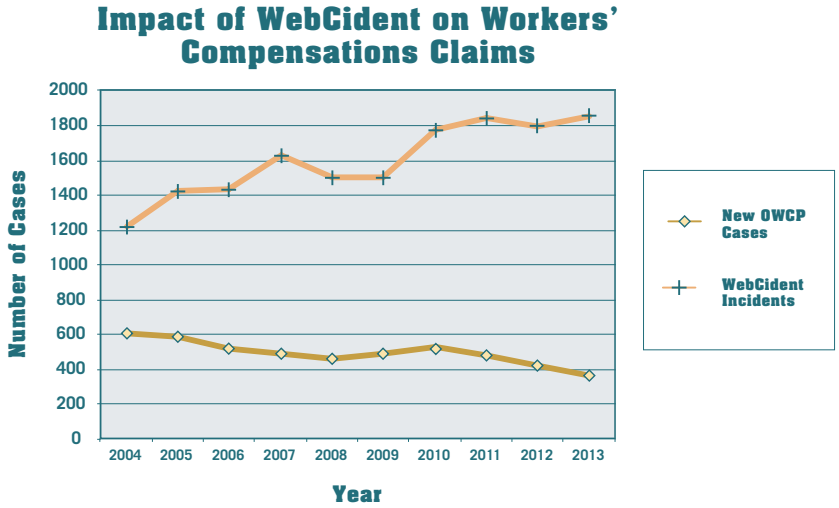


Figure 7: WebCident worker injury incidents and OWCP injury rates from 2004 to 2013.

centers, health stations, dental stations, school stations, youth regional treatment centers, and Area and other offices. During 2013, there were 39,037 incidents reported.

The reporting of incidents and analysis of WebCident data has an impact on the reduction of risk in the work environment through heightened awareness, the development of interventions such as educational programs, changes to policy and work practices, and environmental modification. These impacts may result in reduction of workers' compensation cases. Figure 7, above, shows the potential impact of incident reporting on the reduction of workers' compensation cases (Source: Office of Workers' Compensation Programs (OWCP)).

In 2006, the Office of Clinical and Preventive Services (OCPS) staff asked the EH Data Systems Manager and the IEH Program Manager to work with them in expanding WebCident to collect patient safety data such as medication errors, patient falls, and adverse drug events. The patient safety expansion was very successful. Since it began,

Staff perform infection control and prevention skills they learned at housekeeping training.

the WebCident pharmacy medication error module has saved IHS $250,000 each year for costs associated with the reporting system it replaced. The patient safety component was a performance measure for OCPS and, by the end of 2013, had accumulated 180,981 incidents to monitor and evaluate.

DEHS
National Focus Areas

The DEHS delivers a comprehensive EH program to more than 1.9 million AI/AN people in 35 states. We consult with and provide technical assistance to tribes in an effort to provide safe, healthy environments. DEHS identified five national focus areas: children's environment, safe water, food safety, vectorborne and communicable diseases, and healthy homes. On the following pages you will find descriptions of each of the focus areas and highlights of projects conducted by the Areas in 2013. Evidence-based or promising practices are used most often, but specific projects are also evaluated for effectiveness. Comprehensive interventions use a multi-targeted approach involving education, environmental modification, legislation, and enforcement. The following four key activities are common to each of the focus areas:

- Conduct inspections that identify EH risk factors;
- Suggest corrective actions to reduce or eliminate risk factors;
- Conduct investigations of disease and injury incidents; and
- Provide EH training classes to federal, tribal, and community members.

Children's Environment

The DEHS is responsible for ensuring EH settings for AI/AN children are safe and ultimately provide a healthy environment in which to learn, play, and grow. EH issues associated with children are present in schools, HS Centers, and daycare facilities on tribal lands. These issues present an ever-increasing set of complex challenges to be addressed. A few examples of EH related issues of concern are as follows: indoor air quality, lead exposure, and infectious disease exposure. DEHS staff provides services to approximately 3,000 child-occupied facilities as well as services in community housing. Comprehensive interventions, based on local surveillance, are conducted to reduce the impact of disease and injury in the communities.

Results vary across the country, but many indicators of effective programs focus on reducing the number of critical or repeat violations within a particular facility. Critical violations are threats to the public's health that need to be corrected immediately, and repeat violations are the same violation that has occurred in more than one consecutive facility inspection. DEHS staff focuses on eliminating risk factors related to fire safety, emergency response, asthma triggers, lead-based paint, bullying, communicable disease exposure, and child passenger safety. Projects with an emphasis on the children's environment conducted in 2013 can be found on the following pages.

HEAD START SUMMITS IN THE ALBUQUERQUE AREA

DEBBY CHAVEZ-BIRD, ENVIRONMENTAL HEALTH TECHNICIAN, BOB BATES AND JEFF DICKSON, SUPERVISORY SANITARIANS

INTRODUCTION

The Head Start Model Code requires Head Start staff receive annual training on a variety of topics. To help tribes meet this requirement, annual Head Start Summits were initiated in 2005. The summits are open to all Head Start staff in the Albuquerque Area. For convenience, two one day summits are held. The summits cover all of the required coursework and provide information on other topics such as Injury Prevention and Playground Safety.

METHODS

Planning for the Head Start summits starts in January. A summary of last year's post-summit evaluations is sent out for review, and the project coordinator schedules a conference call with all staff. The dates, locations, and schedules are set. Topics, presenters, and mixers are planned. Each year, the format and topics are changed to keep them current and interesting. Each staff person is given a role in the summit as moderator, speaker, registrar, etc. A monthly call is held to make sure everything is on track. All of the presentations, presenters notes, and handouts are given attendees so they can train staff at their center when they return.

RESULTS

Originally participation was limited to the tribes in the Albuquerque Service Unit. The number of participating Head Starts and attendees has increased to the entire Albuquerque Area. Twenty-five Tribal centers now attend the summit. Surveys of sites have shown improved compliance with the Model Code in areas like sanitization, MSDS and playground safety as a result of the summits.

DISCUSSION

The summits are an effective way for Head Start staff to meet their annual training requirements. The sharing of ideas between different centers is an added benefit, and would not occur in site-specific training. Bringing together multiple sites saves staff resources and allows for guest speakers to present to multiple locations. Post-summit reviews are consistently positive. The planning and presentation process is beneficial to staff and encourages interaction and teamwork.

CONCLUSIONS/RECOMMENDATIONS

The Head Start Summits are an effective way for centers to meet their training requirements. They are convenient, informative, and most of all, fun. The materials provided allow for a train the trainer model. EH staff benefits from working collaboratively on a project. The model could easily be adopted in other Areas.

ONSITE HAND HYGIENE EDUCATION AND DEMONSTRATIONS AT DAYCARES, PRE-SCHOOLS, HEAD START CENTERS, ELEMENTARY AND HIGH SCHOOLS IN THE GREAT PLAINS AREA

CHARLES L. MACK, ENVIRONMENTAL HEALTH SPECIALIST

INTRODUCTION

Shigellosis is an infectious disease caused by a group of bacteria called Shigella. Most that are infected with Shigella develop diarrhea, fever, and stomach cramps after they are exposed to the bacteria, and symptoms resolve in 5 to 7 days. Some persons infected have no symptoms, but still pass the bacteria to others. On October 21, 2013 the State Health Department informed local Public Health Nursing (PHN) and OEH that Shigella cases were on the rise. Proper hand washing is the most effective prevention method for Shigella. Soon after the warning, one Head Start was briefly closed due to the Shigella outbreak. To address the outbreak, prevention teams were established to provide on-site hand washing demonstrations at child care facilities. Reported Shigella infections began to decrease one week later as a result of these efforts.

METHODS

Three prevention teams consisting of three EHS, a PHN, two School Nurses, and an IHS Health Educator were assembled for implementation of hand hygiene education at daycares, pre-schools, Head Starts, Elementary and High Schools. Activities included hand washing demonstrations with students and school staff, with a focus on washing hands properly (20 seconds), especially after using the restroom. Daycares and Pre-Schools focused more on adult staff hand washing responsibilities. Five gallon water coolers along with hand soap and paper towels were used for demonstration purposes. Dissemination of related materials on the prevention and treatment of Shigella and hand washing posters were shared as well.

RESULTS

2,500 children and 310 staff received training through 36 presentations at 26 sites. Shigella can move rapidly through a community, passing from person to person via fecal matter, and timely intervention is paramount to stop an outbreak from occurring. The partnership between the Tribe, IHS, local schools, and Day Care Centers was essential in controlling this outbreak.

CONCLUSIONS/RECOMMENDATIONS

The Shigella bacteria can spread rapidly, especially in the child care setting. Once an outbreak is identified, assembling prevention teams, with a list of sites and presentation times is essential. Prevention teams should have at least one (1) EHS and one (1) PHN. Recommend that the Chief Executive Officer or Clinical Director discuss the Shigellosis outbreak over the radio, it gives your field activity more credibility and generates interest in the training/education. Attending school board meetings gives your prevention team credibility as well.

SCHOOL INTEGRATED PEST MANAGEMENT PILOT PROJECT IN THE PORTLAND AREA

HOLLY THOMPSON DUFFY IHS, JULIANN BARTA EPA

INTRODUCTION

Through an inter-agency agreement (IAA) with Region 10 EPA, the Portland Area provided a variety of services to the tribes in WA, ID and OR. One of the focus areas was children's environments. After initial assessments, it was determined that there was a need for integrated pest management (IPM) education and implementation in schools on tribal lands. We developed a pilot project that utilized the expertise of the EHS to identify pest and pesticide hazards using a standardized checklist during surveys. Their findings will be interpreted by an Environmental Protection Specialist (EPS) to assess current practices, identify needs, and prioritize follow up.

METHODS

Through partnerships with schools, EHS conducted assessments, and developed IPM action plans to reduce pest and pesticide hazards. Needs were prioritized for follow-up by creating a Facility IPM checklist and a related spectrum diagnosis tool that classified facilities on a scale of "no IPM" to "high-level IPM" and identified action items based on classification. The EHS were trained at a one day class provided by IHS and EPA. EHS identified pest and pesticide hazards and documented environmental conditions observed during their walkthrough. The EPS then used the completed checklist to determine the facility's level of IPM. The EPS followed up with each facility, and gathered additional data, and developed a facility specific action plan.

RESULTS

The following activities were completed related to this project in 2013:

- Developed project materials including: a Facility IPM checklist, a guidance document, and a spectrum diagnosis tool to prioritize follow up
- Developed curriculum and provided a one day training to Portland Area EHS
- Performed 5 assessments of schools. Provided verbal and written recommendations.
- Initiated development of action plans for schools
- Compiled a resources for a toolkit to assist schools with IPM

DISCUSSION/CONCLUSION

The goal of this project was to advance tribal schools' level of IPM to "high". Of the five schools assessed this year, two were classified as "no IPM" and three as "low IPM". Work continues in 2014, and five additional facilities will be assessed. The ultimate goal of this pilot is to expand the into other IHS areas. We are consulting with EPA Headquarters to determine how this may work in other areas that lack a full time EPS funded through an IAA with the EPA.

Safe Water

DEHS is responsible for ensuring safe drinking water for AI/AN people. EH issues associated with drinking water can be caused by organisms or contaminants spread through water. Examples of waterborne illnesses include Giardiasis, Shigellosis, Cryptosporidiosis, lead poisoning, and copper toxicity. Annually, DEHS staff report approximately 300 activities related to drinking water.

In 2013, many effective programs focused on reducing the risk factors related to waterborne illness caused by contamination. Some DEHS staff focused on eliminating risk factors related to the operation and maintenance of existing storage systems. Projects with an emphasis on the safe water conducted in 2013 can be found on the following pages.

UNDERGROUND STORAGE TANK (UST)/LEAKING UNDERGROUND STORAGE TANK (LUST) INTERAGENCY AGREEMENT IN THE PORTLAND AREA

PHILIP NENNINGER, LICENSED GEOLOGIST

INTRODUCTION

According to the Environmental Protection Agency (EPA), tribes have historically run significantly below the national average (60% vs 78%) for UST compliance (see Figure 1). A lack of UST compliance increases the chances of a release and groundwater contamination. The tribes throughout the Portland Area rely primarily on groundwater for their drinking water. Through an interagency agreement with EPA, this project increased communication, compliance assistance visits, and training. At the completion of the project, compliance of UST operations among the tribes throughout the Portland Area was the highest in the United States. Groundwater is being protected insuring clean water for the tribes.

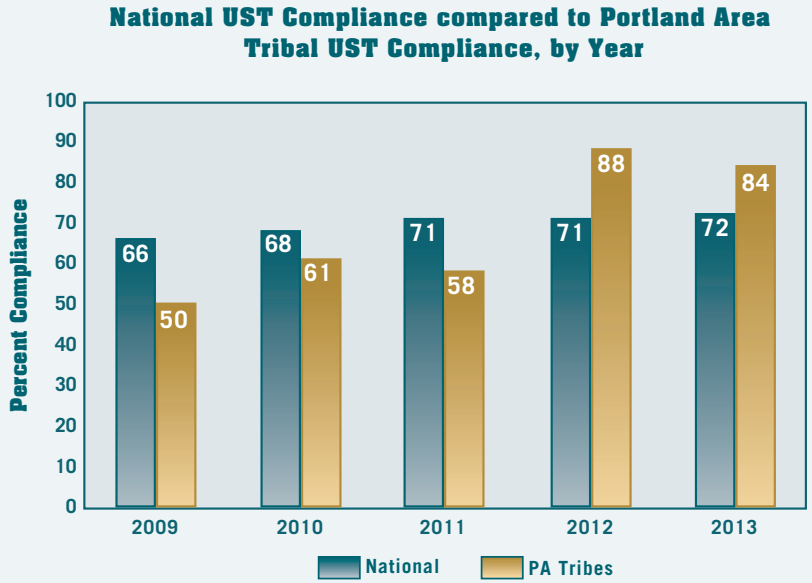


Figure 1: National and Tribal UST Compliance, by Year

METHODS

The interagency agreement included a comprehensive approach to include tribal capacity building (training tribal compliance assistance officers and inspectors), increasing awareness of the UST program, providing on-site visitation and training to individual tribal sites as well as group training. Verification inspections were completed after the training and have helped to document the results.

RESULTS

From 2009 through 2011 the tribal compliance rate for UST lagged significantly behind the national average. By beginning a training program and increasing dialogue with the tribes in the Portland Area, the compliance rate increased dramatically to 88 percent in 2012 and maintaining a rate of 84% for 2013.

CONCLUSIONS/RECOMMENDATIONS

By working with the tribes in the Portland Area through an interagency agreement, EPA and IHS have increased training and awareness of the issues associated with compliance and the dangers of non-compliance (i.e. a petroleum release and contaminated groundwater). A large improvement in compliance of UST systems on tribal lands has been realized. For sustainability of the program, efforts to train and certify Tribal UST Inspectors will continue. Resources should be reviewed with an eye on expanding this program nationally.

ABOVEGROUND STORAGE TANK GUIDELINE DEVELOPMENT IN THE OKLAHOMA CITY AREA

JAMES ISAACS, ENVIRONMENTAL HEALTH SPECIALIST

INTRODUCTION

Aboveground storage of petroleum products exist in tribal communities. The Oklahoma City Area DEHS had no existing operating guideline for the safe storage of petroleum products in above ground storage tanks. To prevent and control exposure or environmental contamination caused by improper storage of petroleum products, the Pawnee EHS, James Isaacs, was assigned to provide guidance and establish an Area-wide policy for activities related to the safe aboveground storage of petroleum products in tribal communities.

METHODS

In January 2013, research was conducted to find best management practices for storing and handling of petroleum products in aboveground storage tanks. Relevant and pertinent information was found and collected from the Division of Petroleum Storage Tanks, Oklahoma Corporation Commission and the United States Environmental Protection Agency, Region 6, Spill Prevention Control Countermeasures, Requirements and Pollution Prevention Practices for Bulk Storage Facilities. Written guidance and best management practices were developed using the above information.

RESULTS

The Pawnee OEHE staff developed an aboveground storage tank record of identification sheet, as well as a monthly survey form, emergency contacts list, and operational guideline. This guideline provides information to DEHS and tribal communities to insure the prevention, and control exposure and/or environmental contamination from improper storage of petroleum product. Inspection forms and tables for recording containment dike drainage were developed and utilized. When implementing such guidelines, State and Federal regulations should be consulted. Other useful materials such as a list of emergency response

equipment, and an agency notification standard report for qualifying discharge are given to the facility operators. The safety of these operations has greatly improved through this project.

DISCUSSION/CONCLUSION

This process allowed DEHS to identify the following needs:

- Necessary equipment and supplies to the field
- Technical consultation and review of reports
- Field activities necessary for maintenance and safety
- Data maintenance in WebEHRS
- Assist in coordination of program activities under the IAG with EPA upon request
- Pollution investigations
- Consultation concerning compliance aspects of above ground storage tanks
- Assist tribal environmental protection programs and Intertribal Environmental Council

Food Safety

DEHS staff provides services at more than 5,000 food service facilities across the country. The CDC estimates that for the entire United States, over 48 million cases of foodborne illness occur, 128,000 of which require hospitalization and 3,000 of which are fatal (CDC, 2011, Food Safety. Retrieved September 8, 2014, from http://www.cdc.gov/foodborneburden/2011-foodborne-estimates.html). Organisms that result in common foodborne illnesses include Salmonella enterica, Escherichia coli O157:H7, Norovirus, Listeria monocytogenes, Staphylococcus aureus, and Clostridium perfringens.

Effective programs focus on reducing the number of critical or repeat violations within a particular facility. Critical violations are threats to the public's health that need to be corrected immediately, and repeat violations are the same violation that has occurred in more than one consecutive facility inspection. Some DEHS staff focus on eliminating risk factors related to inspector bias through standardization of the inspection process. Other staff members work to persuade tribal councils to pass food code legislation, whereas others focus on eliminating specific deficiencies (temperature control, hand washing, and/or employee health).

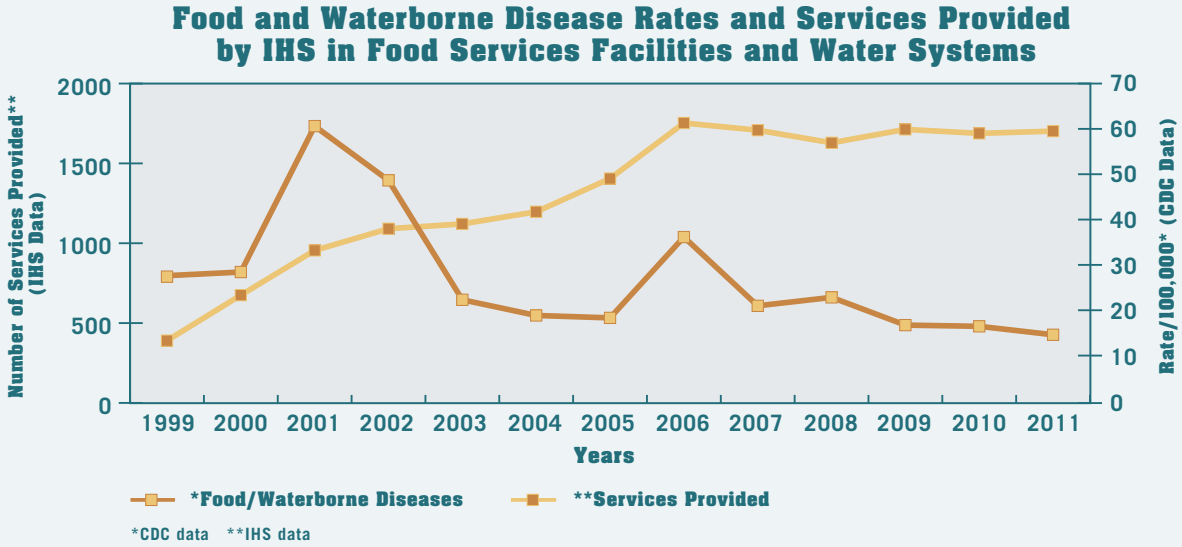


Figure 8: Trends in services and reportable food and waterborne illnesses.

Implementation of effective EH and IP strategies can substantially reduce disease and injury rates. For instance, from 1999 to 2011, as the number of services provided by IHS to food service establishments and drinking water systems increased, the incidence of food and waterborne diseases decreased (see Figure 8, left). Projects with an emphasis on food safety conducted in 2013 can be found on the following pages.

FOOD SURVEY INDICATORS PROTOCOLS FOR TRACKING FOOD SAFETY IN THE BEMIDJI AREA

CDR TIM DUFFY AND CDR WILLIAM CRUMP

INTRODUCTION

Bemidji Area DEHS staff is required to collect data pertaining to five foodborne illness risk indicators during retail food safety inspections. These data are used to:

1. Identify critical food safety deficiencies and risk trends
2. Set program priorities and goals
3. Evaluate the effectiveness of the food safety program
4. Ensure food service establishments meet the standards identified by the CDC as most important for reducing the risk of foodborne illness.

Table 1: Minnesota District Office Foodborne Illness Risk Indicator Compilation, 2013 (n=106)

	In Compliance	Out of Compliance	No. of Facilities Assessed Properly	2013 Percent In Compliance	2012 Percent In Compliance
Item 1: CFPM	103	3	106	97%	91%
Item 2: Exclusion	98	8	106	92%	27%
Item 6: Hand-washing	99	7	106	93%	92%
Item 7: Bare Hand Contact	103	3	106	97%	88%
Item 18: Cooling	101	5	106	95%	77%

Table 2: Rhinelander District Office Foodborne Illness Rick Indicator Compilation, 2013 (n=95)

	In Compliance	Out of Compliance	No. of Facilities Assessed Properly	2013 Percent In Compliance	2012 Percent In Compliance
Item 1: CFPM	75	11	86	87%	84%
Item 2: Exclusion	85	1	86	99%	88%
Item 6: Hand-washing	69	17	86	80%	82%
Item 7: Bare Hand Contact	85	1	86	99%	95%
Item 18: Cooling	85	1	86	99%	86%

METHODS

The indicators chosen by the DEHS program include:

- Certified Food Protection Manager (CFPM) - demonstration of knowledge
- Exclusion Policy – workers with illness are excluded/restricted from working in food establishment
- Hand washing practices – hands properly washed
- Bare hand contact with ready to eat foods
- Cooling – proper cooling time and temperatures

DISCUSSION

Preliminary results revealed that compliance was very high (>90%) for hand-washing in both Districts. CFPM compliance was high in the Rhinelander District and very high (>90%) in the Minnesota District. Bare hand contact compliance was very high in Rhinelander and Minnesota District Offices. Proper cooling practice compliance was high in Rhinelander and increased from 76.9% in 2012 to 95% in 2013 in the Minnesota District. Compliance with exclusion policies was high in Rhinelander and increased from 26.7% to 92% in Minnesota. We believe the large increase for Minnesota is due to better tracking of data.

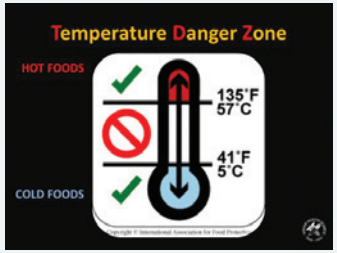
The results indicate compliance remained steady and the tracking of data may have allowed for a more accurate evaluation of the indicators. The following suggestions for improvement were identified:

1. Revision of food safety inspection form
2. Develop Area foodborne illness risk indicator monitoring policy to include defined food code violations
3. Additional staff training and standardization
4. Focused customer training and follow-up visits to improve compliance with cooling practices, and exclusion policy adoption and implementation

ADVANCED FOOD SAFETY TRAINING IN WESTERN ARIZONA 2009–2013

LT ISAAC AMPADU, LT DAVID BALES, CDR ROBERT MORONES, LCDR AMANDA PARRIS, LTJG MISTIN RAY, CDR VINCENT SLAYTON-GARCIA, LCDR SARAH SNYDER, LTJG KENDRA VIEIRA

INTRODUCTION



The Western Arizona DEHS District is responsible for assessing over 400 permanent food establishments. Annually the program provides approximately 50 food safety classes to hundreds of industry and tribal program food service workers. The training is provided to:

- Ensure a competent workforce
- Meet tribal code requirements where applicable
- Help reduce food safety violations

Western Arizona DEHS District adopted a national food safety training curriculum to increase the number of competent food service workers and decrease observed foodborne illness risk factor violations in senior centers.

METHODS

In 2009, a 16-hr Certified Food Manager Training (CFMT) course was implemented in one service unit with a goal to reduce the frequency of food safety trainings. Increasing the number of individuals with advanced food safety knowledge with the expectation to pass on their knowledge to their staff was the proposed model for this project. Currently, CFMT course participants purchase books and tests, and in-kind support for training venues are provided by local casinos and health care facilities. Two EHOs certified through ServSafe provide the training, and annual administrative expenses are estimated at $250/session. The CFMT course outcomes are included in the 5-year Phoenix Area Environmental Health Performance plan in 2010.

RESULTS

Classes provided = 11
Attendees achieving certification = 103
Senior Centers with CFMs:

2011 = 1/12 (8%)
2012 = 5/12 (42%)
2013 = 8/12 (67%)

- Foodborne illness risk factor violations reduced 20%
- No foodborne illness outbreaks have been associated at facilities with certified food manager
- Food safety managers now more proactive in contacting OEHE staff for technical assistance in preventing or resolving food safety concerns
- Efforts underway to duplicate the program in other IHS Districts

DISCUSSION AND CONCLUSIONS

As an intervention strategy to reduce the rate of non-compliance for foodborne illness risk factors at food service operations in senior centers, the CFMT program has contributed to the reduction of the number of foodborne illness risk factor violations. Implementation of the CFMT program has also contributed to DEHS workforce development within the Phoenix Area. Moving forward data should be collected to determine if food establishments with certified food managers have fewer critical food safety violations compared to those that do not employ them.

Vectorborne & Communicable Diseases

Diseases transmitted through humans, insects, or animals present an ever-increasing burden on human health. A few examples of vectorborne or communicable diseases include West Nile Virus, H5N1 (Avian Influenza), Hantavirus, Rocky Mountain Spotted Fever, and Plague.

DEHS staff focus on the elimination of risk factors such as identifying H5N1 in bird populations; promoting animal control programs; and investigating prairie dog die-offs to prevent human Plague cases.

Projects with an emphasis on vectorborne and communicable disease prevention and control conducted in 2013 can be found on the following pages.

COMMUNICABLE DISEASE & EPIDEMIOLOGY INVESTIGATION READINESS IN THE OKLAHOMA CITY AREA

LCDR JULIE ERB-ALVAREZ, AREA EPIDEMIOLOGIST, MR. FARREL SMITH, DISTRICT ENVIRONMENTAL HEALTH OFFICER, CDR DAVID HOGNER, DISTRICT ENVIRONMENTAL HEALTH OFFICER

INTRODUCTION

DEHS identified gaps in disease outbreak investigation, readiness, and response. The existing DEHS communicable disease control and epidemiology guidelines lacked the elements and components of a comprehensive plan. The DEHS staff collaborated with the Area Epidemiologist to revise the guidelines which resulted in strengthening the disease investigation process by increasing of staff competency, readiness, and response.

METHODS

Beginning in March 2013 meetings were held with DEHS staff and the epidemiologist to review current guidelines and discuss how to improve the disease investigation process. In May 2013 DEHS staff was trained on disease surveillance and major food pathogens by the epidemiologist, the Director of the Communicable Disease Division, and the Oklahoma State Department of Health (OSDH). The training included a review on the Public Health Investigation and Disease Detection of Oklahoma (PHIDDO) database that is used for disease surveillance throughout the state. In November 2013 DEHS staff participated in a disease outbreak table top exercise with the Epi-Response Team (ERT) to assess changes in readiness and response capabilities.

RESULTS

1. The communicable disease control and epidemiology guidelines were revised to coordinate efforts and outline the responsibilities of the Epidemiologist, the Epi-Response Teams (ERTs), and the Oklahoma State Department of Health's Acute Disease Division.
2. Staff competencies increased as a direct result of DEHS training on epidemiology processes and improved communication with public health and state acute disease colleagues. This was confirmed by a successful table top exercise.
3. Access to real time outbreak data was improved through DEHS staff knowledge of and access to the OSDH PHIDDO system data (directly or via the Area Epidemiologist).
4. Strengths and weaknesses were identified in the existing DEHS guideline for disease investigation processes.

DISCUSSION

Through this process, DEHS staff identified the following:

- There is a need to inform tribal healthcare systems that receive direct DEHS services about the revised DEHS guidelines.
- Ongoing communication with tribes is imperative in providing disease outbreak response.
- Pre-coordination of services and resources between the service units and the state public health laboratories is important.
- There is a need to identify and discuss how IHS and tribal DEHS programs might share resources to collaborate and respond to disease outbreaks.
- ERTs are scalable to meet the needs of the outbreak or event.

CONCLUSIONS/RECOMMENDATIONS

In conclusion, we recommend the following:

1. ERTs should be developed at the Service Unit and Area Office levels if they currently do not exist. Existing teams should review guidelines and ensure staff is ready to respond if needed.
2. The ERT structure and functionality be reviewed and updated each year.
3. Guidance should be provided to service units by the IHS Area Office on implementation, updating and the use of ERTs in the field.

ANIMAL CONTROL PROGRAM DEVELOPMENT AND IMPACT ON VECTOR/ZOONOTIC DISEASE PREVENTION

S. PIONTKOWSKI, J. VELASCOSOLTERO, G. CARROLL, K. HUSTEDT, B. WITTRY

PHOENIX AREA

INTRODUCTION

Animal control programs (ACPs) can be taken for granted in places where they exist. The public tends to notice their importance in places where they do not exist or where their implementation is in their infancy. Three tribes in Eastern Arizona were in different stages of developing ACPs. This poster will highlight factors to consider with ACP development and showcase one ACP with public health implications.

DISCUSSION

ACP Development Factors to Consider

1. What is the level of need for an ACP?
   - Are services currently available?
   - How many complaints received?
   - Are there injury prevention (e.g. animal bites) implications?
   - Are there disease prevention (e.g. rabies, Rocky Mountain spotted fever) benefits?
   - Are free-roaming dogs a problem?1
2. Who are the key partners/stakeholders?
   - Police Dept.
   - Game & Fish
   - Health Dept.
   - Housing
   - Public works/waste mgmt.
   - Veterinary Services
   - Community Health Representatives (on/off reservation)
   - Public Health Nurses
   - Neighboring jurisdictions (e.g. county rabies control)
   - Legal Dept.
3. What is the status of an animal control ordinance?
   - Does it exist or does one need to be created?
   - Are there enforcement issues?
   - Does existing ordinance need revisions?
4. What level of service will be provided (e.g. animal patrol/ collection, shelter, euthanasia, adoption)?
5. What funding sources are available?
6. What tribal program will manage the ACP?
7. Where will base of operations be housed? (Police Department or Health Department)
8. Will there be a shelter or can ACP contract certain services off reservation?
9. What are the equipment & training needs (vehicles, catch poles)?
10. How many Animal Control Officers (ACOs) are needed to meet program goals?

RESULTS

One Tribe's Experience:

ACP History

1979 – Need for ACP documented (87% in favor)

2000 – ACO hired

2003 – ACP moved from Police Department to Health Department AC ordinance background

1963 – Ordinance passed

1998 – Resolution authorizes euthanization

1999 – Ordinance amended to include rabies control and impoundment

2000 – Inter-Governmental Agreement with County rabies control program

2005 – Ordinance revised; comprehensive and operated from Health Department

CONCLUSION

ACP impacts

- Dogs transported off reservation to contract facility (~ 5-30 per month)
- Spay/neuter clinics conducted through volunteer organization
- Assist local EHS with animal bite investigations, rabies specimen submittals, tribally operated program authorized to handle AC issues
- Allowed for greater involvement & tribal capacity to respond to tickborne disease outbreak
- Conducted special studies; one study identified effective prevention strategies
- Implemented disease prevention interventions

LESSONS LEARNED

- Long term project, program development does not occur overnight
- Be patient and persistent (if initial development attempts are unsuccessful)
- Building tribally operated ACPs has greatest payout potential from investment
- Partnerships are vital for success
- Communicate program success to Tribal leadership

Healthy Homes

EH issues associated with housing on tribal lands present an ever-increasing set of complex challenges to be addressed. A few examples of EH related issues of concern are as follows: lead exposure, asbestos exposure, mold, disease vectors, lack of potable water, radon gas, solid and liquid waste disposal, injuries (e.g., fires, electrocution, and slips/trips/falls), chronic chemical exposures, and asthma triggers.

Many programs focus on capacity building and education related to reducing asthma attack rates, mold and moisture problems, chemical exposure, and other events that are documented through health surveillance systems and through a home inspection program. Home inspections identify threats to the health of occupants. DEHS staff focus on identifying and eliminating risk factors related to fire safety, asthma triggers, lead-based paint, and chemical exposure, as well as chronic and acute exposure to mold and moisture. Projects with an emphasis on healthy homes conducted in 2013 can be found on the following pages.

ASSISTING FEMA WITH FLOOD RESPONSE IN THE MESKWAKI NATION, GREAT PLAINS AREA

LCDR MICHAEL REED, DISTRICT ENVIRONMENTAL HEALTH OFFICER

INTRODUCTION

On May 29th, 2013, the Meskwaki Nation experienced rainfall and flash floods that resulted in substantial impact to the Sac and Fox Settlement near Tama, Iowa. OEHE staff assisted the tribe and the Federal Emergency Management Agency (FEMA) with completion of preliminary damage assessments. They helped FEMA with characterization of post flood conditions and assisted with development of an initial recovery plan.

METHODS

FEMA scheduled preliminary assessments over a 24 hour period. Home damage assessments were completed at three homes that had the most significant damage. Assessments targeted access, extent of damage to structures, water and wastewater systems, roads, and community utility infrastructure.

Tribal entities representing the health clinic, housing, utilities, business enterprises, environmental protection program, and an organic farm, worked together to identify issues that impacted community health during recovery. Agencies identified:

- actions underway
- gaps in resources
- a plan of action

RESULTS

23 homes, roads, tribal utilities, and other infrastructure were impacted by the event and residents were displaced. Impact to each of the sites varied, however major issues included road inaccessibility, water intrusion, and utility outages. Access to the water system provided a supply of potable water, however several homes had standing water over septic leech fields making water usage impractical. Fuel and electrical connections were severed at numerous homes. Crawl space flooding

impacted radon mitigation systems, heating recovery and ventilation systems, and structural components. High water washed out driveways, making them impassable. The Pow Wow grounds were underwater making upcoming cultural events uncertain.

DISCUSSION

OEHE was able to utilize their expertise to assist FEMA in characterizing the extent of the flood impact. They were able to contribute to the tribe's recovery planning efforts. Technical expertise was provided to restore utilities to full capacity and ensure acceptable EH conditions prior to tribal members returning to their homes.

CONCLUSIONS/RECOMMENDATIONS

Damage assessment and recovery planning efforts benefited greatly from the multi-agency approach taken during the flood response. Public health was the primary consideration and focus of all entities involved. Information sharing ensured IHS leadership maintained situational awareness and was able to provide direction to meet the public health needs of the Meskwaki Nation. Key pieces of equipment used during the response event were digital cameras and moisture meters, which helped to identify water damaged building components that appeared to be unaffected but were actually significantly impacted.

ASTHMA MANAGEMENT QUALITY IMPROVEMENT PROJECT IN THE PORTLAND AREA

S. BLACKSHEAR, R.S.; J. FOLLANSBEE, R.N.; S. NYE, PHARMD.; S. RICHARDS, FNP; AND M. WOMACK, PA-C

INTRODUCTION

The Washington Department of Health reports that American Indians/ Alaska Natives have a higher prevalence of asthma than the general population. The Yakama Service Unit in Toppenish, WA is making an organized, multi-disciplined effort to prevent and control asthma in the population it serves by integrating primary medical care and environmental public health.

METHODS

Patients who present to the clinic with moderate to severe asthma and are not controlling with prescription therapy are referred to the environmental health program by the clinician or the Pharmacy's Asthma Management Program for a home assessment. The appraisal uses an environmental assessment tool that addresses home, work, hobbies, lifestyle, and medication use. The patient is provided a copy of the recommendations and is offered the opportunity to participate in an expanded home visit program. The expanded program includes at least three home visits in six months, counseling in medication and environmental modification, and incentive supplies such as mattress and pillow covers, green cleaning supplies, and HEPA filters for air conditioner. The supplies are known interventions that address common asthma triggers found in the home. The assessment is entered into the patient's electronic health record for review by the provider to assist with focused patient education and symptom evaluation. Surveillance is conducted on usage of the interventions and impacts on the patient's asthma symptoms.

RESULTS

Five homes were offered assessments, with six patients participating. Two homes with one patient each completed initial home assessments. One home had environmental issues that needed to be addressed

and another home needed lifestyle modifications. Other patients refused services or were contacted and never replied.

DISCUSSION

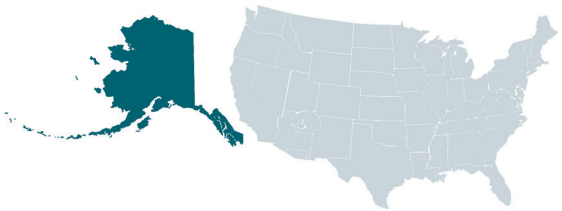
The project has the potential to serve as a model for adoption and replication in other IHS Areas. Effective January 1, 2014, the CMS is changing Medicaid regulations and the new rule will allow Medicaid programs to reimburse for preventive services provided by non-clinical professionals as long as the services are recommended by a physician or licensed practitioner. The IHS is working with the EPA, HRSA, CMS, and States to determine the licensing and standards for professionals to provide the services and what preventive services will be covered. There has been an unintentional benefit of addressing other environmental hazards observed during the assessment and mobilizing community partners to address these hazards. An example would be - solid waste accumulated outside one residence was addressed by the Tribal Solid Waste Program at no cost to the home owner. The Pharmacy's Asthma Management Program will expand to include patients 5 years to 12 years old and we expect participation will increase dramatically.

CONCLUSIONS/RECOMMENDATIONS

Environmental health assessments and interventions can increase the number of asthma symptom free days. Expanded home visits encourage lifestyle and environmental modifications which can reduce asthma attacks that require costly clinical or emergency room visits.

Area
DEHS Programs

Alaska

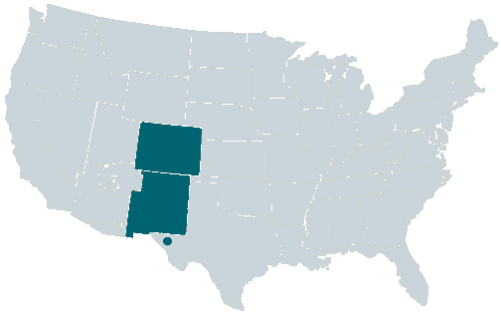


EH programs in the Alaska Area are all tribally managed under the authority of the Indian Self-Determination and Education Assistance Act (Public Law 93-638), as amended. Seven regionally based EH programs serve a specific geographical area. These organizations include the South East Alaska Regional Health Consortium (Sitka), Bristol Bay Area Health Corporation (Dillingham), the Yukon-Kuskokwim Health Corporation (Bethel), the Norton Sound Health Corporation (Nome), the Maniilaq Association (Kotzebue), the Tanana Chiefs Conference (Fairbanks), and the Alaska Native Tribal Health Consortium (ANTHC, of Anchorage).

Typical services include assistance related to water, sewer, solid waste, air, and vector control activities. Other services include disease outbreak investigations, support for community-based clinics related to infection control and safety, and IP efforts. Additionally, several of the tribal EH programs run State of Alaska certified drinking water laboratories that assist communities in ensuring the safety of their drinking water and ensuring compliance with state and federal regulations.

The regional EH programs, together with ANTHC, offer communities and tribes a comprehensive set of environmental health services that protect and enhance the well- being AI/AN.

Albuquerque



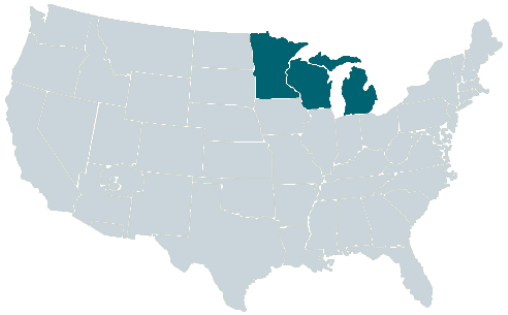
The Albuquerque Area DEHS program serves 27 federally recognized tribes in Colorado, New Mexico, Texas, and Utah. The Area's service population of over 100,000 members comprises 20 Pueblos, 3 Navajo Nation Chapters, 2 Apache Reservations, and 2 Ute Reservations. The Area's EHS staff is stationed at the Area Office and six Service Units. Professional positions include the Director of DEHS, District Sanitarians, Service Unit Environmental Health Specialists, Injury Prevention Specialist, EHS/Safety Officer, Industrial Hygiene and Safety Manager, IEH Specialist, and Environmental Health Technicians.

Albuquerque Area DEHS is responsible for a wide range of general EH services, including surveys, investigations, consultations, assessments, and technical assistance. EHS staff provides trainings and community outreach on a broad range of topics. Additional services are provided in Institutional Environmental Health (IEH) and Injury Prevention (IP). The IEH Manager serves as the Area Emergency Management Point of Contact, providing needed coordination in emergency situations. Staff often participates in national program work, as well as working in partnership with many tribal, federal, county and local groups.

Albuquerque Area implements creative methods to provide high quality services to their tribal partners. Albuquerque Area is committed to program excellence and staff expertise. With consideration of Tribal needs and priorities, extensive long range planning is conducted to ensure the provision of necessary and timely services.

The Albuquerque Area DEHS Program strength is in its staff's commitment to continuous program and self-improvement, collaborative partnerships, and innovation in providing quality services to Tribes in a myriad of programmatic areas.

Bemidji

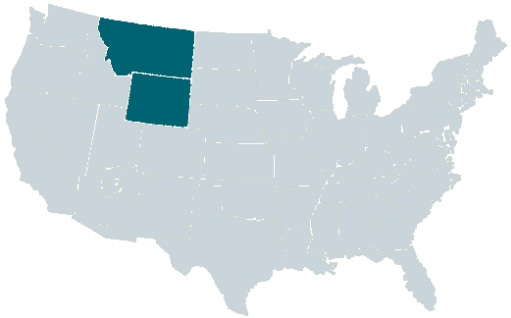


The Bemidji Area serves 34 tribes occupying an area covering 5,183 square miles. Approximately 100,000 American Indians live within the service area covering three states: Michigan, Minnesota, and Wisconsin. There are two district offices within the Area: Minnesota (Bemidji) and Rhinelander, Wisconsin. Staff includes six field EHS, two District EHS, one DEHS Director, and one Area IEH Specialist. DEHS staff provide field services to 19 tribes; tribal EHSs provide field services to 15 tribes.

The Bemidji Area provides EH services to improve food safety; solid and liquid waste management; water quality; hazard communication; epidemiology; vector control; recreation/celebration sanitation; indoor/outdoor air quality; home sanitation and safety; HS, daycare, and school issues; and training. The DEHS is also responsible for specialized services in IP and IEH.

The Bemidji Area emphasizes: (1) preventing pollution and reducing resource depletion, and (2) partnering with tribes in building community resilience by localizing food and energy systems. These "sustainability" aspects of EH have become a priority because of scientific consensus. Bemidji Area DEHS realizes a future scenario in which climate change, environmental degradation, pollution, and resource depletion will significantly impact the public's health and, the practice of environmental public health. Because Bemidji believes this will become one of the greatest challenges facing the future of their DEHS Program – and tribal communities – they strive for a more holistic practice of environmental public health.

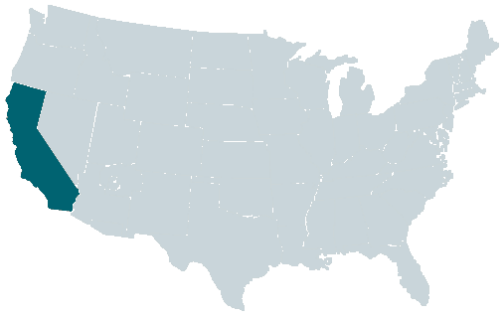
Billings



The Billings Area DEHS serves 9 tribes (totaling 70,000 people) on 8 reservations throughout Montana and Wyoming. Fully staffed, the Billings Area DEHS Program consists of the DEHS Director, an Area staff EHS, an IEH specialist and an IP specialist. The Billings Area has 3 direct service tribes, 4 tribes that have contracted the DEHS program and 2 tribes that have compacted all of the IHS services. Field staff in the area includes 3 federal EHS, 5 tribal EHS and 2 tribal EHTs.

Although the tribes and reservations of Montana and Wyoming are diverse in their cultures, landscapes and communities, the Billings Area DEHS program seeks to provide comprehensive services that address EH, including the 2 specialty areas of IP and IEH. The focus of the program includes food safety, vector control, health and safety at the schools, HS, IHS hospitals and clinics and other community facilities, technical assistance to the hospital and clinics safety officers, and prevention of injuries from falls, motor vehicle crashes, assaults and suicides. Implementation of the DEHS program consists of technical assistance, training, health and safety inspections, and communication and coordination between the tribes, other government agencies, and IHS.

California



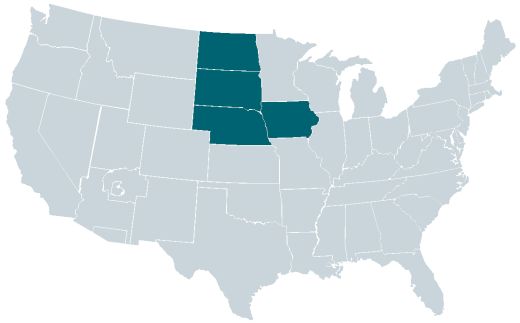
The California Area serves approximately 104 federally recognized tribal governments representing a service population of 86,959 persons, in over 1,550 facilities, in the State of California. Staff provides services to tribes at duty sites in the Area Office, two district offices, and one field office. All DEHS staff have a bachelor's degree in EH or a related discipline.

California Area DEHS addresses a variety of issues, including, but not limited to, food sanitation, hazardous waste, home sanitation and safety, indoor air quality, solid waste management, vector control, wastewater, and water quality. The services provided to California American Indian Tribes consist of investigations, surveys, technical assistance, training, and sampling and testing.

Specialists in IP provide tribes with additional services that aim to address community injuries. The mission of the program is to decrease the incidence of severe injuries and death to the lowest possible level and increase the capacity of tribes to address their injury problems. The program currently provides technical assistance to tribes with injury data collection, development and implementation of interventions or projects based on best practices, and training.

IEH specialists are responsible for providing additional services to tribal health programs and community institutional facilities such as HS Centers, daycare centers, schools, youth facilities, and substance abuse centers. The services currently provided by this program consist of training, safety program development, accreditation support, radiation protection, risk assessments, industrial hygiene, policy development, and OSHA compliance.

Great Plains

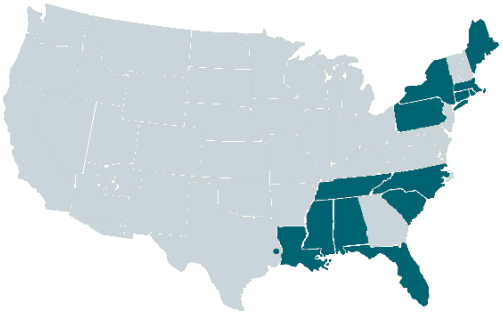


The Great Plains Area IHS encompasses 18 tribes in 4 states (Iowa, Nebraska, North Dakota, and South Dakota) totaling 281,459 square miles. The Great Plains Area is the fifth largest in IHS. DEHS is one of three divisions (DEHS, DSFC, and Facilities Management) within the Great Plains Area OEHE. The Great Plains Area DEHS comprises career tribal employees, federal civil service, and PHS Commissioned Corps Officers.

At the Area level, Great Plains has a DEHS Director, an Area IP Specialist, and a Staff Environmental Health Specialist. In addition the DEHS program funds an IEH Officer which is managed through the Deputy Director of Field Operations and works closely with the corporate compliance program. At the At the District level, the DEHS program has three staff which are located in Minot, North Dakota; Pierre, South Dakota; and Sioux City, Iowa. At the field level, the program has 14 offices with Field EHS and/or IP Specialists. Seven of the field offices are contracted programs and managed by the tribe. The other seven offices are direct service programs and staffed with Civil Service or PHS Commissioned Corps staff. DEHS District and Field staff are responsible for providing environmental health surveys of the facilities listed in the WebEHRS database; technical consultation & trainings to tribal programs and beneficiaries; and carrying out epidemiological investigations as necessary. The remaining facility survey work is covered by the IEH Officer.

District and Field staff spend approximately 60% of their time working on general EH issues and 40% of their time engaged in Injury Prevention activities. Injuries have had a significant negative impact on the health of Great Plains Area communities and as a result, Injury Prevention is a primary focus for the DEHS program.

Nashville

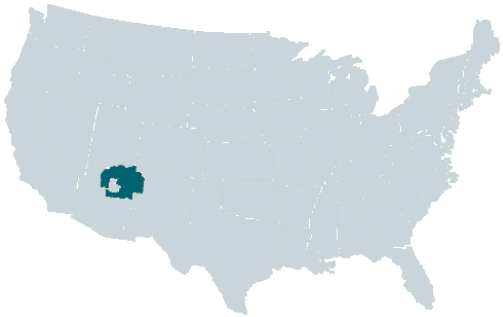


Nashville Area serves 29 tribes and an AI/AN population of approximately 48,000. Thirteen states are covered: Alabama, Connecticut, Florida, Louisiana, Maine, Massachusetts, Mississippi, New York, North Carolina, Pennsylvania, Rhode Island, South Carolina, and Texas. Staff includes one Director and one EHS.

The Nashville Area DEHS provides EH training courses that train both federal and tribal employees in the FDA Food Code, hazard communications/bloodborne pathogens, and WebCident. Annual surveys of numerous facilities, including casinos, hotels, pools, food service venues, and healthcare facilities are also completed.

The Area IEH specialist is part of a comprehensive team that conducts The Joint Commission (TJC) and Accreditation Association of Ambulatory Health Care (AAAHC) mock surveys to ensure federal facilities are ready for accreditation. All Area federal facilities except the newest Service Unit have received and maintained accreditation. This Service Unit will be scheduling their first accreditation survey soon. The EHS is the Project Manager for IP grants.

Navajo

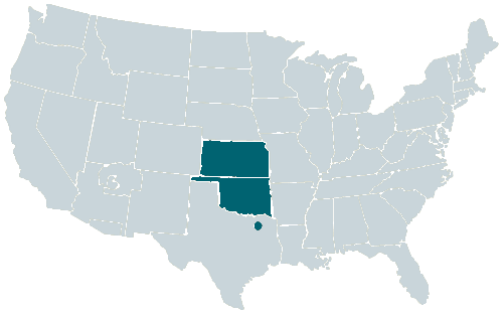


The Navajo Area DEHS serves tribes in portions of Arizona, New Mexico, and Utah and is responsible for services to approximately 250,000 members of the Navajo Nation and Southern Band of San Juan Paiutes. The Navajo Nation is the largest Indian Tribe in the United States. It has the largest reservation, which encompasses more than 25,000 square miles in northeast Arizona, northwest New Mexico, and southern Utah, with three satellite locations in central New Mexico.

DEHS staff members plan and implement an EH and safety program with emphasis on food protection, prevention of motor vehicle crashes and falls, IEH, emergency preparedness, water and sewer sanitation, and prevention of zoonotic diseases including Plague, Rabies, Hantavirus, and West Nile Virus. DEHS staff also provides IP training, food handler courses, and communicable disease prevention training to community and facility staff. In addition to field responsibilities, staff members participate on various facility and community committees. In addition to a comprehensive EH program, the Navajo Area DEHS offers specialized services provided by the IP program and by the Division of Occupational Health and Safety Management. The program is centered at the Navajo Area Office located in Window Rock, Arizona; three district offices located in Fort Defiance, Arizona, Shiprock, New Mexico, and Gallup, New Mexico; and three service unit field offices located in Kayenta, Arizona, Many Farms, Arizona, and Crownpoint, New Mexico. The professional, technical, and clerical staff members work as a team to promote a healthy environment across the Navajo Nation.

Part of the Navajo Area DEHS Food Program is implemented by the Navajo Tribe, which operates the Navajo Division of Health in Window Rock, Arizona. The Navajo Nation provides inspection services, food handler training, and enforcement action for retail and itinerant food services on the reservation.

Oklahoma City



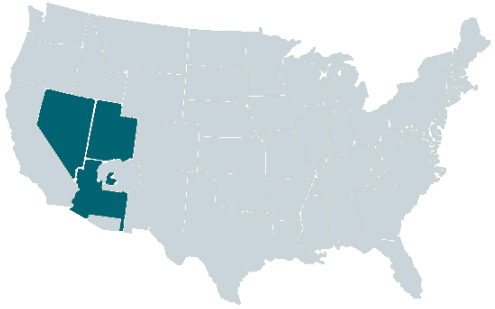
The Oklahoma City Area serves 43 tribes with a service population of nearly 330,000 AI/AN people. The service area covers the States of Kansas, Oklahoma, and Texas. The DEHS has district offices in Okmulgee and Shawnee, Oklahoma, and four field offices located in Oklahoma (Clinton, Lawton, Miami, and Pawnee) and one in Holton, Kansas.

The Area's workforce includes ten EHS that provide EH services that address elements such as food sanitation; solid and liquid waste management; water quality; hazard communication; epidemiology; vector control; emergency response; recreation/celebration sanitation; indoor/outdoor air quality; home sanitation and safety; HS, daycare, and school issues; and training.

The DEHS is also responsible for specialized services in IP and IEH. The IP program reduces the incidence and severity of injury among American Indians. Program objectives are met by conducting injury surveillance surveys and by identifying problem areas that can be solved through direct intervention and through community activities. The IEH program assists healthcare facilities in providing a safe environment for patients, visitors, and staff.

The IEH Specialist provides direct technical assistance to safety committees, infection control committees, facilities management, and others. In addition, the IEH Specialist is responsible for conducting annual radiation protection surveys of all x-ray equipment to ensure that there is no unnecessary exposure to radiation and for conducting other industrial hygiene activities in those facilities.

Phoenix



The Phoenix Area serves 46 tribes/tribal organizations with a combined population of nearly 150,000 and over 2,000 facilities in 4 states (Arizona, California, Nevada, and Utah). A cadre of EHS accomplishes the work of the DEHS. The staff is located in the Area Office; three District Offices; and nine Service Units/ Field Offices.

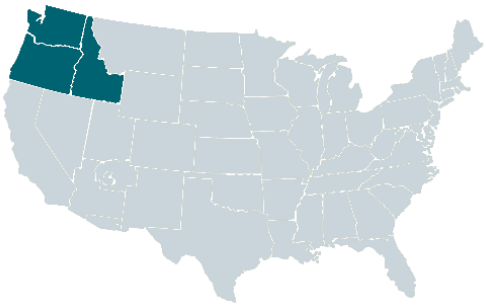
DEHS provides a breadth of technical and consultation services that include facility hazard assessments, policy development, investigations, and training. The diverse technical scope of the program includes food sanitation, vector control, water quality, waste management, air quality, infection control, and occupational safety. Recent staff work has led to accomplishments in response to a RMSF epidemic, reduction in lead poisoning risk among school children, and establishment of a comprehensive tribal animal control program. Specialized services are provided in IEH and IP.

The IEH specialists within the program provide industrial hygiene services, accreditation consultation, and a variety of safety training to the IHS and tribal healthcare facilities. The program values close mentorship of new Safety Officers on fire safety, hazardous materials, security, and safety program management.

The IEH team also provides technical support to DEHS staff consulting on community institutions such as childcare centers, correctional facilities, and schools. As the Phoenix Area Emergency Management Point of Contact, the program ties tribal communities and IHS healthcare facilities into the resources of the national response framework and coordinates a network-wide response to local disasters (i.e., flooding, forest fires, and mass vaccination).

The IP specialists within the program place a priority on epidemiology, training, partnership building, and the development of proven intervention strategies to reduce the risk of death and disability from injuries. Staff utilizes their public health expertise in the prevention of both unintentional injury (i.e., motor vehicle crashes and falls) and intentional injury (i.e., suicide and assaults). Mini-projects, funded through the IP Program, currently support suicide prevention initiatives and elder fall prevention projects. In addition to technical assistance, close mentoring is provided to three Tribal IP Programs funded by a multi-year IHS cooperative agreement.

Portland

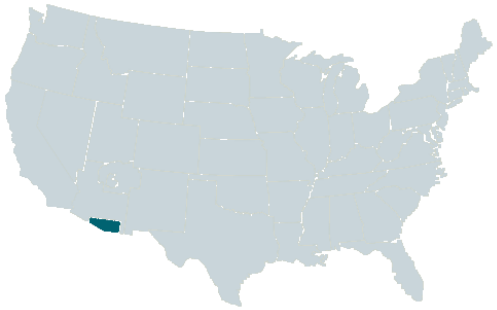


The Portland Area provides a health system for an estimated 150,000 American Indian residents of the 43 federally recognized tribes located in Idaho, Oregon, and Washington. Health delivery services are provided by a mix of health centers, health stations, preventive health programs, and urban programs.

The Portland Area DEHS works in partnership with tribes and other organizations/agencies to implement the following: monitor and assess environmental hazards and conditions in AI/AN homes, institutions, and communities; educate and inform residents about EH issues; develop policies for addressing EH and injury concerns; evaluate programs, plans, and projects; and conduct projects and studies to determine best practices and solutions to environmental public health problems. The outcomes and impacts of these services include controlling and preventing environmentally related disease and injury, and improving personal and overall community wellness. The Portland Area DEHS Program has enhanced services in Pesticide Management and Underground Storage Tank/ Leaking Underground Storage Tank Monitoring through interagency agreements with EPA Region X.

In the Portland Area, many tribes have assumed all or a portion of the DEHS Program under the authority of the Indian Self-Determination and Education Assistance Act (Public Law 93-638, as amended). The direct service tribes are provided services through a DEHS Director and IEH Specialist at the Area Office as well as EHS positions in District and Field Offices. This organizational structure maximizes the delivery of services to 24 tribes and IP to 22 tribes. The Portland Area DEHS Director also serves as the Area Emergency Management Coordinator, providing services in emergency preparedness and response, continuity of operations planning, deployment coordination, and physical security.

Tucson



The Tucson Area serves two tribes: The Tohono O'odham Nation and the Pascua Yaqui Tribe of Arizona. The Tohono O'odham are predominately adirect service, and no EH activities have been contracted. The Pascua Yaqui have compacted and contracted the majority of their services, a notable exception being EH Services.

Casino and hotel operations are the economic development engines for both tribes and DEHS provides staff training, education, and food service surveys for these and other tribal facilities. DEHS provides EH services in an effort to raise the tribes' health status to the highest level, utilizing the Ten Essential Public Health Services and the Mission Statement as guiding ideals.

CAPT Brian Hroch samples household items for lead content

Looking Ahead into 2014

For 2014, the DEHS looks forward to accomplishing the following:

- Submit the third proposed package of recommendations for WebEHRS improvements to the contractor for implementation;
- Begin the process of modifying eSurveys and the program elements features in WebEHRS so they are more useful;
- Complete the Economic Development White Paper and distribute nationally;
- Complete phase one of the redesign of the IHS Injury Prevention Program Development Fellowship curriculum;
- By the end of 2014, realize a 2% improvement nationally in food risk factor deficiencies as compared to the risk factor deficiencies in 2011;
- By the end of 2014, realize a 5% increase nationally in the seatbelt use rate in Tribal Injury Prevention Cooperative Agreement sites by 5% over the use rate in 2011.

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Phoenix, AZ 85004
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1414 NW Northrup Street, Suite 800
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The Division of Environmental Health Services

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INDIAN HEALTH SERVICE
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

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Environmental Health Services
Healthy Environments = Healthy People