Arizona-Sonora Border 2020 Master Action Plan – 2015-2016 Goal 1 – Reduce Air Pollution									
Description of Action	Collaborating Organizations	Cost	Sources of Funding	Lead Points of Contact	2016 Target Output and Results				
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 standards, and reduce vehicle emissions at points-of-entry through anti-idling and other feasible reduction measures.									
Complete particulate matter (PM) and NOx emissions assessment for northbound passenger and freight vehicles at the Mariposa Port of Entry.	Arizona State University	\$136,000	EPA/BECC	Joaquin Marruffo- BECC (<u>imaruffo@cocef.org</u>)	Anticipated Results: Complete final report that quantifies PM and NOx emissions and identifies emissions reductions strategie at the Mariposa Port of Entry.				
Objective 2: By 2020, reduce po Ambos Nogales (PM 2.5 and PM					ls in the following airsheds:				
Complete an Emissions Inventory for Criteria Pollutants for Nogales, Sonora.	Calidad de Vida	\$54,000	EPA/BECC	Joaquin Marruffo- BECC (<u>imaruffo@cocef.org</u>)	Anticipated Results: Complete final report that identifies the sources of criteria pollutants such as CO ₂ , lead, NO ₂ , ozone, PM2.5/PM10, and SO2 in Nogales, Sonora.				
Objective 3: By 2018, maintain e Paso del Norte, and any addition									
Operate PM2.5 Monitor in Nogales, Sonora.	ADEQ, US EPA, CEDES	TBD	EPA	Edna A. Mendoza- ADEQ (<u>Mendoza.Edna@azdeq.gov</u>)	Anticipated Results: Effective operation of monitor and final report with results.				
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 capa city to guarantee sustained implementation.									
Objective 5: By 2020, reduce em	issions and associated imp	acts through ene	ergy efficiency and/or alte	ernative/renewable energy proje	ects.				

Arizona-Sonora Border 2020 Master Action Plan – 2015-2016 Goal 2 – Improve Access to Clean and Safe Water									
Description of Action	Collaborating Organizations	Cost	Sources of Funding	Lead Points of Contact	2016 Target Output and Results				
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 201	6, promote access to safe d	rinking water to a	t least 2,200 households	border-wide. Revise targets e	very 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/BECC/EPA	Total Project Construction \$2.1 M	EPA	Roberto Molina, BECC (rmolina@cocef.org)	Anticipated Results: Certify project and begin construction.				
Increase potable water service reliability and reduce incidents of service interruption and/or low pressure in Nogales, AZ.	City of Nogales, NADB/BECC	Total Project Construction \$0.645 M	CAP (NADB Program) \$500k, City of Nogales \$145k	Roberto Molina, BECC (rmolina@cocef.org)	Anticipated Results: Improve 330 existing household connections; 1,178 benefited residents, contributing to the reduction of risks of waterborne diseases.				
Sonoyta Wastewater Treatment Plant improvements and expansion of sewer collection system.	Comisión Nacional del Agua (CONAGUA), EPA, North American Development Bank (NADB)	\$3.8 Million	EPA/Mexico federal, state and local sources	Hector Aguirre, EPA (aguirre.hector@epa.gov)	Anticipated Results: Connect 720 homes to wastewater service and construct two sewer conveyance lines and a new wastewater treatment plant utilizing a stabilization lagoon system.				

Arizona-Sonora Border 2020 Master Action Plan – 2015-2016 Goal 2 – Improve Access to Clean and Safe Water									
Description of Action	Collaborating Organizations	Cost	Sources of Funding	Lead Points of Contact	2016 Target Output and Results				
Sub-objective 1b: By end of 2016, promote access to adequate wastewater sanitation to 40,700 households border-wide. Revise targets every two years.									
Bisbee-Tintown, Arizona. Wastewater collection project to eliminate nonconforming cesspools and failing septic tanks for wastewater treatment.	USDA-RD, EPA	\$1.7 Million	EPA, USDA	Roger Kohn, EPA (<u>kohn.roger@epa.gov</u>)	Anticipated Results: Improve existing wastewater service connections to 32 homes; Construct wastewater gravity mains and manholes, a force main, lift station, solar panels, and laterals to household connections. Decommission non-conforming septing systems.				
The project proposes to improve the existing wastewater treatment plant (WWTP) in Willcox, AZ to adequately treat its discharges to to Cochise Lake.	City of Willcox, USDA, BECC/NADB and EPA	\$10.66M Total Construction including \$8.0M Border Environment Infrastructure Fund (BEIF)	EPA, USDA	Roberto Molina, BECC (rmolina@cocef.org)	Anticipated Results: Improve service connections for 1,095 households. Improve wastewater treatment process for the existing 0.60 MGD plant to address inadequately treated wastewater discharges currently released to Cochise Lake, an impaired water body.				
San Luis Rio Colorado, Sonora. Wastewater Collection project along "Avenidas B" Streets.	Comisión Nacional del Agua (CONAGUA), EPA, North American Development Bank (NADB)	\$7 Million	EPA/Mexico federal, state and local sources/NADB	Hector Aguirre, EPA (aguirre.hector@epa.gov)	Anticipated Results: Connect 4,000 new home wastewater service connections benefitting over 16,000 residents.				

Arizona-Sonora Border 2020 Master Action Plan – 2015-2016 Goal 2 – Improve Access to Clean and Safe Water								
Description of Action	Collaborating Organizations	Cost	Sources of Funding	Lead Points of Contact	2016 Target Output and Results			
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 s BECC-certified projects, which, for Drinking Water Supply.					structure Program-supported g the Joint Grant Contributions			
Sustainable infrastructure components will be incorporated into the Douglas Wastewater Treatment Plant (WWTP)/Bay Acres project.	EPA, NADB, BECC	TDB	Local, state and federal partners	Roger Kohn, EPA (<u>kohn.roger@epa.gov</u>)	Anticipated Results: Identify and incorporate the sustainable infrastructure components in the Douglas/Bay Acres project and anticipated operating and/or efficiency cost-savings.			
Green Infrastructure Border- wide forum.	EPA, BECC, NADB, City of Tucson, Watershed Mgmt. Group, Mexican Consulate of Tucson, and U of A	\$65,000	EPA \$20k NADB \$15k BECC \$30k	Joaquin Marruffo, BECC, (imarruffo@cocef.org)	Anticipated Results: Train city planning officials on latest techniques to capture stormwater.			
Sub-objective 2b: Improve ener	gy efficiency and efficient w	ater use at border	drinking water and was	tewater utilities.				
Implementation of energy/water audit recommendations in San Luis Rio Colorado's drinking water system.	NADB/BECC, OOMAPAS	TBD	NADB, BECC TA program	Roberto Molina, BECC, (rmolina@cocef.org)	Anticipated Results: Implement micrometering and sectorization in San Luis Rio Colorado's drinking water system to increase water and energy efficiency.			
Perform audits in US-Mexico Border Water Infrastructure Program projects.	EPA, CONAGUA, BECC	TBD	PDAP	Roberto Molina, BECC (rmolina@cocef.org)	Anticipated Results: Conduct water audits in at least (3) utilities, including, San Luis Rio Colorado, Sonora; Douglas, AZ; and Pomerene, AZ.			

Arizona-Sonora Border 2020 Master Action Plan – 2015-2016 Goal 2 – Improve Access to Clean and Safe Water								
Description of Action	Collaborating Organizations	Cost	Sources of Funding	Lead Points of Contact	2016 Target Output and Results			
Sub-objective 2c: Build operation	onal, managerial and financi	al capacity throug	h training of drinking wa	nter and wastewater service pro	oviders in the border region.			
Training on Energy Efficiency in water-wastewater (w-ww) utilities.	NADB, BECC, Sonora Water Utility (WU)	\$25,000	TA NADB/BECC program	Joaquin Marrufo, BECC (<u>imarrufo@cocef.org</u>)	Anticipated Results: Complete training.			
Objective 3: Work binationally t	o identify and reduce surfac	e water contamina	ation in specific high pri	ority water bodies or watershe	ds.			
Sub-objective 3b: Every two years Cruz River and/or the Nogales		at least one projec	t to reduce the level of h	neavy metals, sediment, and/or	bacteria entering the Santa			
Provide sampling and testing equipment and supplies to support Ambos Nogales waste characterization study.	International Boundary and Water Commission (IBWC)	\$10,000	IBWC	Wayne Belzer, IBWC (<u>wayne.belzer@ibwc.gov</u>)	Anticipated Results: Supply Nogales, Sonora with monitoring equipment as identified in final scope of work for waste characterization study for ambos Nogales.			
Facilitate binational technology and expertise exchange for pretreatment of metals in wastewater including peer-topeer industry outreach and collaboration with the Association of Environmental Safety Professionals (APSA).	ADEQ, EPA, Partnering Organizations or Industries	Staff time (approximately 80 hours)	ADEQ, US EPA, Partnering Organizations or Industries	Hans Huth, ADEQ (<u>huth.hans@azdeq.gov</u>)	Anticipated Results: Facilitate a field-based binational technology exchange to observe best practices and improve management of metals in wastewater discharges.			

Arizona-Sonora Border 2020 Master Action Plan – 2015-2016 Goal 2 – Improve Access to Clean and Safe Water

Description of Action	Collaborating Organizations	Cost	Sources of Funding	Lead Points of Contact	2016 Target Output and Results		
Develop a pre-treatment toolkit focused on reducing Fats, Oils, and Greases (FOG) at Nogales, Arizona wastewater treatment plant (WWTP).	BECC/EPA, City of Nogales, Arizona	\$68,000	EPA	Douglas Liden, EPA (<u>liden.douglas@epa.gov</u>)	Anticipated Results: Develop a pretreatment outreach toolkit that includes materials and programs to educate residents on impacts of FOG on the sewer system and proper ways to dispose of them.		
Design plans to rehabilitate International Outfall and Interceptor (IOI).	IBWC	\$639,000	IBWC	Crystal Cadillo, IBWC Crystal.cadillo@ibwc.gov	Anticipated Results: Develop design plans to rehabilitate the international outfall and interceptor in order to extend its operating life to continue treating wastewater from Ambos Nogales.		
Provide training on handling of wastewater containing metals and cyanide.	EPA, BECC, ADEQ, APSA, ASU, OOMAPAS, Alcoa	\$57,000	EPA	Doug Liden, IBWC (<u>liden.douglas@epa.gov</u>)	Anticipated Results: Convene two workshops (one on each side of the border) to train the metal-plating industry on the proper management and treatment of wastewater in order to avoid upsets at Nogales International Treatment Plant.		

Arizona-Sonora Border 2020 Master Action Plan – 2015-2016 Goal 3- Promote Materials Management, Waste Management and Clean Sites									
Description of Action	Collaborating Organizations	Cost	Sources of Funding	Lead Points of Contact	2016 Target Output and Results				
Objective 1: By 2020, increase local and state-level institutional knowledge and experience in the area of sustainable material management practices.									
Convene a Sustainable Materials Management (SMM) Forum to launch strategic planning actions with at least 50 participants and launch a demonstration project.	NADB, BECC, CEDES	\$15,000	BECC/NADB Technical Assistance Program	Joaquin Marrufo (BECC)	Anticipated Results: Advance SMM knowledge among at least 50 leaders and practitioners and launch at least one pilot project to showcase SMM outcomes.				
Develop guidance on preparing end-of- life vehicles (junk cars) for disposal in an environmentally sound manner.	EPA, SEMARNAT, and border stakeholders.	In-kind.	EPA-HQ	Karen Swetland, EPA-HQ,	Anticipated Results: Develop guidance on disposing of end-of-life vehicles for export.				
Objective 2: By 2014, identify priority value.	waste streams and b	y 2020 develop su	stainable material manag	gement practices that streng	then their respective market				
Hold at least four e-waste collection events and conduct educational outreach on best management practices to safely recycle electronic devices in Douglas, Nogales, Sahuarita, and Yuma, Arizona.	Arizona Dept. of Environmental Quality.	\$63,621	Border 2020	J.B. Shaw , ADEQ	Anticipated Results: Collect at least 60,000 lbs. of e-waste. Complete four e-waste collection events and educational outreach. Increase public awareness on best management practices and increase use of certified recyclers.				
Increase capacity to recycle used oil from small businesses by providing compliance educational outreach and by developing three used oil collection transfer stations in Nogales, Sonora.	Municipality of Nogales, Sonora	\$16,508 (with inkind giving total value \$29,713)	Border 2020	Adriana Guerrero Martínez, Dpto. Ecología, Nogales, SN	Anticipated Results: Collect 250,000 liters of used oil as part of demonstration project; train at least 25 small businesses on used oil best practices; develop three used oil transfer stations; and report on number of small business trained. Project will help reduce the illegal dumping of used oil.				

Arizona-Sonora Border 2020 Master Action Plan – 2015-2016 Goal 3- Promote Materials Management, Waste Management and Clean Sites								
Description of Action	Collaborating Organizations	Cost	Sources of Funding	Lead Points of Contact	2016 Target Output and Results			
Acquisition of two solid waste collection vehicles with automated systems.	City of Douglas- Solid Waste Dept., NADB/BECC.	\$500,000 USD	CAP (NADB Program)	Jesica Hernandez - BECC (jahernandez@cocef.org)	Anticipated Results: Procure two solid waste collection vehicles to improve safety and efficiency, reduce costs, and maximize value in solid waste collection.			
Objective 3: By 2020, improve knowle	dge at every level of g	government (feder	al, state, local) to charac	terize and remediate contam	inated sites.			
Source characterization and trash cleanups in the Nogales Wash and Santa Cruz River.	ADEQ, EPA, SEMARNAT, CEDES, Ambos Nogales	TBD	EPA	Emily Pimentel, EPA	Anticipated Results: Develop source characterization protocols to help regularly locate and assess trash sources. Complete two trash cleanups (volume/weight to be determined) in the Nogales wash and Santa Cruz river in Ambos Nogales.			
Objective 4: On an annual basis, impl	ement the Binational	Consultive Mechai	nism on sharing informa	tion on border area hazardo	us waste.			
Implement consultative mechanism in coordination with border states to disseminate information on treatment, storage, and disposal facilities along the AZ/Sonora border.	ADEQ/ CEDES/ EPA/ SEMARNAT	In-Kind	In-kind EPA, SEMARNAT, and State Program Funding	Edna Mendoza (ADEQ); Emily Pimentel (EPA); TBD (CEDES)	Anticipated Results: Implement the Consultative Mechanism by publishing an annual report on the Border 2020 website. Update annually, unless there are proposed new facilities in which case the respective countries would be notified within 30 days of a petition for a facility permit.			

Arizona-Sonora Border 2020 Master Action Plan – 2015-2016 Goal 4- Enhance Joint Preparedness for Environmental Response										
Description of Action	Collaborating Organizations	Cost	Sources of Funding	Lead Points of Contact	2016 Target Output and Results					
	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.									
Continue to evaluate the emergency response notification system at the federal level and at the local and state levels.	EPA, Protección Civil, PROFEPA, ADEQ, and other AZ-Sonora Task Force partners.	TBD	TBD	Bill Jones - USEPA (jones.bill@epa.gov)	Anticipated Result: Evaluate the emergency response notification system and perform Quarterly communications tests as well as simulations to work through events such as a hazardous materials spills.					
Objective 2: By 2020, at least eigh certified training, risk analysis, and		t contingency plans w	ill be supplemented with	preparedness and pre	vention related activities such as					
Update three Sister City Plans with preparedness and prevention related activities.	EPA, Protección Civil, PROFEPA, ADEQ, and other AZ-Sonora Task Force partners.	TBD	US EPA Superfund	Bill Jones - USEPA (jones.bill@epa.gov)	Anticipated Results: Update Sister City Plans for Ambos Nogales, Douglas-Agua Prieta, and San Luis/Yuma-San Luis Rio Colorado.					
Provide training to emergency responders on preparedness and prevention related activities.	EPA, Protección Civil, PROFEPA, ADEQ, and other AZ-Sonora Task Force partners.	Contingent on available resources	TBD	Bill Jones - USEPA (jones.bill@epa.gov)	Anticipated Result: Provide First Responder Awareness (FRA) training; First Responder Operations (FRO) training; HazMat refresher; Incident Command System 100, 200 and 300; and Rail tanker car training.					
Develop trinational Contingency Plan for Tohono O'odham, Yuma, and San Luis Rio Colorado.	Tohono O'odham/ City of Yuma/ City of San Luis Rio Colorado,	\$80,000	US EPA Superfund	Bill Jones - USEPA (jones.bill@epa.gov)	Anticipated Results: Finalize and implement trinational contingency plan for Tohono O'odham, Yuma, and San Luis Rio Colorado.					

Arizona-Sonora Border 2020 Master Action Plan – 2015-2016 Goal 4- Enhance Joint Preparedness for Environmental Response										
Description of Action	Collaborating Organizations	Cost	Sources of Funding	Lead Points of Contact	2016 Target Output and Results					
Objective 3: By 2016, the US-Mex	Objective 3: By 2016, the US-Mexico JRT will make available technical outreach and training materials for distribution and dissemination along the border.									
Provide capacity building materials that will enhance response readiness, cross-border coordination, and training continuance for emergency responders in Arizona/Sonora.	EPA, Protección Civil, PROFEPA, ADEQ, and other AZ-Sonora Task Force partners.	TBD	US EPA Superfund	Bill Jones - USEPA (jones.bill@epa.gov)	Anticipated Results: Provide capacity-building materials leading to enhanced response readiness, cross-border coordination, and training continuance.					
Distribute Incident Command System, Personal Protective Equipment, Fire Safety, Radiation Safety, Mercury Response, and First Responder Awareness training.	EPA, Protección Civil, PROFEPA, ADEQ, and other AZ-Sonora Task Force partners.	Contingent on available resources	TBD	Bill Jones - USEPA (jones.bill@epa.gov)	Anticipated Results: Amount of emergency response systems and equipment distributed. Results will be based on available resources.					
Objective 4: By 2016, the US-Mexi personnel for comparison purpos		ng agreements (includ	ling sister city plans) tha	t allow trans-boundary	movement of equipment and					
Research agreements that allow personnel and equipment to cross the international border to respond to environmental emergencies. Seek assistance from Border Governors, as appropriate.	EPA, PROFEPA. PROT. CIVIL, State and Local Municipalities.	TBD	TBD	Beatriz Oliveira, Bill Jones, Enrique Ortiz, Jorge Vargas	Anticipated Results: Identify at least one mutual agreement that permits the movement of personnel and equipment across the US-MX border. Obtain assistance from Border Governors to develop agreement on trans-border movement of equipment and personnel.					

Description of Action	Collaborating Organizations	Cost	Sources of Funding	Lead Points of Contact	2016 Target Output an Results				
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.									
	By 2020, in Mexico, increase l NAA) and/or similar programs								
	Toxic Release Inventory (TR share information regarding								
deport on activities that contribute to trans-oundary air and/or water ollution using the U.S. oxic Release Inventory	EPA/SEMARNAT	In-Kind	EPA/SEMARNAT	Emily Pimentel	Anticipated Results: Develop fact sheets on activities that contribute to transboundary air and/or water pollution in the Arizona/Sonora region. Develop the				

Arizona-Sonora Border 2020 Master Action Plan – 2015-2016 Fundamental Strategy – Environmental Health **Lead Points of** 2016 Target Output and Collaborating **Description of Action Sources of Funding** Cost **Organizations** Contact Results ADEQ **Anticipated Results:** Recruiting schools to participate past funding came Julie Finke, ADEQ TBD in Flag Programs in which through EPA but currently Increased participation in Flag funded by ADEQ Program. schools and administrators share information on air quality. and curtail outside activity when necessary. Conduct at least one promotor EPA, U.S.M. Border TBD EPA and BHC Jeremy Bauer, EPA Anticipated Results: Hold workshop in Nogales/Nogales. workshops to share Health Commission (BHC), R9 Pediatric Reach approximately 50-75 environmental health information with promotores and health **Environmental Health** promotores who will then build Specialty Unit knowledge with their outreach workers who will share (PEHSU) communities and vulnerable information with vulnerable populations in Arizona/ Sonora. populations along the Arizona-Sonora border. EPA, BHC TBD Convene a Border Children's EPA - Children's Health. Jackie Menghrajani, Anticipated Results: Reach at Health Symposium for medical Border, U.S.M. Border least 150 physicians, public Border environmental and healthcare practitioners Health Commission health nurses, staff and health coordinator working in the border region to promotores on priority build children's environmental environmental health topics health capacity and ensure that impacting border communities. environmental health information and emerging studies are reaching doctors and public health personnel working with vulnerable populations within the border region.

Arizona-Sonora Border 2020 Master Action Plan – 2015-2016 Fundamental Strategy – Environmental Health

Description of Action	Collaborating Organizations	Cost	Sources of Funding	Lead Points of Contact	2016 Target Output and Results
Implement an Extreme Weather and Public Health Program to develop a climate adaptation plan in response to extreme weather.	ADHS, CDC	TBD	TBD	Matthew Roach, ADHS, Jennifer Botsford, ADHS	Anticipated Results: Create and implement climate adaptation plan in 2016. Identify vulnerable populations; create bilingual materials, toolkits and videos, and other interventions to build resilience.
Implement Sunwise School Program in Arizona Public Schools for grades K-8 to teach sun safety using EPA Sunwise curriculum.	ADHS	TBD	TBD	Jennifer Botsford, ADHS	Anticipated Results: EPA Sunwise curriculum materials are distributed and presented in schools.
Implement lead poisoning prevention program to encourage physicians to increase their screening rates of children in Arizona during the first and second year well-baby visits as well as first time testing for older children who have never been tested. The program will also sample a variety of imported products to determine levels of lead in pottery, candies and imported spices.	ADHS	TBD	TBD	Jenifer Botsford, ADHS	Anticipated Results: Increased lead screenings and sampling of imported products. Implement lead poisoning prevention program for physicians.

Arizona-Sonora Border 2020 Master Action Plan – 2015-2016 Fundamental Strategy – Environmental Health

Description of Action	Collaborating Organizations	Cost	Sources of Funding	Lead Points of Contact	2016 Target Output and Results
Implement Arizona's Environmentally Healthy School recognition program to acknowledge that have implemented 14 of 22 environmental measures aimed to protect human health and the environment.	ADEQ	TBD	ADEQ	Julie Finke, ADEQ	Anticipated Results: Showcase and recognize at least five schools that meet or exceed Arizona's Environmentally Healthy School criteria.
Expand Arizona's school bus idling program to add other sources of idling emissions.	ADEQ	Information unavailable.	Information unavailable.	Julie Finke, ADEQ	Anticipated Results: Expand the program beyond the 167 schools currently participating; Increase the number of schools and communities that also include delivery drivers, parents, and city employees in their idling program.