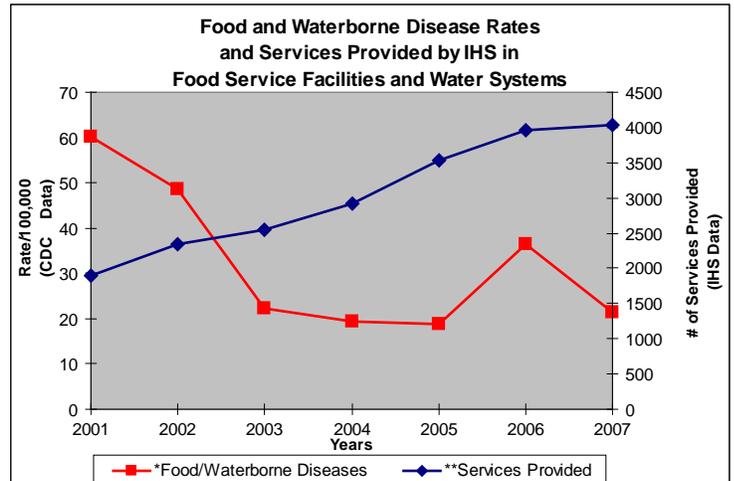


SAFE DRINKING WATER

The Indian Health Service, Division of Environmental Health Services (DEHS) delivers a comprehensive Environmental Health program to the American Indian/Alaskan Native (AN/AI) population. A major component of this program is Safe Drinking Water.

The DEHS is responsible for preventing waterborne illness to a population of over 1.5 million AI/ANs. Activities associated with safe drinking water include conducting inspections of sanitation facilities on a regular basis, investigation of suspected waterborne illnesses, provision of homeowner and operator training, and identification and inclusion of deficiencies of Tribally-owned community and non-community water supplies in the IHS national Sanitation Deficiency System (SDS). These activities are provided to over 560 tribes and 1567 Tribal water systems. In order to meet EPA Safe Drinking Water Act requirements, more sophisticated and larger systems are being developed. This in turn requires an increased level of monitoring to ensure compliance and proper operation.

Activities provided over the past several years have proven to prevent major waterborne illness outbreaks and have decreased the incidence of waterborne illness. Although DEHS activities have increased, there has been no associated increase in funds.



This document describes a strategy for addressing and determining the environmental health needs for this 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</i></p> <p>The DEHS recently developed a web-based data system, Notifiable Disease and External Cause of Injury (NDECI) that will provide surveillance data and reports for a wide range of disease groups, including waterborne illness.</p>	<ul style="list-style-type: none"> • Improve the current web-based disease and injury data system; • Align with other state and federal monitoring systems • Provide training 	<p>Health Effects Indicator: Waterborne Illness Rates</p>	<p>Data on waterborne illness rates and disease thresholds</p> <ul style="list-style-type: none"> • Decrease waterborne illness rates by 5% over 10 years
<p><i>Enhanced Monitoring Capabilities</i></p> <p>DEHS needs the capability of real-time documentation of critical risk factors identified during sanitary surveys. This will improve efficiency and maximize resources.</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>Hazard Indicator: Waterborne Illness Risk Factors</p>	<p>Data on critical risk factor frequency; develop risk factor indicators to monitor over time</p> <ul style="list-style-type: none"> • Reduce frequency by 10% over 5 years
<p><i>Improved Hazard Investigation</i></p> <p>Disease outbreaks and significant survey findings may require rapid interventions and public education across the socio-ecological spectrum.</p>	<ul style="list-style-type: none"> • Implement a critical incidence response training designed to educate on crisis communication, community action and prevention policy and protocol development • Implement a fax-blast or alert network capability into WebEHRS to ensure boil water notice is distributed and trace backs are completed • Provide portable hazard investigation equipment 	<p>Intervention Indicator: Surveillance and Warning Systems</p>	<p>Data on # of Warning Systems Determine Baseline Rates</p> <ul style="list-style-type: none"> • Reduce the # of boil order advisories by 5% over 5 years
<p><i>Increase Public Awareness and Promote Health Literacy</i></p> <p>DEHS should develop a standardized Utility Management training program that covers operation and maintenance of water systems.</p> <p>Expand the system management, operation and maintenance courses to include distance learning.</p>	<ul style="list-style-type: none"> • Develop a standard educational video • Distribute copies of the video to community water systems • Implement an online training, testing, and certification program • Develop a standard distance learning course • Provide training and testing to utility managers 	<p>Intervention Indicator: Education</p> <p>Intervention Indicator: Education</p>	<p>Number of utility managers trained and certified under new program</p> <ul style="list-style-type: none"> • Increase number trained and certified by 1% each year <p>Number of operators and system managers trained and certified under new program</p> <ul style="list-style-type: none"> • Increase number trained and certified by 1% each year

STRATEGY	OBJECTIVES	INDICATORS	PERFORMANCE MEASURES
<p><i>Develop Partnerships with Other Programs</i></p> <p>Community, State and Federal partners with interests in community water systems need to be aware of survey findings, and follow up should be documented.</p>	<ul style="list-style-type: none"> • Implement a network to share concerns identified with community water system facilities or infrastructure with IHS DSFC and other state and federal agencies • Document follow up by external partners in WebEHRS 	<p>Intervention Indicator: Safe Drinking Water Networks</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
<p><i>Tribal Code Development</i></p> <p>Tribes should have policies to respond to critical incidences and changing federal drinking water regulations. Such public health policies are a proven intervention of waterborne illness.</p>	<ul style="list-style-type: none"> • Conduct a comprehensive assessment of tribal public health policies; • Focus efforts to develop tribe-specific policies 	<p>Intervention Indicator: Tribal Drinking Water Codes</p>	<p>Percentage of Tribes with drinking water (DW) codes.</p> <ul style="list-style-type: none"> • Increase % of Tribal –operated systems with DW codes by 5% over 5 years
<p><i>Inform Tribes/Partners of Federal Laws & Regulations</i></p> <p>EPA regulations and survey findings and suggestions for improvement should be formatted so that is easily understood by community leaders</p>	<ul style="list-style-type: none"> • Create a standardized report from the sanitary survey that will assist communities and partners in developing action plans to address health hazards • Document follow up in WebEHRS • Review survey with tribal leadership 	<p>Intervention Indicator: Education</p>	<p>Number of Tribal utilities/programs who are compliant with Sanitary Survey rules</p> <ul style="list-style-type: none"> • Increase % compliance by 10% over 5 years
<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 suspected waterborne illnesses 	<p>Intervention Indicator: Referral Program</p>	<p>Percentage of waterborne illness cases 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>Assure the environmental health workforce is trained and equipped for using the data systems, generating statistical analyses and reports, standardizing surveyors, and field epidemiological investigation.</p>	<ul style="list-style-type: none"> • Provide a comprehensive training program for Environmental Health Specialists 	<p>Intervention Indicator: Workforce Credentials</p>	<p>Percentage of the workforce that is adequately trained and equipped</p> <ul style="list-style-type: none"> • Assure 95% of the workforce is trained and equipped to respond to outbreaks and public health emergencies

STRATEGY	OBJECTIVES	INDICATORS	PERFORMANCE MEASURES
<p><i>Program and Project Evaluations</i></p> <p>Develop tools & procedures to assess the effectiveness, accessibility and quality of services delivered to our customers.</p>	<ul style="list-style-type: none"> • Provide comprehensive evaluation of EH services 	<p>Intervention Indicator: Program Standards and Best Practices</p>	<p>Percentage of EH programs that provide comprehensive services</p> <ul style="list-style-type: none"> • Increase percentage of programs that provide services by 1% each year
<p><i>Conduct Customer Satisfaction Assessment</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 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>DEHS should develop a rate-setting and asset management program to assist communities in improving their financial capacity to provide a sufficient quantity of potable water to end users.</p>	<ul style="list-style-type: none"> • Develop a rate setting program • Distribute copies of the program to community water systems 	<p>Intervention Indicator: Delivery Rates</p>	<p>Percentage of homes with cost of producing and delivering a sufficient quantity EPA approved drinking water is below 5% of the MHI</p> <ul style="list-style-type: none"> • Increase % of homes by 10% over 5 years
<p><i>Project Funding</i></p> <p>Ensure tribal entities are prepared for funding projects and competitive in receiving grants</p>	<ul style="list-style-type: none"> • Assist tribal entities in master planning for drinking water infrastructure needs • 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 drinking water funding every 5 years

ESTIMATED COST	
Equipment	\$2000/tablet PC * 150 personnel = \$300,000
	\$10,000/Area for hazard investigation equipment = \$120,000
Training	\$100,000/Area for training = \$1,200,000
Supplies and Materials	\$10/CD-ROM * 15,000 facilities = \$150,000
Personnel / Services	\$25,000 for NDECI
	\$20,000 for WebEHRS
	\$50,000 for rate-setting program development
	\$10,000 to develop an online educational program
	\$80,000/Area to conduct assessments and develop policies = \$960,000
TOTAL	\$2,915,000