



Environmental Protection Department

Our Mission is to protect, monitor, restore, and regulate Morongo's natural resources, honoring and protecting all life, land, and traditions and enhancing tribal sovereignty. We will promote environmental awareness and environmentally considerate actions by exemplifying environmental stewards, fostering collaborative relationships, expanding education and outreach activities, and continuing to enrich and develop our programs.

Earth Day 2025

Written by: Isabel Hughes, Environmental Administrative Assistant

We're excited to share that our annual Earth Day event on April 17th had a great outcome and strong attendance, despite a last-minute location change! We welcomed an amazing turnout of 430 people, including students, tribal members, employees, and community members.

The event focused on important topics like recycling, water conservation, air quality, and using resources wisely. It was wonderful to see people of all ages participating and showing their interest in these environmental issues.

Throughout the event, visitors explored a variety of booths that offered helpful tips and hands-on activities. From learning how to sort recycling properly to discovering ways to save water at home, there was something for everyone. The booths were run by tribal departments, local organizations, and volunteers who are actively working to protect the environment.

A huge thank you goes out to Morongo schools, tribal government departments, local community groups, and the Morongo community for being such an important part of this event. Your support and energy helped make the day truly special!

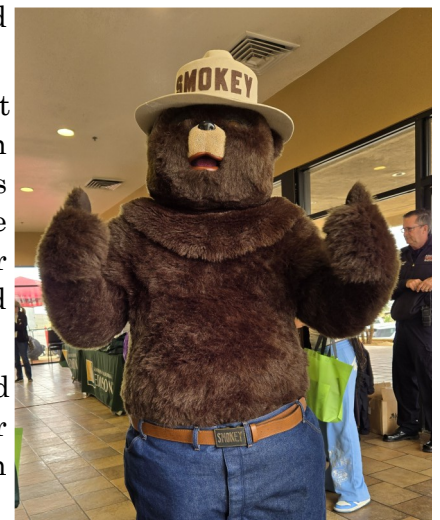
This Earth Day event marked the end of a month-long outreach program with Morongo school students, from preschool through 8th grade. The students' hard work and creativity were on full display during our poster contest. This year, 93 students created colorful and thoughtful posters showing what they love most about the environment on the Morongo Reservation. Their artwork reminded us all how important it is to care for the land we stand on. Some posters highlighted local plants, animals, clean water, and the beautiful canyon views.

The 7th and 8th grade students also created educational trifold about invasive species found on the Reservation. The 7th graders focused on Tree Tobacco, a fast-growing plant that is spreading across different areas and can harm native species. The 8th graders taught us about the growing raven population and shared engaging ideas to help reduce their impact, such as keeping trash secured and protecting small animals and nests.

Thank you again to everyone who joined us for this fun and meaningful day. Your enthusiasm and support show how much our community cares about the environment. We can't wait to celebrate with you all again next year!

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Backyard Composting: Turn Waste Into “Black Gold”

Written by: Zane Tatro, Environmental College Intern



What is Composting and Why Does it Matter?

Composting is a simple, natural way to turn everyday organic waste into a powerful soil enhancer—and it offers big rewards for gardens, homes, and the planet. By composting fruit and vegetable scraps, yard trimmings, and paper products, we can reduce the amount of waste that ends up in landfills and create a valuable resource that boosts the health of soil. Compost helps soil retain water and nutrients, allowing plant roots to grow stronger and healthier. It also introduces beneficial microbes that protect plants from disease and improve their resilience. Composting restores essential nutrients to the soil, reduces the need for synthetic fertilizers, and improves soil structure—helping it retain moisture while still draining properly. Environmentally, composting plays a major role in sustainability by keeping organic materials out of landfills, where they would otherwise generate harmful

methane gas, while also reducing the environmental and financial costs of waste management.

How to Compost at Home

To start composting, choose a bin that fits the space and budget. Whether it's a plastic tub, wooden crate, or store-bought composter, aim for a minimum size of 3'x3'x3' and make sure it allows for airflow by adding holes in the sides and bottom. Place the bin in a shady, well-drained spot. The key to successful composting is balancing two types of materials: nitrogen-rich “greens” (fruit and vegetable scraps, coffee grounds, and fresh grass clippings) and carbon-rich “browns” (dried leaves, shredded paper, cardboard, and small branches). Start with a 2:1 ratio of browns to greens, and layer them to maintain this balance. Keep the contents as damp as a wrung-out sponge and turn the pile every few weeks to aerate and speed up decomposition. Troubleshooting is simple: if the pile smells bad, add more browns; if it's too dry, add greens and a bit of water. Chop larger materials to help them break down faster. Compost is ready to use in about two to six months when it becomes dark, loose, and smells like fresh soil. It can be used in garden beds, potted plants, or as mulch to enrich the yard.

What to Compost—and What to Avoid

Not all organic materials are compost-friendly. Ideal items are listed in the image to the right. Avoid composting meat, dairy, oily or greasy foods, pet waste, treated wood, and weeds that have gone to seed. These items can attract pests, produce foul odors, or contaminate compost. Sticking to the right ingredients and maintaining a healthy compost pile, can reduce household waste and contribute to a more sustainable future. Whether you're looking to nourish your garden, cut down on waste, or simply do your part for the planet, composting is a small change with big impact.

For more detailed information see our Backyard Composting brochure at

<https://morongo.sfo2.digitaloceanspaces.com/morongo.com/Backyard-Composting-Brochure.pdf>.

References: “Composting 101” - National Resource Defense Council; Perkiomen Watershed Conservancy; “How to Make Compost at Home” - University of Maryland College of Agriculture and Natural Resources; and the US Composting Council

WHAT YOU CAN AND CAN'T COMPOST IN			
CAN BE	✓	SHOULD NOT	X
<ul style="list-style-type: none">• Cardboard• Coffee grounds and filters• Eggshells• Fruits and vegetables• Grass clippings• Hair and fur• Hay and straw• Wood chips / Yard trimmings• Leaves• Shredded newspaper		<ul style="list-style-type: none">• Coal or charcoal ash• Dairy products and eggs• Diseased or insect-ridden plants• Fats, grease, lard, oils• Meat or fish bones and scraps• Pet feces or litter• Yard trimmings treated with chemical pesticides	
Source: U.S. Environmental Protection Agency “Composting at			

Think Before You Flush: Septic Do's and Don'ts

Written by: Isabel Hughes, Environmental Administrative Assistant

Buildings generate wastewater from everyday activities from using sinks, showers, toilets, and washing machines, which must be properly treated to protect the environment and public health. There are two primary systems used for this: centralized sewer systems and on-site septic systems.

On the Morongo Reservation, larger facilities such as the Enterprises and Administration Building are connected to a centralized sewer network. These sewer lines transport wastewater to the Morongo Wastewater Treatment Plant, where it's treated before being safely released back into the environment.

Many homes and smaller buildings on the Reservation, however, use septic systems, which treat wastewater on-site. In a typical setup, wastewater flows from the building into a septic tank, where solids and oils separate from the liquid. The solids remain in the tank and must be pumped out periodically. The remaining liquid, known as effluent, flows into a leach field, where it slowly filters through the soil. Natural biological processes in the soil further treat the water before it reenters the groundwater supply.

Proper maintenance of septic systems is critical. When they fail, they can release pathogens and excess nutrients into the groundwater, potentially causing environmental damage and health risks. Fortunately, protecting your septic system is easy, below are a few simple dos and don'ts to follow that can make a big difference.

To learn more about how to care for your septic system, visit the U.S. Environmental Protection Agency's website at www.epa.gov/septicmart.

If you live on the Morongo Reservation and need your septic tank pumped, you can reach out to Morongo Indian Health at 951-849-4761 .

DO	DON'T
Protect It and Inspect It	
✓ Have system inspected & pumped every 3-5 years by a professional	✗ Wait until there is a problem
Think at the Sink	
✓ Limit the use of a garbage disposal	✗ Pour household chemicals down the sink or flush them
✓ Properly dispose of coffee grounds & food	✗ Rinse coffee grounds down the sink
✓ Put grease in a container and throw away	✗ Pour grease or oil down the sink or toilet
Don't Overload the Commode	
✓ Dispose of trash items in the trash can	✗ Flush non-degradable products (feminine hygiene products, floss, cigarettes, paper towels, pharmaceuticals, etc.)
Shield Your Field	
✓ Determine a proper distance away from your system to plant trees and shrubs	✗ Park or drive on your leach field ✗ Plant trees or shrubs too close to your leach field
Don't Strain Your Drain	
✓ Stagger the use of water generating appliances	✗ Concentrate your water use by using the dishwasher, shower, washing machine, and toilet at the same time
✓ Fix leaks and install water efficient products	



Rattlesnake Season is Here

Written by: Isabel Hughes, Environmental Admin Assistant

As we edge closer to summertime and higher temperatures, it is important to be more vigilant about your surroundings on the Morongo Reservation. Between the months of March and October, rattlesnakes are most active, although caution should be exercised year round, especially in the canyons and areas with tall grass.

Rattlesnakes rely on the color of their scales to camouflage with their surroundings, making them difficult to spot in grassy, rocky, or creviced areas. They are often found coiled, basking in the sun or resting in shaded areas, and may also cross roads or parking lots. While they may not feel immediately threatened in these situations, they will shake their rattle if they do perceive a threat. If you hear a rattle, stop immediately, locate the snake, and slowly leave the area.



Western Rattlesnake

Avoiding Encounters

To reduce the risk of encountering rattlesnakes, follow these safety tips:

- **Be aware of your surroundings.** Scan the terrain and environment carefully. Exercise extra caution in unfamiliar areas and watch where you step or place your hands. Avoid putting hands or feet in places you cannot see. Listening for the telltale rattle is crucial as this is your primary warning signal.
- **Stay on marked trails.** This applies not only to designated park trails but also to dirt roads throughout the reservation.
- **Use a walking stick.** This helps alert animals, including snakes, to your presence. Wear closed toe shoes, preferably hiking boots, when walking trails or in areas known for snake activity.
- **Avoid peak activity times,** which are dawn, dusk, and nighttime, especially during the summer.
- **Teach and encourage children** to respect wildlife and avoid snakes.

Initial First Aid

In the event of a snakebite, take the following steps to ensure the most effective response:

- **Keep the injured person calm.** Panic can worsen the effects of venom.
- **If it is safe, take a picture of the snake** to aid medical professionals in identifying it for treatment.
- **Transport the victim to the nearest emergency facility** and notify them enroute that a snakebite victim is incoming.
- **If you cannot reach medical care within an hour,** call 911 or local emergency services for assistance.

DO NOT:

- Do **not** apply a tourniquet.
- Do **not** cut the wound.
- Do **not** attempt to suck out the venom.



Pacific Rattlesnake

As we move into summer, keep these precautions in mind and stay vigilant during outdoor activities. If you encounter a rattlesnake on the Morongo Reservation, whether under your car, house, or at community buildings, call the Reservation Police 24-hour line for removal at 951-634-4810.

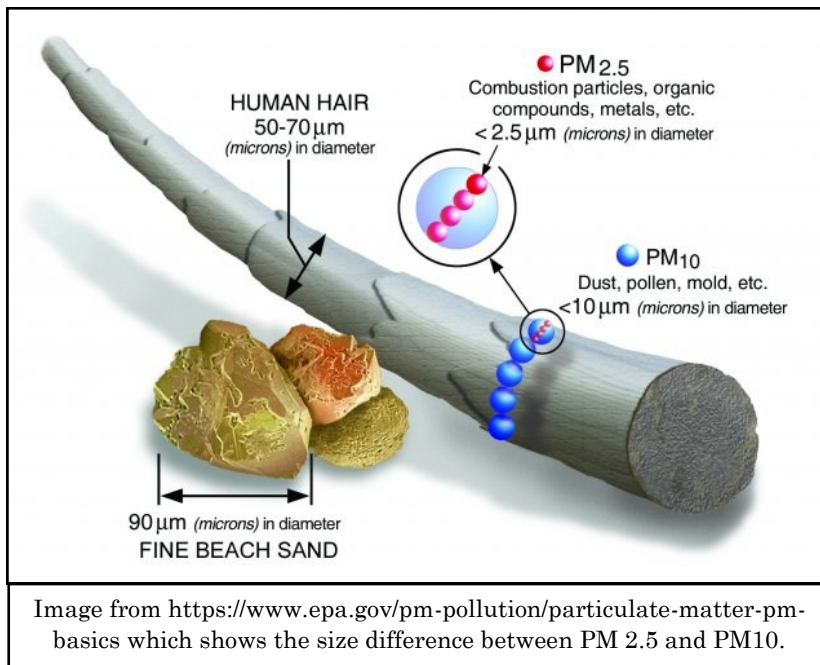
References: ELC—What is rattlesnake season in California? <https://enviroliteracy.org/animals/what-is-rattlesnake-season-in-california/>; CDFW—Rattlesnake <https://wildlife.ca.gov/Conservation/Reptiles/Rattlesnake>

Wildfire Safety

Written by: Lina Luu, Environmental Specialist I

As the risk for wildfire increases during this season, it is important to know how to protect yourself from the harmful smoke. Particulate matter (PM) is a byproduct of wildfires which contains microscopic particles of solid and liquid. It is a pollutant that is dangerous to human health which can result in difficulty breathing, coughing, and can worsen preexisting cardiovascular problems.

One of our goals for the Environmental Protection Department is to keep the community aware of the current air quality. We do this with social media posts and we have a website, www.morongogair.com, where you can visit to view the current air quality being reported by our community air monitors. Morongo's Tribal Air Program monitors for PM2.5 and PM10. The difference between the two is the particle size, PM2.5 being smaller in diameter than PM10.



Last year, Morongo's Tribal Air Program deployed a particulate matter monitor during two fire events (the Line fire and Bridge fire). According to the California Air Resources Board (CARB), the maximum amount of PM10 in a 24-hour average that can be present without harming human health is 150 ug/m³ for the National Ambient Air Quality Standards (NAAQS) and 50 ug/m³ for the California Ambient Air Quality Standards (CAAQS).



Image depicting PM10 that was collected during the fire events. Each circle represents how much PM would be inhaled in the human body within an hour.

During the wildfire event, the PM concentration went as high as 198.5 ug/m³. Although the PM10 concentration did not stay consistently high throughout the day, it is still recommended that outdoor activity is limited when large amounts of pollutants are present outdoors. While a fire event is occurring, try to keep the air inside your home clean by using a high-efficiency filter. If you are interested in creating your own box fan filter, visit <https://morongonation.org/environmental> for resources or contact TAP@morongo-nasn.gov.

References: EPA—Wildfire Smoke Fact Sheet At-Risk Groups of People <https://document.airnow.gov/at-risk-groups-of-people>

Morongo Environmental Protection Department—DIY Box Fan Filter <https://morongonation.org/wp-content/uploads/2021/08/DIY-Box-Fan-Filter.pdf>



Integrated Pest Management

Written by: Oscar Perez, Environmental Specialist I

What is Integrated Pest Management? In simple terms, Integrated Pest Management (IPM) is a holistic approach to handling pests. A pest is any organism that causes harm to humans, either directly or indirectly. Examples include a mosquito trying to bite you or a locust devouring crops, which reduces the community's food supply.

A great way to visualize the principles of IPM is to imagine a pyramid, like the one shown to the right. At the base of the pyramid is **Prevention**, the first and often the only step needed. An example of prevention is purchasing weed-free seeds. This proactive step is taken before pests are present, ideally preventing them from ever appearing.

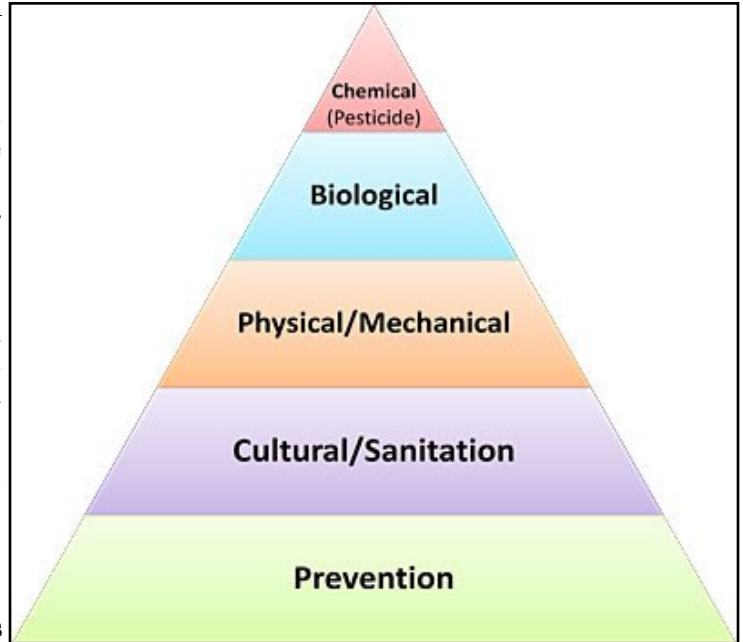
The second principle is **Cultural/Sanitation**. This step involves making the environment inhospitable to pests. For instance, it is difficult for weeds to invade when native plants are already established. Good sanitation also helps because most pests won't bother you if you keep the area clean. Remove potential food sources and shelters for pests like rats, and your home is less likely to be infested.

The remaining principles are used after pests have been detected in your area. The third principle is **Physical/Mechanical** control, which involves manual or mechanical removal.

This might include pulling weeds by hand, being sure to remove all parts of the plant to prevent regrowth, or using tools like tillers or mowers. Physical removal is most effective before weeds flower or insects begin to reproduce.

The fourth principle is **Biological** control. This involves using natural predators, or "good bugs," to disrupt the pest's life cycle. Since many pests are not native, scientists often look to their native habitats to find natural enemies. Local predators can be used as well. For example, ladybugs are excellent at controlling aphid populations.

The final principle is **Chemical/** Pesticide control, which should be a last resort when all other methods have failed. Start with natural remedies such as diatomaceous earth, vinegar, or certain herbs and spices. If these are not effective, research your specific pest and choose a targeted pesticide. Avoid broad-spectrum pesticides because they can harm beneficial organisms like pollinators. Always follow the manufacturer's directions carefully. Overuse of pesticides can harm the environment, particularly through urban nonpoint source pollution that affects waterways.



The Integrated Pest Management Pyramid



Ladybug feasting on aphids.

References: UC Master Gardener Program of Riverside County <https://ucanr.edu/site/uc-master-gardener-program-riverside-county>

Morongo Community Air Quality Project through AB 617 Update

Written by: Pamela Atcitty, Environmental Specialist II

California Air Resource Board's AB 617

The Morongo Band of Mission Indians is making significant progress in advancing environmental health and justice through its Community Air Quality Project, funded by the California Air Resources Board (CARB) 4th Cycle of their Community Air Grants (CAG) under Assembly Bill 617. This important initiative aims to enhance and extend the Tribe's air monitoring network, replace outdated equipment, and collect air toxics data to better understand pollution impacts on the Morongo Reservation.

Work That Has Been Accomplished



Sensors developed by Blue Tomorrow to monitor Morongo's air quality.

Over the past year, the Tribe has worked diligently to lay the foundation for this project. After finalizing the grant award and submitting the required documentation, Morongo's Tribal Air Program established internal project management systems and secured a contract with environmental consulting firm Blue Tomorrow. A kickoff meeting was held in July 2024, and since then, significant steps have been taken toward project implementation.

One of the major accomplishments is the installation of five new state-of-the-art air quality monitors across the Reservation, replacing older units that had reached the end of their service life. These new monitors underwent rigorous testing and calibration, both in the lab and in the field, to ensure the highest data quality. Real-time data from the new monitors is now being transmitted to an upgraded community website, which was launched in November 2024. This platform allows Tribal members to view current air quality conditions, track trends, and participate in community-based air monitoring.

This work supports the goals of AB 617 by addressing the disproportionate burden of air pollution that the Morongo community faces from surrounding industrial and transportation sources. The upgraded air monitoring network, coupled with the new website, empowers residents with accessible information to make informed decisions about their health.

It also promotes community engagement by inviting Tribal members to participate in air quality data collection and reporting.

Upcoming Work to be Completed

In addition to the monitoring network, the Tribe is preparing to launch air toxics sampling in summer 2025. These efforts will focus on identifying pollutants such as heavy metals that pose risks to health, particularly in disadvantaged and low-income households. Blue Tomorrow is developing a Quality Assurance Project Plan (QAPP) to guide this work and will provide training to Morongo EPD staff on sample collection and analysis protocols.

Ongoing work includes the continuation of monitor maintenance, data reviews, and calibration funded under Cycle 3 of the CAG program, beginning April 2025. These tasks are essential to ensure the longevity and accuracy of the air monitoring system.

By leveraging emerging technologies and community-based approaches, the Morongo Band of Mission Indians is prioritizing environmental justice, public health, and Tribal sovereignty. This project demonstrates how Tribal communities can lead innovative efforts to address air pollution and promote cleaner, healthier environments for current and future generations.



Regular maintenance being completed on all monitors.



Morongo's Community Air Quality Project is part of California Climate Investments, a statewide program that puts billions of Cap-and-Trade dollars to work reducing greenhouse gas emissions, strengthening the economy, and improving public health and the environment—particularly in disadvantaged communities.

For current air quality conditions visit MorongoAir.com



Upcoming Events

TO CHECK THE CURRENT AIR QUALITY INDEX



MorongoAir.com



AirNow.com



PurpleAir.com

Morongo Reuse Center



Friday
July 11, 2025
9am to 12pm
Behind Public
Works

Donate usable household
items or take what you
need for FREE.

***Open to Morongo
Residents & Tribal
Members Only***

- Cleaning Products
- Paints
- Electronics

- Lawn Care
- Vehicle Care
- Pool Care



This and previous newsletters are available at <https://morongonation.org/environmental/>. If you would like to join our email list or would like a hard copy mailed to you, let us know at epd@morongo-nsn.gov or 951-755-5127.

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