

Tribal Regulatory Monitoring
Salt River Pima–Maricopa Indian Community (SRPMIC)
Community Development Department (CDD)
Environmental Protection & Natural Resources (EPNR)

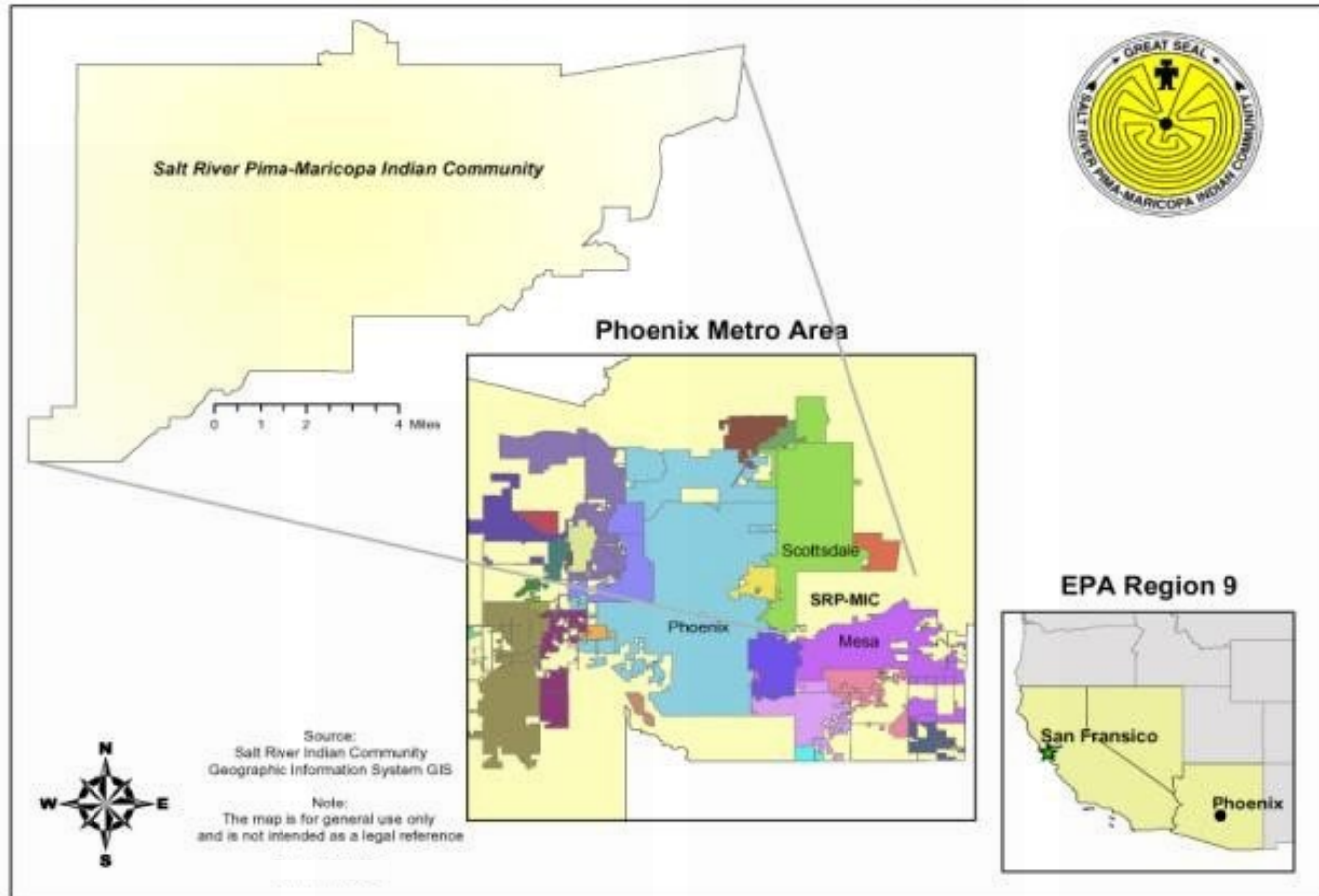
Christopher “Chris” Horan, CDD–EPNR Division Manager
Stan Belone, Environmental Engineer

Region 9 ROTC Meeting
August 13, 2020



Where we are located...

Salt River Pima-Maricopa Indian Community Regional Location



Salt River Pima–Maricopa Indian Community Government

- ❑ Tribal Council comprised of 9 members: President, Vice–President and 7 Councilmembers
- ❑ Variety of industrial and commercial enterprises
- ❑ Strong public safety (police and fire departments)
- ❑ About 24 departments and divisions



About Tribal Monitoring

- ❑ Tribal air monitoring has multiple components
- ❑ Community awareness and regulation are important factors
- ❑ Program is funded through EPA Region 9 grant and tribal funding
- ❑ Began with CAA Grant 103
- ❑ Treatment as a State (TAS) October 2008
- ❑ CAA Grant 105 in 2009



Air Quality Pollution Control

- ❑ Under CAA, EPA proclaimed the National Ambient Air Quality Standard (NAAQS) for certain common air pollutants.
- ❑ NAAQS are concentration levels which EPA has determined to be necessary to protect public health.
- ❑ Under the CAA, EPA is also responsible for designating areas of the country as; attainment, nonattainment or unclassifiable.



Impact of Nonattainment Status

- ❑ SRPMIC is in a nonattainment area in Maricopa County
- ❑ Nonattainment status for PM10 and 8-hour ozone
- ❑ Generally an area is declared nonattainment based on data collected at one or more ambient air monitoring stations that are not meeting the NAAQS



Monitoring Locations

Senior Center

- Ozone
- PM10
- PM2.5
- Meteorological

Red Mountain

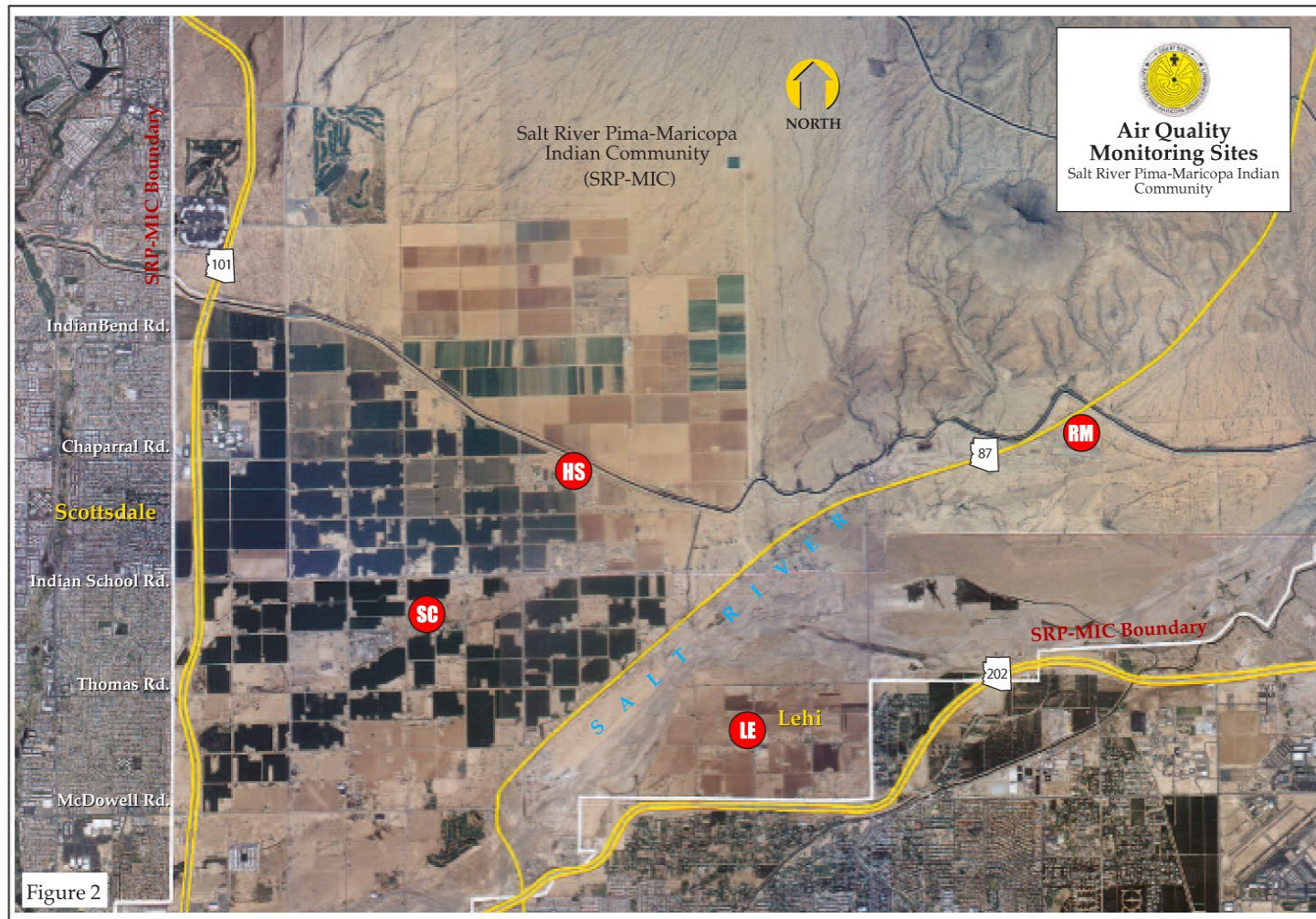
- Ozone
- Meteorological

Lehi

- Ozone
- PM10
- Meteorological

High School

- Ozone
- PM10



SRPMIC Air Monitoring Sites

Senior Center

- Ozone
- PM10
- PM2.5
- Meteorological

Red Mountain

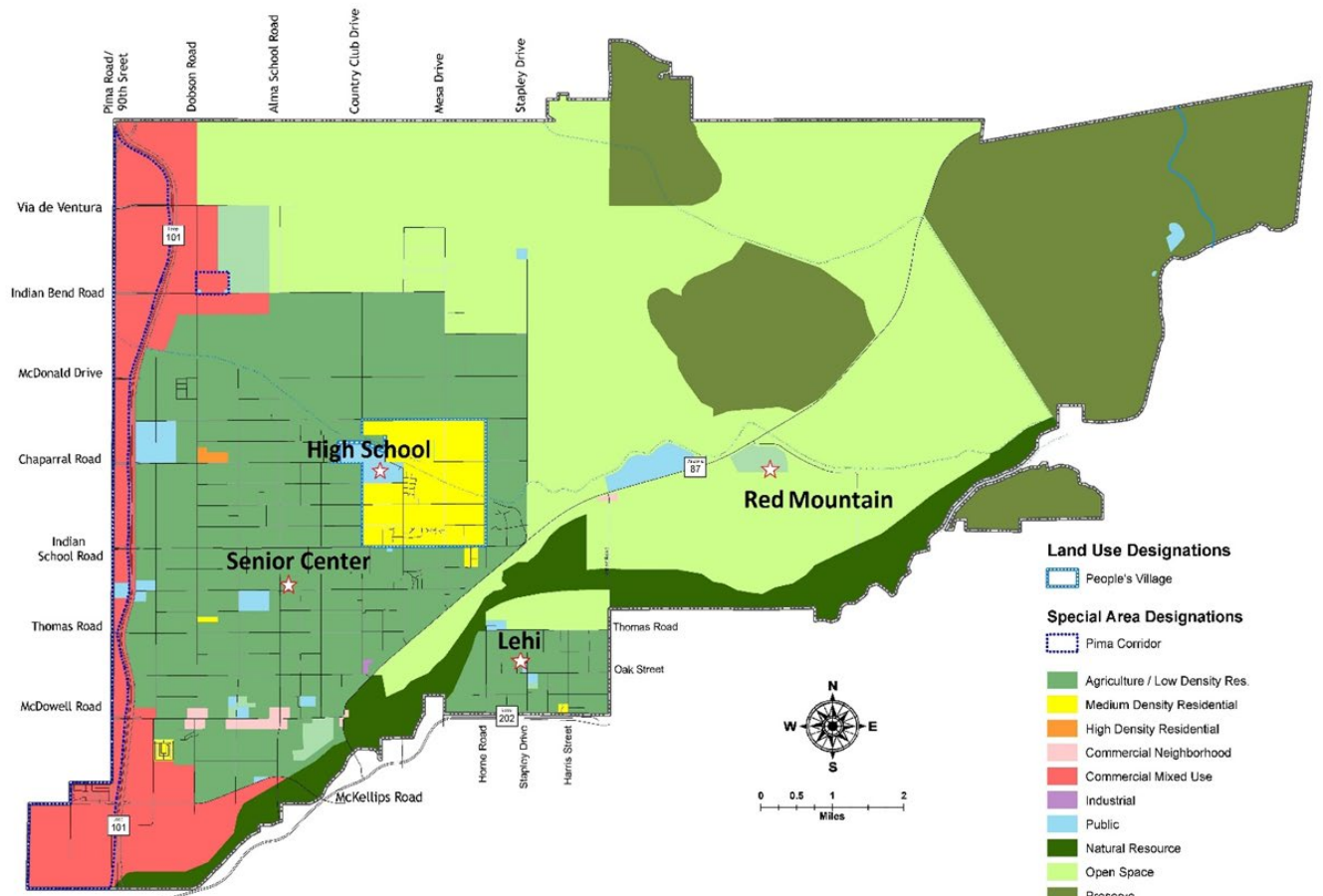
- Ozone
- Meteorological

Lehi

- Ozone
- PM10
- Meteorological

High School

- Ozone
- PM10



SRPMIC Air Monitoring Sites and Land Use Map

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Tribal Monitoring

- Follows EPA, and State and Local Air Monitoring Sites (SLAMS) guidance recommendations and conducts regulatory monitoring requirements
- Collects data for regulatory use and comparison to NAAQS for EPA
- Data also used to assess health/welfare effects and determine pollution source both on and off Community



Air Quality Functions

- Air quality monitoring activities
- QA/QC
- Data Management
- Audits
- Contractual Services
- Outreach
- Permit Reviews
- Local Agencies



Air Monitoring Instrumentation Used

SRPMIC – Air Monitoring Instrumentation													
Site ID	EPA AQS ID	PM ₁₀	PM _{2.5}	O ₃	WS / WD	Temp / RH	Delta Temp	Baro. Press	Rain	Solar Rad.	Room Temp	Data Logger	Total Active Monitors
SC	040137020	1	2	1	1	1/1	1	1	1	1	1	1	13
RM	040137021			1	1	1/1		1			1	1	7
LE	040137022	1		1	1	1/1		1			1	1	8
HS	040137024	1		1							1	1	4
Total		3	2	4	3	6	1	3	1	1	4	4	32

SRPMIC – Standard Equipment										
Equipment Type	O ₃ Primary Standard	O ₃ Transfer Standard	Flow Meter	Temp Standard	Min/ Max Temp Standard	Press Standard	RH Standard	Wind System Standard	Total Active Monitors	
Field Standard		1	4	3	1	3	1	1	14	
Stationary Standard	1				1				2	
Total	1	1	4	3	2	3	1	1	16	



Unrestricted Airflow

Must have unrestricted airflow in an arc of at least 180° or at least 90% of the monitoring path must have unrestricted airflow.



Height Above Ground

The probe inlet is 2 – 5 meters above the ground level.



Distance to Roadways

The site is at 10 meters from roadway edge (nearest traffic lane) for roadways with 1,000 or less vehicles per day.



Distance of Drip Line

At least 90% of monitoring path must be at least 10 meters or further from the drip line

tree(s) act as obstruction(s).



Meteorological Height

Wind instruments need to be located 10 meters above ground level, and at a distance of least 10 times the height of any nearby obstruction.



Distance Between Monitors

The monitors should be at least 2 meters apart if operated as collocated network.



Tribal Environmental Regulatory Program

- Majority of tribal air quality regulatory monitoring across the nation is funded by EPA
 - There are many tribal air quality monitoring programs in Region 9
 - Currently there are four (4) tribal air agencies doing regulatory monitoring in Region 9



Regulatory Monitors

- Regulatory monitors; the data are used to compared to the NAAQS
 - Planning purposes for support of decision-making
 - Design values
 - Emission strategies
 - Determines pollution sources across the Community

Tribal Environmental Regulatory Program

- The data are expected to meet all specific regulatory requirements by the EPA
 - There are many specific requirements for monitoring data
 - Ensure that the data are valid before submitting to Air Quality Systems (AQS)
 - The equipment used in monitoring are calibrated and audited at required schedules
 - The data are reported to AQS quarterly and certified annually
 - The annual monitoring network plan report



How We Operate

- We are committed to our operation
 - Maintain 4 ambient air monitoring stations to ensure required regulations are performed and completed
 - Have 3 staff and 1 QAO; we are kept busy with all program components
 - Report data in a timely manner
 - Framework based on Quality Assurance Project Plan (QAPP)
- There are challenges
 - Unexpected equipment breakdown
 - Sources impacting the monitors/dealing with issues
 - Data network operation – work with SRPMIC Information Technology Department



How We Operate

- Funding Under CAA 105
 - Operate and manage with the funding from EPA grant
 - EPA has the PM2.5 PEP and ozone NPAP audits
- Local Agency Collaboration
 - Have scheduled Technical Working Group meetings
 - Contact for assistance
 - Involved in local committees
 - Assist other tribal air programs



Meeting Requirements

- Requirements are important in the EPA air quality program
- Specific monitoring requirements for each criteria pollutants
- QA/QC of each parameter to ensure the instruments are performing within their required functions
- Independent audits for quality data
- Data validation and data submission
- Data reports: quarterly, annually and 5-year
- QAPP, 40 CFR, and EPA guidance documents are used



Expectations

- Continue to maintain the monitoring program
 - We will continue to fulfill regulatory program tasks
- Newer software and equipment
 - Research of new software that will fit our program
 - Look for new products (it comes with cost)
- Document revisions
 - Required to revise the QAPP and Standard Operating Procedures (SOP) every so often.
 - EPA's guidance documents are updated periodically



Expectations

- Audit programs
 - EPA audit findings – we expect to improve regulatory program
 - Quarterly performance audits – we expect our equipment to perform better
 - Internal program audits – we expect to improve the program efficiency

- Program reports
 - We expect to continue improving



Regulatory Program Motivation

- Keeping up with rules and regulations
 - Important that all data are submitted in timely manner to AQS..I remember my first data submission
 - Commitment to tasks and ability to complete them
 - Fixing equipment
 - Gaining regulatory program knowledge
- Support in place
 - Functioning organization you rely on
 - Have outside contacts for information and assistance
 - Network with people in your profession
 - EPA staff guidance



Regulatory Program Motivation

- Achievements and recognition
 - The time and effort that is put in shows in the data
 - Program recognition – strive to continue being successful



Thank You!



Christopher "Chris" Horan is the Community Development Department's Environmental Protection and Natural Resource Division Manager. He currently holds a Master of Science Degree in Environmental Science and Bachelor of Science degree in Biology from the University of Northern Iowa. He has over twenty years of experience with grants and environmental issues. He currently has been married to Calista Horan for twenty eight years and has four children. His hobbies include van conversions, hiking and reading.

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Stan Belone is the Environmental Engineer and responsible for overseeing the AQ monitoring network, environmental regulations, assisting with grant management, tribal AQ issues, data quality and reporting. He has been involved with tribal air program for 19 years in building tribal capacity to a regulatory program. Prior to joining SRPMIC, worked with Maricopa County AQ Division for 12 years.

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