Sonora-Arizona 2017-2018 Border 2020 Action Plan

Goal 1 – Reduce Air Pollution						
Description of Action	**Collaborating Organizations**	**Cost and Source**	**Lead Points of Contact**	**Target Output**	**Results**	**Progress**
Objective 1: By 2020, in accordance with the NAFTA, promote the reduction of the number of vehicles operating in the border region that do not comply with respective vehicle emissions standards, and reduce vehicle emissions at ports-of-entry through anti-idling and other feasible reduction measures.						
Quantifying Emission Reduction Benefits from Nogales Unified Cargo Processing Facility	North American Research Partnership (NARP)	EPA/ NADB: $83,625	Lauren Maghran, Jeremy Bauer (EPA) Erik Lee (NARP) erik@naresearchpartnership.org	• Characterization of vehicle fleet and delay/processing times at Nogales-Mariposa Ports of Entry. • Report and presentation documenting relationship between wait-times and emissions and the impact the Unified Cargo Processing facility has on these. • Project workshop to discuss results.	• Project implemented in coordination with U.S Customs and Border Protection (CPB) and Mexico's Tax Administrative Service (SAT) and Free and Secure Trade (FAST) programs. • The analysis showed a substantial reduction in queue lengths and crossing times with an approximately 85% reduction in emissions (carbon dioxide and particulate matter) at the Port of Nogales-Mariposa crossing. • A summary of the findings was presented at AZ/SON Regional Workgroup Air Task Force Meeting held in Tubac, AZ March 28, 2019 and at the Arizona/Mexico Commission (AMC) meeting on June 2019.	Deliverable Achieved
Objective 2: By 2020, reduce pollutant emissions in order to approach attainment of respective national ambient air quality standards in the following airsheds: San Diego/Tijuana, Imperial County/Mexicali, Ambos Nogales, Paso del Norte (El Paso/Juarez/Sunland Park).						
Implement the Nogales PROAIRE Program	Municipality of Nogales, SEMARNAT	Participating agency's staff time	Municipality of Nogales, SEMARNAT	• Plan that identifies sources of air pollution emissions in Nogales and measures for addressing them.	• Revised the last phase of the Management Environmental Plan to Improve Air Quality in the City.	Significant Progress

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Description of Action	**Collaborating Organizations**	**Cost and Source**	**Lead Points of Contact**	**Target Output**	**Results**	**Progress**
Sonora PROAIRE	CEDES	CEDES: Staff time	Héctor Lizárraga (CEDES)/ Dzoara Tejeda	• Plan that identifies sources of air pollution emissions in Sonora and measures for addressing them.	• Developed Sonora's PROAIRE Plan in May 2017. • Signed the agreement on Feb. 8, 2018. • Published the PROAIRE plan on SONORA's official webpage: https://www.gob.mx/cms/uploads/attachment/file/310198/23_ProAire_Sonoa.pdf • Publication is also published on CEDES' webpage: https://cedes.gob.mx/images/pdf/ProAireSonora.pdf 2017-18 Achievements • Strategy 1: Reduced fixed source emissions. Measurement 1- Regulation of State Industries -Advanced. • Strategy 6- Strengthening Institutional Capacity. Measurement 14. Update of Emission Inventory. Advanced. • Will convene the core group to review progress and plan full implementation of each partners strategies and measures.	Deliverable Achieved
Yuma PM_{10} control measure SIP	ADEQ	EPA 105 Grant	Matthew Ivers ivers.matthew@azdeq.gov	• ADEQ is developing controls to bring the Yuma PM_{10} nonattainment area into attainment.	• ADEQ is developing controls to bring the Yuma PM_{10} nonattainment area into attainment. Target date of 6/30/2020.	Initial Progress
Douglas/Paul-Spur PM_{10} control measure SIP	ADEQ	EPA 105 Grant	Matthew Ivers ivers.matthew@azdeq.gov	• ADEQ is developing controls to bring the Douglas/Paul-Spur nonattainment area into attainment.	• This is in progress.	Initial Progress

Goal 1 – Reduce Air Pollution						
Description of Action	**Collaborating Organizations**	**Cost and Source**	**Lead Points of Contact**	**Target Output**	**Results**	**Progress**
Nogales $PM_{2.5}$ maintenance plan	ADEQ	EPA 105 Grant	Matthew Ivers ivers.matthew@azdeq.gov	• ADEQ is developing a maintenance plan and re-designation request for the Nogales $PM_{2.5}$ nonattainment area.	• This is in progress. • Project to be included in 2019-2020 action plan.	Initial Progress
Objective 3: By 2018, maintain effective air monitoring networks and provide real-time access to air quality data: California/Baja California, Arizona/Sonora, Paso del Norte Airshed, and any additional binational airshed that is designed as non-attainment for U.S. or Mexican air quality Standards prior to 2015.						
Operate PM_{10} Monitor in Nogales, Sonora	Arizona Department of Environmental Quality (ADEQ), EPA, Comisión de Ecología y CEDES	EPA, CEDES: Staff time	Hector Lizárraga (CEDES)	• Effective operation of monitor and final report with results.	• Implemented PM_{10} monitoring which has had only 80% effectiveness due to deficiencies in the equipment and power outages from electrical failures. • The data is published in real-time on Sinaica del Instituto Nacional de Cambio Climatico and is available for download. • The data is used for the Inventario Nacional de Emisiones.	Moderate Progress
Operate and Maintain Douglas and Nogales, Arizona Air Quality Monitoring Stations	ADEQ, EPA	ADEQ, EPA: Staff time and maintenance costs	Gerardo Monroy, ADEQ Monroy.Gerardo@azdeq.gov	• Effective operation of air monitoring stations and post real-time air monitoring data on web.	• ADEQ continues operating and maintaining the air monitoring stations at these two locations, as well as posting real-time data on the web.	Deliverable Achieved

Goal 1 – Reduce Air Pollution						
Description of Action	**Collaborating Organizations**	**Cost and Source**	**Lead Points of Contact**	**Target Output**	**Results**	**Progress**
Conduct ozone monitoring in San Luis Rio Colorado to identify emissions that are crossing the border into Arizona	ADEQ, CEDES, State University of Sonora	EPA Multi-purpose grant: Participating Agencies Staff time	Gerardo Monroy, ADEQ Monroy.Gerardo@azdeq.gov	• Effective operation of monitor and report with results. • To have additional data to supplement data in the city of Yuma, AZ.	• ADEQ, in collaboration with CEDES and the Municipality of San Luis Rio Colorado, Sonora has been collecting ozone and meteorological data in San Luis Rio Colorado since May 2017. Data is posted real-time on AirNow-Tech: https://www.airnowtech.org/	Deliverable Achieved
Develop a cell phone application to disseminate air quality index forecasts for the Yuma region	Arizona Department of Environmental Quality (ADEQ)	Participating Agency Staff time	Jose Rodriguez ADEQ Rodriguez.jose@azdeq.gov	• Disseminate the air quality index forecast produced by ADEQ for the Yuma region. Local monitoring occurs for PM_{10}, $PM_{2.5}$ and ozone.	• The cell phone application was officially released on 9/7/2017. • Activities have focused on promoting the app. Positive feedback has been received from city officials.	Deliverable Achieved
Objective 4: By 2015, support completion of climate action plans in each of the six northern Mexican Border States (as appropriate), and build the necessary capacity to guarantee sustained implementation.						
There are currently no active projects under this objective for the 2017-2018 cycle. Past action plans are available at: https://www.epa.gov/border2020/region-9-action-plans.						
Objective 5: By 2020, reduce emissions and associated impacts through energy efficiency and/or alternative/renewable energy projects.						

Goal 1 – Reduce Air Pollution						
Description of Action	**Collaborating Organizations**	**Cost and Source**	**Lead Points of Contact**	**Target Output**	**Results**	**Progress**
A Small-Scale Solar Implementation Project in Ambos Nogales	University of Arizona	EPA/NADB $44,060	Laura Lawrence (EPA) Diane Austin (University of Arizona) daustin@email.arizona.edu	• Establish locally-and regionally-specific partnerships, materials, and implementation protocols for advancing solar energy in Ambos Nogales and along the Arizona-Sonora border. • Provide information and models for other communities during the project period and beyond. • Implement pilot project.	• Project initiated in December 2017 and has been extended to September 2019. • To date, an advisory board was established; developed protocols for gathering information on existing and alternative solar installations and on national, state, and local policies related to solar energy. • Developed protocols for selecting sites for pilot installations and guides for outreach materials. • April 2019- The materials selected were translated into Spanish and situated at EcoCasa (solar installation location). • Actions include the installation of environmental monitors and equipment at EcoCasa (Feb 2019) to track exterior/interior temperature and heat/cold Index and other related factors. • Some project results (update) provided at the Air Task Force meeting in Tubac, AZ in March 2019. • Project to be completed Fall of 2019.	Significant Progress

Goal 2 – Improve Access to Clean and Safe Water						
Description of Action	**Collaborating Organizations**	**Cost and Funding**	**Lead Points of Contact**	**Target Output**	**Results**	**Progress**
Objective 1: Promote the increase in the number of homes connected to safe drinking water and adequate wastewater treatment.						
Sub-objective 1a: By end of 2018, promote access to safe drinking water to at least 1,600 households border-wide. Revise targets every two years.						
Provide Pomerene, AZ with a technically and financially feasible drinking water system to reduce arsenic and fluoride concentrations in their drinking water below the established Maximum Contaminant Level (MCL)	Pomerene Water District, NADB/EPA/USDA	EPA: Total Project Construction $2.1 M	Alejandra Nuñez (NADB) anunez@nadb.org	• Provide Pomerene with a technically and financially feasible system to bring arsenic and fluoride concentrations in drinking water within the established Maximum Contaminant Levels. • Construct well transmission mains to deliver all ground water to the storage tanks. Allow for maximum flexibility in blending, and upgrade existing arsenic treatment.	• The closure of a dairy has reduced drinking water demand in Pomerene. The community may decide to not implement, or to reduce the scope of the project. • Tank rehab/replacement is being evaluated as an alternative approach. Since arsenic and fluoride concentrations will be reduced below the MCLs at less cost than had been anticipated, or the project may not be implemented, EPA will not contribute any construction funding (BEIF).	Moderate Progress
Sub-objective 1b: By end of 2018, promote access to adequate wastewater sanitation to 12,000 households border-wide. Revise targets every two years.						
San Luis Rio Colorado, Sonora. Wastewater Collection project along "Avenidas B" Streets	Comisión Nacional del Agua (CONAGUA), EPA, North American Development Bank (NADB)	EPA/Mexico federal, state and local sources: $7M	Toribio Cueva (NADB) tcueva@nadb.org	Expansion of the wastewater collection system.	• Construction was completed in June 2018.	Deliverable Achieved

Goal 2 – Improve Access to Clean and Safe Water						
Description of Action	**Collaborating Organizations**	**Cost and Funding**	**Lead Points of Contact**	**Target Output**	**Results**	**Progress**
Wastewater project in Sonoyta, Sonora	Comisión Nacional del Agua (CONAGUA), EPA, North American Development Bank (NADB), City of Sonoyta	EPA/Mexico federal, state and local sources: $2.4M	Roberto Molina (NADB) rmolina@nadb.org	• Project in Sonoyta, Sonora to improve and expand the sewer collection system: Construct two sewer conveyance lines, an 0.685 MGD wastewater treatment plan, a gravity line to convey the city's sewage to the lagoon system, and new waste water connections in previously unserved neighborhoods.	• Improvements and expansion of the sewer collection system • Construction of two sewer conveyance lines and a 0.685 MGD wastewater treatment plant utilizing a stabilization lagoon system. • Construction was completed in August 2018.	Deliverable Achieved
Objective 2: Help drinking water and wastewater utilities in the border region to implement sustainable infrastructure practices to reduce operating costs, improve energy efficiency, use water efficiently and adapt to climate change.						
Sub-objective 2a: Incorporate sustainable infrastructure elements, as feasible and appropriate, into U.S.-Mexico Border Water Infrastructure Program-supported in BECC-certified projects.						
There are currently no active projects under this objective for the 2017-2018 cycle. Past action plans are available at: https://www.epa.gov/border2020/region-9-action-plans.						
Sub-objective 2b: Improve energy efficiency and efficient water use at border drinking water and wastewater utilities.						
There are currently no active projects under this objective for the 2017-2018 cycle. Past action plans are available at: https://www.epa.gov/border2020/region-9-action-plans.						
Sub-objective 2c: Build operational, managerial, and financial capacity at border drinking water and wastewater utilities through training.						
There are currently no active projects under this objective for the 2017-2018 cycle. Past action plans are available at: https://www.epa.gov/border2020/region-9-action-plans.						
Objective 3: Work binationally to identify and reduce surface water contamination in specific high priority water bodies or watersheds.						
Sub-objective 3a: Develop a binational watershed protection plan in the Lower Rio Grande below Falcon International Dam.						

Goal 2 – Improve Access to Clean and Safe Water						
Description of Action	**Collaborating Organizations**	**Cost and Funding**	**Lead Points of Contact**	**Target Output**	**Results**	**Progress**
Please refer to Action Plan provided by EPA Region 6: https://www.epa.gov/border2020/region-6-publications						
Sub-objective 3b: Every two years, identify and implement at least one project to reduce the level of heavy metals, sediment, and/or bacteria entering the Santa Cruz River and/or the Nogales Creek.						
Source characterization study focused on heavy metals. Providing lab analysis and equipment and supplies to support this pretreatment effort	OOMAPAS-NS, ADEQ, City of Phoenix, Pima County, NADB/EPA	EPA/NADB: $11,418	Roger Kohn (EPA) Kohn.Roger@EPA.gov Hans Huth (ADEQ) Huth.Hans@azdeq.gov	• Conduct wastewater sampling to characterize the heavy metals in the wastewater collection system of Nogales, Sonora, simultaneously with the monitoring done by the IBWC at the border (manhole #1). • Wastewater samples from 8 sampling sites in Sonora will be analyzed over a 4-5-month sampling period to identify heavy metals such as copper, chromium, nickel, and zinc that may be present in the wastewater collection system. • Produce a final report that shows which industrial or commercial zones are likely to contribute to heavy metals exceedances detected by IBWC in its monitoring.	• Sampling by the Nogales, Sonora Wastewater Utility (OOMAPAS-NS) initiated in tandem with the International Boundary and Water Commission's monitoring in Manhole One (MH 1) on May 28, 2018. • Total of 102 samples were taken, 90 were comparable with the sample done in MH 1 and 23 were taken to verify quality of the samples. • Key findings of Copper, Chrome, Nickel and Zinc • Project included vital City to City partnership and collaboration with City of Phoenix and Pima County • Project finding presented at Arizona/SON Regional Task Force Meeting (March 2019).	Deliverable Achieved

Goal 2 – Improve Access to Clean and Safe Water						
Description of Action	**Collaborating Organizations**	**Cost and Funding**	**Lead Points of Contact**	**Target Output**	**Results**	**Progress**
Create green infrastructure structures (biofilters) for trapping waste and solids in Nogales, Sonora	IMIP, EPA/NADB	EPA/NADB: $36,659	Roger Kohn (EPA) Kohn.Roger@EPA.gov	• IMIP (Instituto Municipal de Investigación y Planeación de Nogales), will create bio-filters to trap waste and solids in Nogales, Sonora (at waterway "Canada El Muerto") • Systems will prevent the entrance of wastes such as plastics, glass, wood, paper, cardboard, oil, as well as sediment into the U.S. • The biofilters can also retain nearly 300 liters of rainfall for every 1 mm of rainfall, which will help to recharge the aquifer and to prevent flooding.	• Project kick off and training meeting was held on April 18 with Nogales mayor and the participation of 77 professionals and university students. • A diagnostic of the physical conditions of the streams to intervene took place, as well as a classification of waste found in these sites. • The final design was modified from its original version, based on the results of the calculations of runoff water volumes from the selected sites (streams). • Outreach material was designed including Facebook and Twitter sites.	Significant Progress
Sub-objective 3c: Every two years identify and implement at least one project to reduce the levels of bacteria, biochemical oxygen demand (BOD), trash, and/or phosphates entering the New River.						
Please refer to California/Baja California Action Plan: https://www.epa.gov/border2020/region-9-action-plansplanes-de-accion-de-region-9						
Sub-objective 3d: Every two years identify and implement at least one project to reduce the level of bacteria, sediment, and/or trash that enters the Tijuana River.						
Please refer to California/Baja Action Plan https://www.epa.gov/border2020/region-9-action-plansplanes-de-accion-de-region-9						
Objective 3-other: Initiatives to reduce water contamination in other watersheds and/or water bodies						

Goal 2 – Improve Access to Clean and Safe Water						
Description of Action	**Collaborating Organizations**	**Cost and Funding**	**Lead Points of Contact**	**Target Output**	**Results**	**Progress**
Improve the existing wastewater treatment plant (WWTP) in Willcox, AZ to adequately treat its discharges to Cochise Lake	City of Willcox, USDA, NADB and EPA	EPA, USDA, City of Willcox: $15.9M Total Construction including $4.7M Border Environment Infrastructure Fund (BEIF)	Gerardo Calza (NADB) gcalza@nadb.org	• Wastewater treatment plant rehabilitation from a lagoon system to an oxidation ditch facility.	• Estimated substantial project completion: September 2018 i.e., plant will start operations. • Lagoon closure will take an additional 12 months.	Significant Progress
Objective 4: Provide the public with timely access to water quality data in binational water bodies and watersheds in a readily understandable, web-based format.						
Sub-objective 4a: Develop a binational website that displays timely information on beach advisories on both sides of the border in the Brownsville/Matamoros area, and ensure its operation through 2020.						
Please refer to Action Plan provided by EPA Region 6: https://www.epa.gov/border2020/region-6-publications						
Sub-objective 4b: Develop a binational website that displays timely information on beach advisories on both sides of the border in the San Diego/Tijuana area, and ensure operation of website through 2020.						
Please refer to California/Baja California Action Plan; https://www.epa.gov/border2020/region-9-action-plansplanes-de-accion-de-region-9						
Sub-objective 4c: Develop a binational website that displays timely information on water quality in high-priority watersheds including the Lower Rio Grande, the New River, and the Tijuana River and ensure operation of website through 2020.						
Please refer to California/Baja California Action Plan: https://www.epa.gov/border2020/region-9-action-plansplanes-de-accion-de-region-9						

Goal 3- Promote Materials Management, Waste Management and Clean Sites						
Description of Action	**Collaborating Organizations**	**Cost and Funds**	**Lead Points of Contact**	**Target Output**	**Results**	**Progress**
Objective 1: By 2020, increase local and state-level institutional knowledge and experience in the area of sustainable material management practices.						
Develop Santa Cruz County compost center to compost 8,000 tons of wasted produce and develop capacity to explore expanding operation	University of Arizona and Santa Cruz County	EPA/NADB grant: $91,519	Darcy Dixon, UA-Tucson	• Create Santa Cruz County Compost Center and compost 8,000 tons of wasted produce, create 9,000 cubic yards compost. • Divert valuable recyclable organics from local county landfill.	• Grant award June of 2018 with the completion of the QAPP. • UA has hired a new bilingual coordinator. • Project sponsor is on track towards meeting the revised project timeline granted by the NADB as part of the time-extension to 2020.	Initial Progress
Objective 2: By 2014, identify priority waste streams and by 2020 develop sustainable material management practices that strengthen their respective market value.						
There are currently no active projects under this objective for the 2017-2018 cycle. Past action plans are available at: https://www.epa.gov/border2020/region-9-action-plans.						
Objective 3: By 2020, improve knowledge at every level of government (federal, state, local) to characterize and remediate contaminated sites.						
Develop web-based application hosted by CEDES for citizens to report trash. Use information to identify and prioritize trash in Nogales, Sonora and conduct four trash cleanups	CEDES	EPA/NADB grant: $37,500	Hector Lizárraga, CEDES	• Complete four trash cleanups and develop on-line web-based application to identify and prioritize trash sites in Nogales, Sonora. • Reduce binational trash impacts.	• NADB has explored a new project sponsor given contracting challenges. • Considering working with the municipality in Nogales, Sonora for the implementation of the project. • Initiation of project is expected late 2019.	Initial Progress

Goal 3- Promote Materials Management, Waste Management and Clean Sites						
Description of Action	**Collaborating Organizations**	**Cost and Funds**	**Lead Points of Contact**	**Target Output**	**Results**	**Progress**
Objective 4: On an annual basis, implement the Binational Consultative Mechanism on sharing information on border area hazardous waste facilities.						
Implement the Consultative Mechanism to report hazardous waste treatment, storage, and disposal (TSD) facilities and spent lead-acid batteries and electronic recycling facilities	EPA, SEMARNAT, and ADEQ	EPA grant: In-kind	Edna Mendoza (ADEQ)	• Report on status of hazardous waste TSDs. • Facilitate public access to information on hazardous waste TSDs.	• EPA HQ completed submission of Reg 6 and 9 reports to SEMARNAT.	Significant Progress

Goal 4- Enhance Joint Preparedness for Environmental Response						
Description of Action	**Collaborating Organizations**	**Cost and Funds**	**Lead Points of Contact**	**Target Output**	**Results**	**Progress**
Objective 1: Update as necessary, the current Mexico-US Joint Contingency Plan and on an annual basis, continue to evaluate and update the emergency notification mechanism between Mexico and the United States.						
Update Joint Contingency Plans in Ambos Nogales, Yuma-San Luis/San Luis Rio Colorado, and Douglas-Agua Prieta	EPA, ADEQ, Protección Civil, Ambos Nogales, Douglas-AP, San Luis-Yuma, PROFEPA	N/A	Bill Jones (EPA)	• Update Contingency Plans.	• All plans have been completed.	Deliverable Achieved
Objective 2: By 2020, at least eight (8) of the sister city joint contingency plans will be supplemented with preparedness and prevention related activities such as certified training, risk analysis, and/or capacity building.						
Enhance sister city emergency plans with preparedness, prevention and response related contacts and information.	EPA, ADEQ, Protección Civil, Ambos Nogales, Douglas-AP, San Luis-Yuma, PROFEPA	EPA Contract: $50,000	Bill Jones (EPA)	• Supplement 3 Sister-City Emergency Plans.	• All plans have been completed.	Deliverable Achieved
Objective 3: By 2016, the US-Mexico JRT will make available technical outreach and training materials for distribution and dissemination along the border.						
Support development of emergency plans and develop tabletop training to exercise the plans.	ASU, NADB, EPA, ITN, Protección Civil, Maquiladora Assn & Industry, Fire Depts., Cities of Nogales, Sonora and AZ	EPA/NADB Grant: $91,809	Bill Jones (EPA), Briselda Duarte (NADB), Al Brown, Larry Olson	• Increase emergency response capacity with local emergency plans and facility plans.	• Plans and exercises were prepared and finalized and training complete.	Deliverable Achieved

Goal 4- Enhance Joint Preparedness for Environmental Response						
Description of Action	**Collaborating Organizations**	**Cost and Funds**	**Lead Points of Contact**	**Target Output**	**Results**	**Progress**
Training and capacity-building in Sonora, Mexico. Training will include First Responder Awareness, First Responder Operations, Incident Command System and Hazmat Tech Refreshers	ADEQ, Protección Civil, Ambos Nogales, Douglas-AP, San Luis-Yuma, PROFEPA	EPA Contract	Bill Jones (EPA)	• Conduct 6 sessions of emergency preparedness training in Sonora, Mexico. • The 2017 training session included train the trainer curricula. • The 2018 training conducted by those completing 2017 training with the guidance and support from the contractor. • See TDD and After-Action Reports from each training session.	• Training was completed in September 2018 and a transfer ceremony of the training program to Sonora Civil Protection, Sonora University and the Nogales Technical Institute took place in Hermosillo on December 2018. • Over 2000 people have been trained over the course of the last year and a half.	Deliverable Achieved
Objective 4: By 2016, the US-Mexico JRT will analyze existing agreements (including sister city plans) that allow trans-boundary movement of equipment and personnel for comparison purposes.						
Analyze existing agreements that allow trans-boundary movement of equipment and personnel	EPA, ADEQ, Protección Civil, Ambos Nogales, Douglas-AP, San Luis-Yuma, PROFEPA	N/A	Bill Jones (EPA)	• Analysis of agreements.	• Agreements have been assessed and the determination was made that local solutions work best. Douglas – Agua Prieta and Imperial County – Mexicali are examples.	Deliverable Achieved

Goal 5- Enhance Compliance Assurance and Environmental Stewardship						
Description of Action	**Collaborating Organizations**	**Cost and Funds**	**Lead Points of Contact**	**Target Output**	**Results**	**Progress**
Objective 1: By 2020, strengthen effective information sharing between US and Mexican agencies regarding the movement of hazardous waste across the border and its ultimate treatment or disposal. In addition, ensure that land ports of entry have sufficient inspection capacity to police hazardous shipments.						
ADEQ to host border enforcement task force members to explore opportunities to facilitate information on import/exports, especially with US Customs and Border Patrol	ADEQ	ADEQ: In-kind	Edna Mendoza, ADEQ	• Strengthen information sharing regarding import/exports on hazardous waste and other materials such as e-waste, solvents, and vehicle scrap and deter scam recycling and dumping.	• Completed conference call and exchanged information about new electronic manifest reporting.	Deliverable Achieved
Objective 2: By 2020, in Mexico, increase by 25 percent the number of businesses in the border region enrolled in the National program for Environmental Auditing (PNAA) and/or similar programs at the state level for facilities not regulated by the federal government, using 2012 as a baseline.						
There are currently no active projects under this objective for the 2017-2018 cycle. Past action plans are available at: https://www.epa.gov/border2020/region-9-action-plans.						
Objective 3: Using the U.S. Toxic Release Inventory (TRI) and the Mexican Registry of Emissions and Transfers of Pollutants (RETC), along with other sources of environmental information, share information regarding activities contributing pollution to trans-boundary air and/or water basins along the border.						
There are currently no active projects under this objective for the 2017-2018 cycle. Past action plans are available at: https://www.epa.gov/border2020/region-9-action-plans.						
Objective 4: By 2020, implement at least five (5) binational workshops targeted to environmental enforcement professionals, including port-of-entry customs professionals, to promote the exchange of information and improve understanding of each country's respective compliance and enforcement programs and tools, including field inspection and case development practices.						
There are currently no active projects under this objective for the 2017-2018 cycle. Past action plans are available at: https://www.epa.gov/border2020/region-9-action-plans.						

Fundamental Strategy – Environmental Health						
Description of Action	**Collaborating Organizations**	**Cost and Funds**	**Lead Points of Contact**	**Target Output**	**Results**	**Progress**
Air quality and asthma actions						
Promote Flag Program in the Arizona/Sonora border region	ADEQ, EPA	ADEQ: Staff time and $17K for flags (for all of AZ)	Julie Finke (ADEQ) Finke.Julie@azdeq.gov and Eric Canteenwala (EPA) Canteenwala.Eric@epa.gov	• Increase and maintain participation in flag program in the border region. • Outreach to include community Health Centers, Fire Stations, and Parks and Recreation, Schools' administrators and other participating organizations • Share information on local air quality conditions for communities to reduce exposure and reduce pollution causing activities. • Purchase 200 sets of flags and 150 individual flags for statewide program and deliver individual flags and full sets to Santa Cruz and Yuma Counties as requested. • Continue flag program outreach efforts in the following eligible border counties: Santa Cruz and Yuma Counties.	• 20 individual green flags were delivered in April 2018 to Yuma County as replacements for ongoing participants who have worn out flags. • Five new participants were added. • Flags are delivered upon request. • Project is on-going.	Moderate Progress

Fundamental Strategy – Environmental Health						
Description of Action	**Collaborating Organizations**	**Cost and Funds**	**Lead Points of Contact**	**Target Output**	**Results**	**Progress**
Expand Arizona's school vehicle idling program to add other sources of idling emissions	ADEQ	Staff time	Julie Finke (ADEQ) Finke.Julie@azdeq.gov	• Maintain continuous participation and continue promotion. • Invite two non-participating school districts in the border region to register as a participant. • Attend two school transportation conferences every year promoting on-their on-going participation and recruiting new registrations.	• 40 school districts have registered to voluntary participate in ADEQ's school bus idle reduction program within the border region, Cochise, Pima, Santa Cruz and Yuma Counties. • This indicates 287 schools, 1,288 school buses. • No new schools or school districts have registered in 2018. • One Transportation Conference was attended • Project is on-going	Moderate Progress

Fundamental Strategy – Environmental Health						
Description of Action	**Collaborating Organizations**	**Cost and Funds**	**Lead Points of Contact**	**Target Output**	**Results**	**Progress**
Implement the Environmental Public Health Tracking (EPHT) Tool	Arizona Department of Health Services, CDC, AZ County Health Departments, Other State Health Departments, and Local Universities (Arizona State University, University of Arizona, and Northern Arizona University), ADEQ	CDC: Funding Applies Statewide $634k annually (2017-2022)	Matthew Roach, Epidemiology Program Manager Matthew.roach@azdhs.gov	• ADHS launched a new program website: Arizona Environmental Public Health Tracking (EPHT) website. • Website viewers can learn about environmental hazards in the state that could impact health using the sites interactive tool. For example, Arizonans can review air quality information and compare the information with respiratory issues such as asthma. • The program's website features additional Arizona specific data not available on CDC's Tracking Portal. Data can also be downloaded, shared, and printed. ADHS will be working with CDC and partners within the state to expand the data available and add new features to the website.	• Published an interactive tool with environmental data on air pollution such as air toxics, particulate matter and ozone that can be viewed as maps, charts, and graphs. https://www.azdhs.gov/preparedness/epidemiology-disease-control/environmental-health/environmental-public-health-tracking/index.php#environment-air-pollution • Published: 1) emergency department and hospitalization inpatient admission data on chronic obstructive pulmonary disease (COPD), carbon monoxide poisoning, and asthma (2005-17); 2) sub-county level data on asthma and COPD ED visits and hospitalizations (2010-17) • Project is on-going and will be added to 201-2020 action plan.	Deliverable Achieved

Fundamental Strategy – Environmental Health						
Description of Action	**Collaborating Organizations**	**Cost and Funds**	**Lead Points of Contact**	**Target Output**	**Results**	**Progress**
Integrated pest management and pesticide exposure actions						
Implement Four Corners Biomonitoring Consortium (4CSBC) CDC Grant	Arizona Department of Health Services, 4CSBC, CDC	CDC: Funding Applies Statewide	Niki Lajevardi-Khosh, Health Educator niki.lajevardi-khosh@azdhs.gov	Grant allows Arizona residents to partake in an epidemiology study, which looks to correlate levels of contaminants in urine—such as plasticizers and pesticides—with their responses on a questionnaire regarding recent activities, foods consumed, etc. • Collect 50 samples by end of year 4. **AZ Border Counties:** • Ongoing biomonitoring outreach and sampling (contingent on lab analysis status) • Reach 14 homes and 18 participants reached out to in Cochise county *Project is on-going	• 139 urine samples have been analyzed for metals and returned to participants **AZ Border Counties:** • Sampling stopped in July 2017 due to urine sample requiring analysis. • All Cochise participants have received their results. • Cochise county was sampled in September and December 2018. • Project collection has come to an end. • States are currently working on data analysis and final report of project will be published online.	Moderate Progress
Train the Trainer workshop on Pesticide Safety and Integrated Pest Management for promotores	US EPA, Mexican Consulate, Campesinas Sin Fronteras	Staff time	Fabiola Estrada, Estrada.Fabiola@epa.gov	• Educate community health workers on pesticide safety, the revised Worker Protection Standard (WPS) and Integrated Pest Management (IPM).	• Trained 15 promotores on August 23, 2017.	Deliverable Achieved
Lead poisoning prevention actions						

Implement lead poisoning prevention program targeting physicians to increase screening rates of children in Arizona	ADHS, CDC, AHCCCS, Health care Providers	CDC for lead poisoning prevention: Grant funding for statewide efforts for lead poisoning prevention; in-kind from state laboratory and other ADHS program support	Amber Asburry, Childhood Lead Poisoning Prevention Program Manager, ADHS Amber.Asburry@azdhs.gov	• Increase lead screenings of at-risk children at 12 and 24 months of age. • To include first time testing for older children who have never been tested. • Increase identification of lead poisoning source for families of children with elevated blood lead levels. • Program will also sample a variety of imported products to determine levels of lead in pottery, candies and imported spices. • 2017 Annual Surveillance Report expected in August to include 2017 case counts and screening rates. • New CDC Cooperative Agreement to start 9/2018. **AZ Border Counties:** • Statewide 340 total children had elevated blood lead levels in 2016. 67 of those 340 children with elevated blood lead levels resided in counties bordering Mexico. • The statewide screening rate at 12 months was 24.2%. For Yuma County, the screening rate at 12 months of age was 18.9%; 24.2% in Pima, 37.3% in Santa Cruz, and 39.36% in Cochise County. • Project is on-going	• Released 2016 Score Card ○ 5% increase in screening children at 12 months of age in high-risk zip codes between 2014 and 2016. ○ 3% increase in screening children at 24 months of age in high-risk zip codes between 2014 and 2016. • New 2018 Targeted Lead Screening Plan with a new list of high-risk areas. • Interactive Lead Risk Map for providers and families to determine if children live in high-risk areas across the state. • Updates from 2017 Annual Surveillance Report Updates The full report can be accessed here. • Statewide: 321 total children less than 6 years of age had elevated blood lead levels (≥ 5 µg/dL) reported in 2017. 70 of those with elevated blood lead levels resided in counties bordering Mexico. **AZ Border Counties:** • 2 home investigation were conducted in 2017 in counties bordering Mexico with lead-based paint identified as the source. No confirmed sources found. Investigations/Environmental Sampling between May-December 2018: 1 investigation was conducted in a county bordering Mexico with no lead source identified.	Moderate Progress

Fundamental Strategy – Environmental Health						
Description of Action	**Collaborating Organizations**	**Cost and Funds**	**Lead Points of Contact**	**Target Output**	**Results**	**Progress**
Multi-topic environmental health actions (IPM, IAQ, vector-borne, asthma-related, lead poisoning, children's health, Healthy Homes etc.)						
Collect environmental health data and identify the current state of environmental health along the AZ-Sonora border	Sonora Environmental Research, Inc.	EPA/NADB and leveraged funds: $45,975 ($37,975 Border 2020 Grant and $8,000 leveraged funds)	Jeremy Bauer (EPA) and Aminata Kilungo (SERI)	• Identify state of environmental health along the Arizona-Sonora Border. • Will focus on childhood blood levels, mercury, and pesticides poisoning, and asthma. • Implement presentations on results.	• Final report provided May 2017. • Completed and published report "Evaluation of Environmental Health Status Along the Arizona-Sonora Border 2017".	Deliverable Achieved
Implementation of Healthy Places for Healthy People in Nogales, AZ to identify a location for a new health center that the Mariposa Community Health Center	EPA, Mariposa Community Health Center (MCHC), Appalachian Regional Commission, HUD, HHS	EPA grant	Jose Garcia (EPA) Garcia.Jose@epa.gov	• Report synthesizing the information from the community workshops that will help them decide on the best location for the clinic.	• Completed workshop July 13th and 14th in Nogales, AZ, which was a 1.5-day on-site workshop aimed at helping Nogales identify goals, issues and opportunities, and develop an action plan around health and community revitalization. • Identified funding sources and resources, and helped identify other partnership opportunities for the community to help bring their vision to fruition. • Most recently MCHC received $45K to train promotoras to educate local parents and caregivers on preventing exposure to lead, pesticides, and air pollutants in their homes.	Moderate Progress

Fundamental Strategy – Environmental Health						
Description of Action	**Collaborating Organizations**	**Cost and Funds**	**Lead Points of Contact**	**Target Output**	**Results**	**Progress**
Promote leveraging opportunities with state and local partners to improve environmental health	Binational Health and Environment Council (BHEC), EPA	Staff time	Jessica Helgesen (EPA) Helgesen.Jessica@epa.gov	• Support local programs and efforts being implemented.	• Presented to 20 stakeholders about environmental health and Border 2020 in the border region at the Binational Health and Environmental Council for Arizona-Sonora.	Moderate Progress
Implement SunWise School Program in Arizona Public Schools for grades K-8 to teach sun safety using EPA SunWise curriculum	Arizona Department of Health Services, CDC	CDC block grant, Prevention and Public Health Fund: Funding Applies Statewide	Bianca Arriaga, SunWise Program Coordinator, ADHS Bianca.Arriaga@azdhs.gov	• EPA SunWise curriculum materials are distributed and presented in schools. • The program also distributes and promotes sun safety information through its annual sun safety poster contest, which students across the state of Arizona are encouraged to participate in. **AZ Border Counties:** • Boosting educational assistance via materials and assembly requests. • Project is on-going.	**AZ Border Counties**: • Presented in Douglas, AZ for a school assembly in late April 2017 to about 150 students. • The 2017 poster winner was a 6th grader from Wade Carpenter Middle School located in Nogales, AZ. • Out of the 1,537 entries from the 2018 poster contest, first place winner from Nogales, AZ, and the third was from Douglas, AZ. • Offered a workshop at the Yuma First Things First Early Childhood Education conference in April of 2017 for educators to implement sun safety practices in their settings. • Out of the 1,537 entries from the 2018 poster contest, the winner was a 7th grader from Wade Carpenter Middle School located in Nogales, and third place was from Douglas, AZ. • Offered a workshop at the Yuma First Things First Early Childhood Education conference in April of 2018 for educators to implement sun safety practices in their settings.	Moderate Progress

Implement an Extreme Weather and Public Health Program to develop a climate and health adaptation plan in response to extreme weather and climate-sensitive public health hazards	ADHS, CDC, University of Arizona, Arizona State University, Local Health Departments	CDC: Funding Applies Statewide	Matthew Roach, Epidemiology Program Manager, ADHS Matthew.Roach@azdhs.gov	• Arizona Climate and Health Adaptation Plan, Vulnerability Assessment Report, Bilingual heat brochure created, County health department projects funded for adapting to extreme weather. **AZ: Border Counties (on-going):** • Fund 3 County Health Department projects funded; including Yuma, Maricopa, and Pinal Counties. Maricopa developed a climate and health champion recognition award. Pinal County started public health surveillance. Yuma county evaluated cooling center needs and heat education.	**AZ: Border Counties (on-going):** • Arizona Climate and Health Adaptation Plan completed in 2017. • Published: Addendum to the Arizona Climate and Health Adaptation Plan 2018 The addendum highlights new efforts local partners have taken to address climate-sensitive health hazards using recommendations from the Plan. • Vulnerability Assessment Report Completed in 2017. • Bilingual Heat Brochure Posted on Website. • Released Projections of Climate Impacts on Vector-Borne Diseases and Valley Fever in Arizona Report • Yuma County has initiated a project to evaluate and improve cooling center usage during the summer as well as produce and distribute educational materials for preventing heat-related illness. $23,333 in year 1 and $20,000 in Year 2-5 annually. • Three Counties funded (Maricopa, Pinal, and Yuma) and plan to fund 4th county (Pima County) in 2019. • Facilitated 2018 State Heat Planning Workshop with 80 partners. • Published a meeting summary of the 2018 State Heat Workshop in the scientific literature for others to see how to engage a multidisciplinary group on heat.	Significant Progress

Fundamental Strategy – Environmental Health						
Description of Action	**Collaborating Organizations**	**Cost and Funds**	**Lead Points of Contact**	**Target Output**	**Results**	**Progress**
					• Co-led the 2018 Arizona Heat Awareness Week with National Weather Service which led to 400,000 social media views for safety messages on extreme heat. • Assisted Yuma County Public Health identify vulnerable population needs to heat and handed out heat safety outreach material in May 2018. https://asunow.asu.edu/20180629-making-community-heat-ready-asu-researchers-head-yuma-educate-and-survey-community	
Safe Water for Community Health (Safe WATCH) CDC Private Well Water Quality Health Education	Arizona Department of Health Services, University of Arizona, Arizona Department of Environmental Quality, Arizona Department of Water Resources	CDC: Funding Applies Statewide	Niki Lajevardi-Khosh Health Educator ADHS, niki.lajevardi-khosh@azdhs.gov	Grant to provide outreach and education to well owners across the state to reduce exposure to waterborne contaminants: • Host 8 workshops across the state to promote well maintenance, upkeep, and the importance of water testing. **AZ Border Counties:** • Private well owner support, outreach, and education. • Project is on-going.	• Since 10/2017, 4 workshops held in Sierra Vista, Bouse, Concho, and Flagstaff. • Private “Well Owner” outreach materials have been mailed by Arizona Department of Water Resources. • Continued to update certified labs list for testing drinking water. • Posted bilingual outreach materials for certified labs to test drinking water in AZ, nitrates, wells and sewage, and a guide to protect health for private well owners.	Moderate Progress

Fundamental Strategy – Environmental Health						
Description of Action	**Collaborating Organizations**	**Cost and Funds**	**Lead Points of Contact**	**Target Output**	**Results**	**Progress**
Proyecto Hogar Seguro (Safe Home Project)	Mariposa Community Health Center, ADHS, SEAHEC/ Ambos Nogales Binational Health Council, Santa Cruz County Health Dpt,, Child and Family Resources, Nogales Community Development, First Things First Santa Cruz County Regional Council, EPA	EPA: $35,000 with additional $18,000 in-kind match	Scott Stollman (EPA) Jacquelyn Menghrajani (EPA)	• Educate 400 parents, caregivers, and child care providers in Santa Cruz County, AZ to reduce exposure to lead-based paint, use integrated pest management, and improve indoor air quality. • Benefit 1,000 children.	• Designed training curriculum on Environmental Health for promotoras, with 18 promotoras trained. • Educated 350 through Mariposa Community Health home visiting and 100 Child and Family Resources Healthy Families AZ. Total: 450. • Over 1,000 - Combination of Mariposa Family Learning Center activities benefitting 150 children, Mariposa Community Health home visits benefitting 800 children, and Healthy Families AZ 150 children. Total: 1,100.	Deliverable Achieved
Healthy Homes and Healthy Children Program for Nogales, Arizona	Sonora Environmental Research Institute, Inc., EPA	EPA: $39,500 with additional $8,320 in-kind match	Jessica Helgesen (EPA), Jacquelyn Menghrajani (EPA)	• Train promotores on healthy homes concepts and how to conduct a healthy homes inspection. • Hold three healthy homes community workshops and one healthy childcare workshop. • Conduct healthy homes inspections in 200 homes and advise residents on how to address health and safety hazards. • Conduct 10 healthy childcare inspections.	• Trained five SERI staff and one volunteer on healthy home concepts. • Four community common home risks workshops with 33 community members and one childcare provider. • Conducted 200 homes visits and 182 Healthy Homes assessments. • Eight childcare and Head Start Programs inspected.	Significant Progress