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

The Environmental Health Services Program

–of the–

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Annual Report **2012**

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 2012 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: This year's cover photo is the winner of the 2012 Division of Environmental Health Services photo contest. LTJG Brandon Parker collects information from a resident who requested help with evaluation of standing water in his back yard. This turned out to be a septic system failure; Brandon was able to coordinate services for this gentleman the following day.

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 2012. This report covers activities and projects conducted by Indian Health Service (IHS) and Tribal/Corporation environmental health (EH) 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 IHS 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 (IP) and institutional environmental health (IEH) 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. The commercial web-based environmental health reporting system (WebEHRS) was fully implemented this year. A "train the trainer" course was delivered and Areas began training their staff and tribal staff in the basics of using the new system. We continued to enhance capacity of tribal injury prevention programs through the Tribal Injury Prevention Cooperative Agreement Program (TIPCAP) and the Ride Safe and Sleep Safe Programs. This was the final year for the Federal Emergency Management Administration (FEMA) interagency agreement with DEHS. After 18 years, FEMA was unable to continue their financial support of the IHS Sleep Safe Program, intended to reduce fire and burn injuries in children enrolled in tribal Head Start (HS) programs. The IHS injury prevention program will continue funding current sites until the remaining funds are expended. We continued to improve communication with our stakeholders through a revision of the DEHS website and additions of the final informational products from Vision Element Team Five to the website. Vision Element Team Three completed their draft of Part Three Chapter 11 of the Indian Health Manual (IHM), "Environmental Health", and it was submitted to IHS Management Policy and Internal Control Staff, where it was sent out for public review and comment. The final draft remained under Agency review through 2012. The assessment tool used to measure IEH Residency participants' competencies was revised and applied to the two current Residents this year. The assessment tool will be further refined for use outside the Residency through the new Workforce Development Vision Element Team. Area Reviews were completed for California and Portland; however the final reports were not completed during this year. The Department of Health and Human Services (DHHS)/Health Canada Memorandum of Understanding (MOU) came to an end this year, so the U.S. – Canada Environmental Health Officer Staff Exchange is no longer supported.

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

Table of Contents

The Environmental Health Services Program Annual Report 2012

List of Acronyms

AI/AN: . . . . . American Indian/Alaska Native
ANTHC: . . . . . Alaska Native Tribal Health Consortium
BIA:. . . . . Bureau of Indian Affairs
BYPS: . . . . . Bully-Proofing Your School
CA-MRSA: . . . . . .Community Acquired Methicillin-Resistant Staphylococcus aureus
CDC: . . . . . Centers for Disease Control and Prevention
CDPH: . . . . . California Department of Public Health
CPSC: . . . . . .Consumer Product Safety Commission
CRIHB: . . . . . .California Rural Indian Health Board
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 Support 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
IEH: . . . . . Institutional Environmental Health
IHM: . . . . . Indian Health Manual
IHS: . . . . . Indian Health Service
IP:. . . . . .Injury Prevention
LNF: . . . . . Level of Need Funded
MOU:. . . . . Memorandum of Understanding
MPH:. . . . . Masters of Public Health
MRSA:. . . . . .Methicillin-resistant Staphylococcus aureus
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 Workers' Compensation Programs
PBIS:. . . . . Positive Behavior Interventions and Supports
PHS: . . . . . Public Health Service
REHS/RS: . . . . . Registered Environmental Health Specialist/Registered Sanitarian
RMSF:. . . . . Rocky Mountain Spotted Fever
RMW: . . . . . Remote Maintenance Worker
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
WNV:. . . . . West Nile Virus
YKHC: . . . . . Yukon-Kuskokwim Health Corporation

The Albuquerque Area DEHS Online Food Handler Training project team receive recognition as finalists in Round 5 of HHS Innovates. Pictured (left to right) Robert Bates, District EHS; LCDR Katie Hubbard, Service Unit EHS; Secretary Health and Human Services (HHS), Kathleen Sebelius; CDR Jeff Dickson, District EHS; Debra Grabowski, EHS; and Deputy Secretary HHS, Bill Corr.

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).

LTJG Mistin Ray performs a negative pressure test at a local health care facility.

Program Structure

True to its historical beginnings, the DEHS is a field-based 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 2012, the national DEHS program consisted of a total of 289 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 similarly staffed. In 2012, the DEHS HQ staff consisted of:

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

Program Resources

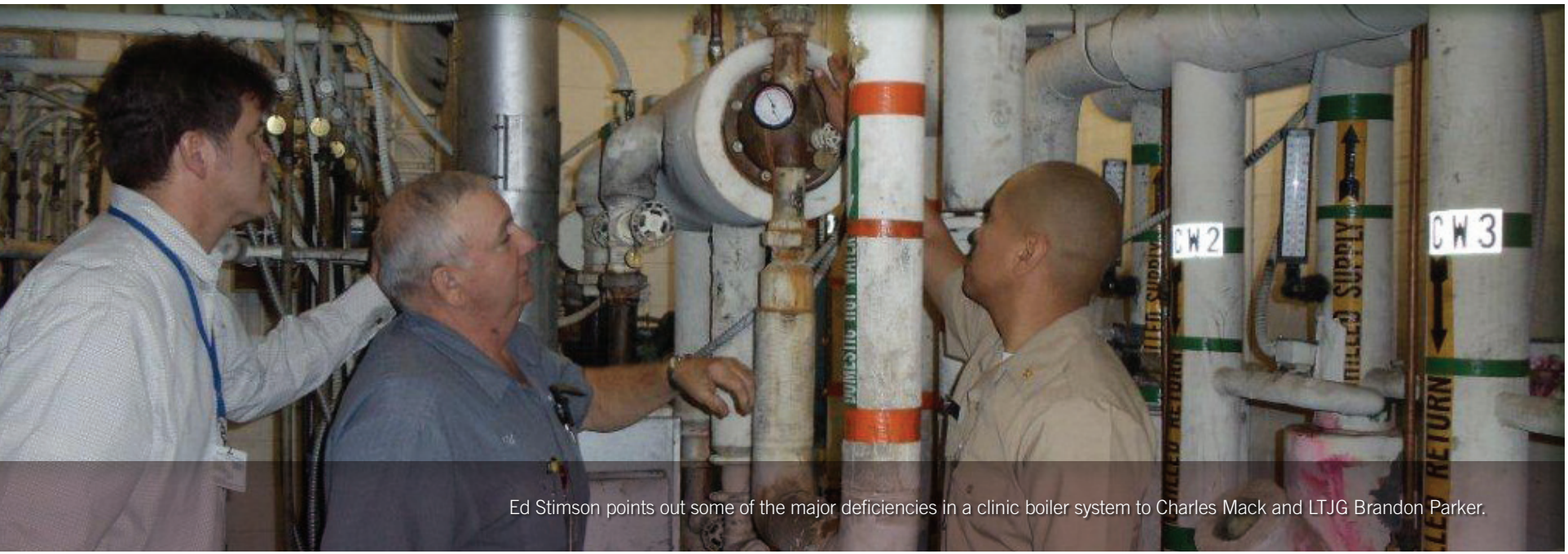
The current budget of the DEHS Program is approximately $26.8 million; this funding is derived from three primary sources: congressional allocation; the IHS Director's Initiatives; and IP budget enhancements (see Table 1). DEHS funds support a wide variety of activities, including IP, IEH, safety management, 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 2012, and based on the workload-based Resource Requirement Methodology (RRM), the DEHS share of the EHSA budget was approximately 34%.

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

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.



Ed Stimson points out some of the major deficiencies in a clinic boiler system to Charles Mack and LTJG Brandon Parker.

Figure 1, below, depicts a historical comparison of the workload-based RRM versus the distribution of Program funds from 2001 to 2011.

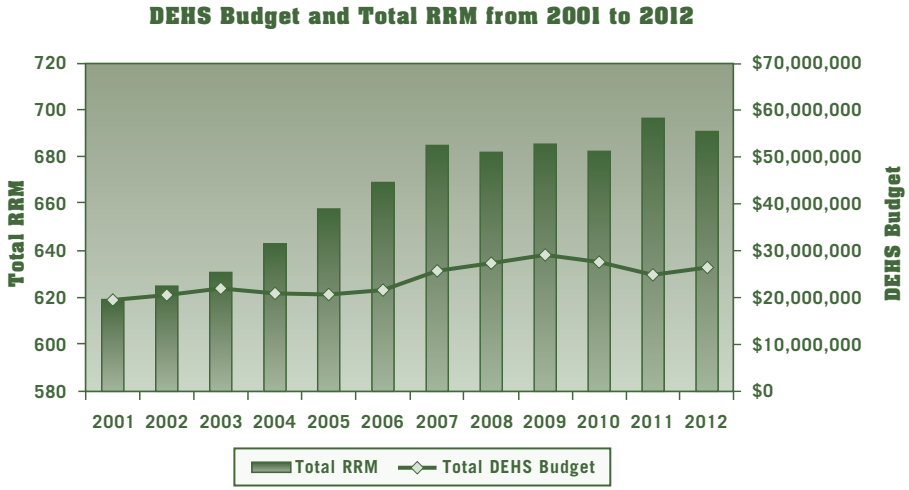


Figure 1: RRM (workload) vs. actual DEHS funding from 2001 to 2012

Table 2 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 2012

Level of Need Funded (LNF) 2012						
Area	# Tribal & IHS Staff*	RRM	%LNF	Federal Staff	Tribal Staff	Total
Aberdeen	31	57.9	53.5%	18	13	31
Alaska	46	88.5	52.0%	0	46	46
Albuquerque	20	37.1	53.9%	14	6	20
Bemidji	25	50.5	49.5%	9	16	25
Billings	13	33.4	38.9%	4	9	13
California	12	48.8	24.6%	6	6	12
Nashville	19	44.5	42.7%	2	17	19
Navajo	46	110.8	41.5%	33	13	46
Oklahoma	27	87.9	30.7%	12	15	27
Phoenix	29	68.0	42.6%	19	10	29
Portland	15	50.3	29.8%	8	7	15
Tucson	4	12.5	32.0%	4	0	4
Total	287	690.2**	41.6%	129	158	287

*Includes tribal staff hired with IHS Cooperative Agreement funds.
**This total is due to rounding.
Note: Staffing numbers reflect calendar year data (CY 2012), and RRM numbers reflect data year data (FY 2012).

As Table 2 shows, the DEHS Program strives to accomplish its tasks at a funding level of 41.6% of the estimated actual need. In order to maximize the utilization of available resources, the DEHS has established interagency agreements with the following federal agencies over the years:

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

George Carroll processes a canine blood sample as part of a Centers for Disease Control and Prevention led Epi-Aid to determine the Rocky Mountain Spotted Fever risk on the Hopi Reservation

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 2012 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 536 training sessions during 2012 on a variety of topics. The Environmental Health Support Center (EHSC) in Albuquerque provided EH program management, IP, topic-specific EH, and IEH courses for a total of 19 classes with 529 attendees. A breakdown of those courses can be found in Table 3, below.

Table 3: EHSC Sponsored Courses, 2012

EHSC Sponsored Courses - Calendar Year 2012					
Course	**Location**	**Number of Attendees**	**Course**	**Location**	**Number of Attendees**
New WebEHRS	Albuquerque, NM	30	Healthcare Safety Accreditation	Rapid City, SD	30
Environmental Health and Engineering Orientation Course	Albuquerque, NM	14	Environmental Health Training in Emergency Response	Rapid City, SD	54
FDA Plan Review	San Diego, CA	25	NFPA 101 – Life Safety Code	Albuquerque, NM	25
Integrated Pest Management (Rocky Mountain Spotted Fever)	Chandler, AZ	78	NFPA 99 – Healthcare Facilities	Albuquerque, NM	42
Healthcare Safety Accreditation	Phoenix, AZ	30	Environmental Effects of Clandestine Meth Labs	Billings, MT	25
Group Facilitation Methods	Phoenix, AZ	20	Injury Prevention Level I	Reno, NV	12
Injury Prevention Level II	Anchorage, AK	14	SAFE Playground Assessment	Billings, MT	25
Integrated Pest Management	Portland, OR	29	Injury Prevention Level I	Anchorage, AK	9
Injury Prevention Level I	Turtle Mountain, ND	20	Injury Prevention Level II	Chandler, AZ	30
SAFE Playground Assessment	Albuquerque, NM	17			
Total					**529**

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 20 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 2012, the DEHS supported 20 student externs.

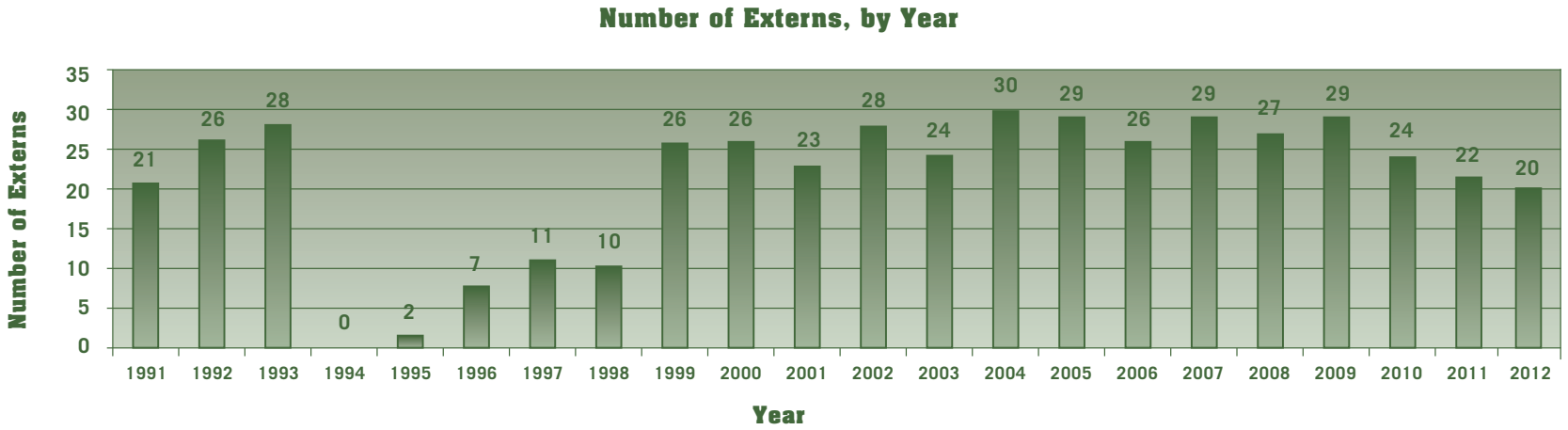


Figure 2: Number of college students participating in the DEHS extern program, by year

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 27 DEHS staff funded by IHS for college courses in 2012. Of the 27, 24 were federal employees and 4 were tribal employees. Staff in 11 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 short courses – and the prior experiences of the participants – the Fellowship offers advanced training in community interventions, 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

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

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

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	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	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	1998	Karen Arviso Gary Carter Casey Crump David Hogner Brad Husberg Karin Knopp James Ludington JoAnn Perank Tish Ramirez Tina Russel
1999	Bruce Chandler Arla Stroop Myrna Buckles Brian Johnson Ryan Hill Twyla "Zoe" Benally Dennis Renville Zahid Samad Tina Samm	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	2002	Christopher W. Allen Jeff Dickson Myla Jensen Dan Kinsey Joseph LaFramboise Shirley Peaches Shelli Stephens-Stidham Sara A. Wagner Mona Zuffante	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
2004	Larry Carlson Timothy P. Duffy Jim Ferguson Hayden R. Hardie Rebekah Hunkup Robert Morones Mark E. Pike Randolph G. Runs After Charles Woodlee	2005	Michelle Begay Mark Brewer Kyla Hagan George Hupp Holly Kostrzewski Elvira Martin Ina Mickelson Stephen Piontkowski John Schmitz	2006*	Lisa Aguerro Sherron Prosser Charlotte Ann Branham Samantha Holmberg Bonita Paddyaker Belinda Aungie Kathey Wilson Helen Garcia-Sisneros Angelita Chee Arturo Calvo	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

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

2008*	Fleurette Brown-Edison	2009*	Sarah-Jean T. Snyder	2011	Martin Stephens	2012*	Chris Chestnut
	Mary Robertson-Begay		Rebecca Morris		Tim Balderrama		Jennifer J. Jordan
	Antoinette R. Short		Laquita F. Fish		Bryan Reed		Jacqueline Kizer
	Amy R. Cozad		Karen M. Ansera		Hillary Strayer		Nicole D. Thunder
	Jason D. Hymer		Pamela A. Michaelson-Gambrell		Lisa Nakagawa		Desta Walker
	Darcy Merchant, Sr.		Dr. Verlee K. White Calfe-Sayler		Jacey McCurtain		Donald B. Williams
	Lyndon Endischee		Bernice Bert		Dustin Joplin		Tina A. Yazzie-Smiley
	Robin Lee		Amanda Parris		Jason Hymer		
	Janelle Trottier		Le Ray Skinner		David Bales		
			Jennifer L. Franks		Molly Madson		
			Annie Phare		Travis Bowser		

* 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 MOU with 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 will generally be 12 months, may or may not require relocation, and additional graduate-level course work may be necessary. 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 2012). They can be found listed in chronological order in Table 5, on the next page.

LT Chris Chestnut conducts a temporary food vendor survey.

Table 5: IEH Residency Graduates

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

Staff recognition is another important aspect of DEHS retention efforts. Table 6, on the next page, shows the distribution of PHS, IHS, and tribal awards presented to DEHS staff during CY 2012.

Table 6: Summary of Awards Received by DEHS Staff in CY 2012

Award Type	AB	AK	AQ	BE	BI	CA	NS	NV	OK	PH	PO	TU	TOTAL
PHS Awards													
Outstanding Service Medal													0
Commendation Medal				1						1			2
PHS Achievement Medal		1		1				3	3	1			9
PHS Citation								3		1			4
Crisis Response Service Award													0
Outstanding Unit Citation				1									1
Unit Commendation						2		1	2	15			20
Isolated Hardship		1	2							1			4
Training Ribbon										1			1
Field Medical Readiness Badge													0
Foreign Duty Award													0
Special Assignment Award								3		1			4
Hazardous Duty													0
Recruitment													0
IHS Area Awards	6		4			1	1	10	1		6	2	31
Civil Service Personnel Awards			16	1				2		1			20
National IHS Awards		1	2										3
Other National Awards			5				1						6
Tribal Awards									1		1		2
TOTAL AWARDS	**6**	**3**	**29**	**4**	**0**	**3**	**2**	**22**	**7**	**22**	**7**	**2**	**107**
% of Staff Receiving Awards													
Federal	NR	NR	27%	44%	NR	50%	50%	NR	NR	58%	NR	50%	
Tribal	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	

NR = No Report

Thirty-six percent (36%) of all DEHS staff, including federal and tribal employees, have master's degrees in Public Health or a related field. Forty-nine percent (49%) of federal staff and twenty-four percent (23%) of tribal staff have this advanced degree. Figure 4 presents a breakout of DEHS staff with master's degrees, by discipline. Seventy-five (75%) of IEH staff have master's degrees. IP Specialists follow with thirty-seven percent (37%) and EHS with twenty-nine percent (29%).

Fifty-five percent (55%) of all DEHS staff are Registered Environmental Health Specialists or Registered Sanitarians (REHS/RS), with sixty-six percent (66%) of federal staff and forty-two percent (42%) of tribal staff registered. Figure 5 summarizes registration according to specialty. Registration is highest in the IEH Program, with sixty-nine percent (69%) of staff registered.

Twenty-four percent (24%) of all DEHS staff have completed the IHS IP Fellowship Program; seventeen percent (17%) are Child Passenger Safety Technicians; and seven percent (7%) have met Food and Drug Administration (FDA) standards to conduct retail food service inspections. Table 7, on the next page, summarizes these and other credentials.

James Dodd performs a food service survey.

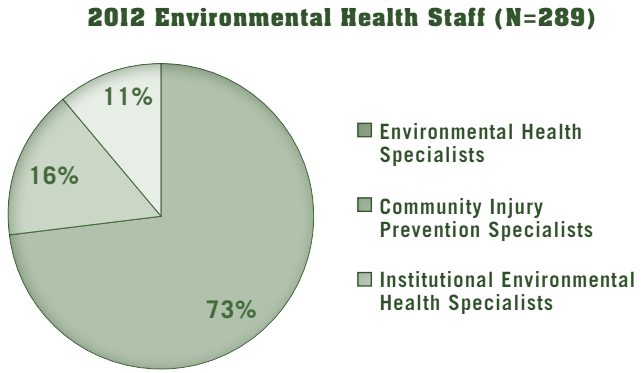


Figure 3: Distribution of DEHS staff within the national program

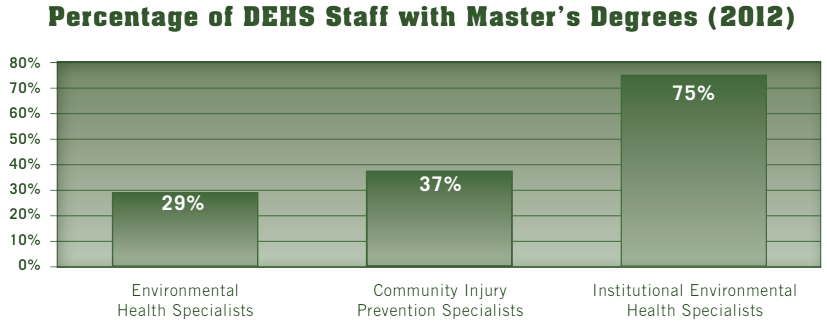


Figure 4: Percentage of DEHS staff with master's degrees

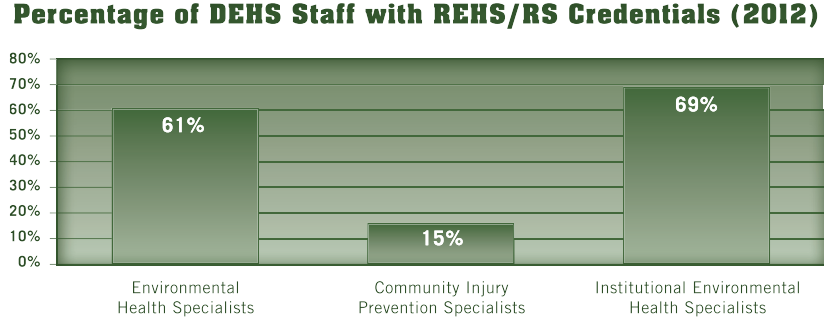


Figure 5: Percentage of DEHS staff with RS or REHS credentials

Table 7: 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*	129	7	23	159	53%
IP Fellow	49	18	5	72	24%
Certified Safety Professional	1	0	2	3	1%
Certified Industrial Hygienist	0	0	4	4	1%
Certified in Infection Control	0	0	0	0	0%
Child Safety Passenger Safety Technician	32	19	0	51	17%
Certified Playground Safety Inspector	16	0	0	16	5%
Certified Radiation Protection Surveyorw	6	1	8	15	5%
Certified Environmental Health Technician	2	0	0	2	1%
Diplomate, American Academy of Sanitarians	4	0	1	5	2%
CHEM**	2	0	3	5	2%
FDA Standard	20	0	1	21	7%
Lead/Asbestos Certification	6	0	6	12	4%
IEH Residency	1	0	12	13	4%

*Only full-time specialists were counted.

**Registered Sanitarian/Registered Environmental Health Specialist/Other State Registrations.

***CHEM = Certificate of Health Care Environmental 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 8, on the next page.

Table 8: EHS of the Year, 1993 to 2012

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

LT Nakagawa performs a food service survey.

Individuals who received Area EHS of the Year (2012) are highlighted below:

- Aberdeen Area, Michael Reed
- Albuquerque Area, Debby Chavez-Bird
- Bemidji Area, Jeffery Conner
- California Area, Lisa Nakagawa
- Oklahoma Area, Dustin Joplin
- Phoenix Area, John Hansen
- Portland Area, Michael Cooney

From the above list of nominees, the selectee for the IHS EHS of the Year (2012) was LT Lisa Nakagawa of the California Area. Her write-up can be found on the next page.

IHS ENVIRONMENTAL HEALTH SPECIALIST OF 2012:

LT LISA NAKAGAWA

INTRODUCTION

The Indian Health Service California Area Office (CAO), Office of Environmental Health and Engineering (OEHE), nominates LT Lisa Nakagawa for the IHS 2012 Environmental Health Specialist of the Year. Since 2009, she has served as an IHS EHS providing direct environmental health services to 10 federally recognized American Indian tribes (5,488 population) in central California. She also serves as the Area IP Program Manager and provides injury prevention leadership to four EHS and 83 federally recognized American Indian tribes.

SPECIAL ACCOMPLISHMENTS

In 2012, LT Nakagawa made significant environmental health and injury prevention contributions in tribal communities. The following are examples of her special accomplishments:

- Injury Prevention Program: In 2012, LT Nakagawa graduated from the IHS IP Specialist Fellowship. As a result of her participation, she elected to complete an evaluation of the California Area's IP mini-grant program.
  Since 1991, the CAO IP program has provided funds to Tribal health programs for purchase of intervention devices that support use of evidence-based strategies. Interventions have included use of child safety seats, bicycle helmets, and smoke detectors. LT Nakagawa conducted key informant interviews and surveys with 19 Tribal health programs to determine the effectiveness of these resources. In addition to providing valuable feedback on the mini-grant program, more than 37% of key informants identified carbon monoxide detectors, elder fall interventions, and enhanced training as significant needs in their communities.

LT Lisa Nakagawa,
Environmental Health Specialist of the year.

With this information, LT Nakagawa immediately prepared a plan to expand the mini-grant program. LT Nakagawa met with representatives from the California Department of Public Health (CDPH) and established a partnership to build capacity for elder strength and balance programs in tribal communities. This resulted in the first ever "Tai Chi: Moving for Better Balance" train-the-trainer course being held at the California Rural Indian Health Board (CRIHB). Approximately 15 representatives from the CRIHB, Greenville Rancheria, Karuk Tribe, Tule River, Reno Sparks Indian Colony, and the Sacramento Native American Health Center attended the course and received "Instructor Certificates". LT Nakagawa then selected one Tribal health program to participate in an elder fall prevention demonstration project in 2013. This pilot project will implement evidence-based strategies and the results will be used to make fall interventions a key part of the CAO IP mini-grant program.

- Injury Prevention Racial Misclassification Study: While participating in the Fellowship, LT Nakagawa collaborated with the California Tribal Epi Center and initiated a descriptive injury research study. This study will describe injury deaths, hospitalizations, and emergency department admissions using data from the IHS and CDPH. The study will also identify a new racial misclassification adjustment factor since racial misclassification has historically been a significant issue in California. The results of this study will be used to publish a new "Atlas of Injuries" for California in 2013.
- Program Support: LT Nakagawa completed one of the highest survey completion percentages of all CAO EHS. The following are additional examples of her outstanding work:
  - Only staff member to complete EH surveys at 100% of assigned food service facilities,
  - Served as Project Officer for 3 IHS TIPCAP sites, and
  - Authored multiple standard operating policies and procedures; resulted in written policies for conducting sanitary surveys and inspection of temporary food service establishments.

PROFESSIONALISM

LT Nakagawa has a BS degree in EH from California State University-Fresno and a MPH in Environmental Health from San Diego State University. She is a certified child passenger safety technician and a graduate of the IHS IP Specialist Fellowship.

LT Nakagawa is an active member of two national workgroups: The DEHS Workforce Development Team and the IHS Injury Surveillance Workgroup. She published two IP articles in the January and July issues of the CAO Newsletter. LT Nakagawa conducted a professional presentation on her fellowship project at the IP Fellowship Symposium in Rockville and is an active injury prevention mentor to both IHS staff and tribal injury prevention staff within the CAO.

In 2012, LT Nakagawa served as Secretary for the local Sierra Commissioned Officer Association Branch and was an aide-de-camp for the Assistant Secretary for Health, Dr. Howard K. Koh, during a recent visit to California.

INNOVATION

"Tai Chi: Moving for Better Balance" is recommended by the CDC as an evidence-based fall prevention program. Because of LT Nakagawa's efforts four tribes and two Tribal health programs now have the capacity to provide this stand-alone effective strategy.

LT Nakagawa utilized the public health approach and ten essential services to guide all aspects of her work. She continues to monitor health status through her injury surveillance efforts; and mobilize partnerships in her work as illustrated by collaboration with the CDPH, the California Tribal Epi Center, and IP program representatives at all 26 Indian Health Programs. LT Nakagawa is making use of evaluation concepts as demonstrated by her completed evaluation project and supports policy development that benefits the overall EH program.

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 primary vision elements identified since 2007 are listed below:

DEHS PRIMARY 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.
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 2012. 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 comprising several HQ and Area-level staff. The Core Group is responsible for reviewing work products from the teams and for providing input to each of the teams through liaison members.

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 on the next page.

- **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 have 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 will be completed by the end of 2013 and include a competency model, a list of opportunities to develop the workforce, and implementation plan.

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. Our staff are composed of 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 provided services to a total of 19,350 facilities during 2012 (Source: WebEHRS Reports, National Establishment Counts, FY 2012). These services included 8,898 activities with 6,757 that monitored the environmental health status of these facilities (Source: WebEHRS Reports, Activity Reports, sorted by filter, month, and type). Also, staff reported in WebEHRS that there were 256 investigations conducted and 536 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.

In 2010, an Implementation Team was created to serve as a "board" to review inquiries for use of the DEHS patient safety data; 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.

Specialized Services to AI/AN Communities

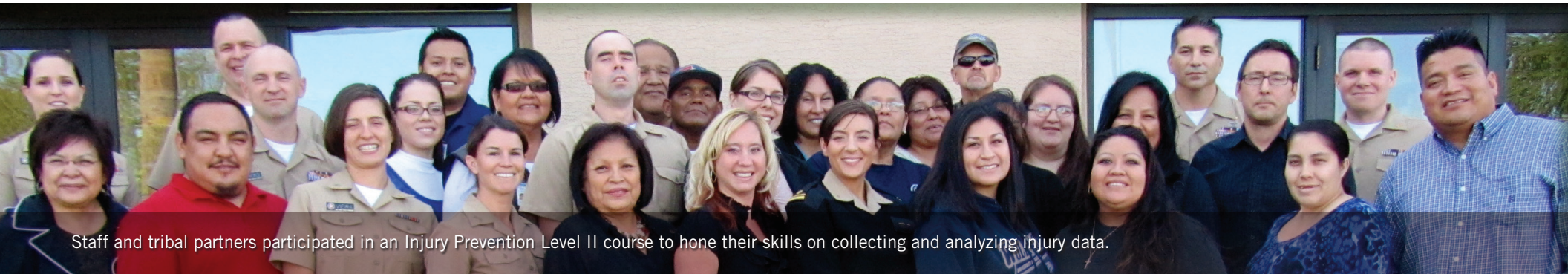
The DEHS provides specialized services in IP and IEH through consultation and technical assistance. IP Specialists take the lead in working with communities to develop public health strategies to reduce the burden of injury experienced by AI/AN communities. IEH Specialists have skills to identify, evaluate, 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 2011 included (1) provision of the NHTSA 32-hour "Technician Certification" course to staff who install car seats; (2) advocacy meetings with tribal councils; (3) awareness campaigns in communities; (4) implementation of primary seatbelt laws, (5) implementation of motor vehicle checkpoints that look for incorrect or no use of child car seats; (6) implementation of the IHS Ride Safe Child Passenger Safety Program in HS Programs; (7) distribution and installation of car seats by trained professionals; and (8) child safety car seat clinics.

In 2012, tribes in five Areas (Aberdeen, Alaska, California, 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 (Aberdeen, Alaska, Albuquerque, Bemidji, California, Nashville, Navajo, Oklahoma, Phoenix, and Portland) received IHS 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. There were also 17 tribes awarded continuing funding for $80,000 for 5 years. In 2010, the IP Program distributed approximately $2.47 million through TIPCAP. A summary of this funding, by tribe, is presented in Table 9, on the following pages.



Staff and tribal partners participated in an Injury Prevention Level II course to hone their skills on collecting and analyzing injury data.

Table 9: 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 9: 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									

Table 9: 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
White Mountain Apache Tribe				X					X				
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	

Table 9: 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
Lac Vieux Desert Band of Lake Superior Chippewa Indians										X			
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 2007-2012 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 2012, the IP Program, the U.S. Fire Administration, and the IHS HS 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 HS Programs, and developing and adopting tribal laws requiring fire safety codes in homes. The Sleep Safe Program is funded by the U.S. Fire Administration, the IHS IP Program, and the IHS HS 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 2012 to 2013 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. Nineteen HS Sleep Safe Programs received smoke alarms at a total cost of $25,000, and nearly 1,400 smoke alarms were distributed to HS families with children. Also, IHS continues to support the Ride Safe Program. Nineteen HS programs received child safety seats at a total cost of $55,000 in the 2012 to 2013 HS school year. Over 1,700 child safety seats were distributed to HS families with children. Since 1999, the Sleep Safe Program has provided $1.97 million and more than 43,000 smoke alarms to AI/AN HS programs to reduce fire and burn injuries. Since 2002, the Ride Safe Program has provided $1.45 million and more than 11,500 child safety seats to AI/AN HS Programs to reduce motor vehicle deaths and injuries.

Injury Prevention Specialists, Tribal Health Clinic Employees, and Tribal Injury Prevention Cooperative Agreement Program Coordinators participate in Tai Chi Moving for Better Balance Instructor course.

CDR Brian Lewelling and CDR Danny Walters set up a Miran ambient analyzer to perform nitrous oxide testing in a dental operatory. Photo taken by Martin Smith

INSTITUTIONAL ENVIRONMENTAL HEALTH PROGRAM

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 182,019 worker, visitor, and patient incidents at 547 IHS and tribal facilities. During 2012, there were 45,764 incidents reported.

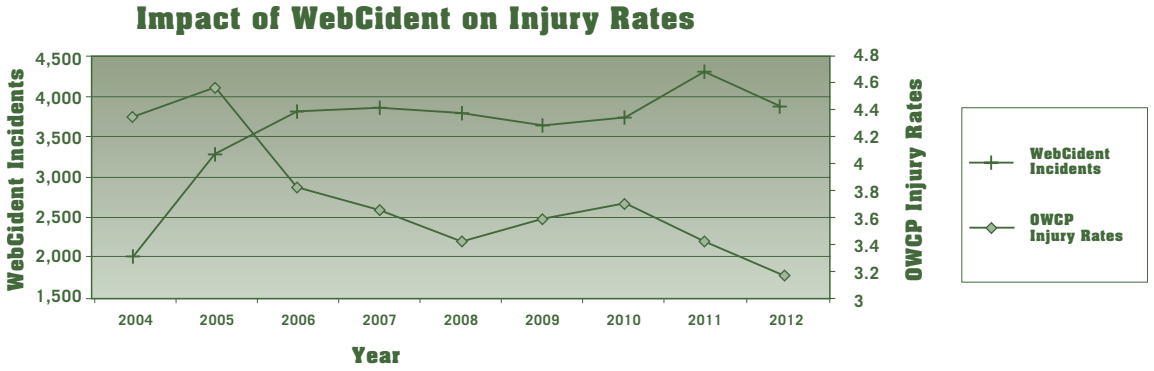


Figure 6: Worker WebCident-reported incidents and OWCP injury rates from 2004 to 2012

Figure 6, above, shows the impact of incident reporting on the reduction of workers' compensation case rates (Source: Office of Workers' Compensation Programs (OWCP). As more worker, hazardous condition, and security incidents are reported and investigated, safety programs improve and help to reduce the number of employees being injured each year, which results in fewer workers' compensation cases.

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, 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 2012, had accumulated 146,490 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 2012. 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 provide 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 focus 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 2012 can be found on the following pages.

PLAYGROUND ASSESSMENTS OF THE TODD COUNTY SCHOOL DISTRICT & THE ST. FRANCIS INDIAN SCHOOL

MR. CHARLES L. MACK, ENVIRONMENTAL HEALTH SPECIALIST

INDIAN HEALTH SERVICE - ABERDEEN AREA

INTRODUCTION

Located on the Rosebud Reservation in South Dakota; the Todd County School District had ten (10) playgrounds, while the St. Francis Indian School had three (3) playgrounds. Many of these playground installations dated back to the 1940's and 1950's. Older equipment presented the greatest hazards, which included: *head entrapments; strangulation hazards; and the lack of surfacing material.* Some playgrounds were installed in the early 1990's before stricter standards were set in place and these posed safety problems as well. Following this project one school completely removed a dangerous playground and the larger school district has plans for the removal of many more in 2013.

METHODS

Standards and survey methodology were based on the CPSC Handbook and Curriculum from the National Program for Playground Safety. The school systems had a total of 1,687 elementary children enrolled. Two (2) Environmental Health Officers and one (1) OEH Extern conducted these surveys over a three-month period. Standard *commercial play system survey equipment* was used. The findings were shared with both school boards for recommended action.

DISCUSSION/RESULTS

Trends were observed over the years that included new playground equipment being built adjacent to older equipment and the latter not being removed. In addition, some school officials complained of children being injured in falls due to the lack of proper surfacing material and depths of that material. Newer equipment placed within the last 10 years posed the least risk. Older equipment and "custom-made" equipment safety issues needed to be brought to the attention of the school administrations; their respective boards; and maintenance personnel. Only when this information was presented as a stand-alone report did the school entities understand the magnitude of the problems and the importance of remediation.

One playground play structure posed the following risks: *strangulation risk from a loose bolt; chains worn down on ends, cracked metal pipes, head entrapment, and lack of adequate surfacing material.* Multiply this risk by many more problematic playground play structures and the potential for serious injury or death increases dramatically. School systems were able to take swift action on these playground issues because of their available resources and power to take immediate action to repair or remove unsafe equipment. *Tribal Housing Community Playground safety issues may be more challenging to address due to resource issues.*

CONCLUSIONS/RECOMMENDATIONS

School Districts need to place a priority on playground maintenance and safety, as the Todd County School District plans to do during their upcoming $15 million consolidated elementary school slated for construction in 2013.

SCHOOL CURRICULUM-BASED BULLYING PREVENTION

CDR WILLIAM C. C. CRUMP, RS, MPH
INDIAN HEALTH SERVICE - BEMIDJI AREA

INTRODUCTION

The purpose of this program is to provide a curriculum for educators that wish to decrease or prevent bullying related incidents in their schools. This program is based on Creating Caring Communities Bully-Proofing Your School (BPYS). BPYS provides six core components:

1. Staff training
2. Student instruction
3. Support for the victims
4. Interventions with bullies
5. Systems interventions
6. Development of a positive, caring environment within the school

METHODS

BPYS manuals include samples of policies, plans, curricula, presentations, implementation tools and ideas, and surveys used to evaluate each school's program. Comprehensive implementation incorporates the following elements:

1. Acknowledgement and commitment to address the problem of bullying and harassment
2. Development and communication of a school-wide anti-bullying and harassment policy and discipline plan
3. Assessment of current school climate and safety issues
4. Formation of a team to design and guide program implementation
5. Development of a plan for program implementation
6. Training of staff and students in PBYS program basics
7. Ongoing development of the Caring Community
8. Establishment of partnerships with the parental and greater school community
9. Evaluation of program effectiveness

RESULTS

The program is implemented in 8 school districts with total student enrollment over 4800. Statistical data were collected and analyzed using School Wide Information System as well as school climate surveys.

School One:

- Increased Attendance: by 3.3% in high school and 3.7% in the elementary school.
- Reduced Failure Rates: by 36% in the high school and 18.4% in the middle school.
- Decrease in the average number of referrals from September to December: Referrals in the classroom have dropped by 44% from September to December.
- Growth in knowledge and implementation of PBIS: In all three buildings, "Expectations Defined" and "Management" went up over 40%.

School Two:

- The School Wide Information System data show the average number of behavior referrals per day in the elementary school dropped from 10 to 9.
- Students come to school knowing what is expected of them; there are no mysteries. The universal expectations and common language used by all staff reassures students that school is a safe place and that all adults have the same expectations

CONCLUSIONS

A full evaluation of the data is being conducted. A final survey will be provided to determine the program's effectiveness, administration, funding, and recommendations for improvement.

BUILDING INJURY CONTROL CAPACITY AMONG CALIFORNIA TRIBES: EVALUATING THE AREA MINI-GRANT PROGRAM

LT LISA NAKAGAWA, MPH
INDIAN HEALTH SERVICE - CALIFORNIA AREA

INTRODUCTION

Since 1991, the California Area Office has provided funds to tribal health programs for purchase of evidence-based IP items that include child safety seats, bicycle helmets, and smoke detectors.

METHODS

A process evaluation of the IP Mini-Grant Program was conducted by the DEHS. A questionnaire for the key informant interviews was developed and pilot tested to determine the effectiveness of the Mini-Grant Program. The questionnaire consisted of both open-ended questions and closed-ended questions. Key informant interviews were then conducted with tribal health program staff responsible for IP in their communities. Personal interviews were conducted by telephone and in person. An additional internet questionnaire was administered to the IHS Area IP Specialists. The survey was conducted to identify uses of IP funding in other Areas.

RESULTS

The results from both questionnaires:

- 66% of tribal health programs eligible for the mini-grant program were interviewed (19 of 30)
- All 19 programs do not want funding reduced or switched to other injury initiatives
- Programs identified carbon monoxide detectors, elder fall interventions, and training as community needs
- Only 6 of 11 IHS Areas have some type of IP grant program and only 2 of 11 of the IHS Areas have conducted an evaluation of their grant program

DISCUSSION/CONCLUSIONS/RECOMMENDATIONS

The mini-grant program is a very valuable resource for tribal health programs. Many of the programs have created local partnerships with county health departments, law enforcement, fire departments, other tribal organizations, universities, IP coalitions, non-profit organizations and businesses.

Tribal health program staff enthusiastically supported the existing mini-grant program, but additional IP projects and activities are needed to improve both the mini-grant program and the California Area Injury Prevention Program.

Some future recommendations for the California Injury Prevention Program are:

- Increase funding for the mini-grant program
- Pilot projects for carbon monoxide detectors and fall prevention
- Provide California Native American IP education materials
- Conduct an impact evaluation of the mini-grants based on the published scientific literature and qualitative data from documented success stories

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 2012, many effective programs focused on reducing the risk factors related to waterborne illness. Some DEHS staff focused on eliminating risk factors related to unsafe or insufficient water supply and the operation and maintenance of existing individual and community systems. Projects with an emphasis on the safe water conducted in 2012 can be found on the following pages.

SPOTLIGHT ON PILOT STATION PIPE BURSTING

YUKON-KUSKOKWIM HEALTH CORPORATION

INDIAN HEALTH SERVICE - ALASKA AREA

INTRODUCTION

During February 2012, the Yukon-Kuskokwim Health Corporation (YKHC) OEHE was contacted by the City of Pilot Station regarding frozen water lines. The Remote Maintenance Worker (RMW) program, housed in OEHE, provides technical assistance to 50 village water systems in the Yukon-Kuskokwim Delta. RMW staff responded immediately and diagnosed approximately 1,000 feet of shattered 12-inch arctic pipe buried four feet underground.

METHODS

Due to the high replacement cost of underground arctic pipe and the lack of available funding, the RMW program began exploring alternative repair options. Pipe Bursting NW in Washington offered a technology called "pipe bursting" which means a trenchless method of replacing buried pipelines without the need for a traditional construction trench. The technology had been successfully used since 1992, but it had never been tested in arctic pipe.

YKHC worked with the Alaska Division of Environmental Conservation, The ANTHC and the EPA to secure funding in the amount of $111,000. With the funding arranged in June 2012, the RMW program immediately ordered equipment and arranged travel.

RESULTS

RMW staff and Pipe Bursting NW staff traveled to Pilot Station on July 23, 2012. They worked closely with the water plant operators and other staff in Pilot Station. The crew excavated the required pits and began replacing the pipe on July 23. The project was completed on July 26.

The original estimated replacement cost was $250,000. It typically takes more than three years to fund similar projects using traditional SFC funding, and often several more before projects are complete.

DISCUSSION/CONCLUSION

By utilizing special project funds, the Pipe Bursting NW technology and local labor (in kind support), the project was completed for less than half the cost, and in record time. Additionally, approximately 1/3 of the funds were used to purchase Pipe Bursting NW equipment that can now be used on similar projects further reducing repairs in the future. Based on the success in Pilot Station, we know Pipe Bursting NW equipment is appropriate for buried arctic pipe projects and remote Alaska environments. It furthered showed the need for small pools of money that could be accessed quickly and used by communities to make urgent repairs that are critical to community water systems.

Allan Paukan, Lead RMW operating pipe bursting machine.

Pipe going in ground

New black HDPE pipe inside old cracked blue pvc pipe.

NORTH DUNSEITH HEAD START SEWER PROJECT

MR. JAMES DODD, REHS

INDIAN HEALTH SERVICE - ABERDEEN AREA

INTRODUCTION

The North Dunseith HS facility is one of five HS facilities serving the Turtle Mountain Reservation. The HS had been plagued for several years with intermittent sewer backup issues, especially in the winter, that became an operational burden. After each episode the staff was challenged to clean up the mess and sanitize the area prior to reopening. In addition, EPA Region 8 inspected the servicing lagoon and found several managerial violations. A team was formed to investigate, and a plan was decided upon that promises to remedy the sewer backup problem and satisfies the EPA's managerial concerns.

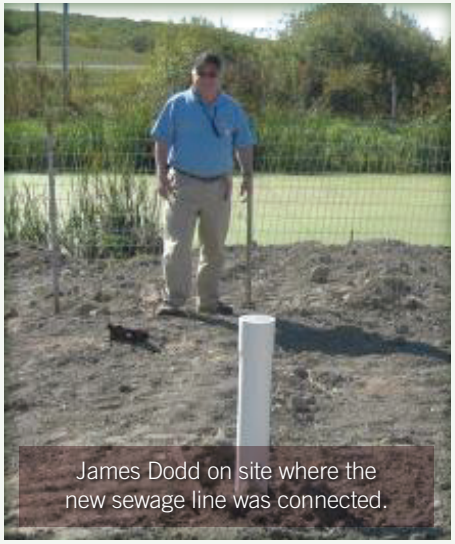
METHODS

Mr. Jim Dodd, Belcourt Service Unit EHS offered his support to the HS Facility Manager, Ron Poitra, to help solve the problem. Mr. Poitra had already solicited a quote from a local plumber to fix the sewer system at an estimated cost of $35,000. Mr. Dodd advised the HS to conduct an additional assessment of the situation before spending scarce funds on a grinder pump that may or may not solve the problem. CDR Jack Sorum, Tribal Utility Consultant for the Minot District and a local construction contractor were brought in to consult on the issue. After a site visit the grade of the site was measured and Marion Construction staff took video recordings of the sewer drains from the HS facility all the way to the lagoon. A local farmer with tractor and mower was hired to clear the lagoon over-growth. An order for proper warning signs was placed.

RESULTS

Significant issues were identified with the sewer drain line that warranted its replacement. Estimated cost to complete the work was $8,000 and the Tribal Council pledged their financial support for the repairs. Marion Construction was awarded the contract to replace the sewer drain line from the HS facility to the lagoon. One improvement over the previous line was the addition of drain clean-outs. The lagoon parameter fence was put back into place and a section that was already damaged was replaced with new fence. The vegetative growth was removed from inside and outside the fence line and warning signs were affixed to all four sides of the lagoon fence. A variance to the weekly lagoon inspections by HS staff was requested and granted by EPA Region 8 in favor of monthly inspections. A simple checklist provided by CDR Sorum serves to collect required data. The EPA accepted the HS response to their notice of violation letter. There have been no further issues with sewer back-ups at the HS.

Safety signage at a sewage lagoon.



James Dodd on site where the new sewage line was connected.

Food Safety

DEHS staff provide 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 April 25, 2012, 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.

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. 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).

Implementation of effective EH and IP strategies can substantially reduce disease and injury rates. For instance, from 2001 to 2009, as the number of services provided by IHS to food service establishments and drinking water systems went up, the incidence of food and waterborne diseases decreased (see Figure 7). Projects with an emphasis on food safety conducted in 2012 can be found on the following pages.

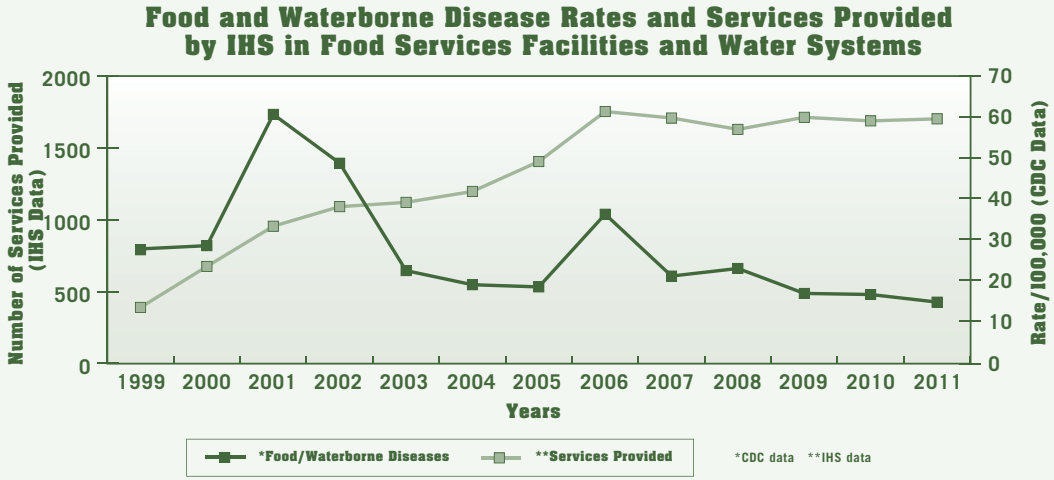


Figure 7: Trends in services and reportable food and waterborne diseases

ALBUQUERQUE AREA ONLINE FOOD HANDLERS TRAINING

LCDR KATIE HUBBARD, CDR JEFF DICKSON, MR. TOM CANDELARIA, MS. DEBRA GRABOWSKI, MR. BOB BATES*

INDIAN HEALTH SERVICE - ALBUQUERQUE AREA

INTRODUCTION

Foodborne illness (FBI) continues to be a public health issue nationally involving thousands of deaths and millions of people experiencing illness. The Indian Health Service has a responsibility to improve public health conditions among Native populations and prevent disease such as FBI. Given increased workloads and decreased staffing levels new innovations to providing public health services is a high priority. Through partnerships developed with Tribal food programs, internal IHS Departments, and existing Tribal online training programs a collaborative, culturally-relevant online food safety and sanitation training was created.

METHODS/DISCUSSION

Internally, a workgroup was formed to determine the training content for the target population, scenario design, role assignments, and timelines. Externally, tribal partnerships were developed to better understand online training options, design considerations, and available locations for the photo shoot. Borrowing cameras, photo shoot location, and purchasing a microphone enabled the project to be completed "in-house" since the IHS-OIT Division developed the web content. Nationally, the training has been viewed by over 3000 people. Increasing the level of knowledge regarding safe food principles is paramount to reducing FBI. Future projects should focus on obtaining funding greater than $200 spent on this project to enable video, interactive web content, and increased flexibility in updating training content.

RESULTS

- 2215 people passed the test on their first try
- Of those that passed, 88% was the average score

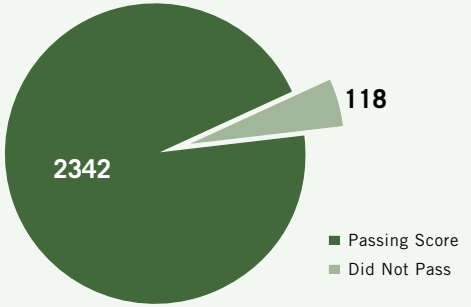


Figure 1: Number of People who Passed the Test

CONCLUSIONS/RECOMMENDATIONS

The Online Food Handler Training (OFHT) was designed for customer convenience and cultural-relevancy as well as to alleviate a workload burden for DEHS staff. Given decreased funding levels the need to become more efficient grows each year. The OFHT has received positive feedback and greatly exceeded expectations for addressing food safety training needs in the Albuquerque Area. Because of its on-line platform, it is easily adaptable for other Areas to customize for their use. View the full training at www.ihs.gov/foodhandler .

* This project was a round five winner in the HHS Innovates Program.

EXPLORING FOOD CODE ADOPTION AND FOOD SAFETY TRAINING WITHIN THE BEMIDJI AREA IHS

LTJG SCOTT DALY, REHS

INDIAN HEALTH SERVICE - BEMIDJI AREA

INTRODUCTION

Adoption of the FDA Food Code is a critical component for achieving food safety and active managerial control in a food establishment. The adoption of the FDA Food Code varies among the tribes in the Bemidji Area. It is unknown which impedes achievement of the manager and food handler training requirements are being satisfied. A 13 question electronic survey was sent to each EHS in the Bemidji Area to query the level of food code adoption and the type of training required and provided by each tribe. The results indicated a gap between tribal regulations and food handler training, which impedes achievement of an integrated food safety system.

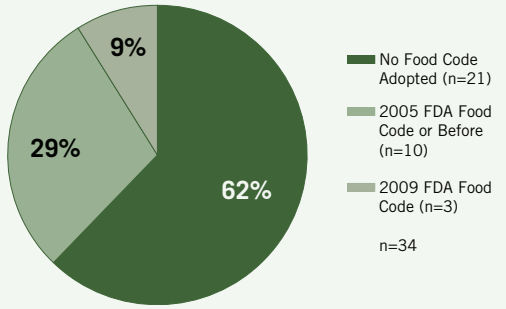
METHODS

A 13 question electronic survey was emailed to each of the 15 EHS providing field services for the 34 tribes in the Bemidji Area. The survey questioned each tribe's level of food code adoption and what food manager and food handler training is required or provided.

RESULTS

The survey was completed for all 34 tribes. The results indicated 38% of tribes have adopted a food code. Of the 13 tribes that adopted a food code, 3 are based on the most current version. Although certified food protection manager training was required by only 38% of tribes, 85% provided it to their managers as a best practice. All respondents selected ServSafe as the only program offered. A similar breakdown was seen for basic food handler training for food service employees; only 26% required it while 79% provided it.

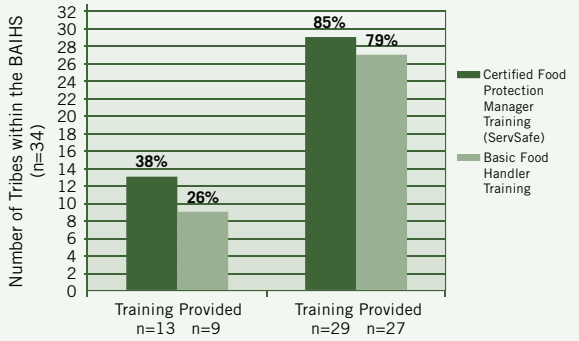
Figure 1: Level of Tribal Food Code Adoption within the BAIHS



DISCUSSION

Having tribes without a food code is problematic because it allows tribal facilities to operate without rules or regulations and creates a lack of accountability. Moreover, 77% of the tribes that adopted a food code were not based on the most current FDA version. The results indicated a gap between tribal regulations and food handler training. Although the percentage of tribes voluntarily providing trainings to both their food managers and food service employees is high, 15% of the tribes did not provide certified food protection manager training and 20% did not provide any type of basic food handler training. There are three tribes in the Area not providing any type of food handler training.

Figure 2: Required Manager and Basic Food Handler Training vs. Provided Manager and Basic Food Handler Training



CONCLUSIONS/RECOMMENDATIONS

Priority should be given to adopting or updating the food codes for each tribe within the Area. DEHS can develop a standard operating procedure for prioritizing food safety training in the Area to improve efficiency. The procedure will detail ServSafe classes only be given to managers and people in charge. All other employees would receive basic food handler training because general employees do not need ServSafe training.

ENHANCED FOOD SAFETY TRAINING IN TRIBAL GAMING FACILITIES

CAPT BRIAN LEWELLING, MPH
INDIAN HEALTH SERVICE - CALIFORNIA AREA

INTRODUCTION

Food safety is a very important EH issue for the 104 federally recognized tribes and Indian gaming facilities in the California Area. Many food service establishments in Indian gaming facilities are considered "high risk" based on the specialized processes they use and the clientele that they serve. Currently, there are 59 Indian gaming facilities in California and 247 food service establishments associated with these facilities.

METHODS

The Area held a one-day course that focused on the five major risk factors that contribute to foodborne illness as cited in the 2009 FDA Food Code. Risk factors included improper holding temperatures, inadequate cooking temperatures, contaminated equipment, food from unsafe sources, and poor personal hygiene. The training blended verbal presentations with field exercises. The field exercises focused on identifying risks in a controlled setting. The training culminated with an extensive question and answer forum provided for participants.

RESULTS/LESSONS LEARNED

- Approximately 19 gaming officials representing three Indian gaming facilities attended this training.
- Several training participants had little to no knowledge of food safety principles.
- Officials at three Indian gaming facilities now have a far better understanding of food safety deficiencies.
- Strengthened partnerships have resulted between DEHS and gaming facilities.

DISCUSSION

Following an FDA Plan Review Course held in southern California, the DEHS staff met with gaming officials from multiple facilities to discuss food safety issues. During these meetings, Indian gaming officials informed the DEHS staff that they could better support and enforce food safety codes in their facilities with enhanced food safety training.

With this information, the DEHS provided tailored food safety training for Indian gaming officials. A structured one-day training course was developed by DEHS staff which included a half-day of classroom instruction covering the 5 high risk factors identified by the FDA for the retail food industry. The remainder of the training included a designed walk-through of a casino food service operation to give the participants a chance to see the concepts learned in the classroom from the morning session. At the end of the walk-through mock survey, a question/answer session was conducted for the participants. Feedback from the participants was overwhelmingly positive, with requests for future training. Most indicated this training gave them a sense of understanding of the basics needed to look for as they conducted their duties.

CONCLUSIONS/RECOMMENDATIONS

Food safety continues to be a priority for many California tribes. In partnership with tribes, the DEHS staff continue to work to address food safety issues by use of both educational and enforcement strategies.

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, H1N1, Hantavirus, Rocky Mountain Spotted Fever (RMSF), and Plague.

DEHS staff focused on the elimination of risk factors through identifying H5N1 in bird populations; conducting spay, neuter, and rabies clinics for dogs and cats; 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 2012 can be found on the following pages.

REDUCING THE ENVIRONMENTAL HEALTH RISKS OF PESTS AND PESTICIDES IN INDIAN COUNTRY

MS. HOLLY THOMPSON DUFFY
INDIAN HEALTH SERVICE - PORTLAND AREA

INTRODUCTION

The Portland Area DEHS and Region 10 EPA have entered into an Interagency Agreement designed to ensure pesticides are used safely in Indian Country to protect public health. The purpose of the project is to conduct both pesticide use and needs assessments, which will identify and prioritize specific risk-reduction services to be provided through the program. The role of the program is to provide technical assistance and consultation; the EPA is providing funding and programmatic support. This project serves all 43 tribes in Washington, Idaho and Oregon, depending on interest and needs.

METHODS

The project's approach is to partner with tribes; conduct thorough pesticide use and needs assessments; and develop service delivery plans aimed to assist tribes in implementing effective policies related to pesticide use, specifically Integrated Pest Management (IPM). The program has developed a comprehensive method for evaluating both pesticide use as well as community needs and interests. First community profiles are created for each of the tribes, which includes social, economic and demographic information. These are not specific to pest management, and may be used by other projects to get perspective on what's going on in a particular community. A series of questionnaires specific to different Tribal departments has also been developed, which is used to conduct interviews to assess the nature of pest problems and the extent of pesticide use. Needs and interests are then identified and prioritized. At this point the general public becomes involved through surveys and town hall meetings.

RESULTS/LESSONS LEARNED

2012 was year one of the project. During this time tribal assessments were conducted, outreach materials were created, and presentations to tribal members were made.

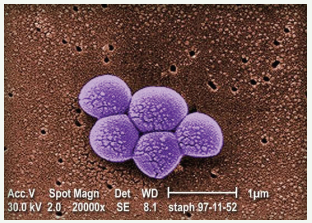
DISCUSSION

Considering the widespread use of pesticides in both indoor and outdoor environments, tribal members are exposed on a regular basis. Exposures to both pests and pesticides can results in a variety of EH impacts. The acute effects are well documented, while chronic effects are often identified after years of use. Considering the health risks associated with pesticides, the message is to reduce use and therefore exposures to all pesticides. This project seeks to promote and enhance the EHS five priority areas:

- Children's Environment: Children are disproportionately affected by pesticides. This program seeks to protect children from pests and pesticide exposure where they live, learn and play
- Food Safety: Although there are tolerance levels to protect us from acute exposures used on crops, using fewer pesticides in agriculture protects us from the chronic effects. Also pesticides are used in retail and institutional food service; the project works to reduce use in these food areas through IPM implementation.
- Healthy Homes: A pest and pesticide free home helps protect occupants and results in a safer, healthier home. IPM relates to 5 of the 7 guiding principles of Healthy Homes.
- Vectorborne & Communicable Disease: IPM is holistic and takes into account the pest conducive conditions that attracted pests in the first place, providing sustainable control.
- Safe Drinking Water: Water is contaminated by pesticides through irrigation, drift, leaching, runoff and direct application to waterways to control invasive species.

CONCLUSIONS/RECOMMENDATIONS

IPM is a proven method of pest control which utilizes a combination of prevention and risk reduction, controlling pests more efficiently and reducing the use of pesticides. Increasing awareness and adoption of IPM and other risk reduction techniques helps protect public health and we expect to improve health outcomes.



ABERDEEN AREA IHS ANTIMICROBIAL RESISTANCE PROJECT

CAPT AUBREY C. SMELLEY, CAPT JON SCHUCHARDT, LCDR JEFF GILDOW
INDIAN HEALTH SERVICE - ABERDEEN AREA

INTRODUCTION

An unpublished CDC report titled "Retrospective Review of Methicillin-resistant *Staphylococcus aureus* (MRSA) using Laboratory Survey IHS Facilities" and a 1999 CDC Morbidity and Mortality Weekly Report "Four Pediatric Deaths from Community Acquired Methicillin-Resistant *Staphylococcus aureus* (CA-MRSA) – Minnesota and North Dakota, 1997-1999 prompted research into MRSA infections in the Aberdeen Area. Annual antibiogram data revealed rates approximately two times the national average for MRSA infections.

METHODS

In 1999, an Antimicrobial Resistance Project was developed through the Aberdeen Area IHS IEH program to address increasing MRSA infection rates in the Area. The project consisted of reviewing annual antibiogram reports to assess CA-MRSA trending patterns at each Area healthcare facility and developing interventions. Subsequent annual antibiogram reports were used to monitor changes as an indicator of project effectiveness. Interventions included dissemination of CDC antimicrobial resistance clinical and community educational materials, and assessments of antimicrobial resistance efforts at Area healthcare facilities. The project is on-going and continues into 2013.

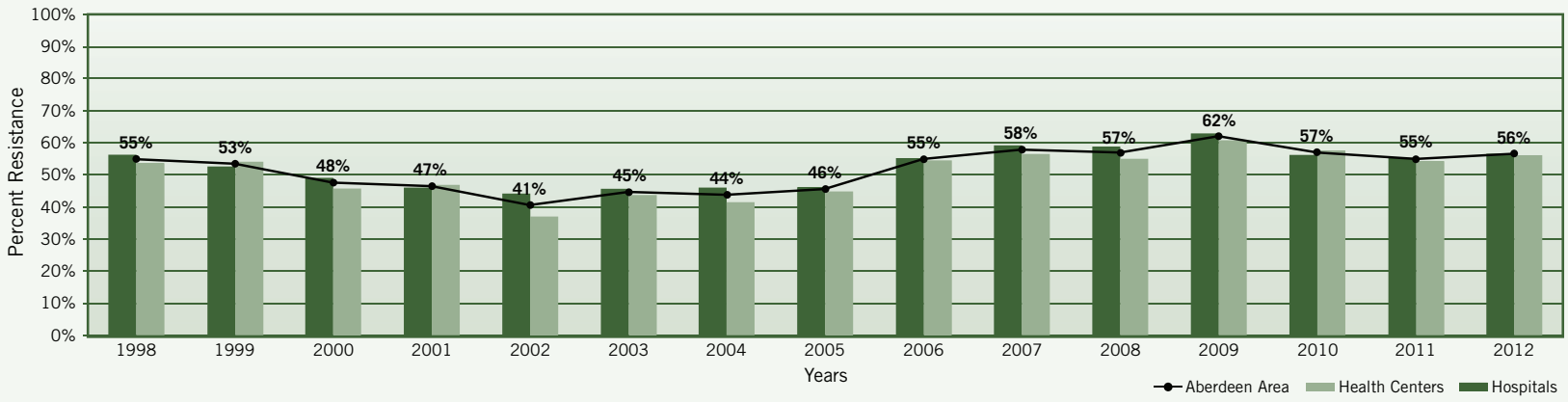
RESULTS

Although the project's success can't be directly attributed to the Aberdeen Area Antimicrobial Resistance Project, the Area infection trending patterns indicated a decline in MRSA infections in 1997 to 2005 from 52% to 46%. However, a significant increase to 55% was observed in 2006 and prompted additional interventions such as working with Area Pharmacists to develop and implement healthcare antimicrobial stewardship programs and working with Service Unit Infection Control Coordinators to promote community antimicrobial resistance educational materials and implement hand hygiene improvement measures. Declines were observed in 2010 and 2011.

CONCLUSIONS/RECOMMENDATIONS

The Aberdeen Area Antimicrobial Resistance Project is a continuous process that focuses on environmental modes of CA-MRSA disease transmission (e.g., contact sports, poor hand hygiene at healthcare facilities). The literature indicates that antimicrobial stewardship is a more effective method to control CA-MRSA and other emerging antimicrobial resistant organisms.

Aberdeen Area IHS Areawide Oxacyllin Resistance Trending Patterns for *Staphylococcus aureus* - Calendar Years 1998 - 2012



RENO DISTRICT EHS WNV SURVEILLANCE INITIATIVE

CDR KELLI D. STAMPER
INDIAN HEALTH SERVICE - PHOENIX AREA

INTRODUCTION

The Reno District DEHS initiated a mosquito surveillance program in several tribal communities during the 2012 summer season. Existing West Nile Virus (WNV) surveillance efforts did not include tribal reservations, resulting in gaps in information to inform effective prevention and response strategies.

METHODS

Partnerships were utilized for program success. Washoe County Vectorborne Disease Program provided field training, equipment, species identification &lab testing. Formal adoption of the Western Arizona District's mosquito sampling protocol allowed for uniform sampling. Tribal environmental program staff assisted with the sampling.

Planning activities identified communities for surveillance based on:

- geographic areas where gaps in surveillance data existed
- environmental factors that promote mosquito populations
- feasibility for sampling activities

Planning culminated in identifying specific sampling sites in each community, securing approval from tribal leaders, and purchasing and field testing trapping equipment. Finally, trapping and testing was conducted monthly from July through October, and results communicated to the tribes.

Field training with Mr. Will Lumpkin, WCVDP

RESULTS

- Increased program capacity
- Expanded WNV surveillance to tribal communities
- 36 sample pools were collected
- Confirmed presence of mosquito species of concern
- No mosquitos tested positive for WNV
- Strengthened partnerships and opportunities to expand surveillance efforts in 2013

DISCUSSION

Surveillance efforts confirmed the presence of several species of mosquito associated with the spread of WNV, which allowed us to better communicate the significance and urgency of mitigation and prevention efforts with our tribal partners. A key challenge was a shortage of mosquito traps and supplies, which resulted from the national-level outbreak of WNV.

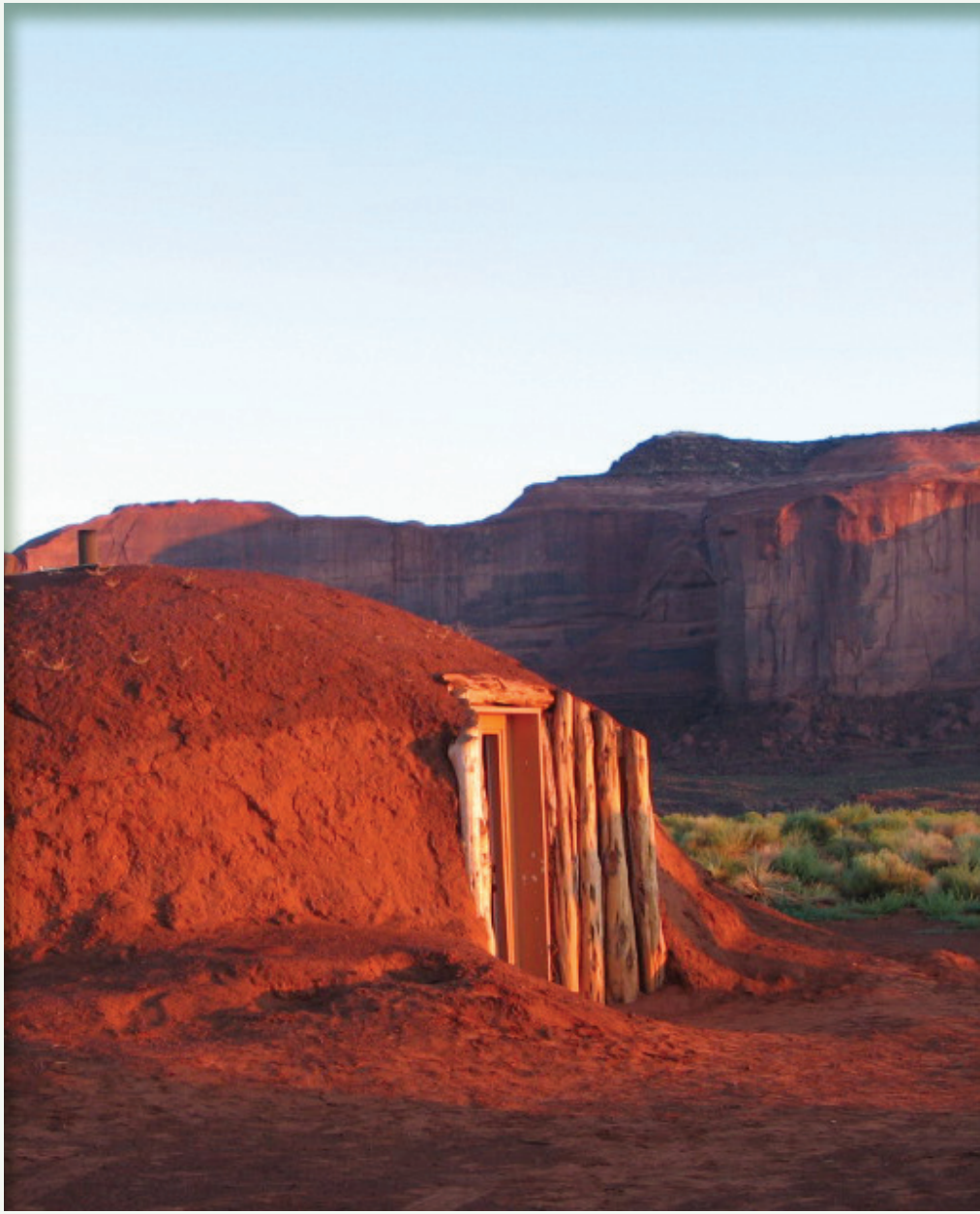
CONCLUSIONS

Vectorborne diseases, such as WNV, are expected to increase in coming years due to climate change and other factors. Partnerships were essential to the success of this initiative and created building blocks for future efforts with the County and Tribes. Despite the media coverage and public health information system bulletins, more education is needed about risks and prevention strategies. Data collected during this effort can inform prevention and mitigation efforts, to include reducing mosquito breeding sites.

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 2012 can be found on the following pages.



ELDER FALL PREVENTION AT THE PUEBLO OF SAN FELIPE

KAREN ANSERA, DEBBY CHAVEZ-BIRD, JERRY LEE
INDIAN HEALTH SERVICE - ALBUQUERQUE AREA

INTRODUCTION

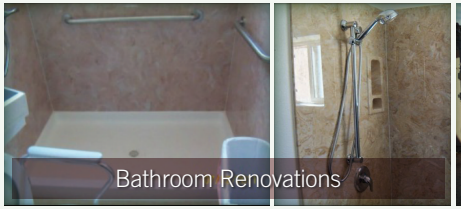
In many AI/AN communities severe fall injuries among elders is a growing problem. Growing lifespans in this population are often countered by failing eyesight and hearing, weakened gait and balance, overmedication and common fall hazards inside and outside homes. At the Pueblo of San Felipe in north central New Mexico, falls accounted for 35% of recorded injuries. After an all-time peak of 102 cases in 2007, falls rose from 33 cases in 2008 to 78 cases in 2011. In response, multiple interdisciplinary efforts were initiated to prevent primary and secondary fall injuries among local elders age 55+.

METHODS

Operating a TIPCAP infrastructure grant that funds staffing and project materials, the San Felipe Health & Wellness Program collaborated with local and regional agencies on a range of elder fall prevention training and environmental initiatives. Their training collaborators included the local Senior Program, Meals on Wheels, and the San Felipe Health Clinic. Environmental changes were coordinated with SCHC and the local Housing Authority. TIPCAP resources were used for educational and promotional programs conducted throughout the community, and to help fund environmental improvements inside and outside local elders' homes.

RESULTS

Besides fall prevention training for local elders, caregivers and general community members, elders received referrals for vision testing, gait/balance assessment, medication management (review of prescribed and non-prescribed medications) and exercise programs. Home renovation needs were identified with home assessments, plus referrals by medical staff. Renovations included outdoor ramps, bathroom modifications (including tub-to-shower conversions), grab bars, safety rails and night lights for enhancing safety at elders' homes.


Bathroom Renovations


Outdoor ramp Installation

DISCUSSION

So far, the number of recorded fall injuries reduced slightly from 2011 to 2012, reversing the prior upward trend. Also, the growth of elder fall prevention initiatives attracted additional community participants and agencies, and positively influenced participation and support by the elders themselves. Home modification project funds also helped the Housing Authority to maintain a year-around work force, resulting in added home safety improvements (like step repair, rug securing and outdoor lighting) beyond what project funds covered.


Elder strength training class


Fall prevention training for local elders

CONCLUSIONS

This project goes far past the clearly urgent need to reduce severe fall injuries among local elders. Beyond the tragic human cost of losing treasured elders to death and disability, the monetary cost to the tribe and IHS in treating these elders often continues throughout their lives, further reducing already limited resources that are vital to providing care for the entire San Felipe community. The continued collaboration of several programs and residents has made this an ongoing success.

IMPROVING THE RESPIRATORY HEALTH OF ALASKA NATIVE PEOPLE THROUGH HOME BASED INTERVENTIONS

ALASKA NATIVE TRIBAL HEALTH CONSORTIUM

INDIAN HEALTH SERVICE - ALASKA AREA

INTRODUCTION

AI/AN suffer from a high burden of acute and chronic respiratory diseases. This study was designed to examine the effects of home modifications on reducing the need for respiratory medical care among a high risk group of Alaska Native children. A multifaceted, home-based intervention was developed to improve the indoor air quality in homes for children experiencing chronic illnesses. To date, 30 households with 116 children have been involved in Phase I of this project. Phase II begins in the winter of 2013.

METHODS

Four communities in Southwest Alaska participated in Phase I Home Modifications included improving ventilation, replacing or tuning heating devices, and remediation of moisture damage.

Project team members sampled air quality in participating homes three times: before the modifications, immediately after modifications, and one year after modifications. Samples were obtained using DustTraks, Ultra III Passive Badges, HOBO monitors and Extech monitors.

Health Outcomes Measures:

- Lung health questionnaires were administered at the initial home visit, prior to home modifications, and at 2 weeks, 3 months, and 1 year post-modification to caregivers
- Clinic visits and hospitalizations as a result of respiratory illness prior to the intervention and upon completion of the intervention were counted using a review of medical records for specific ICD9 codes.

PRELIMINARY RESULTS

Phase 1 included data collection and neared completion in 2012. Data collection began Jan 2012 and will continue through Mar 2013.

A total of 30 households were visited, which house 116 children younger than the age of 13. Home modifications averaged less than $5,000 per household for materials and labor costs. Indoor air quality measurements indicated that air quality has improved in homes following the home modifications. Preliminary results suggested that the respiratory health of children in participating households improved following home modifications.

DISCUSSION

This work represents the first attempt to establish a Tribal Healthy Homes program in Alaska. ANTHC improved ventilation, replaced older wood stoves, and repaired excessive moisture damage in homes. Preliminary results from Phase I show children in intervention homes had less clinic and hospital visits for respiratory illness and overall indoor air quality improved.

CONCLUSIONS

Partnerships were essential to the success of this initiative. More education is needed about risks and prevention strategies. Data collected during this effort can inform prevention and mitigation efforts, to include reducing mosquito breeding sites as vectorborne diseases such as WNV are expected to increase in coming years..

NEXT STEPS

Phase I:

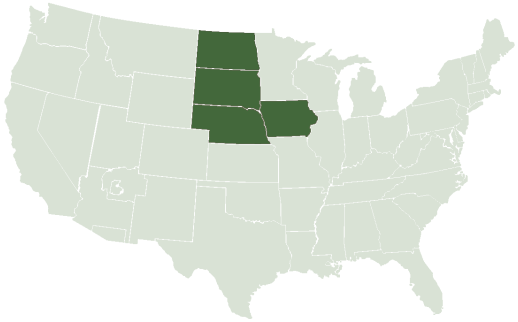
- Data analysis is ongoing
- Follow up visits continue through following winter

Phase II:

- Select 30 additional homes in 4 additional communities
- Add health data for adults
- Continue to improve methods and procedures

Area
DEHS Programs

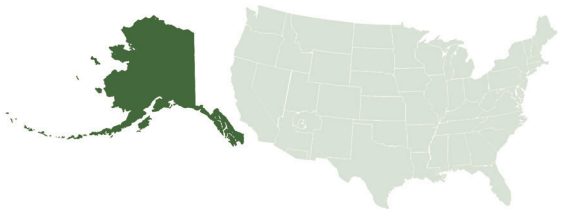
Aberdeen



The Aberdeen Area IHS encompasses 18 tribes in 4 states (Iowa, Nebraska, North Dakota, and South Dakota) totaling 281,459 square miles. The Aberdeen Area is the fifth largest in IHS, with 2,139 facilities and a user population of 121,903 American Indians. DEHS is one of three divisions (DEHS, DSFC, and Facilities Management) within the Aberdeen Area OEHE. The Aberdeen Area DEHS comprises career tribal employees, federal civil service, and PHS Commissioned Corps Officers. At the Area level, Aberdeen has a DEHS Director, an Area IP Specialist, and an IEH Specialist. At the district level, this Area has District EH staff located in Minot, North Dakota; Pierre, South Dakota; and Sioux City, Iowa. At the field level, the Aberdeen Area DEHS staffs 14 offices with Field EHS and 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 staff. DEHS District and Field staff are responsible for providing surveys, technical assistance, and investigations at most EH facilities listed in WebEHRS. The remaining facilities are covered by the IEH Specialist. District and Field staff spend approximately 60% of their time working on general EH issues and 40% of their time engaged in specific IP activities.

IP is a primary focus area for the program because of the significant impact it has on the communities. For example, Aberdeen Area American Indian children (birth to 6 years of age) suffer a fire death rate three times higher than white children and a motor vehicle death rate seven times higher than white children. The health impact and the health disparity are clear. One way the tribes and the Aberdeen Area DEHS Program are working to address these two concerns is to partner with the IHS HS, the IHS IP Program, and the U.S. Fire Administration.

Alaska

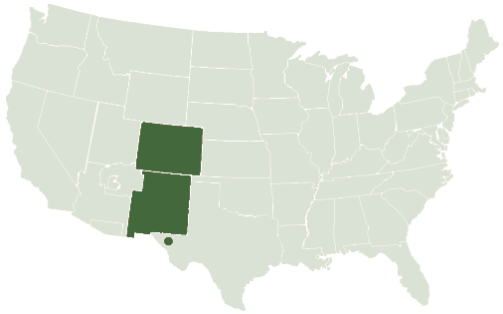


EH programs in the Alaska Area are all tribally managed under the authority of the Indian Self-Determination and Education Assistance Act (Public Law 93-638), as amended. Seven regionally based EH programs serve a specific geographical area. These organizations include the South East Alaska Regional 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

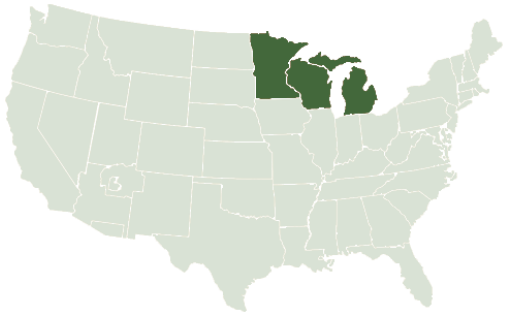


The Albuquerque Area DEHS Program serves 27 federally recognized tribes in Colorado, New Mexico, Texas, and Utah. The Area's service population of over 100,000 members comprises 20 Pueblos, 3 Navajo Nation Chapters, 2 Apache Reservations, and 2 Ute Reservations. Area EHS are stationed at the Area Office and the six Service Units. Professional positions include a Director, District Supervising EHS, a Supervising EHS, Service Unit EHS, IP Specialists, Safety Officers, an Industrial Hygiene and Safety Manager, an IEH Specialist, and Environmental Health Technicians (EHT).

The Albuquerque Area's Emergency Management Program is also housed within the DEHS Program. Its staff undergoes continuous training for these roles, performing at a level that includes skills qualifying for special certifications, such as the FEMA Professional Continuity Practitioner Certification. Services are provided internally and externally, and community outreach activities are ongoing. Service also includes management of an Area-wide satellite telephone emergency management communication program.

Staff often participate in national program work; they support the EHSC Training Team and other DEHS Programs in course development, participate as course trainers, and/or sponsor national EH training for their peers and for tribal members.

Bemidji

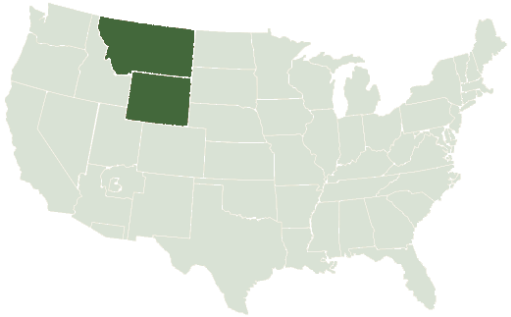


The Bemidji Area serves 34 tribes occupying an area covering 5,183 square miles. Approximately 100,000 American Indians live within the service area covering three states: Michigan, Minnesota, and Wisconsin. There are two district offices within the Area: Minnesota (Bemidji) and Rhinelander, Wisconsin. 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

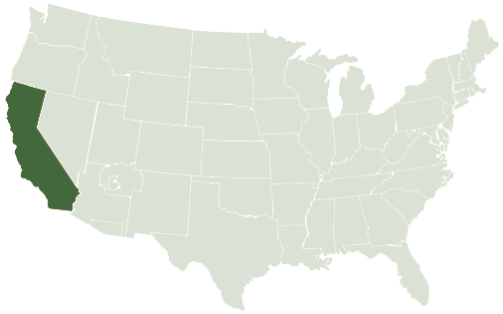


The Billings Area DEHS serves 9 tribes (totaling 70,000 people) on 8 reservations throughout Montana and Wyoming. If fully staffed the Billings Area DEHS Program would consist of the DEHS Director, an Area staff EHS, an IEH specialist and an IP specialist. The Billings Area has 3 direct service tribes, 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



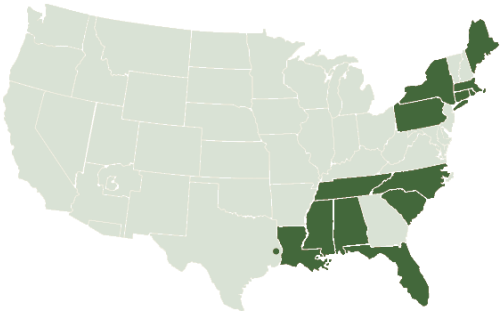
The California Area serves approximately 104 federally recognized tribal governments representing a service population of 87,950 persons, in over 1,550 facilities, in the State of California. Staff provides services to tribes at duty sites in the Area Office, two district offices, and one field office. 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.

Nashville

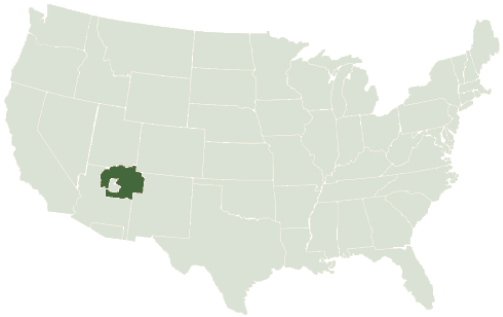


Nashville Area serves 29 tribes and an AI/AN population of approximately 48,000. Thirteen states are covered: Alabama, Connecticut, Florida, Louisiana, Maine, Massachusetts, Mississippi, New York, North Carolina, Pennsylvania, Rhode Island, South Carolina, and Texas. Staff includes one Director and one 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 have received and maintained accreditation. The EHS is the Project Manager for IP grants.

Navajo

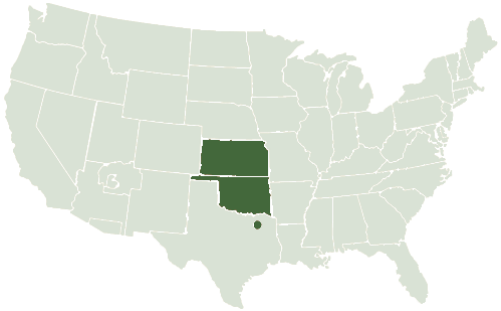


The Navajo Area DEHS serves tribes in portions of Arizona, New Mexico, and Utah and is responsible for services to approximately 250,000 members of the Navajo Nation and Southern Band of San Juan Paiutes. The Navajo Nation is the largest Indian Tribe in the United States. It has the largest reservation,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

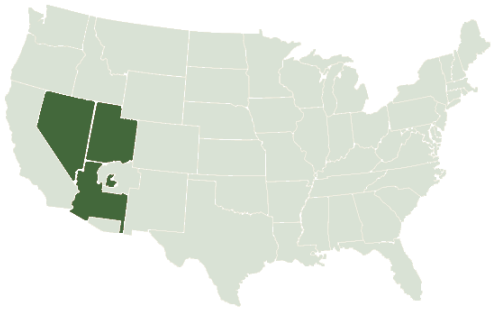


The Oklahoma City Area serves 43 tribes with a service population of nearly 330,000 AI/AN people. The service area covers the States of Kansas, Oklahoma, and Texas. The DEHS has district offices in Okmulgee and Shawnee, Oklahoma, and four field offices located in Oklahoma (Clinton, Lawton, Miami, and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



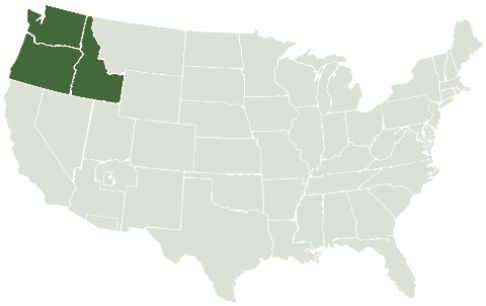
The Phoenix Area serves 46 tribes/tribal organizations with a combined population of nearly 150,000 and over 2,000 facilities in 4 states (Arizona, California, Nevada, and Utah). A cadre of EHS accomplishes the work of the DEHS. The staff is located in the Area Office; three District Offices; and nine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

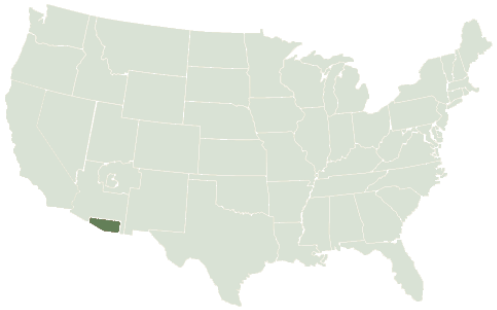


The Portland Area provides a health system for an estimated 150,000 American Indian residents of the 43 federally recognized tribes located in Idaho, Oregon, and Washington. Health delivery services are provided by a mix of health centers, health stations, preventive health programs, and urban programs.

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 Nation has approximately 31,000 enrolled members, and the Pascua Yaqui Tribe has approximately 18,000 enrolled members. The Tohono O'odham are predominately direct 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.

Looking Ahead into 2013

For 2013, the DEHS looks forward to accomplishing the following:

- Complete the Workforce Development Vision Element and begin implementation
- Identify members for a WebEHRS Change Control Board and begin reviewing and approving suggestions for improvement of the system
- Ensure that registration as an REHS/RS is an accepted requirement in all Area EH vacancies
- Improve communication and enhance staff competencies through increased use of technical webinars
- Increase use of "virtual" national meetings to minimize travel, reduce costs, and improve participation

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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

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