



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



The Environmental Health Services Program

—of the—

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

Annual Report **2014**

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.”

The Environmental Health Services Program

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INDIAN HEALTH SERVICE U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES Annual Report **2014**

This Annual Report for Calendar Year 2014 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 contacting:

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On The cover: The 2014 DEHS Photo Contest winner was CDR Vince Garcia. Here CDR Garcia prepares mosquito specimens for West Nile virus testing. (Colorado River Indian Reservation; August 2014)

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 2014. This report covers activities and projects conducted by Indian Health Service (IHS) and Tribal/Corporation environmental health partners throughout the nation. The intent of the report is two-fold: to capture historical program information so that it will not be lost to the ages; and to highlight activities and accomplishments that address the five DEHS national program focus areas and support the Indian Health Service priorities.

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

It has always been difficult to demonstrate the health impact of our activities when we prevent something from happening in the first place; but it is not impossible. Even though we may not be able to show that our activities directly improve morbidity and mortality rates, we can show that working with a tribe to pass a seatbelt law led to a reduced number of motor vehicle crash-related emergency department visits or that having a tribal food code led to fewer risk factor violations than not having one. Throughout this report, we 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 2014, the third package of recommendations for WebEHRS improvements was submitted to the contractor for implementation. Several of those items were completed in 2014, but implementation continued through 2015. Two workgroups were formed as a result of recommendations from the Change Control Board that were charged with identifying and creating needed e-Surveys and simplifying activity categories. The white paper that described the impact of economic development, specifically gaming, on the DEHS workload was completed during 2014 but not nationally distributed until 2015. The white paper offered five options for provision of services to Tribal operations. The Program Development track of the Injury Prevention Specialist Fellowship was redesigned to allow online learning in place of two in-person courses. This change to the curricula was necessary because travel restrictions made it difficult to get enough students to fill a class and keep that class throughout the year. In 2014, both our environmental surveillance and injury intervention final performance measures were calculated and compared to the 2011 baseline measures. Unfortunately, only the injury intervention measure met (actually exceeded) the target. The target was to improve the seatbelt use rate by 5% after two years of implementing comprehensive strategies. The use rate actually improved by more than 27%. The environmental surveillance measure got worse after interventions were put in place. The target was to improve the national food safety survey risk factor deficiency rate by 2% but instead, we saw the deficiency rate increase by 28%. We plan to address the issues that caused confusion about the measures in the upcoming 2016 – 2020 performance measures.

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

Table of Contents

The Environmental Health Services Program Annual Report 2014

Message from the Division Director	iii	Portland	62
Profile of the DEHS Program	1	Tucson	63
Program mission	1	Looking Ahead into 2015.	65
Program History	1	IHS Area DEHS Program Directory.	66
Program Structure	2	List of Figures	
Our Operating Philosophy	6	Figure 1: RRM (workload) vs. actual DEHS funding	
Education and Recognition	7	from 2002 to 2014.. . . .	4
Program Vision	20	Figure 2: Number of college students participating	
DEHS Services	23	in the DEHS extern program, by year	9
Core Services to AI/AN Communities.	23	Figure 3: Distribution of DEHS staff within the national program.	13
Specialized Services to AI/AN Communities	25	Figure 4: Percentage of DEHS staff with master's degrees.	13
DEHS National Focus Areas.	33	Figure 5: Percentage of DEHS staff with REHS/RS credentials	13
Children's Environment	34	Figure 6: Activities completed in 2013 as reported in WebEHRs.	23
Safe Drinking Water	36	Figure 7: IHS Workers' Compensation Cases, 2004-2014.	30
Food Safety	37	Figure 8: WebCident worker injury incidents and	
Vectorborne and Communicable Diseases	42	Office of Workers' Compensation Programs	
Healthy Homes	47	injury cases from 2004 to 2014.. . . .	31
Area DEHS Programs	51	Figure 9: Trends in services and reportable food	
Alaska	52	and waterborne illnesses.	37
Albuquerque	53	List of Tables	
Bemidji	54	Table 1: DEHS Program Funding Sources.	3
Billings	55	Table 2: Level of Need Funded (LNF) 2014.	5
California	56	Table 3: EHSC Sponsored Courses, 2014.	7
Great Plains	57	Table 4: List of Injury Prevention Fellowship Program	
Nashville.	58	Graduates by Year.	10
Navajo	59	Table 5: IEH Residency Graduates.	12
Oklahoma City	60	Table 6: Summary of DEHS Staff Certifications.	14
Phoenix	61	Table 7: Summary of Awards Received by DEHS Staff.	15
		Table 8: EHS of the Year, 2014 through 1993.. . . .	16
		Table 9: IHS TIPCAP Funding.	26

List of Acronyms

AI/AN:	American Indian/Alaska Native	LNF:	Level of Need Funded
ANTHC:	Alaska Native Tribal Health Consortium	MPH:	Master of Public Health
BIA:	Bureau of Indian Affairs	NDECI:	Notifiable Disease and External Cause of Injury
CDC:	Centers for Disease Control and Prevention	NHTSA:	National Highway Traffic Safety Administration
DEHS:	Division of Environmental Health Services	OCPS:	Office of Clinical and Preventive Services
DSFC:	Division of Sanitation Facilities Construction	OEHE:	Office of Environmental Health and Engineering
EH:	Environmental Health	OSHA:	Occupational Safety and Health Administration
EHS:	Environmental Health Specialist	OWCP:	Office of Worker's Compensation Programs
EHSA:	Environmental Health Services Account	PHS:	Public Health Service
EHSC:	Environmental Health Support Center	REHS/RS:	Registered Environmental Health Specialist/Registered Sanitarian
EHT:	Environmental Health Technician	RRM:	Resource Requirement Methodology
FDA:	Food and Drug Administration	TIPCAP:	Tribal Injury Prevention Cooperative Agreement Program
HQ:	Headquarters	USUHS:	Uniformed Services University of the Health Sciences
IEH:	Institutional Environmental Health	WebCident:	Web Based Incident Reporting System
IHS:	Indian Health Service	WebEHRS:	Web-based Environmental Health Reporting System
IP:	Injury Prevention	YKHC:	Yukon-Kuskokwim Health Corporation



LT Ampadu recording measurements from a wet bulb globe thermometer as part of a follow-up indoor air quality investigation.

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 to 1912, when Commissioner Burke, Office of Indian Affairs, U.S. Department of the Interiors, 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 of 1954 (Public Law 83-568), which moved the responsibilities for AI/AN healthcare 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 and provided advice and technical guidance on all community-based institutions.

In 1963, a joint conference of BIA and IHS 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 within the Health Education Program. The Accident Prevention Program continued as a collaborative effort with Health Education until 1979, when Emery Johnson, Director of IHS, formally transferred responsibility to Environmental Health Services and the name changed to Community Injury Control, and later to Community Injury Prevention (IP).

Program Structure

True to its historical beginnings, the DEHS is a field-based environmental health (EH) services program that takes pride in supporting the needs of individual tribal communities. The DEHS operates under a decentralized organizational structure, with most of its staff employed in district and field offices throughout the 12 IHS Areas. In 2014, the national DEHS program consisted of a total of 282 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 Rockville, Maryland, is staffed similarly to the Areas.

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

Program Resources

The current budget of the DEHS Program is approximately \$32 million. This funding is derived from three primary sources: congressional allocation; the IHS Director's Initiatives; and IP budget enhancements (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.

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 2014, the DEHS share of the EHSA budget was approximately 42%, or \$32,072,304. Figure 1 depicts a historical comparison of the workload-based Resource Requirement Methodology (RRM) versus the distribution of Program funds from 2002 to 2014. 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 1: DEHS Program Funding Sources.

Fiscal Year	Total EHSA Budget	DEHS RRM Share	*DEHS Budget	OEHE Funds Provided to DEHS			IHS Director's Initiative	Injury Prevention Budget Enhancements	Total DEHS Budget
				COSTEP**	Injury Prevention**	Residency**			
1998	\$42,159,000	33.80%	\$14,249,742	\$81,000	\$116,000	\$90,000	\$304,000	\$0	\$14,840,742
1999	\$44,244,000	33.80%	\$14,954,472	\$206,000	\$174,100	\$120,000	\$304,000	\$0	\$15,758,572
2000	\$49,162,000	33.20%	\$16,321,784	\$208,000	\$175,000	\$67,600	\$304,000	\$1,475,000	\$18,551,384
2001	\$50,997,000	34.20%	\$17,440,974	\$184,000	\$69,000	\$63,100	***	\$1,779,000	\$19,536,074
2002	\$52,856,000	34.93%	\$18,460,797	\$224,000	\$111,000	\$100,000	***	\$1,779,000	\$20,674,797
2003	\$54,437,000	36.62%	\$19,937,064	\$194,100	\$88,000	\$100,000	***	\$1,779,000	\$22,098,164
2004	\$55,888,650	33.63%	\$18,794,176	\$240,000	\$118,700	\$100,000	***	\$1,779,000	\$21,031,876
2005	\$56,328,611	32.80%	\$18,475,968	\$232,000	\$74,000	\$100,000	***	\$1,779,000	\$20,660,968
2006	\$57,447,796	34.03%	\$19,547,711	\$208,000	\$67,500	\$100,000	***	\$1,779,000	\$21,702,211
2007	\$63,235,458	35.68%	\$22,564,290	\$232,000	\$98,000	\$100,000	***	\$2,779,000	\$25,773,290
2008	\$64,576,052	37.65%	\$24,313,637	\$216,000	\$61,000	\$100,000	***	\$2,779,000	\$27,469,637
2009	\$67,022,000	38.97%	\$26,117,871	\$228,500	\$66,782	\$100,000	***	\$2,779,000	\$29,292,153
2010	\$69,196,000	35.74%	\$24,730,653	\$176,000	\$0	\$100,000	***	\$2,779,000	\$27,785,653
2011	\$69,057,608	32.00%	\$22,098,435	\$144,000	\$84,000	\$0	***	\$2,771,942	\$25,098,377
2012	\$69,703,294	34.00%	\$23,699,120	\$160,000	\$49,000	\$100,000	***	\$2,763,473	\$26,771,593
2013	\$66,521,479	38.00%	\$25,278,162	\$128,000	\$0	\$100,000	***	\$2,280,000	\$27,786,162
2014	\$70,901,479	41.00%	\$29,069,606	\$136,000	\$63,000	\$100,000	***	\$2,766,698	\$32,072,304
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									

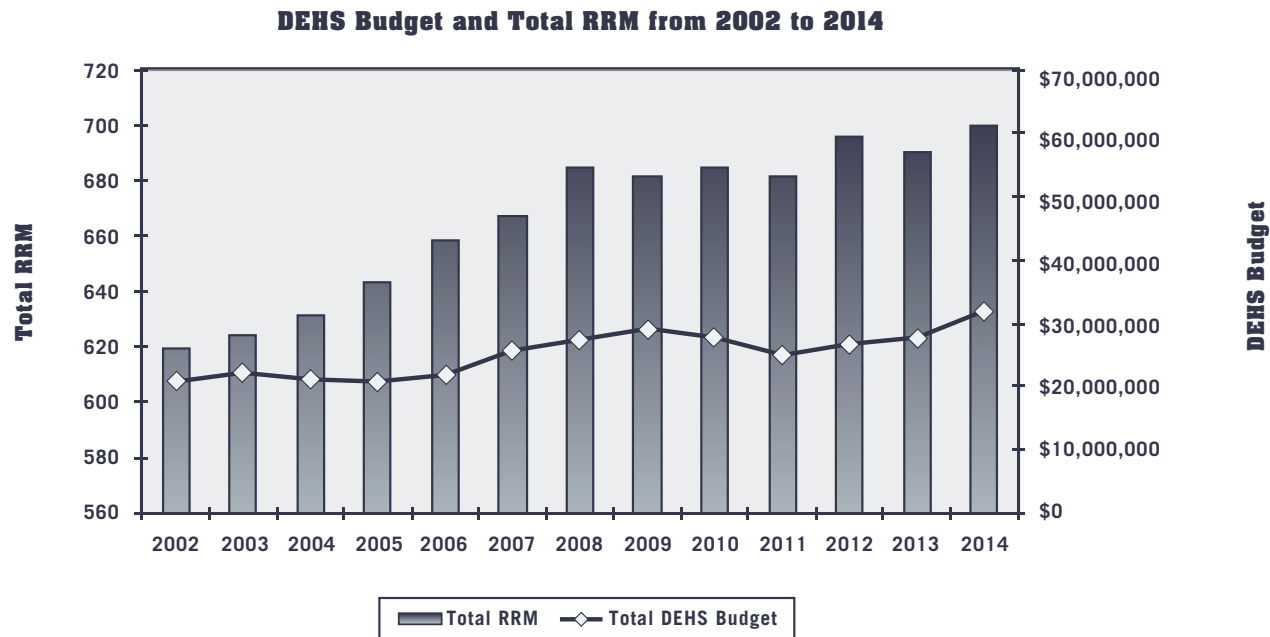


Figure 1: RRM (workload) vs. actual DEHS funding from 2002 to 2014.

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

Table 2: Level of Need Funded (LNF) 2014.

Level of Need Funded (LNF) 2014					
Area	Total Staff*	RMM	%LNF	Federal Staff	Tribal Staff
Alaska	47	89.5	52.5%	0	47
Albuquerque	18	38.2	47.1%	16	2
Bemidji	26	52.8	49.2%	11	15
Billings	9	32.3	27.9%	4	5
California	9	51.1	17.6%	6	3
Great Plains	28	58.2	48.1%	16	12
Nashville	18	46.0	39.1%	3	15
Navajo	37	110.2	33.6%	32	5
Oklahoma	33	89.2	37.0%	9	24
Phoenix	38	69.4	54.8%	22	16
Portland	13	50.7	25.6%	5	8
Tucson	6	12.6	47.6%	6	0
Total**	282	700.2	40.3%	130	152

* Includes Tribal staff hired with IHS Cooperative Agreement Funds

HQ staff are not reflected here

**Total is not exact due to rounding

Data from 2013 determines the 2014 LNF

As Table 2 shows, the DEHS Program strives to accomplish its tasks at a funding level of 41.8% of the estimated actual need. In order to maximize the utilization of available resources, the DEHS has established partnerships with federal agencies. Partnerships change as needs are addressed or emerge. A few of the partners over the years include:

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



Mr. Dodd conducting a food service sanitation survey.

Our Operating Philosophy

The operating philosophy of the DEHS is based on the Ten Essential Public Health Services first articulated in 1994 by a partnership of local, state, and national public health leaders. IHS adopted them as the Ten Essential Environmental Health Services and 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:

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 2014 can be found in the National Focus Area section of this report.

Education and Recognition

Education is a cornerstone of any successful public health program because it is the first step in raising awareness and empowering individuals and communities to participate in resolving community health issues. DEHS staff conducted training sessions during 2014 on a variety of topics. The Environmental Health Support Center (EHSC) in Albuquerque, New Mexico provided program management, IP, topic-specific EH, and IEH courses. Webinars were also utilized to maintain staff competencies without requiring travel. In 2014 there were 19 classes and 7 webinars with a total of 622 attendees (Table 3).

Table 3: EHSC Sponsored Courses, 2014.

EHSC Sponsored Courses - Calendar Year 2014		
Course	Location	Number of Attendees
Basic Course for Safety Officers	Phoenix, AZ	33
Biology and Control of Vectors and Public Health Pests: The Importance of Integrated Pest Management	Tucson, AZ	23
Certified Professional of Food Safety Training Course	Tucson, AZ	11
Certified Professional of Food Safety Training Course	Duluth, MN	13
Education for the Prevention of Infection (EPI) 101	Albuquerque, NM	52
Environmental and Health Effects of Clandestine Meth Labs	Oklahoma City, OK	31
Environmental and Health Effects of Clandestine Meth Labs	Albuquerque, NM	49
Infection Control for Ambulatory Healthcare Facilities	Albuquerque, NM	47
Intermediate Injury Prevention	Tucson, AZ	13
Intermediate Injury Prevention	Sacramento, CA	19
Introduction to Injury Prevention	Reno, NV	11
Introduction to Injury Prevention	Anchorage, AK	14
Introduction to Injury Prevention	Scottsdale, AZ	25
NFPA 101 - Life Safety Code	Window Rock, AZ	31
NFPA 101 - Life Safety Code	Farmington, NM	27
NFPA 101 - Life Safety Code	Spokane, WA	12
NFPA 99 Standards for Healthcare	Window Rock, AZ	29
NFPA 99 Standards for Healthcare	Farmington, NM	28
Playground Safety	Shawnee, OK	15
Total		483

Table 3: EHSC Sponsored Courses, 2014, (cont.).

Webinars	Month	Number of Attendees
Leadership Learning Team Cohort I	March-August	10
Leadership Learning Team Cohort II	May-September	12
Total Attendees		22
Sustainability Webinars		
Sustainability Webinar - Mid-Atlantic Region Reverse Osmosis	January	13
Sustainability Webinar - Video Conferencing	February	9
Sustainability Webinar - Human Pharmaceuticals in the Environment	July	42
Sustainability Webinar - How Facilities Can Comply w/ Pharmaceutical Waste	August	40
Sustainability Webinar - Striving for Net-Zero Energy Consumption in Quarters	December	13
Total Attendees		117
Total Webinar Attendees		139

Successful delivery of environmental health services to tribal communities rests on the foundation of a competent and motivated workforce. Figure 2 shows the numbers of student externs hired in the past 24 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 2014, the DEHS supported 17 student externs.

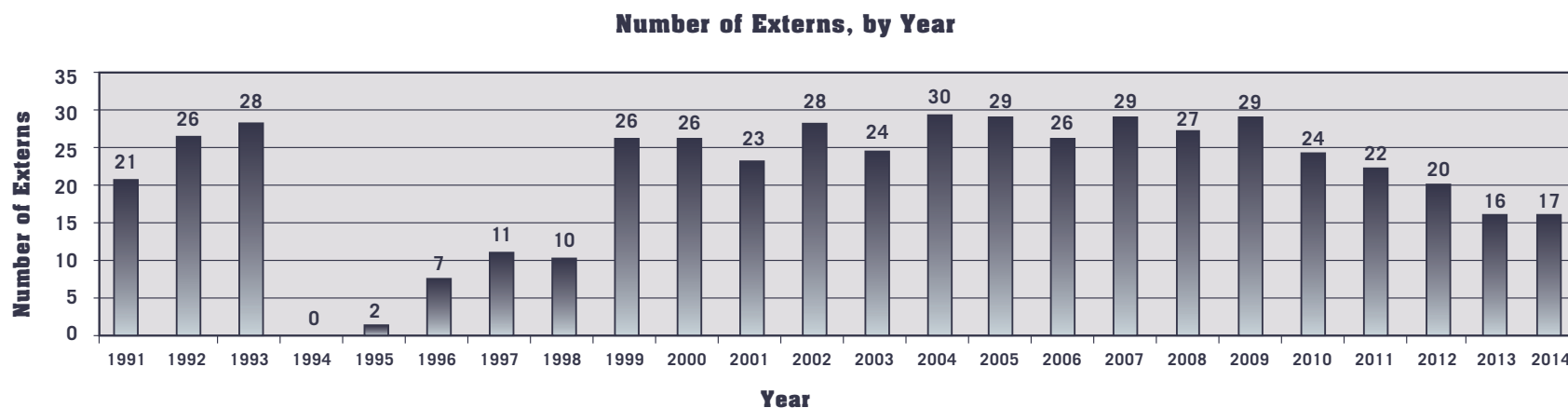


Figure 2: Number of college students participating in the DEHS extern program, by year.

The 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 10 DEHS staff funded by IHS for college courses in 2014. Of the 10, six were federal employees and four were tribal employees. Staff in 7 of the 12 Areas received long-term training support.

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

Building on the IHS IP Program core courses and the prior experiences of the participants, the Fellowship offers advanced training in

community injury intervention strategies, coalition building, injury epidemiology, program evaluation, presentation skills, and field work. Fellows apply the skills they've acquired by working on individual projects involving data collection and/or program implementation and evaluation.

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

What do participants gain from the Fellowship?

- Enhanced skills in community injury prevention:
 - Designing a project,
 - Promoting community involvement,
 - Collecting and analyzing data, and

- Conducting oral and written presentations;

- A knowledge of “best practices” for prevention of intentional and unintentional injuries;
- Individualized learning experiences (e.g. using Global Positioning System [GPS] devices);
- College credits from the University of Michigan (Epidemiology Fellowship); and
- Completion of a project that will help reduce injuries in their community.

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

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

2014*	Julie Adams John Hansen Adrianna M. Gibson Sharon K. Silvas Gina Yellow Eagle Rea Joyce Miles Lyndee Sue Hornell Gregory A. Sehongva Patrick H. Martinez	2012*	Chris Chestnut Jennifer J. Jordan Jacqueline Kizer Nicole D. Thunder Desta Walker Donald B. Williams Tina A. Yazzie-Smiley	2011	Martin Stephens Tim Balderrama Bryan Reed Hillary Strayer Lisa Nakagawa Jacey McCurtain Dustin Joplin Jason Hymer David Bales Molly Madson Travis Bowser	2009*	Sarah-Jean T. Snyder Rebecca Morris Laquita F. Fish Karen M. Ansera Pamela A. Michaelson-Gambrell Verlee White Calfe-Sayler Bernice Bert Amanda Parris Le Ray Skinner Jennifer L. Franks Annie Phare
2008*	Fleurette Brown-Edison Mary Robertson-Begay Antoinette R. Short Amy R. Cozad Jason D. Hymer Darcy Merchant, Sr. Lyndon Endischee Robin Lee Janelle Trottier	2007	Sherron Prosser Janae Price Siona Willie Stephanie Peebles Coffey Verlee K. White Calfe-Sayler Susan E.C. Ducore Belinda Aungie Michael E. Reed Jr. Bonny M. Weed Elisa DuBreuil	2006*	Lisa Aguerro Sherron Prosser Charlotte Ann Branham Samantha Holmberg Bonita Paddyaker Belinda Aungie Kathey Wilson Helen Garcia-Sisneros Angelita Chee Arturo Calvo	2005	Michelle Begay Mark Brewer Kyla Hagan George Hupp Holly Kostrzewski Elvira Martin Ina Mickelson Stephen Piontkowski John Schmitz
2004	Larry Carlson Timothy P. Duffy Jim Ferguson Hayden R. Hardie Rebekah Hunkup Robert Morones Mark E. Pike Randolph G. Runs After Charles Woodlee	2003*	Frances C. Anchondo Andee Beaver Keechi Maria A. Benton Mary Alice Clark Sybil K. Cochran Montell Elliott Eldon R. Espling Helen Gregorio Jodi R. Johnson Danny Joseph Norma McAdams Michael S. Struwin Minnie Yazzie	2002	Christopher W. Allen Jeff Dickson Myla Jensen Dan Kinsey Joseph LaFramboise Shirley Peaches Shelli Stephens-Stidham Sara A. Wagner Mona Zuffante	2000	Bruce Etchison Michael Boley Nicole Horseherder Martin Smith Mark Byrd Bobby Villines Sue Hargis Nate Quiring Andrea Horn Sharon John Richard Skaggs Molly Patton
1999	Bruce Chandler Arla Stroop Myrna Buckles Brian Johnson Ryan Hill Twyla "Zoe" Benally Dennis Renville Zahid Samad Tina Samm	1998	Karen Arviso Gary Carter Casey Crump David Hogner Brad Husberg Karin Knopp James Ludington JoAnn Perank Tish Ramirez Tina Russel	1997	Gordon Tsatoke, Jr Marjorie Winters Tom Fazzini Donna M. Nez Kathleen A. O'Gara Nellie Benally Jim Spahr Teri L. Sanddal Patricia Harris Smith Alex Hardin	1996	Holly Billie Robert Bialas Wenonya St.Cyr Rebecca Lawrence Vince Garcia Emily Watchman Jennifer Lincoln Donald B. Williams David Cramer Lynn Cook Sherry Fredericks-King Shirley Brewer Debra Haines

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

1995	Mark D. Miller Diana M. Kuklinski Lovetta Phipps Chris B. Buchanan Barbara A. Spriggs Debra M. Meek Randy Benefield James R. Howell Angela Maloney	1994	Hayden Anderson Michael Keiffer Kenny Hicks Willard Dause Albert Locklear Patricia Rouen John Spriggs Dione Bartmess Dan Hanson Mary O'Connor Wayne Hall Mike Halko Phyllis Cooke-Green Sharan Freiberg	1993	Alta Bruce Matthew J. Powers Roxanne L. Ellingson Wendy Fanaselle Ward Jones Darla Tillman Shawn F. Sorenson Mark Jackson Mark H. Mattson John D. Smart Cynthia LaCounte Paul T. Young	1992	Michael M. Welch Daniel C. Strausbaugh Virginia Begay Christopher Krogh Jodee Dennison Deanne M. Boisvert Louise B. Wedlock Dale M. Bates Susan McCracken Charles Stewart Watson Margaret M. Simons Joe Maloney Duane Kilgus Theresa Botruff
1991	Kelly M. Taylor Evelyn 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	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	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	1988	John R. Weaver Helen A. Hayes Christine M. Jackson Robert S. Newsad David M. Mosier Gary A. Schuettpeiz 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
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						

*This Fellowship year was a Program Development Class. **There was not a Fellowship class in 2001, 2010 and 2013.

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

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

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

The IEH Residency-only track is designed for those applicants who have already obtained a Master of Science or MPH degree in environmental health, industrial hygiene, occupational health, or safety management. The duration of the residency will generally be 12 months 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 25 IEH Residency Graduates from 1986 through 2014 (Table 5).

Table 5: IEH Residency Graduates.

Graduate	Residency Year
Katherine Hubbard	2014
Timothy Taylor	2014
Valerie Herrera	2010
Ricardo Murga	2010
Danny Walters	2009
Charles Woodlee	2008
David Cramer	2005
Mark Strauss	2005
Gary Carter	2003
Brian Hroch	2003
Kit Grosch	2001
Chris Kates	2001
Keith Cook	1999
John Smart	1999
John Holland	1997
Jeff Morris	1995
Linda Tiokasin	1995
Gary Gefroh	1994
David McMahon	1994
Greg Heck	1993
Curt Smelley	1993
Mark Kelty	1992
Al Knapp	1991
Bob Berger	1989
Jim Spahr	1986

Figure 3 shows the distribution of DEHS staff (282) within the national program (this excludes headquarters staff). Of these 130 were federally employed staff and 152 were tribally employed. The types of staff are Environmental Health Specialists (EHS) (203), Community Injury Prevention Specialists (52), and Institutional Environmental Health Specialists (27).

Thirty-one percent (88/282) of all DEHS staff, including federal and tribal employees, have master's degree in Environmental Health or a related field. Of the federal staff 45% (59/130) and 19% (29/152) of tribal staff have this advanced degree. Figure 4 presents the percentage of DEHS staff with master's degrees by specialty. Twenty-nine percent (58/203) of generalists, 19% (10/52) of IP Specialists, and 74% (20/27) of the IEH staff have master's degrees.

Of all DEHS staff 57% (161/282) are Registered Environmental Health Specialists or Registered Sanitarians (REHS/RS). Of the federal staff 71% (92/130) were registered and of tribal staff 45% (69/152) were registered. Figure 5 summarizes registration according to specialty. Sixty-five percent (132/203) of generalists, 85% (23/27) of IEH Specialists, and 12% (6/52) of the IP staff are registered.

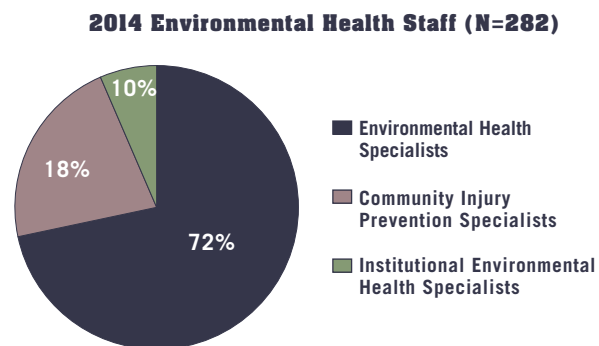


Figure 3: Distribution of DEHS staff within the national program.

Percentage of DEHS Staff with Master's Degrees (2014)

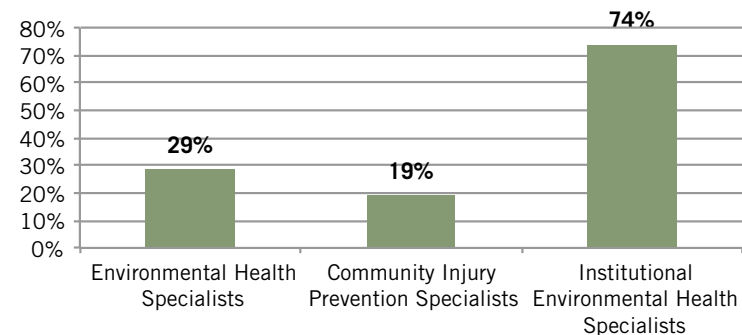


Figure 4: Percentage of DEHS staff with master's degrees.

Percentage of DEHS Staff with REHS/RS Credential (2014)

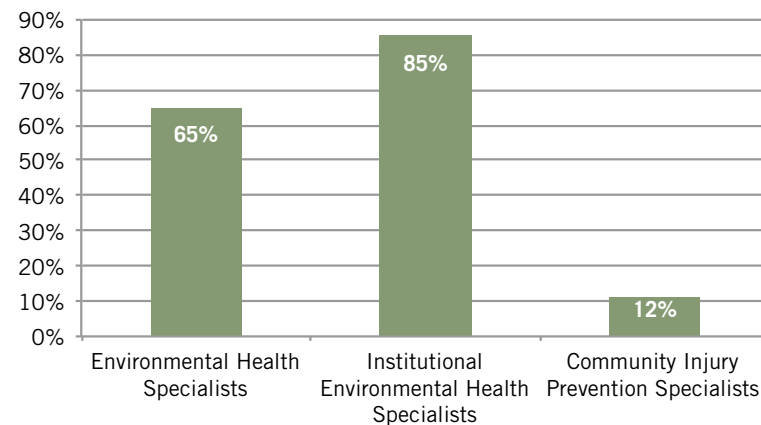


Figure 5: Percentage of DEHS staff with REHS/RS credentials.

Of all DEHS staff 20% (56/282) completed the IHS IP Fellowship Program, 22% (63/282) were Child Passenger Safety Technicians, and 2% (5/282) met Food and Drug Administration (FDA) standards to conduct retail food service inspections. Table 6 summarizes these and other credentials.

Table 6: Summary of DEHS Staff Certifications.

Certification	Environmental Health Specialist	Community Injury Prevention Specialist	Institutional Environmental Health Specialist	Total	Percent of total
REHS/RS*	132	6	23	161	57%
IP Fellow	37	14	5	56	20%
Certified Safety Professional	1	0	3	4	1%
Certified Industrial Hygienist	1	0	7	8	3%
Certified in Infection Control	0	0	0	0	0%
Child Safety Passenger Safety Technician	40	21	2	63	22%
Certified Playground Safety Inspector	3	0	1	4	1%
Certified Radiation Protection Surveyor	3	0	5	8	3%
Certified Environmental Health Technician	6	0	0	6	2%
Diplomate, American Academy of Sanitarians	3	1	1	5	2%
CHEM**	1	0	2	3	1%
FDA Standard	5	0	0	5	2%
Lead/Asbestos Certification	10	0	0	10	3%
IEH Residency	2	0	10	12	4%
Certified Pool Operator	45	0	1	46	16%
OSHA HAZWOPER	12	0	2	14	5%
Healthy Homes Specialist	6	0	0	6	2%
Certified Professional in Food Safety	9	0	0	9	3%

*Registered Environmental Health Specialist/Registered Sanitarian**Certificate of Healthcare Emergency Management

There are several awards DEHS staff may earn in recognition of contributions and achievements towards IHS goals, objectives, and the completion of significant activities. Table 7 is a summary of awards received by DEHS staff in 2014.

Table 7: Summary of Awards Received by DEHS Staff.

Award Type	Federal	Tribal	Total
Public Health Service Awards			
OSM	1		1
Commendation Medal	4		4
PHS Achievement Medal	5	2	7
PHS Citation	4		4
Crisis Response Service Award			
Outstanding Unit Citation	2		2
Unit Commendation	10		10
Isolated Hardship	2		2
Training Ribbon	1		1
Field Medical Readiness Badge			
Foreign Duty Award			
Hazardous Duty Award			
Special Assignment Award	2		2
Indian Health Service Area Awards	11		11
Civil Service Personnel Awards	20		20
National IHS Awards	2	2	4
Other National Awards	2		2
Tribal Awards			
TOTAL	66	4	70



CAPT Murga conducting a respirator fit test on Ms. Viera, Environmental Health Specialist.

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.

Table 8: EHS of the Year, 2014 through 1993.

2014	Landon Wiggins, Phoenix Area IHS	2003	Casey Crump, Bemidji Area IHS
2013	Martha Maynes, Bemidji Area IHS	2002	Pete Wallis, Tanana Chiefs Corporation
2012	Lisa Nakagawa, California Area IHS	2001	Molly Patton, Tanana Chiefs Corp.
2011	Bryan Reed, Bristol Bay Area Health Corp.	2000	Shawn Sorenson, South East Alaska Regional Health Corp.
2010	Amanda M. Parris, Phoenix Area IHS	1999	Mike Welch, Phoenix Area IHS
2009	Timothy Duffy, Bemidji Area IHS	1998	Diana Kuklinski, Phoenix Area IHS
2008	Holly Billie, Phoenix Area IHS	1997	Mark Mattson, Bemidji Area IHS
2007	Stephen Piontkowski, Phoenix Area IHS	1996	Harold Cully, Oklahoma Area IHS
2006	Troy Ritter, Alaska Native Tribal Health Consortium	1995	Keith Cook, Navajo Area IHS
2005	Andrea Horn, Phoenix Area IHS	1994	Carol Rollins, Ho-Chunk Nation
2004	Celeste Davis, Albuquerque Area IHS	1993	John Sarisky, Navajo Area IHS

Individuals who received Area EHS of the Year (2014) were:

- Alaska Area, Jennifer Skarada
- Albuquerque Area, Molly Madson
- Bemidji Area, Connie Giroux
- Great Plains Area, Tim Balderrama
- Oklahoma City Area, Calvin Underwood
- Phoenix Area, Landon Wiggins
- Portland Area, Matthew Ellis

From the above list of nominees, the selectee for the IHS EHS of the Year (2014) was Landon Wiggins of the Phoenix Area. His write-up can be found on the following pages.

INDIAN HEALTH SERVICE ENVIRONMENTAL HEALTH SPECIALIST OF 2014:

LANDON WIGGINS, REHS

INTRODUCTION

Since June 2012, LCDR Landon Wiggins has served as the Senior Environmental Health Officer for the Schurz Service Unit providing direct services to seven tribes in Nevada (pop. 2500). He also serves as the primary environmental health advisor to an urban health program serving Native Americans in the greater Reno, NV area. As the Senior EHO, LCDR Wiggins serves as a mentor to the Junior Field EHO at this duty station. The Schurz Service Unit is 1 of 4 that comprises the Reno District Office (RDO) which serves a total of 28 tribes in Nevada, Utah, and California. LCDR Wiggins consistently demonstrates commitment to the mission of the IHS and is a valued and highly respected resource to the RDO, the Phoenix Area, and to the tribes he serves.

SPECIAL ACCOMPLISHMENTS

ATP Bioluminescence Evaluation of Environmental Cleaning in Healthcare Settings: Disinfection of environmental surfaces to reduce the risk of healthcare associated infections, including those associated with multi-drug resistant organisms. There are 26 clinics and health stations in the RDO in which EHOs conduct routine environmental health surveys. LCDR Wiggins analyzed survey findings and identified gaps in environmental cleaning practices. Employing a comprehensive public health approach, LCDR Wiggins took the lead in developing an initiative to improve cleaning practices in healthcare facilities throughout the RDO. He researched and identified adenosine triphosphate (ATP) bioluminescence technology as a tool to test and provide a rapid detection of microbial surface contamination. He then adapted CDC's hospital focused Options for Evaluating Environmental Cleaning and Objective Methods for Evaluating Environmental Hygiene and designed a pilot project targeting the ambulatory healthcare setting.



LCDR Landon Wiggins, Environmental Health Specialist of the Year

He established and led a team of five RDO EHOs to assess cleaning practices at 5 clinics. He developed a survey protocol to ascertain baseline measures of surface contaminants, inventories of cleaning chemicals, housekeeping procedures, and infection control capacity. Baseline survey results indicated: 68% of ATP tested surfaces failed, indicating inadequate cleaning practices; several primary disinfects were not EPA registered; 60% of the facilities had no written housekeeping policies and procedures; and no facility infection control program was linked to environmental cleaning.

Using the baseline findings, LCDR Wiggins developed an improvement initiative with one of the participating facilities, the Pyramid Lake Paiute Tribal Health Clinic. He worked closely with clinic housekeeping

staff in developing cleaning policies and procedures. He led the development and instruction of a customized training for housekeeping staff to improve cleaning practices. The procurement of cleaning chemicals was updated to assure all were approved for the healthcare setting. Clinic leadership influenced by the project sent four staff for advanced training through the Association for Professionals in Infection Control and Epidemiology (APIC). To evaluate cleaning practices, LCDR Wiggins partnered with the clinic Quality Assurance Coordinator to conduct unannounced ATP assessments. Over a 6 month period, results went from an initial 88% fail rate to a 92% pass rate.

This project, including the innovative use of ATP and sampling procedures developed by LCDR Wiggins, has been expanded for use by his peers at additional healthcare facilities in the RDO. The project has also been adapted to evaluate environmental cleaning practices at other facility types, including child care facilities. LCDR Wiggins' focus on a process approach to interventions and systems change; and his leadership in planning and implementation, significantly contributed to the success of this project and increased technical capacity within the Reno District Environmental Health program.

Head Start Preventative Maintenance Initiative: Children's environmental health is a high priority for the Phoenix Area. In 2014 the RDO completed a project that provided the Inter-Tribal Council of Nevada Head Start Program, and tribes a prioritized facility repair and renovation needs list to target significant repeat health, safety, and code compliance issues for each of their 10 facilities. The priority report identified more than 100 significant issues, including 58 critical items. EH staff seized the opportunity to promote routine repair and preventative maintenance (PM) programs, which were identified as a substantial contributing factor to the findings at 9 out of 10 facilities. LCDR Wiggins took the lead in developing a PM tool that could be applied to one or multiple facilities, from basic to complex. The RDO will be pilot testing the tool to adapt it to other facility types during 2015, while continuing to partner with Head Start programs.

LCDR Wiggins' efforts served to build capacity within the EH, tribal, and partner programs, as well as to provide a needed resource to tribal programs.

PROFESSIONALISM

LCDR Wiggins is a model environmental health practitioner who maintains professional registration through NEHA (RS/REHS) and is a certified ServSafe instructor, a nationally-recognized food safety training curriculum. In addition to serving as a mentor to a Junior Field EHO, he also served effectively as the Preceptor to an EHO JRCOSTEP in 2014. He is committed to professional development and volunteered to participate in the OEHE Leadership and Personal Development Leadership Learning Team Pilot Project - a virtual training opportunity focused on enhancing leadership and management competencies. In 2014, he was among a team of IHS EHOs who contributed to the IHS Workforce Development Committee through their submittal of a formal report of training recommendations for junior EHOs. He continues to develop his professional presentation skills, co-authoring a formal poster presentation in 2014, ("Evaluation of Environmental Cleaning in Ambulatory Healthcare Settings", regional American Society of Safety Engineers Research Poster Competition), and presenting EH educational sessions at the Inter-Tribal Council of Nevada's 47th and 48th Annual Conventions ("Promoting Children's Environmental Health and Safety in the Childcare Environment"). His current role as the Vice President of the Northern Nevada Commissioned Officers Association demonstrates his leadership abilities and commitment to the Commissioned Corps.

INNOVATION

Capacity Builder: LCDR Wiggins identified environmental cleaning effectiveness as a public health concern and conceptualized the evaluation strategy using ATP technology, which was a new tool within the RD EH program. In addition to the technology, the project also required research and staff training in environmental cleaning and

infection control best practices in a district where the majority of healthcare facilities lacked a designated and trained infection control officer. LCDR Wiggins' intervention plan has shown notable success in improving environmental cleaning, with a major factor being the ability to quantify and provide immediate and visual results. This effort utilizes each of the ten essential public health services. LCDR Wiggins' efforts and systematic, process-driven approach increased both tribal and RD EH program capacity and provided a tool and intervention strategy that is already being applied to other facility types and public health issues.

SUMMARY

LCDR Wiggins demonstrates a high degree of professional and personal commitment to the mission of the Public Health Service and the Indian Health Service. His performance and willingness to go the extra mile have allowed him to strengthen relationships with tribal partners and have enhanced the quality of environmental health services provided to the Schurz Service Unit Tribes. He is a dedicated and talented Environmental Health professional who demonstrates leadership qualities that inspire cooperation and confidence in his colleagues, peers and tribal partners. He is an up and coming leader and a credit to the environmental health category.



LTJG Deardorff and LCDR Wiggins use adenosine triphosphate bioluminescence to assess the effectiveness of surface disinfection in a clinic.

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 Program leadership (HQ and Area Directors) identified seven Vision Elements that would have the most positive impact on the DEHS Program.

DEHS VISION ELEMENTS

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

In addition to Area efforts to develop policies and plans, program strategic planning continued to be a major national emphasis during 2014. Over 45 DEHS staff have been involved on teams formed to create significant, tangible progress on the seven Vision Elements since the February 2007 DEHS Directors’ meeting held in Nashville, Tennessee.

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

Summary of the accomplishments of Vision Element Teams:

- **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 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 2014.
- **Team 3 – Standardized Guidelines:** This team revised Part 3, Chapter 11 – Environmental Health of the Indian Health Manual. This chapter establishes the policy, objectives, responsibilities, and functions of a comprehensive community-based Environmental Health and

Engineering Program. Thanks to the efforts of this team, the updated chapter was signed into policy by the Acting IHS Director and published on July 15, 2013.

- **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. 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 formed to complete the following tasks:

1. Create a competency model for staff;
2. Create a list of opportunities to develop the workforce; and
3. Develop an implementation plan.

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

- **Team 7 – Operational Model:** In 2014 the directors selected this vision element to identify core services all Areas should provide the tribes. This team was tasked with creating a chapter in the OEHE Technical Handbook defining the operating guidelines for the DEHS and align with Part 3 Chapter 11 of the Indian Health Manual.



LT Burbage conducting a bed bug assessment.



CAPTs Hicks and Carter (L-R) conduct rabies virus vaccinations.

DEHS Services

Core Services to AI/AN Communities

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

For the DEHS, health monitoring activities not only include real-time surveys for a variety of public health-related issues but also the use of regional and national information systems to manage, track, and respond to trends and issues. Program staff had EH responsibilities for 19,106 facilities during 2014 (Source: WebEHRS Reports, National Establishment Counts*). Staff recorded 7,674 activities that monitored the environmental health status of these facilities (Source: WebEHRS Reports, Activities Summary). Figure 6 identifies various types of completed activities. Of the 5,798 activities reported, 76% (5798/7674) were surveys, representing the most common activity. There were 425 training sessions conducted and 244 investigations completed.

**Activities Completed in 2014 as Reported in WebEHRS
(percent of total)**

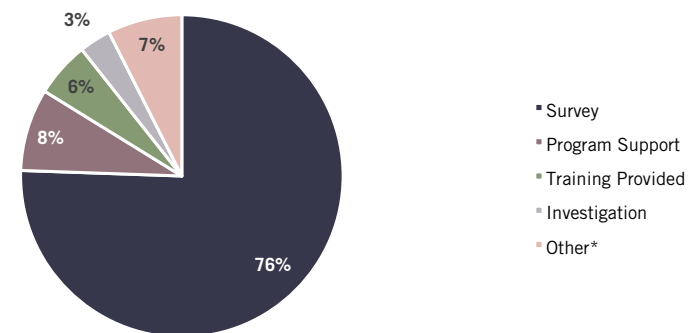


Figure 6: Activities completed in 2013 as reported in WebEHRS.

*Other includes mobilize community, policy development, sample/test, evaluation, control, training received, and data collection.

*All reports used a filter that excludes Headquarters items.



LT Hansen and CAPT Carter conduct rabies virus vaccinations.

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

In 2011, a team of subject matter experts from across the DEHS worked closely with a software vendor to address the need to revise WebEHRS so that the system could meet the dynamic requirements of EH in IHS. The outcome was a framework for an advanced and sustainable system with new features including enhanced eSurvey capabilities, improved report formatting, and a mobile application for field use. The system was rolled out in 2012. Further refining and customization occurred in 2014 to improve function and capabilities of the system. This process was driven primarily by staff input using the feedback feature embedded in the system.

Specialized Services to AI/AN Communities

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

COMMUNITY INJURY PREVENTION PROGRAM

A comprehensive approach is more effective for implementation of IP interventions. Effective IP interventions incorporating all strategies (education, legislation, enforcement, and environmental modification) rather than only one can have the most impact. Comprehensive Injury Prevention effective strategies implemented by the Areas in 2014:

- Motor vehicle injury prevention effective strategies
 - Promotion of primary occupant restraint laws; DUI laws; distracted driving
 - Child Safety Seat fitting stations and community clinics
- Unintentional elder falls prevention programs (exercise, home safety assessments, clinical)
- Suicide prevention (youth aimed initiatives, locked gun storage)
- Violence prevention specifically in school-based bullying prevention
- Drowning prevention (float coats)
- Fire safety (installation of smoke alarms, home safety)
- Advocacy and training targeting tribal leadership
- Targeted media awareness campaigns in AI/AN communities

Starting in FY 2014, CDC's Tribal Motor Vehicle Injury Prevention Programs (TMVIPPP) funded eight tribes/tribal organizations (Oglala Sioux Tribe, Caddo Nation, Hopi Tribe, Rosebud Sioux, Sisseton-Wahpeton Oyate of Lake Transverse Reservation, Colorado River Indian Tribes, California Rural Indian Health Board, Southeast Alaska Regional

Health Consortium). The DEHS staff at these tribes provided various levels of valuable technical support that ranged from project design and implementation to data collection and quality assurance. TMVIPPs incorporated at least two interventions from the Guide to Community Prevention Services (<http://www.thecommunityguide.org/mvoi/index.html>) that included evidence-based road safety interventions designed to increase seatbelt use, child safety seat use, and decrease alcohol-impaired driving.

The IHS Tribal Injury Prevention Cooperative Agreement Program (TIPCAP) started in 1997 to help tribes/tribal organizations build IP infrastructure and capacity. Since then, over \$23.5 million has been awarded to 91 tribes or tribal organizations. TIPCAP applies the public health approach to employ effective strategies that address education, policy development with enforcement and environmental modifications to ensure effective, and sustainable programs. TIPCAP addresses the IHS IP program priorities of motor vehicle injury prevention and unintentional elder fall prevention. TIPCAP also supports local tribal community injury prevention priorities such as suicide prevention, violence prevention, drowning prevention, helmet use, poisoning prevention, and fire safety. During the initial 1997 funding cycle, 13 tribes/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, TIPCAP increased program funding awards to \$50,000 for five years with 25 awards; increased project funding \$15,000 for three years

with 11 awards; and one year training or conference attendance awards of \$5,000 with three awards. In 2004, there was supplemental funding awarded to eight tribes for one year. Five of these awards were to create programs and three were to fund projects. The 2005 to 2010 award cycle of five year Cooperative Agreements totaled more than \$5 million to 32 tribes.

In 2010, the IP Program distributed approximately \$2.47 million for TIPCAP. The 2010 TIPCAP grant awards included 33 cooperative agreements from ranging from \$10,000 to \$80,000. Sixteen new tribes/tribal organizations were awarded at \$65,000 for five years. Seventeen tribes/tribal organizations/urban programs received \$80,000 for five years. Seven Tribes received funding for projects at \$10,000 for three years.

A summary of this funding, by Tribe, is presented in Table 9.

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 2 yrs	\$15,000 for 2 yrs	\$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
Absentee Shawnee Tribe											X		
Ak-Chin Indian Community				X									X
Aleutian Pribilof Islands Association		X											
Aroostook Band of Micmacs							X						
Bad River Band of Lake Superior Tribe of Chippewa Indians			X									X	
Bristol Bay Area Health Corporation	X												
Bristol Bay Area Health Corporation									X			X	
Caddo Nation			X					X					
California Rural Indian Health Board, Inc.			X					X				X	
Chickasaw Nation			X										
Chilkoot Indian Association							X						
Chitimacha Tribe of Louisiana										X			X
Choctaw Nation of Oklahoma									X			X	
Colorado River Indian Tribes			X								X		
Comanche Nation of Oklahoma			X										
Dakota Center for Independent Living					X								
Eastern Band of Cherokee Indians			X										

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 2 yrs	\$15,000 for 2 yrs	\$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
Fallon Paiute Shoshone Tribe	X												
First Mesa Consolidated Villages			X										
Fond Du Lac Reservation			X					X				X	
Fort Peck Assiniboine & Sioux Tribes	X			X									
Gerald L. Ignace Indian Health Center				X									
Gila River Indian Community											X		
Grand Traverse Band of Ottawa and Chippewa Indians					X		X						
Great Plains Tribal Chairmen's Health Board											X		
Greenville Rancheria													X
Hardrock Chapter			X					X				X	
Ho-Chunk Nation											X		
Hoopla Valley Tribe	X		X										
Houlton Band of Maliseet Indians		X		X						X			
Hualapai Tribe											X		
Indian Health Council, Inc.									X			X	
Jamestown S'Klallam Tribe	X												
Jena Band of Choctaw Indians										X			
Kiowa Tribe of Oklahoma									X			X	
Kodiak Area Native Association			X										
Lac Vieux Desert Band of Lake Superior Chippewa Indians										X			
Maniilaq Association											X		
Menominee Indian Tribe of Wisconsin											X		
Miccosukee Corporation	X												
Mille Lacs Band of Ojibwe				X									
Mount Sanford Tribal Consortium							X						
Nambe Pueblo										X			
Navajo Nation			X					X				X	

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 2 yrs	\$15,000 for 2 yrs	\$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
Nevada Urban Indians Inc.							X						
NNAHA Ojibwe Tribes								X					
Northwest Portland Area Indian Health Board											X		
Northwest Washington Indian Health Board											X		
Norton Sound Health Corporation						X			X			X	
Oglala Sioux Tribe									X		X		
Oneida Tribe of Wisconsin						X			X			X	
Osage Nation of Oklahoma	X								X				
Pascua Yaqui Tribe of Arizona			X										
Pawnee Nation of Oklahoma						X							
Pokagon Band of Potawatomi Indians	X												
Ponca Tribe of Nebraska		X		X									
Ponca Tribe of Oklahoma		X	X										
Pueblo of Jemez	X		X					X				X	
Pyramid Lake Paiute Tribe										X			
Quechan Indian Tribe									X			X	
Reno-Sparks Indian Colony			X								X		
Rocky Boy Tribal Health			X										
Rosebud Sioux Tribe				X									
Sac & Fox Nation	X												
San Carlos Apache											X		
San Felipe Pueblo									X			X	
Sapulpa Indian Health Center										X			
Sault Ste. Marie Tribe of Chippewa Indians					X								
Seneca-Cayuga Tribe of Oklahoma										X			
Sisseton-Wahpeton Oyate of the Lake Traverse						X			X			X	
South East Alaska Regional Health Consortium			X					X				X	
Southcentral Foundation				X			X						

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 2 yrs	\$15,000 for 2 yrs	\$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
Southern Ute Indian Tribe													X
Spirit Lake Tribe			X										
St. Regis Mohawk Tribe			X										X
Standing Rock Sioux Tribe									X				
Stockbridge-Munsee Community Band Mohican Indians				X						X			X
Tanana Chiefs Conference											X		
The Kaw Nation			X					X				X	
Three Affiliated Tribes			X										
Toiyabe Indian Health Project, Inc.									X				
Trenton Service Area			X										
Tuba City											X		
Tule River Indian Tribe											X		
United Tribes Technical College	X		X										
Ute Indian Tribe						X							
Walker River Paiute Tribe													X
White Earth Reservation Tribal Council				X						X			
White Mountain Apache Tribe				X					X				
Wichita and Affiliated Tribes				X									
Winslow Indian Health Care Center, Inc.						X							
Yavapai-Prescott Indian Tribe	X												
Ysleta del Sur Pueblo	X												

The collaboration between the IHS IP Program and the IHS Primary Care Provider began in 2007 to dedicate each July issue to Injury Prevention. The 2007-2014 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, community-based prevention, and tribal epidemiology centers.

The IP Program has supported the implementation of the National Sleep Safe Program (formerly funded by the U.S. Fire Administration) since 1999 to reduce fire and burn injuries in AI/AN communities. Its goal is to reduce the fire and burn injury rate for AI/AN children, ages 0 to 5 years, by increasing the use of operable smoke alarms in homes, providing a fire safety curriculum in Head Start (HS) Programs, and developing and

adopting tribal laws requiring fire safety codes in homes. The Sleep Safe Program is based on the same concept of community mobilization utilized in the National Indian Safe Home Coalition. In the 2013-2014 school year, the IHS IP Program funded Sleep Safe projects at thirteen Head Start Programs that resulted in distribution of 1,800 smoke alarms. In addition to parents, teachers, and caregivers – such as grandparents – were included that year. Since 1999, the Sleep Safe Program has provided \$2 million and more than 45,000 smoke alarms to AI/AN HS programs to reduce fire and burn injuries.

The Ride Safe Program was based on the same concepts as the Sleep Safe Program and developed 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 Head Start staff, parents, and caregivers; and conducting home visits and observational safety seat surveys in communities. Historically, the Ride Safe Program was funded by the IHS IP Program in collaboration with the National IHS Head Start Program. In the 2013-2014 school year, twenty Head Start Programs received child safety seats at a total cost of \$61,000 and more than 2,000 child safety seats were distributed. Since 2002, the Ride Safe Program has provided \$1.51 million and more

than 13,500 child safety seats to AI/AN Head Start Programs to reduce motor vehicle deaths and injuries.

For the 2014-2015 school year, the Ride Safe and Sleep Safe Programs were paused due to funding and changes in the National IHS Head Start Program. The National IHS Head Start Program had served a vital role in the training, implementation, reporting and evaluation of both Ride Safe and Sleep Safe Programs. Therefore, Ride Safe and Sleep Program operations will need to be evaluated on how to best manage the programs without this key partnership.

INSTITUTIONAL ENVIRONMENTAL HEALTH PROGRAM

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

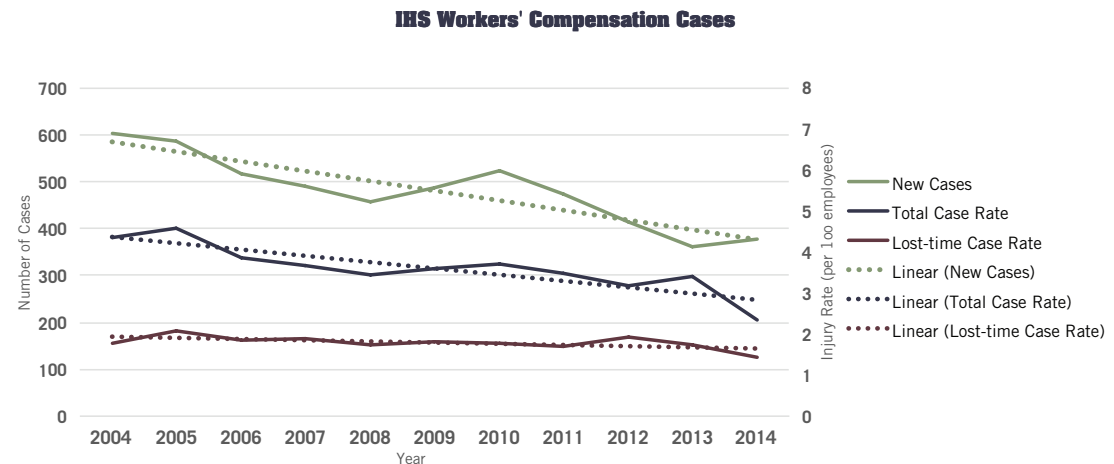


Figure 7: IHS Workers' Compensation Cases, 2004-2014.

Impact of WebCident on Workers' Compensation Claims

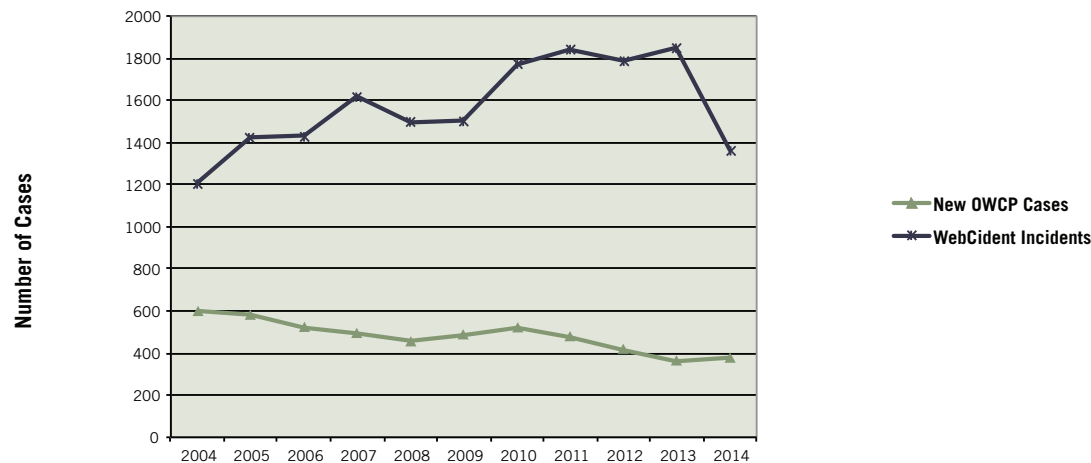


Figure 8: WebCident worker injury incidents and Office of Workers' Compensation Programs injury cases from 2004 to 2014.

One of the few existing metrics for measuring success of safety programs is the number of occupational injury cases and occupational injury rates. Figure 7 illustrates the occupational injury case numbers and rates for IHS federal employees. When compared to the 2013 Bureau of Labor Statistics data, IHS injury cases are consistently lower than those in the national healthcare industry. Figure 7 also indicates a trend of decreasing injury cases, total case rates, and lost-time case rates¹ for IHS from 2004 through 2014.

¹ Lost-time injuries are generally considered more severe injuries which result in lost workdays. These injuries are a subset of the total injury case rate.

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 DEHS launched the system in 2002, WebCident has collected information on more than 25,584 worker, visitor, and patient incidents at 188 IHS and tribal hospitals, health centers, health stations, dental stations, school health stations, youth regional treatment centers, and Area and other offices. During 2014, there were 34,168 incidents reported.

The reporting of incidents and analysis of WebCident data has an impact on the reduction of risk in the work environment through heightened awareness, the development of interventions such as educational programs, changes to policy and work practices, and environmental modification. These impacts may result in the reduction of occupational injury and workers' compensation cases. Figure 8, shows the potential impact of incident reporting on the reduction of workers' compensation cases (Source: Office of Workers' Compensation Programs (OWCP)). The reduction of WebCident incidents shown in 2014 may have been the result of expanded use of the Department of Labor's Employees' Compensation Operations and Management Portal system used throughout the IHS to electronically file compensation claims. This may also account for the slight increase in workers' compensation cases reported in 2014.

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 2014, had accumulated 211,108 incidents to monitor and evaluate.



DEHS Directors' Meeting, Albuquerque, NM

DEHS National Focus Areas

The DEHS delivers a comprehensive EH program to more than 2.2 million AI/AN people in 35 states. We consult with and provide technical assistance to tribes in an effort to provide safe, healthy environments. In 2008 DEHS identified five national focus areas: children's environment, safe drinking 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 IHS Areas in 2014. 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
- 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 childcare 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. The DEHS staff provides services to approximately 3,000 child-occupied facilities as well as services in community housing. Comprehensive interventions, based on local surveillance, are conducted to reduce the impact of disease and injury in the communities.

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 occurred in more than one consecutive facility inspection. The 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 2014 can be found on the following pages.



SHIGELLA RESPONSE ON A SOUTHWEST SOUTH DAKOTA RESERVATION

TERROLD MENZIE

GREAT PLAINS AREA

INTRODUCTION

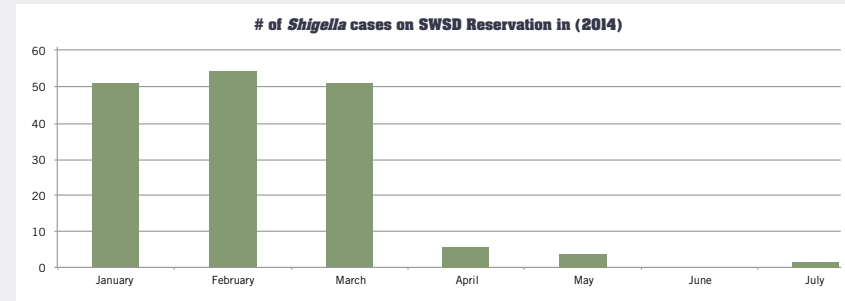
Southwestern South Dakota saw a dramatic increase in the number of *Shigella* cases in 2013-2014. In the early months of 2014 the *Shigella* outbreak was strongly felt in one SW South Dakota Reservation, primarily amongst school age children (5 to 16 years of age). The children who suffered from the illness missed school and parents missed work to take them for treatment and to provide them care at home. The schools had been made aware of the outbreak and initially responded to the outbreak using their internal resources (e.g. issued notes to parents). Unfortunately the number of cases continued to increase.

METHODS

As with most diseases spread via the fecal-oral route, proper handwashing through skills training is an effective control strategy. Therefore, a team of six EHSs were dispatched to assist the two resident EHSs who worked with [41] local schools, Head Starts, and childcare centers to educate students and teachers on proper handwashing. Teams showed students how *Shigella* spreads, followed by a demonstration stressing proper handwashing techniques using GlowGerm™. At the end of the 10-20 minute sessions, participants were reminded why handwashing is the best method to prevent and control *Shigella*. In addition to the handwashing training, medical staff conducted home visits and prescribed antibiotics.

RESULTS

Work on the handwashing education program started in early April 2014. The number of laboratory confirmed cases on the Reservation fell spectacularly from 57 in March to 7 in April. No cases were reported in June.



DISCUSSION

The results show that proper handwashing techniques coupled with keeping students with *Shigella* symptoms at home and treating with antibiotics worked to stop the outbreak. The decrease in the number of *Shigella* cases was echoed after a handwashing skills training in a neighboring community. Both of the communities received the same training and had nearly identical results. Due to the local schools desire to handle the outbreak in-house, there was a delay in providing the handwashing training. OEHE/DEHS leadership observed the continued rise of *Shigella* cases during February and March required more direct involvement and sought local concurrence. DEHS staff assisted control efforts.

CONCLUSIONS/RECOMMENDATIONS

Using teams of EHSs to quickly reach local schools with handwashing training in a timely manner, in conjunction with medical treatment, helped halt the spread of the disease. It was also critical for school administration to encourage ill students and staff to stay home and get ill individuals on an appropriate antibiotic. Physician and Public Health Nurse support was key to reduce the time patients shed the pathogen.

Safe Drinking Water



The DEHS is one of the partners 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, the DEHS staff report approximately 300 activities related to drinking water.

There were no projects with an emphasis in safe drinking water reported in 2014. The DEHS staff focused on eliminating risk factors related to the operation and maintenance of water systems.



Food Safety



The DEHS staff provide services at more than 5,000 food service facilities across the country. The CDC estimates over 48 million cases of foodborne illness occur in the United States annually, 128,000 of which require hospitalization and 3,000 of which are fatal. Organisms that result in the most common foodborne illnesses include *Norovirus*, *Salmonella*, *Clostridium perfringens*, *Campylobacter*, and *Staphylococcus aureus* (CDC, Estimates of Foodborne Illness in the United States, 2011, available at: <http://www.cdc.gov/foodborneburden/2011-foodborne-estimates.html>).

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 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 work to persuade tribal councils to pass food code legislation, whereas others focus on eliminating specific deficiencies (e.g. temperature control, hand washing, and/or employee health).

Implementation of effective EH strategies can substantially reduce disease and injury rates. For instance, from 2001 through 2013, as the number of services provided by IHS to food service establishments and drinking water systems increased 101% (2214/4453), the incidence

of food and waterborne diseases in the United States decreased 72% (60.2/17.06) (Figure 9). Projects with an emphasis on food safety conducted in 2014 can be found on the following pages.

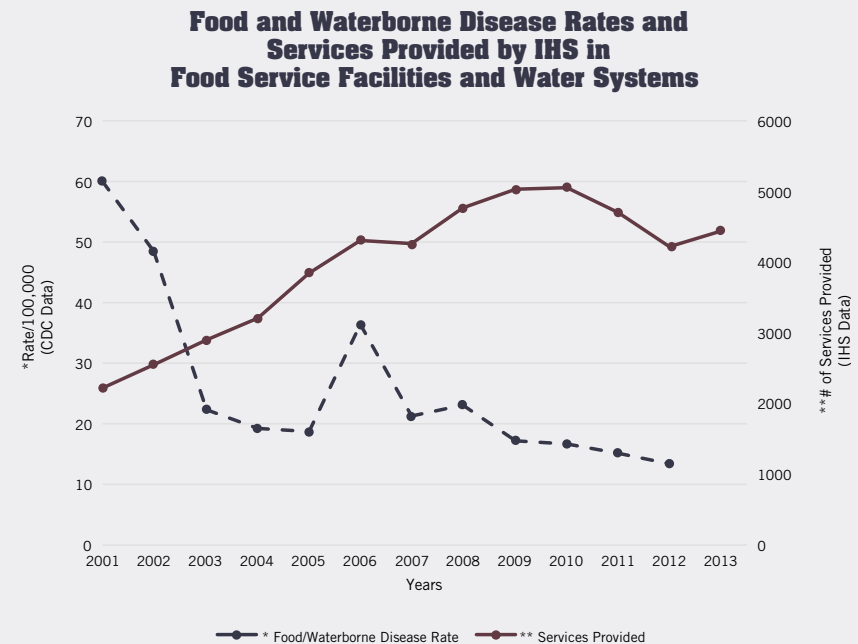


Figure 9: Trends in services and reportable food and waterborne illnesses.

Sources: * CDC MMWR, Summary of Notifiable Diseases, United States.
 ** IHS WebEHRS Data System.

ELBOW LAKE COMMUNITY CENTER / ELDERLY NUTRITION PROGRAM

CONNIE GIROUX

BEMIDJI AREA

INTRODUCTION

The Elbow Lake Community Center was primarily used by the White Earth Elderly Nutrition Program but also served as a gathering place for community activities. The facility had numerous environmental health and safety concerns that were continually identified in annual surveys. Some of these concerns included gaps between floor and wall junctions, numerous cracks in drywall and junctions, extensive water damage, exposed electrical wiring, lack of a hand washing sink in the kitchen, and illuminated exit signs not working properly. Due to the extent of damage and cost of repairs, the White Earth Nation decided to build a new community center for Elbow Lake.

METHODS

White Earth Builders oversaw the management and construction of the new facility. The Bemidji Area IHS OEHE was contacted and assisted in:

- Designing the layout of the facility
- Providing technical assistance on the kitchen and facility layout
- Providing technical guidance on codes and regulations
- Providing technical assistance in reviewing change orders
- Conducting site visits

RESULTS

The ground breaking ceremony for the new Elbow Lake Community Center occurred on November 26, 2013. After almost a year of planning and construction, the 2,352 sq. foot, \$264,543, Elbow Lake Community Center was completed and ready for use by the White Earth Elderly Nutrition Program on October 17, 2014. The facility included





an office area, dry storage room, two ADA compliant restrooms, mechanical room, kitchen, and dining room/activity area. The new installed kitchen equipment cost \$65,759 and ten contractors worked on the project.

DISCUSSION

Since the Elderly Nutrition Program utilizes the facility the most, and serves a high risk population, the project provides a safer environment for elders to gather and allows food to be properly stored, cooked, and served. Through the collaboration between the White Earth Nation, White Earth Enterprises, White Earth Builders, and IHS, the new community center was built to enhance services for the Elbow Lake community. Collaboration between the White Earth Nation and the IHS will continue as new projects arise and the need for assistance is requested.

CONCLUSIONS/RECOMMENDATIONS

This project demonstrates roles the DEHS staff have when involved in all phases of building design, construction, and operation. It highlights the importance of taking health and safety factors into consideration prior to project completion and when operations begin. The DEHS staff should continue to build relationships with facility operators that enable them to fulfill these roles.



TULALIP TRIBES ENVIRONMENTAL HEALTH INSPECTION PROGRAM

NINA REECE, QUIL CEDA VILLAGE, TULALIP TRIBES; MIKE COONEY (RETIRED) AND SUZY MEGERY, TULALIP TRIBES; KARIN KNOPP (RETIRED) AND CELESTE DAVIS, INDIAN HEALTH SERVICE

PORTLAND AREA

INTRODUCTION

The IHS Olympic District Office (ODO) serves a total of 14 tribes which include 320 tribal facilities in a 13,000 square mile area. Tulalip Tribes is the largest of the ODO tribes with 139 facilities (43%), of those 77 (55%) are food related; and the tribe continues to grow. The IHS and the tribe both recognized the growth was quickly exceeding IHS resources to provide services. After years of discussing various options, the tribe offered to fund an additional environmental health inspector position. This position evolved into a full-time tribal employee dedicated to public health inspections since January 2011. The IHS continues to provide environmental health services to the tribal community and technical consulting to the tribal inspection program.

METHODS

The tribal EH inspector works closely with the IHS. The IHS DEHS WebEHRS system continues to provide the inspection framework for the program. The tribal EH inspector uses WebEHRS as an IHS employee would: for tracking, scheduling, report-writing, and managing the tribal facilities. In 2011/2012, the tribal EH inspector focused on updating all the food facility inspections, investigating food illness complaints, and conducting food handler training. In 2012/2013, the tribal program added swimming pool inspections. In 2014, the tribal program incorporated plan reviews, training, and illness/complaint investigations into the service menu.



RESULTS

The total number of food inspections increased from less than 50 per year before the tribal inspection program was started, to 172 in 2014. In addition, follow-up visits were conducted as needed. The number of critical risk factor violations also decreased once the program was established: from 113 in 2011 to 25 in 2014.

DISCUSSION

As expected, the total number of food inspections increased with the addition of the tribal EH inspector. In addition, 100% of the food facilities are now inspected, and are inspected at least two times per year. In comparison, due to resource limitations, IHS inspections are conducted once per year for high risk facilities; and less if considered a low risk facility. Another benefit of this program has been the addition of follow-up inspections. Since the tribal EH inspector is geographically located in the tribal community, commuting distance and time is not an issue. Follow-up visits are done when critical violations are found and serve to motivate the facility operators to address these violations in a timely manner. Another indicator of program success is the decrease of noted critical violations from the program's start in 2011 through 2014. Consequently foodborne illness complaints and cases have also been greatly reduced.

CONCLUSIONS/RECOMMENDATIONS

The number of total facilities assigned to an inspector and travel distances effects the rate of completed inspections and follow-ups. The Tulalip EH inspector has 77 facilities with only local community travel compared to the one IHS EH inspector who has 320 facilities plus travel in a large geographic area. The partnership between the tribal EH inspector and the IHS inspector works well and makes for an overall stronger public health presence in the tribal community. Other large tribes with many enterprise facilities should be encouraged to start a similar program.

TRIBALLY ADOPTED FARMERS' MARKET FOOD SAFETY GUIDELINE

MIKAYLA DEARDORFF AND KELLI MOHLER

PHOENIX AREA

INTRODUCTION

In late 2013, the Reno Sparks Indian Colony (RSIC) Health Clinic requested OEHE assistance to develop food safety requirements for monthly farmers' market planned for the summer of 2014.

- Market to provide locally grown and handcrafted products, those produced under newly adopted Nevada Cottage Foods Law, as well as temporary and other food vendors
- The OEHE and the Tribe collaborated on the development and adoption of a comprehensive Farmers' Market Food Safety Guideline and Permitting Process
- Aimed at consistency with state and local requirements to best ensure food safety and promote compliance

METHODS

- Reviewed sample guidelines and application forms provided by local farmers' markets
- Contacted local health jurisdictions (e.g. Nevada Dept. of Ag, and Nevada State Division of Public Health) for their respective food safety requirements, restrictions, and application process for various food vendors types and products
- Participated in multiple committee and special meetings with tribal leadership and departments to provide guidance and to ensure the final draft met the needs of the Tribe
- Developed and provided a draft Food Safety Guideline and Permitting Process for tribal approval

RESULTS

- Farmers' Market Food Safety Guideline was adopted by Tribal Council in 2014 as an appendix to Tribal Farmers' Market Policy and Procedures
- Increased DEHS capacity through research and education on food safety requirements at farmers' markets and cottage food laws across the District
- Guidelines served as a template for other tribes considering similar events

- Strengthened partnerships with local and state EH programs, improving communication and partnership on overlapping EH issues

DISCUSSION

The RSIC is an urban tribe, resulting in high potential Native and non-Native consumer rates for farmers' market events. The Center for Disease Control reports 46% of the 4,589 foodborne illness outbreaks between 1998-2008 were linked to fresh produce. Thus, ensuring a comprehensive, enforceable food safety standard and permitting process for events was critical for public health protection.

- The demand for and presence of farmers' markets and similar events offering produce and other food items continues to increase in the U.S.;
- Nevada adopted a new cottage food law in 2013
- Food safety regulations vary across jurisdictions, creating confusion for vendors, who may not be familiar with the differing requirements (there are 5 health jurisdictions in NV with varying food safety regulations)
- Challenges included developing processes among tribal programs for issuing business and food service permits, clarifying enforcement authority, defining roles, and addressing concerns related to enforcement

CONCLUSIONS/RECOMMENDATIONS

Adoption of the Farmers' Market Food Safety Guideline was a significant step towards protecting the public health and reignited discussion about RSIC adoption of the FDA Model Food Code. The guideline also increased capacity at the tribal level for the assessment and enforcement of food safety standards, creating a permitting and enforcement process by which vendors and event coordinators are held accountable for compliance. The guideline serves as a template for other tribes throughout the District.

- Maintain partnerships
- Continue to advocate for the adoption of the FDA Model Food Code throughout the District, as well as specific food safety guidelines and processes for food events, such as celebrations and farmers' markets

Vectorborne & Communicable Diseases



Diseases transmitted through humans, insects, or animals present an ever-increasing burden on human health. A few examples of vectorborne or communicable diseases include West Nile virus, H5N1 (Avian Influenza), hantavirus, Rocky Mountain spotted fever, and plague.

The DEHS staff work 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. In 2014, staff focused on building tribal capacity to conduct animal bite investigations, evaluated infection control practices, and the development of body art guidelines for tribal jurisdictions.

Projects with an emphasis on vectorborne and communicable disease prevention and control conducted in 2014 can be found on the following pages.



TEACHING A NEW DOG OLD TRICKS: BUILDING TRIBAL CAPACITY THROUGH ENHANCED ANIMAL CONTROL SERVICES

STEPHEN PIONTKOWSKI, JOSE VELASCOSOLTERO, JON PEABODY, KELSEY HUSTEDT, GEORGE CARROLL, CHRIS BISHOP

PHOENIX AREA

INTRODUCTION

Animal bite investigations (ABIs) determining the risk of rabies exposure are a routine component of the DEHS workload on reservations in the Phoenix Area. Acknowledgement of miscommunication and disjointed operations among stakeholders led one tribe's animal control program (ACP) to assume ABI responsibility in 2014. We summarize a pilot project that resulted in shifting responsibility of conducting ABIs from the DEHS to a tribal ACP.

- 66 animal bites occurred annually (average FY 2012-2014) on a reservation with tribal enrollment ~ 15,500; majority of bite incidents involved dogs
- Rabies virus is endemic in the region; latest epizootic in 2013
- Each bite incident requires an investigation to assess bite victims' risk of rabies exposure; rabies is 100% fatal if untreated
- ABIs require extensive travel/time ranging from 1-4 hours
- ABI results submitted to patient care providers to determine if patient requires rabies post-exposure prophylaxis
- Miscommunication between ACP and DEHS caused some ABI referrals to be duplicated or not investigated
- Purpose of pilot was to conduct efficient ABIs through a standardized approach to improve tribal capacity

METHODS

- Stakeholders (ACP, county rabies control program, DEHS) agreed to conduct pilot
- Project period: February 2013 through August 2014
- EHOs authored ABI Pilot Standard Operating Procedures (SOP)
- Valid ABI referrals from local IHS Hospital were conducted solely by tribal Animal Control Officers (ACOs) in accordance with ABI policy
- EHOs exercised quality control practices
 - Created centralized database to track ABIs
 - Provided training to ACOs
 - Reviewed ABIs received from ACOs for accuracy

and completeness

- EHOs conducted project evaluation at middle and end of project period and discussed with stakeholders

RESULTS

- ABI SOP institutionalized new method of providing services

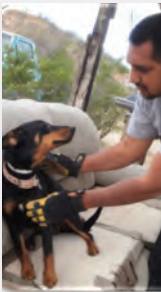
Project Strengths	Project Challenges
Centralized reporting system eliminated duplicate referrals	Incomplete referrals submitted by IHS Hospital
ACP viewed by community as a resource for all things pet related	ABI referrals not submitted to ACP immediately after referral written by IHS Hospital
ACP conducted 58 ABIs	Some ABI monthly reports submitted late to OEHE
ACP located 46 of 61* dogs (75%)**	Below average bite incidents (6) reported over three month period because fax number change not communicated with stakeholders
*Higher number of dogs than ABIs because some incidents involve >1 dog **Percentage typical due to challenges identifying free-roaming dogs	

DISCUSSION

- Challenges were identified and overcome due to quality control practices and project evaluation
- Greater efficiency of enhanced services from tribal ACP is expected and will be monitored

CONCLUSIONS/RECOMMENDATIONS

- New ABI procedures as a result of this pilot project enhanced tribe's capacity to provide more complete ACP services which began in late 2014
- Pursuit of enhanced tribal capacity to provide services is an abiding endeavor that requires persistence and devotion



ATP BIOLUMINESCENCE EVALUATION OF ENVIRONMENTAL CLEANING IN CLINICAL SETTINGS

LONDON WIGGINS AND ADA SLOOP

PHOENIX AREA

INTRODUCTION

Routine environmental health surveys of healthcare facilities within the Reno District indicated gaps in environmental cleaning practices. Effective environmental control measures are essential to control microorganisms and provide a safe environment for the patient and healthcare worker.

- To assess this and identify intervention strategies, the Reno District EH program, in conjunction with healthcare staff, completed evaluations of cleaning procedures and the thoroughness of surface disinfection at five health clinics located within the District
- The assessments were conducted using adenosine triphosphate (ATP) bioluminescence
- Twenty-five environmental surfaces were sampled in each clinic; the total amount of ATP, both microbial and non-microbial, was quantified and expressed as relative light units (RLU)
- This assessment was based on CDC's Options for Evaluating Environmental Cleaning and Objective Methods for Evaluating Environmental Hygiene, both of which were adapted to the Health Clinic setting
- The ATP Bioluminescence tool helped to identify areas where cleaning was indicated as insufficient

METHODS

- Equipment
 - SystemSURE Plus Luminometer
 - SureTrend data analysis software
 - UltraSnap ATP test swabs
- Sampling

- Established assessment protocol (testing locations, objects, and baseline data)
- Collected and analyzed ATP testing datasets

Reporting

- Primary report comparing data from the five clinics was prepared along with secondary reports for each individual clinic

RESULTS

- Only two of the five facilities had written housekeeping policies and procedures
- Chemical inventories included primary disinfectants that were not EPA registered and/or intended for healthcare
- ATP Instrumentation guidelines set recommend pass, caution and fail limits for patient rooms (PR) and public areas (PA) as: PR: P=<25, C=25-50, F=>50 RLUs and PA: P=<50, C=50-100, F=>100 RLUs
 - 68% of tested surfaces failed to meet these limits (see chart)
 - Public areas 16% higher fail rate than patient care
 - Surfaces that consistently failed at all facilities: exam tables, bathroom sink handles, the ADA automatic door openers, waiting room armchair rests, and the reception counter
- Where an Infection Control Nurse was appointed, they served under another primary job title, contributing to a lack of emphasis on the housekeeping component of the infection control program

DISCUSSION

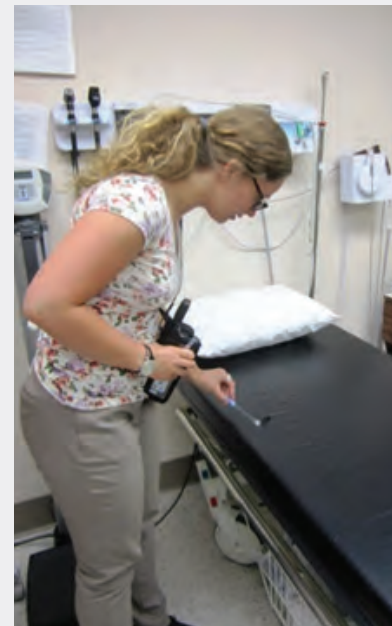
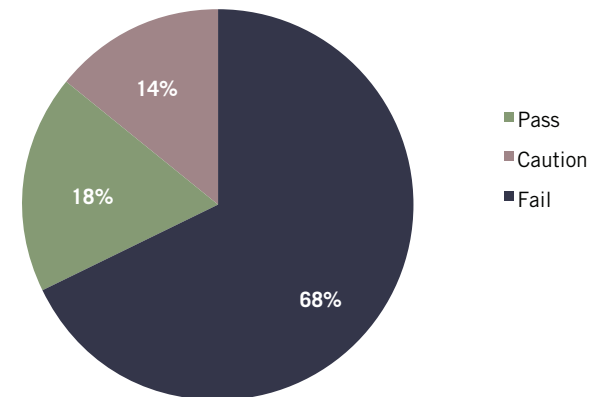
- Many facilities lack policy development and implementation directly linking environmental cleaning and surface disinfection to infection control
- This evaluation provides the data necessary to introduce programmatic and educational interventions to reduce the transmission of healthcare acquired infections related to contamination of near-patient surfaces and equipment

CONCLUSIONS/RECOMMENDATIONS

In order to ensure effective environmental cleaning and control measures within clinical settings, emphasis needs to be placed on developing comprehensive cleaning and disinfecting policies and procedures for high contact patient care surfaces.

- Challenges
 - Altering established behavior and practices
 - Establishing a direct link between infection control and environmental cleaning
 - Lack of developed and implemented policies and procedures
 - Lack of designated and trained IC Nurses
- Recommendations for Interventions
 - Follow up assessments
 - Trainings for key staff, using assessment data
 - Development and implementation of policies and procedures

Environmental Surfaces Sampling Results
- All Locations



DEVELOPMENT OF TEMPORARY BODY ART GUIDELINES

DAVID HOGNER, FARREL SMITH, AND DANNY WALTERS

OKLAHOMA CITY AREA

INTRODUCTION

The Oklahoma City Area Indian Health Service was contacted by a tribal nation for technical assistance and support during a three day temporary body art event. Since tribal body art guidelines were non-existent, partnerships with tribal and state health officials were essential in the development of staff training and body art guidelines and inspection protocols. As a result, a Model Tribal Body Art Code and Guideline document was developed to provide the basic requirements for evaluating the environmental health and safety of body art establishments within tribal jurisdictions.

METHODS

Beginning in January 2014, meetings were held with tribal officials, Oklahoma State Department of Health and the DEHS to layout the operational framework of the event. Due to the uniqueness of this event the tribe allowed the Oklahoma State Department of Health to provide onsite technical assistance to tribal and the DEHS staff. Preventing disease transmission during the event was the major focus.

In March 2014, the Oklahoma State Department of Health coordinated training for tribal and the DEHS staff at a local body artist establishment. In April 2014, Body Art Guidelines, partnership roles and responsibilities, logistics, and a comprehensive inspection checklist was completed and utilized. Between each shift a debriefing session occurred to highlight issues of concern. At the conclusion of the event an after action meeting was held to identify strengths and areas for improvement.

RESULTS

1. DEHS staff conducted 126 pre-event body art booth inspections and continual onsite monitoring throughout the entire event
2. Tribal body art regulations were written and developed by the tribe using the State of Oklahoma's body art regulations
3. Partnerships were strengthened between Indian Health Service, Tribe, State, and County
4. Staff competencies were improved

5. Model Tribal Body Art Guidelines were created

6. A body art inspection checklist and presentation was developed

DISCUSSION

- The Model Tribal Body Art Code and Guidelines provide the basic requirements for evaluating the environmental health, safety, and infection control of body art establishments within tribal jurisdictions
- The Temporary Tattoo Event presentation is intended to provide familiarization with planning, training, event activities and lessons learned
- Lessons were learned during the event which prompted an after action review to discuss what went well and areas for improvement
 - Lessons learned were included in the Model Tribal Body Art Code and Guidelines and the Temporary Tattoo Event presentation developed by the Oklahoma City Area Indian Health Service, Division of Environmental Health Services

CONCLUSIONS

Pre-planning and building partnerships were vital to the success of this event. The development of body art guidelines for tribal jurisdictions will better prepare both tribal entities and the DEHS staff for dealing with these events from an infection control standpoint. After action review is also key for identifying strengths and weakness in an effort to improve existing best practices.

RECOMMENDATIONS

- Review contractual requirements regarding infection control to all parties involved
- Provide adequate handwashing stations and require single use body art equipment
- Ensure artists are informed how to access the applicable regulations
- Ensure pre-event inspections are conducted prior to an artist conducting any body art activities

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: 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 and the DEHS staff focus on identifying and eliminating related risk factors. Projects with an emphasis on healthy homes conducted in 2014 can be found on the following pages.



SWIMMING POOL AND SPA PROGRAM IMPROVEMENT INITIATIVE

ALYSSA BERNIDO, JEFF DICKSON, AND DEBRA GRABOWSKI

ALBUQUERQUE AREA

INTRODUCTION

The role of pools and spas in disease transmission and injuries has been well documented. To minimize these adverse impacts, the Albuquerque Area DEHS uses current standards and provides tribes up-to-date information. We adopted a multi-pronged approach: assess information of which the tribes might not be aware; evaluate best practices; and compare our current program against the best practices model. We found several areas where we needed to develop informational brochures and we updated pool survey operating procedures.

METHODS

We first evaluated recently issued or updated pool information. We identified the Americans with Disabilities Act (ADA) and the Virginia Graeme Baker Act (VGBA) as two topics for which updated information should be provided. Alyssa reviewed the contents of the document we are currently using (based on the State of New Mexico code), the guidance document for the survey form in WebEHRS, and the Model Aquatic Health Code (MAHC). By analyzing the 117 survey form items, she determined areas of agreement and disagreement.

RESULTS

Two brochures were developed, one on the VGBA and one on the ADA as it relates to pools and spas. These brochures have been disseminated to the pool operators within our Area. We found many similarities but also, of course, differences between the current guidance document, the guidance document used for the WebEHRS form, and the MAHC.

DISCUSSION

The development of the two pool brochures helped fill a significant information gap for the tribal pool operators and facility managers. Many had heard of the acts but were unsure of the provisions. Others had begun implementation but had not reached full compliance. Because of the multiple areas of agreement and disagreement between the forms, it seems that the WebEHRS form at this time provides a good middle ground, with most of the provisions of the three codes addressed.

CONCLUSIONS/RECOMMENDATIONS

Because of the potential severity of drain related incidents, it is critical that all pools and spas comply with the VGBA. The brochures helped clarify the provisions. An information brochure helped answer many ADA requirement questions we received. The review of our current guidance document against the best practices outlined in the MAHC helped ensure that we used the most current survey protocols, which helped to enhance the safety of tribal pools and spas.

BED BUG TASK FORCE: COMMUNITY BED BUG SURVEY

BRANDON PARKER

GREAT PLAINS AREA

INTRODUCTION

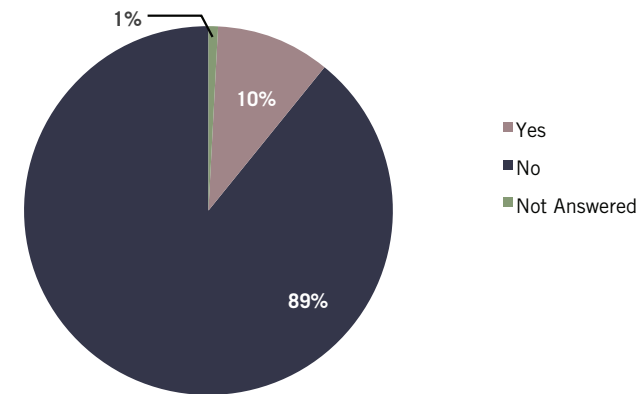
The Centers for Disease Control and Prevention report bed bugs as an emerging public health concern. In 2014, several bed bug complaints were reported to public service programs within a tribal reservation. A Bed Bug Task Force was formed to help address this local concern. This group consisted of IHS (OEHE and Public Health Nurses), State Department of Health, and tribal partners. With limited resources and the magnitude of the problem unknown, the group set out to monitor the bed bug activity level in five communities by conducting a community bed bug survey, develop response and control tasks, link people to needed services, and seek additional tools and resources to help address the matter.

METHODS

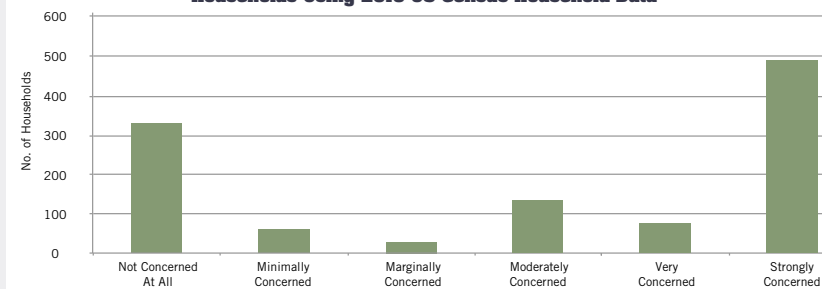
From three possible options, the Task Force prepared a method to gauge the bed bug activity level on the reservation by developing a brief survey. The survey was then completed in an anonymous fashion in three locations. The one page survey design included closed-end questions and two open-ended questions. Survey responses were quantitatively transcribed using a combination of Epi Info 7 and an Excel spreadsheet. Two foundation questions from which the questionnaire built from were: 1) had respondents dealt with a bed bug infestation within the last few years; and 2) which community had respondent resided in? The survey team analyzed reported infestations and further expanded the data utilizing recent U.S. Census data to project other community-based bed bug related matters.

RESULTS

BBTF Survey: Participants Who Reported Having Bed Bug Infestation Problems



BBTF Survey: Estimated Bed Bug Concern Level of Households Using 2010 US Census Household Data



DISCUSSION

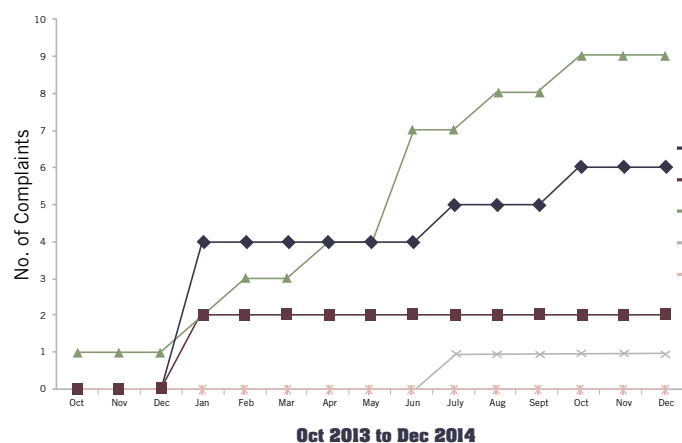
Bed bugs have become a concern for many, especially those in isolated communities least equipped to deal with them. Survey data showed at least 1 in 5 households in a community reported bed bug infestations; however, other community specific household data varied significantly. Using U.S. Census data, we estimated that up to 450 of 2,800 persons were directly affected by bed bugs and that overall, 50% of households were very concerned, if not strongly concerned, about infestation risks. Limitations: the convenience sampling method we used can only produce an estimate of the bed bug infestation.

CONCLUSIONS/RECOMMENDATIONS

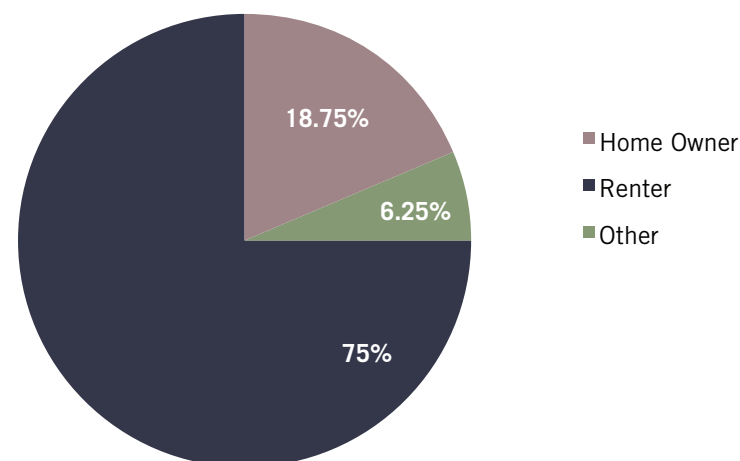
Bed bug infestations are a burden on residents, property owners, and health and social service providers. In order to mitigate health effects, improve quality of life, and reduce economic hardships, long-term opportunities to stop and curtail the spread of bed bugs should be a priority. The Bed Bug Task Force should utilize the survey data to develop a Bed Bug Management Plan which is scaled to local needs and capacities.



**Bed Bug Complaints that were Reported to OEH
From Five Reservation Communities; Oct 2013 to Dec 2014**



BBTF Survey: Infestations by Housing Status





Area DEHS Programs

Alaska



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

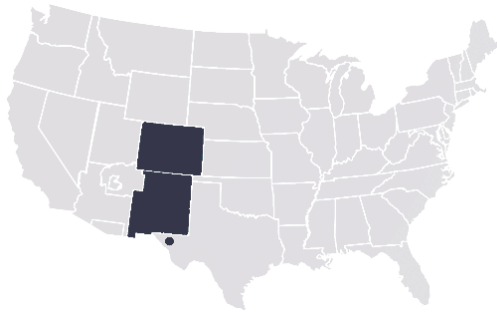
Typical services include assistance related to water, sewer, solid waste, air, and vector

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 operate 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 of AI/ANs.



Albuquerque

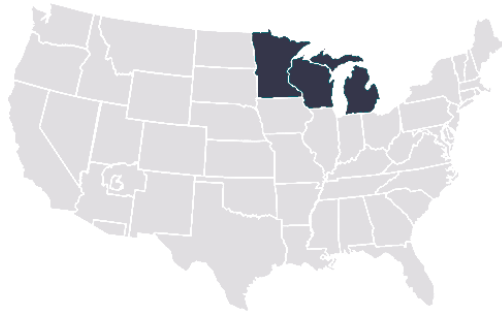


The Albuquerque Area DEHS Program serves 27 federally recognized tribes in Colorado, New Mexico, Texas, and Utah. The Area's service population of over 100,000 members comprises 20 Pueblos, three Navajo Nation Chapters, two Apache Reservations, and two Ute Reservations. The Area's EHS staff are stationed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

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

The Albuquerque Area DEHS implements creative methods to provide high quality services to their tribal partners. The Area is committed to program excellence and staff expertise. With consideration of tribal needs and priorities, extensive long range planning is conducted to ensure the provision of necessary and timely services. The Albuquerque Area DEHS Program strength is in its staff's commitment to continuous program and self-improvement, collaborative partnerships, and innovation in providing quality services to tribes in a myriad of programmatic areas.

Bemidji



The Bemidji Area DEHS 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. The DEHS staff provide field services to 23 tribes; tribal EHSs provide field services to 11 tribes.

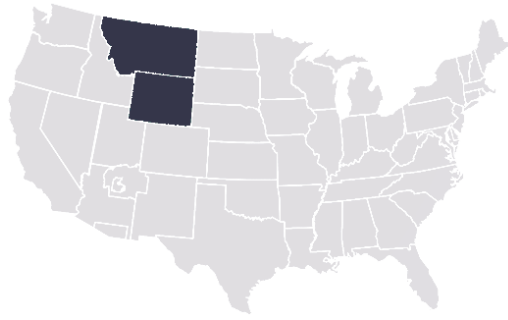
The Bemidji Area provides EH services

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, childcare, 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



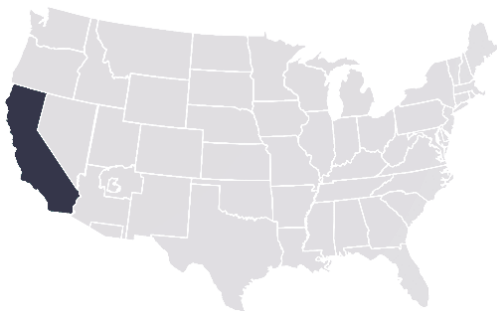
The Billings Area DEHS serves nine tribes (totaling 70,000 people) on 8 reservations throughout Montana and Wyoming. Fully staffed, the Billings Area DEHS Program consists of the DEHS Director, an Area Environmental Health Officer, an IEH Officer and an IP Specialist. The Billings Area has three direct service tribes, four Title I tribes that have contracted the DEHS Program and two Title V tribes that have compacted all IHS services. Field staff in the area include three federal EHSs, five tribal EHSs, and two tribal EH Technicians. 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 environmental health, including the two specialty areas of IP and IEH. The focus of the program includes food safety, vector control, health and safety at schools, Head Starts, 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 the IHS.



California

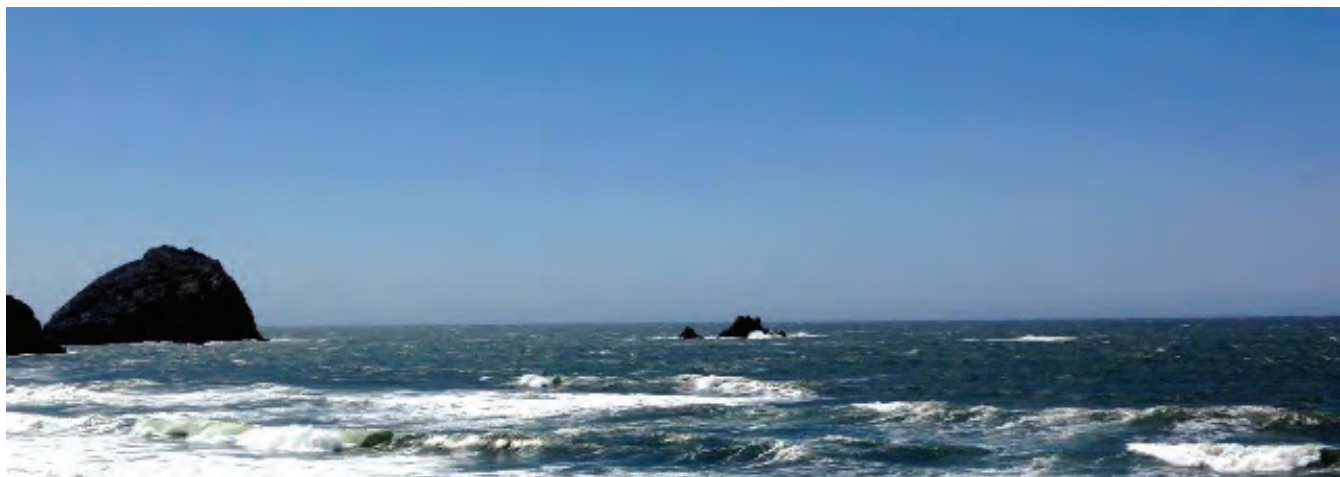


The California Area serves approximately 104 federally recognized tribal governments representing a service population of 86,959 persons, in over 1,550 facilities, in the State of California. Staff provide services to tribes at duty sites in the Area Office, two district offices, and one field office.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

California Area DEHS addresses a variety of issues including, but not limited to: food service, recreational surveys, home sanitation and safety, children's environments, solid waste

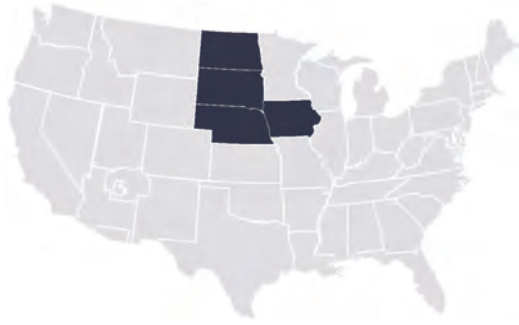
management, community water, wastewater, and institutional accreditation. The services provided to California American Indian Tribes consist of investigations, surveys, technical assistance, training, and surveillance.

Tribes are provided with IP services that aim to reduce emergency room visits, hospitalizations, and deaths in the communities. The mission of the program is 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 Head Start Centers, childcare centers, schools, youth facilities, and substance abuse centers. The services currently provided by this program consist of training, safety program development, accreditation support, risk assessments, industrial hygiene, policy development, and OSHA compliance.

Great Plains

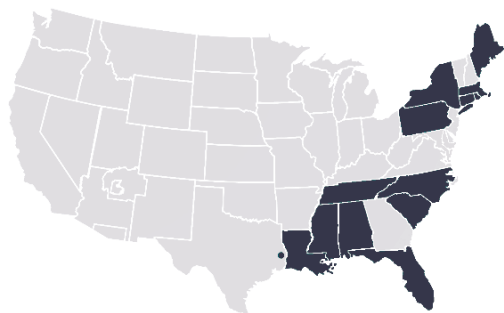


The IHS Great Plains Area encompasses 18 tribes in four states (Iowa, Nebraska, North Dakota, and South Dakota) totaling 281,459 square miles and is the fifth largest Area in the IHS. The DEHS is one of three divisions (DEHS, DSFC, and Facilities Management) within the Great Plains Area OEHE. The DEHS comprises career tribal employees, federal civil service, and PHS Commissioned Corps Officers. At the Area level, Great Plains has a DEHS Director, an Area IP Specialist, and a Staff Environmental Health Specialist. In addition the DEHS Program funds an IEH Officer which is managed through the Deputy Director of Field Operations and works closely

with the corporate compliance program. At the district level, the DEHS Program has three staff located in Minot, North Dakota; Pierre, South Dakota; and Sioux City, Iowa. At the field level, the program has 13 offices with Field EHS and/or IP Specialists. Seven of the field offices are contracted programs and managed by the tribe. The other six offices are direct service programs and staffed with Civil Service or PHS Commissioned Corps staff. The DEHS district and field staff are responsible for providing environmental health surveys of the facilities listed in the WebEHRS database, technical consultation and trainings to tribal programs and beneficiaries, and carrying out

epidemiological investigations as necessary. The remaining facility survey work is covered by the IEH Officer. District and field staff spend approximately 60% of their time working on general EH issues and 40% of their time engaged in IP activities. Injuries have had a significant negative impact on the health of Great Plains Area communities and as a result, IP is a primary focus for the DEHS Program. During 2014 and 2015 the participating DEHS staff will conduct Severe Injury Surveillance using data from the Purchased and Referred Care program, Electronic Health Record, and State Death Data. The Area Severe Injury Profile will be available in 2016.

Nashville

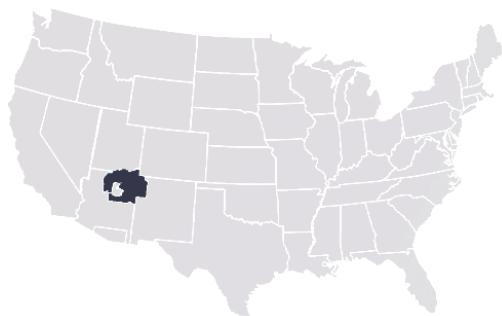


The Nashville Area serves a vast region across 14 states, 29 tribes and three urban areas serving an AI/AN population of approximately 52,000. Fourteen states are covered: Alabama, Connecticut, Florida, Louisiana, Maine, Maryland, Massachusetts, Mississippi, New York, North Carolina, Rhode Island, South Carolina, Tennessee and Texas. Staff includes one Director and two EHOs. 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 conducted. The Area IEH Specialist is part of a comprehensive

team that conducts The Joint Commission and Accreditation Association of Ambulatory Health Care mock surveys to ensure federal facilities are ready for accreditation. All Area federal facilities except the newest Service Unit have received and maintained accreditation. This Service Unit will be scheduling their first accreditation survey soon. The EHOs are Project Managers for IP grants.



Navajo



The Navajo Area DEHS is a large comprehensive EH program serving more than 250,000 members of the Navajo Nation and the Southern Band of San Juan Paiutes. EH services are provided to Indian communities on reservations encompassing more than 25,000 square miles of land in northeast Arizona, northwest New Mexico, and southern Utah.

The DEHS staff plan and provide EH programs and services in many areas such as food safety, prevention of elder falls, motor vehicle injuries, emergency preparedness, water and sewer sanitation, and prevention of zoonotic diseases including plague, rabies, hantavirus, and West Nile virus. Public health assessments in the form of facility surveys, training, investigations, sampling, and technical

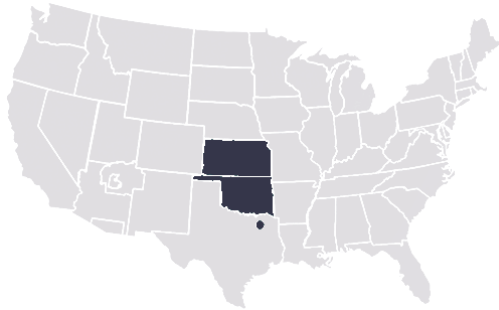
assistance (i.e. participation on facility and community committees, facility plan reviews) are just a few services provided by the program to tribes.

The Navajo Area DEHS also provides an IP Program and IEH services through the Division of Occupational Health and Safety Management (DOHSM). The IP Program provides services that address traumatic injuries that can often greatly affect communities while the DOHSM deals with IEH issues in healthcare facilities. Both programs rely heavily on assessments, surveillance, and best practice interventions to target health risks in communities. Training is also offered to build tribal capacity for IP and occupational health and safety issues.



These programs and services are provided through multiple offices including the Navajo Area Office in Window Rock, Arizona; three district/field offices in Fort Defiance, Arizona, Shiprock, New Mexico, and Gallup, New Mexico; and field offices at three Service Units in Kayenta, Arizona, Many Farms, Arizona, and Crownpoint, New Mexico. The professional, technical, and clerical staff of the Navajo Area DEHS and tribal EH programs work as a team in partnership with tribes to promote healthy environments in Indian communities.

Oklahoma City



The IHS Oklahoma City Area serves 43 tribes with a service population of nearly 350,000 AI/AN people. The service area covers the States of Kansas, Oklahoma, and Texas. The DEHS provides direct EH support services to 32 Tribes and has five field offices located in Okmulgee, Shawnee, Clinton, Lawton, and Pawnee, Oklahoma, and one in Holton, Kansas.

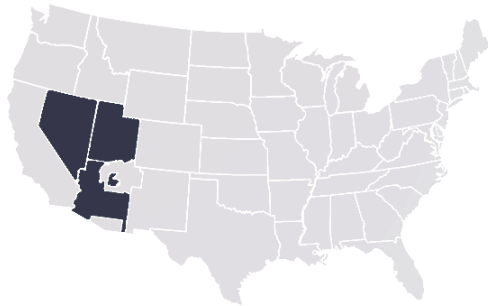
The DEHS Program includes eleven staff members that provide a wide range of EH services that include, but are not limited to: food safety, solid and liquid waste management, water quality, hazard communication, epidemiology, vector control, emergency management and response,

infection control, recreation/celebration sanitation, indoor/outdoor air quality, home sanitation and safety, Head Start and childcare food and safety, in addition to meeting a wide selection of specific training needs.

The DEHS is also responsible for specialized services in the areas of IP and IEH. The goal of the Oklahoma City Area IP Program is to reduce the incidence and severity of injuries and deaths within the tribes they serve and work in conjunction with. 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 provide a safe environment for patients, visitors, and staff. The IEH Specialist provides direct technical assistance to safety officer and committees, infection control officers and committees, facilities management and leadership. In addition, the IEH Specialist is responsible for conducting annual radiation protection surveys of all x-ray equipment within IHS and tribal hospitals and clinics to ensure safe levels of radiation are used and maintained. Also to conduct comprehensive industrial hygiene surveys within those facilities to ensure that a safe environment is being achieved and maintained.

Phoenix



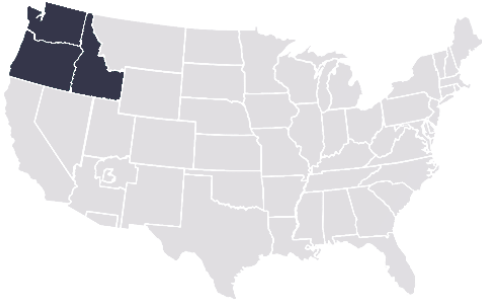
The Phoenix Area serves 46 tribes/tribal organizations with a combined population of nearly 150,000 and over 2,000 facilities in four states (Arizona, California, Nevada, and Utah). A cadre of EH professionals accomplish the work of the DEHS. The staff is located in the Area Office; three district offices; and nine Service Units/field offices.



The 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. Specialized services are

provided in IP and IEH. The IP services include epidemiology, training, partnership building, and the development of proven intervention strategies for community-based injury prevention. The IEH services include industrial hygiene, occupational health, emergency preparedness, and healthcare accreditation consultation.

Portland

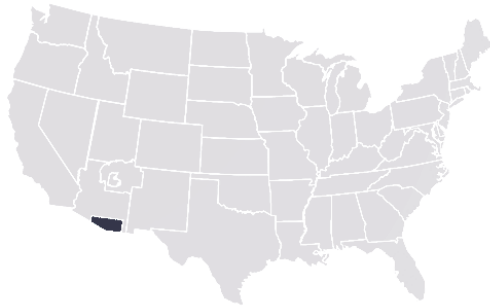


The IHS Portland Area provides a health system for an estimated 150,000 American Indian residents of Idaho, Oregon, and Washington. Health delivery services are provided by a mix of health centers, health stations, preventive health programs, and urban programs. The Portland Area DEHS works in partnership with tribes, the six Service Units, and other organizations/agencies to implement a comprehensive service delivery model that includes 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 control and prevent environmentally related disease and injury and improve personal and overall community wellness. The Portland Area DEHS Program has enhanced services in pesticide safety through an interagency agreement with EPA Region X. In the Portland Area, many of the 43 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 direct services to 23 tribes. The Portland Area DEHS Director also serves as the Area Emergency Management Coordinator, providing services in emergency preparedness and response and continuity of operations planning.

Tucson

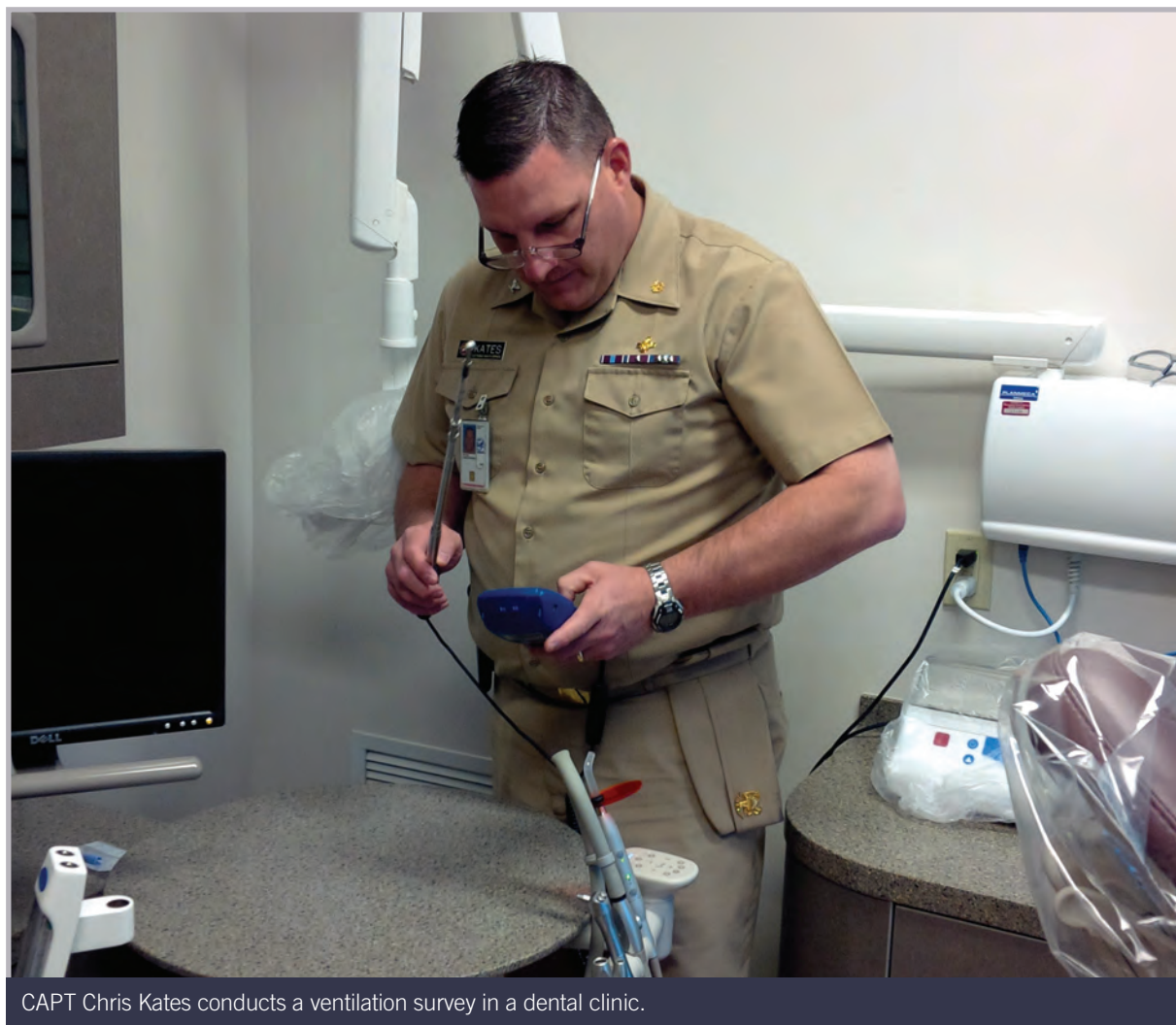


The Tucson Area Environmental Health Services Branch (EHSB) serves two tribes, the Pascua Yaqui Tribe and the Tohono O'odham Nation (total population for both tribes is 52,943). The EHSB program consists of the Director, an Area IP Specialist, three EH Officers, and one EH Technician. The EHSB program focuses on providing the best possible service to the tribes we serve. The EHSB services include, but are not limited to, food safety, vector borne disease surveillance, surveys of recreation\celebration, indoor air quality, Head Starts, child care, elder programs, school programs, home assessments, healthcare surveys, Life Safety, accreditation assistance, and clinical referrals pertaining to EH. The EHSB staff provides many trainings to the communities, for example, bloodborne pathogens, infection control, food handling,

certified car seat installation assistance, and vector related issues.

The IP Program assists the tribes by focusing on partnership\coalition building, using injury statistics, and utilizing evidence-based intervention strategies to reduce the risk of injuries and death. The EHSB is dedicated to the IP program and hosts/supports at least one IP course annually.

The EHSB Program provides services in an effort to raise the tribes' health status to the highest level. By utilizing sound environmental health practices, strengthening external partnerships (federal, state and local), and building capacity within the tribal programs, the quality and timely delivery of environmental health services is enhanced.



CAPT Chris Kates conducts a ventilation survey in a dental clinic.

Looking Ahead into 2015

For 2015, the DEHS looks forward to accomplishing the following:

- Successfully complete the 2011 through 2015 environmental surveillance and injury intervention performance measures and begin preparations for implementation of a new set of measures for 2016 through 2020
- Complete the remaining strategic vision element, “develop an operational model for DEHS that describes the core services all IHS Area programs should provide”
- Successfully close-out the 2010 through 2015 Tribal Cooperative Agreement Program (TIPCAP) grantees and award up to 30 tribes/tribal organizations funding to begin the 2015 through 2020 TIPCAP cycle
- Identify a plan for the future of the Indian Health Service Injury Prevention Specialist Fellowship advanced training
- Complete the Institutional Environmental Health (IEH) Industrial Hygiene Protocols
- Select at least one Indian Health Service (IHS) Environmental Health Officer to begin the two-year Uniformed Services University of the Health Sciences/IHS IEH MSPH and Residency program



IHS Area

DEHS Program Directory

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Ph. (505) 248-4947

Bemidji Area/EHSS

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Billings Area/OEHE

2900 4th Avenue North
Billings, MT 59107
Ph. (406) 247-7090

California Area/DEHS

650 Capitol Mall, Suite 7-100
Sacramento, CA 95814
Ph. (916) 930-3981, ext. 336

Great Plains Area/DEHS

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Room 309, Federal Building
Aberdeen, SD 57401
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Nashville Area/DEHS

711 Stewarts Ferry Pike
Nashville, TN 37214-2634
Ph. (615) 467-1622

Navajo Area/DEHS

P.O. Box 9020
Window Rock, AZ 86515
Ph. (928) 871-5807

Oklahoma City Area/DEHS

701 Market Drive
Oklahoma City, OK 73114
Ph. (405) 951-6001

Phoenix Area/DEHS

40 North Central Avenue, Suite 720
Phoenix, AZ 85004
Ph. (602) 364-5068

Portland Area/DEHS

1414 NW Northrup Street, Suite 800
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Ph. (503) 414-7774

Tucson Area/EHSB

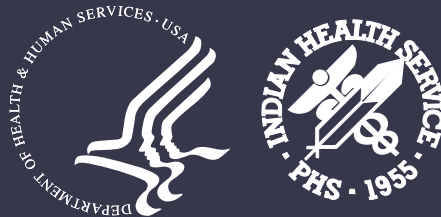
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The Division of Environmental Health Services

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

Annual Report **2014**



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

INDIAN HEALTH SERVICE

Office of Environmental Health and Engineering

Division of Environmental Health Services

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Rockville, MD 20857

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Environmental Health Services

• *Healthy Environments = Healthy People* •