

HEALTHY HOMES

The Indian Health Service, Division of Environmental Health Services (DEHS) delivers a comprehensive environmental health program to the American Indian/Alaska Native (AI/AN) population and is one of several partners responsible for ensuring environmentally-healthy homes to a population of over 2 million AI/ANs.

Growing focus on the home as a site of multiple disease and injury risks is placing additional burdens on the environmental health specialist, and while nationally there are on-going efforts to address housing issues in Indian Country, including programs to increase housing stock and ensure adequate drinking water and sewage disposal, environmental health interventions have seen no increase in funding.

Furthermore, healthy housing is being recognized nationally as an important environmental health issue, as evidenced by the Surgeon General's Healthy Housing Call-to-Action. Some of the identified environmental health risks in the home are as follows: 1) lead exposure; 2) asbestos exposure; 3) disease vectors; 4) injuries (e.g. fires, acute chemical exposures, slips/trips/falls); 5) chronic chemical exposures (e.g. household chemicals, illicit drug manufacturing); 6) asthma triggers (e.g. mold, second hand cigarette smoke, cockroaches, dust mites); 7) overcrowding; 8) foodborne illnesses; 9) water-washed diseases (e.g. skin infections, upper respiratory illnesses); 10) inadequate sewage disposal, and; 11) inadequate drinking water. DEHS funding is used to prevent and control these environmental health risks.

This document describes a strategy for addressing and determining the environmental health needs of a national priority. This issue statement is formatted for flexibility and adaptability so that regional and local programs may use it to develop their own systems and strategies, while maintaining uniform methods of determining need and delivering services.

The DEHS activities revolve around the Ten Essential Services of Environmental Health:

SERVICES

Environmental and Health Monitoring and Surveillance

- Enhanced Disease Surveillance Capabilities
- Enhanced Hazard Monitoring Capabilities

Investigation

- Improved Hazard Investigation

Environmental Health Education

- Increase Public Awareness and Promote Health Literacy

Mobilization of Partnerships

- Develop Partnerships with Other Programs

Public Health Policy Development

- Tribal Code Development

Support Public Health Laws & Regulations

- Inform Tribes/Partners of Federal Laws & Regulations

Link People to Environmental Health Services

- Integrate with Clinical Services

Assure Competent Workforce

- Staff Credentialing

Evaluate Environmental Health Services

- Program and Project Evaluations
- Conduct Customer Satisfaction Assessments

Research New Insights and Innovative Solutions

- Community Based Research
- Project Funding

STRATEGY	OBJECTIVES	INDICATORS	PERFORMANCE MEASURES
<p><i>Enhanced Disease Surveillance Capabilities</i></p> <p>A web-based data system, Notifiable Disease and External Cause of Injury (NDECI) will provide surveillance data and reports for a wide range of disease groups of environmental etiology.</p>	<ul style="list-style-type: none"> ➤ Enhance report output capabilities of current system for asthma ➤ Provide training on use of the system and interpretation of the data 	<p>Health Effects Indicator: Incident Rate of Asthma Attack</p>	<p>Data on asthma attack rates and other disease thresholds Determine baseline rates</p> <ul style="list-style-type: none"> ➤ Decrease asthma attack rates with probable environmental etiology by 5% over 5 years
<p><i>Enhanced Monitoring Capabilities</i></p> <p>To improve efficiency and maximize resources, the DEHS needs the capability to monitor critical risk factors identified during on-site surveys so efforts can be focused on reducing or controlling hazards.</p>	<ul style="list-style-type: none"> ➤ Implement an electronic survey capability into our Web-based Environmental Health Reporting System (WebEHRS) ➤ Provide tablet PCs to provide on-the-spot, rapid reporting ➤ Provide training 	<p>Intervention Indicator: Home Inspections</p>	<p>Number of Home Inspections Determine baseline indicator and frequency</p> <ul style="list-style-type: none"> ➤ Increase inspection frequency by 5% over 5 years
<p><i>Improved Hazard Investigation</i></p> <p>The DEHS needs the capability to provide a comprehensive approach to identifying health hazards in homes.</p>	<ul style="list-style-type: none"> ➤ Develop a system that integrates clinical services and environmental health services ➤ Develop capability of conducting onsite mold and asthma trigger surveys ➤ Provide portable hazard investigation equipment ➤ Provide training ➤ Provide equipment 	<p>Hazard Indicator: Mold and Moisture Problems and Risk Factors</p>	<p>Interventions to reduce allergens Proportion of homes with mold/moisture problems that are addressed</p> <ul style="list-style-type: none"> ➤ Increase successful interventions applied by 10% over 5 years
<p><i>Increase Public Awareness and Promote Health Literacy</i></p> <p>Develop awareness materials for community and target audiences and promote health literacy.</p>	<ul style="list-style-type: none"> ➤ Develop a standard educational video ➤ Distribute copies of the video to appropriate partners (i.e. community health representatives, EPA grant coordinators, tribal public health departments) ➤ Conduct educational events for the community 	<p>Intervention Indicator: Education</p>	<p>Percentage of population receiving education on healthy homes</p> <ul style="list-style-type: none"> ➤ Conduct training and provide healthy housing education to reach 50% of the local population by 2015
<p><i>Develop Partnerships with Other Programs</i></p> <p>Develop partnerships with Tribal Housing Authority, local health jurisdictions, clinicians, county extension agents, and others stakeholders.</p>	<ul style="list-style-type: none"> ➤ Sponsor meetings and workshops ➤ Attend partners' meetings and workshops 	<p>Intervention Indicator: Healthy Housing Coalitions</p>	<p>Number of meetings/workshops with stakeholder partners attended or coordinated</p> <ul style="list-style-type: none"> ➤ Attend or coordinate at least one meeting/workshop annually that are focused on healthy homes

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<p><i>Tribal Code Development</i></p> <p>Ensure tribes have and enforce current, relevant building codes. Such codes, when followed, are proven to prevent mold growth due to poor site selection, inappropriate building materials, or ineffective construction techniques.</p>	<ul style="list-style-type: none"> ➤ Conduct a comprehensive assessment of tribal residential building codes ➤ Focus efforts to develop tribe-specific residential building codes where none exist 	<p>Intervention Indicator: Tribal Building Codes</p>	<p>Percentage of current, relevant tribal building codes on the books and enforced</p> <ul style="list-style-type: none"> ➤ Increase percentage of codes implemented by 5% each year
<p><i>Inform Tribes/Partners of Federal Laws & Regulations</i></p> <p>Federal laws regarding lead abatement in homes should be communicated to ensure Tribal populations are conducting abatement activities in a safe manner and tribal members are occupying protected environments.</p>	<ul style="list-style-type: none"> ➤ Conduct comprehensive assessment of tribal codes/infrastructure ➤ Ensure Tribal Housing Departments are aware of Federal reporting requirements regarding notification during renovation, property transfer, or new tenant occupation 	<p>Intervention Indicator: Education</p>	<p>Number of Tribal Housing Programs who have incorporated the Lead Safety Rules into practice</p> <ul style="list-style-type: none"> ➤ Ensure 100% of Tribal Housing Departments are aware of Federal regulations
<p><i>Integrate with Clinical Services</i></p> <p>Communicate disease surveillance and survey findings with Tribes, clinicians and State/County health departments and align practices and protocols with these partners. Ensure the community is linked to environmental health services through clinical services.</p>	<ul style="list-style-type: none"> ➤ Ensure that clinicians provide written referrals to the environmental health services department in response to an illness with suspected environmental etiology in the home. 	<p>Intervention Indicator: Referral Program</p>	<p>Percentage of asthmatics presenting to ER referred to environmental health services</p> <p>Determine baseline rate of referrals</p> <ul style="list-style-type: none"> ➤ Increase referrals by 40% over 5 years
<p><i>Staff Credentialing</i></p> <p>To ensure a workforce competent in housing-related disease and injury exposures and their elimination and control.</p>	<ul style="list-style-type: none"> ➤ Develop or select a model curriculum for training environmental health staff in Healthy Housing principles 	<p>Intervention Indicator: Workforce Credentials</p>	<p>Percentage of field environmental health staff receiving Healthy Home Specialist certification</p> <ul style="list-style-type: none"> ➤ Increase number trained and certified by 5% each year
<p><i>Program and Project Evaluations</i></p> <p>Conduct evaluations to ensure initiatives are having a positive effect on education, awareness, and hazard reduction.</p>	<ul style="list-style-type: none"> ➤ Analyze epidemiological data, survey/inspection reports, and other strategic initiatives 	<p>Intervention Indicator: Program Standards and Best Practices</p>	<p>Analysis of program and strategic performance measures</p> <ul style="list-style-type: none"> ➤ 100% of Area programs produce tri-annual report demonstrating results

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<p><i>Conduct Customer Satisfaction Assessments</i></p> <p>Gauge the perception and opinion of the level, type, and quality of environmental health services</p>	<ul style="list-style-type: none"> ➤ Develop local or Area standardized assessment methodology ➤ Complete surveys of stakeholders and residents that measure the satisfaction of stakeholders and residents with the services of the environmental health program 	<p>Intervention Indicator: Program Assessment</p>	<p>Assessment results</p> <ul style="list-style-type: none"> ➤ 100% of Area programs conduct tri-annual assessment ➤ Results improve each three-year cycle by 10%
<p><i>Community Based Research</i></p> <p>Ensure community-based research is being conducted regarding illnesses and injuries having environmental etiologies in the home.</p>	<ul style="list-style-type: none"> ➤ Coordinate research activities 	<p>Intervention Indicator: Research Best Practices</p>	<p>Number of research project affiliations</p> <ul style="list-style-type: none"> ➤ Conduct at least one research project to test and verify intervention strategies thought to improve health
<p><i>Project Funding</i></p> <p>Ensure tribal entities are competitive in receiving grants</p>	<ul style="list-style-type: none"> ➤ Assist tribal entities in procuring funding to translate research into practice 	<p>Intervention Indicator: Program and Policy Best Practices</p>	<p>Number of tribes or tribal programs that receive funding</p> <ul style="list-style-type: none"> ➤ Assist tribal entity in successful receipt of healthy homes funding every 5 years

ESTIMATED COST	
Equipment	\$2000/tablet PC * 150 personnel = \$300,000
	\$10,000/Area for epidemiological response kits = \$120,000
	\$20,000/Area for training on indoor air quality (IAQ) equipment and survey techniques = \$240,000
	\$20,000/Area for IAQ testing and sampling equipment = \$240,000
Training	\$100,000/Area for data system training = \$1,200,000
	\$50,000/Area for training on generating statistical analyses and reports (non-degreed/R.S. personnel) = \$600,000
	\$20,000/Area (average) to send 75% of their environmental health staff to healthy homes training and certification course = \$240,000
	\$5,000/Area (average) for sufficient training and materials to ensure all staff receive RS/REHS credential = \$60,000
Supplies and Materials	\$10/CD-ROM * 15,000 facilities = \$150,000
	\$10,000/Area to sponsor meetings and workshops (space, travel, materials, supplies) = \$120,000
Personnel / Services	\$25,000 for NDECI
	\$20,000 for WebEHRS
	\$50,000 for culturally appropriate video development
	\$10,000 to develop an online educational program
	\$5000/Area/year for sampling media/laboratory service = \$60,000
	\$50,000/Area to conduct assessments and coordinate the development of building codes = \$600,000
	\$10,000/Area to conduct assessments and coordinate the development of a referral system = \$120,000
	\$5,000/Area to design, conduct, and analyze survey = \$60,000.
\$5,000/Area train on grant writing and attend grant writing workshops = \$60,000.	
Miscellaneous Travel	\$5,000/Area/year for travel specific to attendance at partner stakeholders' meetings and events = \$60,000
TOTAL	\$4,095,000