



Environmental Protection Department

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Morongo's Environmental Protection Department

Written By: James Payne, Environmental Director

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Greetings, I'd like to take a moment to reintroduce you to the Morongo Environmental Protection Department as its new Director. We opened the doors in October of 2004; it was then when I started as the GIS Environmental Specialist. I have been fortunate to be a part of the development of the programs including the Tribal Air, Pollution Prevention, Tribal Water, Resource Conservation, and Geographic Information Systems. I'm proud to see how each of the programs has progressed and how they now have a dedicated and professional staff member overseeing them.

Throughout the years, we have interacted with many of you at events we've hosted such as the Bog Clean Up and Earth Day, various workshops, Environmental Education at the Morongo Schools, and at the Environmental booth present at Cultural Days, Health Fair, and more. I'm happy to say we will continue to be at those events! I'm happy to say we will continue to be at those events.

I'm also confident in stating that our staff will carry on working earnestly and diligently for the Tribe. A few examples of this work includes: monitoring for ozone and particulate matter, in order to identify our air quality and take appropriate actions to clean the air shed. Ensuring that the waste stream is properly managed, from recyclables to household hazardous waste, to help protect the land and conserve resources. Surface water monitoring to characterize conditions and promote the development of water quality standards.

After you read through this quarter's newsletter, I encourage you to stop by and/or check out our web page and become reacquainted with our staff and how we may be of assistance. We look forward to continuing the endeavors that the department has undertaken, and with Tribal Council's approval we will advance the capabilities and responsibilities as well.



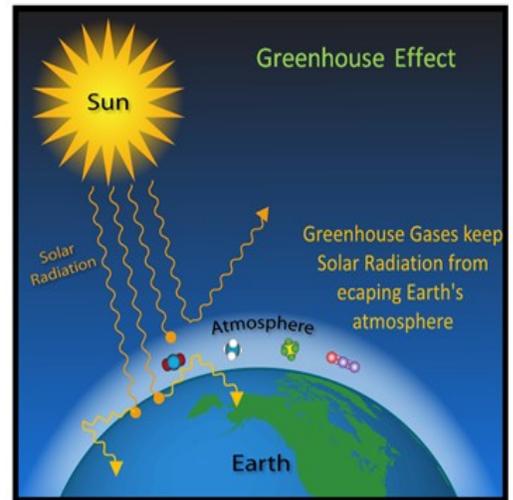
Environmental Department Staff
Pictured: Dana DeVries, Debbie Gandara, Pamela Atcitty, Jon Castillo, Annemarie Teall and James Payne.

The Greenhouse Gases and Climate Change

Written by: Pam Atcitty, Environmental Specialist

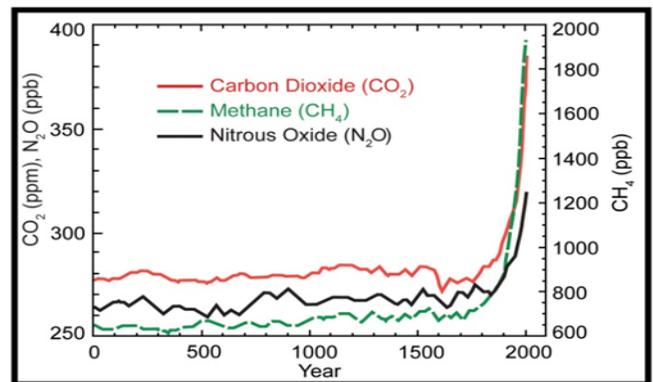
Balancing Earth's Temperature

Just like a gardener's greenhouse that traps heat inside, Earth has a "natural greenhouse effect" in which some of the sun's infrared radiation is trapped to warm the planet. Earth's temperature depends on the delicate balance between energy, in the form of sunlight entering and leaving the planet's atmosphere. In the atmosphere, there are certain heat-trapping gases, such as carbon dioxide, methane, nitrous oxides, ozone, and water vapor, which aid in this process by reflecting the heat back to earth. This process allows Earth to maintain a comfortable temperature of around 57 degrees Fahrenheit. If this radiation is not trapped, the average temperature on earth would drop to zero degrees Fahrenheit, and life would not be as we know it today. In this way, these heat-trapping gases or "greenhouse gases" (GHG) are very important and central to the survival of the living organisms on Earth. The greenhouse effect is what makes Earth so unique from the other planets; we have just the right amount of GHG to make for a suitable temperature. Yet, too much of something is not a good thing, and in this case, the excess of these GHG or especially carbon dioxide, in our atmosphere is harmful to life and the environment. With an excess of these gases being released into the atmosphere by humans, the greenhouse effect is enhancing and this is causing the rise in temperature that we have been experiencing in the last two centuries.



Human Impact- Burning Fossil Fuels

Since the Industrial Revolution began around 1750, human activities have contributed substantially to Earth's climate change by adding an overwhelming amount GHG like carbon dioxide and nitrous oxides. The output of carbon dioxide alone has risen about 36%, and since 1880, which marks the end of the Industrial Revolution, Earth's temperature has risen 1.4 degrees Fahrenheit. Although this may not seem like an enormous increase, the effects it leaves on the environment and the organisms that live in it are deadly. Many plants and animals cannot adapt to temperature changes in their environment quickly, and this is causing many to become endangered and, for some, extinct. The largest source of GHG emissions from human activities in the United States is from burning fossil fuels for electricity, heat, and transportation.



Main Greenhouse Gas Emissions in the United States are:

- Electricity production- responsible for the largest share of greenhouse gas emissions. Over 70% of our electricity comes from burning fossil fuels, mostly coal and natural gas.
- Transportation- primarily from burning fossil fuel for our cars, trucks, ships, trains, and planes.
- Industry- burning of fossil fuels for energy as well as greenhouse gas emissions from certain chemical reactions necessary to produce goods from raw materials.
- Commercial and Residential- businesses and homes burn fossil fuels for heat, the use of certain products that contain greenhouse gases, and the handling of waste.
- Agriculture- emissions from livestock such as cows, agricultural soils, and rice production.



The Greenhouse Gases and Climate Changes

Continued from Page 2

Human Impact- Deforestation

Trees play a huge role in controlling Earth's temperature. Trees can be considered a carbon dioxide regulator as they naturally convert carbon dioxide to oxygen; the more trees, the less carbon dioxide in the atmosphere and the more oxygen. Since we live in an age where carbon dioxide is very abundant in the atmosphere, released through man-made inventions, such as cars, factories, and power plants, it is important, more than ever, that trees fulfill their part in the environment and take some of the excess carbon dioxide out of the air. Unfortunately, the removal of large forests, or deforestation, is preventing this job from fully being accomplished, and with half of all the Earth's forests gone, the amount of carbon dioxide continues to rise. With more carbon dioxide in the atmosphere, more of the sun's radiation is being reflected back to earth, instead of space, and this is causing our average temperature to rise. Deforestation is a major issue when it comes to Earth's temperature and ultimately global warming.

How can we prevent GHG emissions on Morongo Reservation?

Today, there is undeniable scientific evidence that the abundance of these heat-trapping gases are increasing in the atmosphere and the only realistic solution to preventing a change in our climate and global warming is to reduce the burning of fossil fuels and reverse deforestation. Here are some useful tips that Morongo Tribal Members and Residents are doing to help lower GHGs and help prevent Global Warming.



Finding other ways of generating electricity, like solar, wind, hydro, geothermal, bio-fuels, tide and wave energy. Tribal residents like the Huizar and Mathews families have switched to energy generated by clean, renewable sources and are reducing the amount of CO gases being emitted into the atmosphere.



Finding other ways of powering our transport like riding your bicycle, walking or taking the bus instead of driving a car. Another alternatives to burning less fossil fuels for transport is to carpool with a coworker and when its time to purchase a new car, choose one that offers good gas mileage like a hybrid.



Don't waste electricity, turn off the lights and electronics when you're not using them. Use the "on/off" function on the machine itself and using only as much light as you need. Saving electricity reduces greenhouse gas emissions.



Reduce, reuse or recycle all kinds of items, from water bottles to clothes, to save energy and raw materials. Choose reusable products instead of disposable. By recycling your household waste, you reduce the amount of carbon dioxide admitted into the atmosphere. Look for these recycling bins at Public Works or you can request a curbside recycling cart from the Environmental Protection Department.



Plant trees to help absorb excess carbon dioxide, and to provide shade and windbreaks to keep heating and cooling cost down. A single tree will absorb approximately one ton of carbon dioxide during its lifetime. If possible, choose a tree that is appropriate to Morongo's region and climate to ensure that the tree has a chance to live a longer life.

Morongo Environmental Department Summer 2012 Interns

Written by: Debbie Gandara, Environmental Admin. Assistant

This summer, our department hosted two high school student interns through the EPD Native American Preference Internship Program. The two students were Andrew Castaneda & Lauren Martin. The students were exposed to all of the EPD Programs and assisted with our on-going projects, protecting our air, water, and land on the Morongo Indian Reservation.



Andrew working with the GPS equipment.

One of these on-going projects is the illegal dumping and litter in the canyons. Andrew assisted in cleaning up Bog Hill, by removing gun casings, bottles, and cans along with other different trash, which in the long run, helped improve the environmental health of Bog Hill. At the end of his hard work he was asked to share his thoughts on the importance of a clean Canyon and Bog. (See Page 5)

The Student Interns along with some of the Environmental staff went on a field trip to the MRF (Material Recovery Facility) located in Riverside, in which they were exposed to the whole recycling program. Mainly because this is where Morongo takes all of the recyclables collected on the Reservation and Casino Morongo. The Facility recycles everything from bottles, cans, glass, paper and cardboard to wood chipping, they also collect Electronic Wastes, concrete and several other things.

The interns were able to see how all the trash is put into different categories of recycling. The Student Interns said it was a very good learning experience something they may never have been able to experience had it not been for our Internship Program.

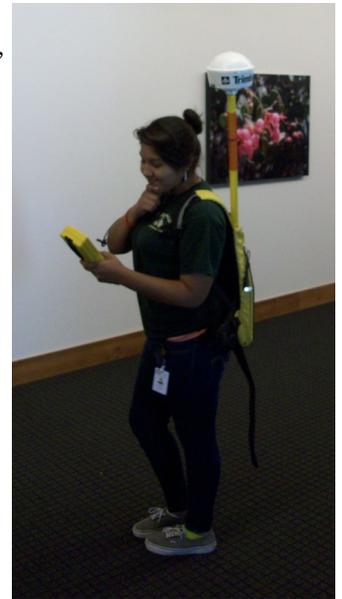
As a requirement of the program, the Interns were asked to pick something about the environment that they held close to their hearts and write a paper and create a presentation on the issue and how to improve the environment. Both presented their Power Point Presentations to friends, family and staff on their last day.



Andrew picked "Project One Horse" and presented the on-going illegal dumping, trespassing, and vandalism occurring at One Horse, located adjacent to the community of Cabazon and the wind mills. Andrew wanted the area to be preserved for future generations and to protect the culturally sacred lands, wildlife, and native plants found in One Horse.

Andrew's recommended solution to the problem was to repair the existing fence line with a thicker cable, making it more difficult for trespassers to cut the fence lines. Also, Andrew recommended replacing the gate locks and having Reservation Patrol inspect the area daily for trespassers.

Lauren chose "Sorting & Recycling at Morongo Administration" and presented on the recycling and composting efforts at Morongo Administration. The purpose of her project was to see how the Administration recycling program was doing and make recommendation to improve the program. (See Page 5 for more of her work) Lauren did find opportunities for improvement through increased food composting and opportunities for more recycling of Styrofoam, mixed paper, and plastic food containers. Her recommendations for accomplishing this was increased education for the staff and community.



Lauren learning all about the GPS Equipment.



Help to Do Your Part!

Written by: Andrew Castaneda, Summer Intern 2012

Jon, Myself and Dana went to the Morongo Bog and cleaned up. We picked up gun shells, bottles, paper, tires and much more trash that shouldn't have been in there. We did this because we need to keep our Canyons nice and healthy and always looking beautiful because trash does not belong in our environment. I learned that just by picking up little by little it can really make a big difference in our environment and improve the beauty. I also learned that just by throwing out bottles and all sorts of different trash it can change the way the canyons look, and how the plants and animals become sick from it. Well that is what I learned about keeping our canyons nice and clean for our environment and for our future generations.



Andrew at Bog Hill and all the trash collected after a hard day's work at the Bog, the truck is full of trash that they collected.

Administration Building's Recycling Inventory

Written by: Lauren Martin, Summer Intern 2012

I had the privilege of inspecting all the departments at the Morongo Admin. Building, for recycle bins and see how the different departments were doing since it is mandatory to recycle at the Admin.. I went to each dept. and their break rooms to see if the departments were recycling. I found that every dept. is doing very well in keeping up with their recycling. I wouldn't change anything since they are all doing such a great job.

In the recycle bins, we found mainly office materials such as to be expected. Plastic was the second material we had the most of. When sorting, we found some refuse that didn't belong with the recycled materials such as potato chip bags,

napkins, fast food lids, and coffee stir sticks. We also found some compostable materials like bananas and other foods.



Lauren completing a "waste audit" of the Admin Building recyclables and trash by separating all the different trash into categories.

Safety and Compliance: HAZCOM Program

Written by: Dana DeVries, Environmental Supervisor



The Morongo Environmental Protection Department began hazardous wastes management in 2004 and has since worked to promote an environmentally sound, regulatory compliant, and reservation-wide hazardous wastes collection and disposal program. As part of this program, the EPD staff provides a Hazard Communication Program (HAZCOM) to Morongo Reservation Services Departments and Enterprises to ensure each is in compliance with the federal Occupation Safety and Health Administration (OSHA) Hazard Communication Standard, the federal Resource Conservation and Recovery Act (RCRA), the Tribe's Solid and Hazardous Wastes Management Code, and California disposal regulations. These 4 regulations state how hazardous chemicals and hazardous wastes should be stored, used, and disposed of. Quarterly, participating departments and enterprises are inspected (see *Key Components* below) and a report is prepared for the supervisor/manager highlighting violations and recommendations for improvement. The EPD then assists departments to bring them in compliance.

The purpose of the EPD's HAZCOM program is to protect the health and safety of tribal members and the employees who work for them and to protect the sacred land that they live on. Cleaning chemicals, oils, paints, aerosol cans, pesticides, and herbicides are all hazardous materials and can cause serious health and environmental effects if not properly handled, stored, and disposed of. For example, one gallon of gasoline can pollute 750,000 gallons of water! The community could then be exposed to gasoline through drinking contaminated water or breathing in gasoline vapors, which in higher doses are irritants and even toxic. Not only does gasoline pose a health hazard, it is also a fire and explosion hazard.

Key Components of the HAZCOM Program Inspections:

Chemical Inventory List: Survey each department/ enterprise to determine what chemicals are present and compile a master list.

Material Safety Data Sheets (MSDS): Ensure MSDS's are provided to employees for each hazardous chemical used in the facility. The MSDS's contain information on how to handle the chemical and what personal protective equipment employees need to wear in order to protect themselves and others from being exposed to the hazard.

Labeling and Signage: Ensure all containers holding hazardous materials are properly labeled with the identity of the substance and appropriate warnings. Labels are the quickest source of information employees and community members need to make sure they are not putting themselves at risk of exposure and what to do if they are exposed. Not having chemicals labeled is dangerous for everyone's health and safety.

Emergency Spill Procedures: Ensure departments have access to spill kits and posted procedures for responding to spill of hazardous materials.

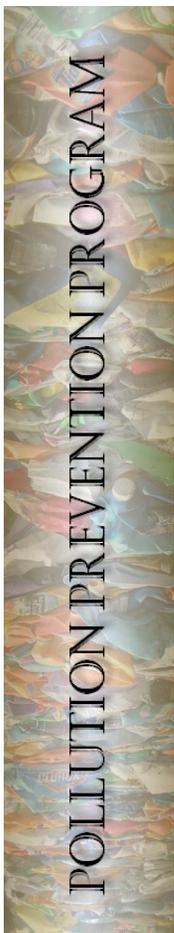
Storage: Ensure all containers holding hazardous materials are stored in a manner to minimize the possibility of a release. All containers need to be not leaking and stored upright, closed, and away from chemicals it could mix with to form a dangerous reaction.

Disposal: Ensure all hazardous wastes are disposed of in accordance with Tribal, State, and Federal regulations to prevent hazardous materials from entering the community and the environment.

Training: Ensure employees are trained on hazardous chemicals in their work area and emergency response procedures to protect their and the community's health and safety.



All Spray bottles are labeled at Morongo A&W.



Public Works Disposal Area

Written by: Jon Castillo, Environmental Technician

It is a privilege for Morongo's Residents to be able to dispose of waste at the Public Works (P.W.) roll-off. P.W. pays for the fees for disposal at the landfill.

Products such as hazardous materials, electrical products, and appliances are not allowed in the P.W. roll-off, and could lead to heavy fines towards Morongo if dumped in the landfill. There are State Laws and Morongo's Solid and Hazardous Waste Code that do not allow these items to be dumped in our waste containers which are taken to the local landfill.

The Environmental Protection Department has placed containers next to the P.W. roll-off to help recycle waste and help keep cost down .

Please help separate these items and place them in the proper containers.

Metal Container – Bikes, lawnmowers, scrap metal, aluminum, and barbeques.

E-Waste Cage – All Electronics such as T.V.'s, Stereos, Computers, Printers, all battery operated toys.

Clothing and Shoe Containers – All Clothes, Blankets, Jackets, Shoes, and Linens.

Recycle Bin – Cardboard, Glass, Aluminum, Plastics, and Paper.

Appliances – Refrigerators, Water heaters, Washers, and Dryers can be dropped off on the dock next to the roll-off.

Tires – All Tires can be dropped off on the dock behind the Recycle Bin.

Household Hazardous Waste Shed – Oils, Paints, Batteries, and Pesticides, Cleaning Products, and Florescent Bulbs. Please help the Environmental Department when dropping off Household Hazardous Waste by ensuring all chemicals have a label, identifying the product dropped off. This allows us to take precautions on how to safely handle and store products in our Hazmat Facility.

REMEMBER;

WASTE COSTS MONEY,

RECYCLING;

CUTS LANDFILL COST

SAVES THE LANDFILL FOR FUTURE USE

PROVIDES REVENUE BACK TO P.W.

Thank you for you help.

09/14/2008

Upcoming Events with the Morongo Environmental Protection Department



The MPD will be going on a Geological Field Trip to Millard Canyon on October 13, 2012, time to be determined. Any Interested Tribal Members please sign up with Debbie Gandara @ 951-755-5128 by October 9th, 2012. you can either drive your own vehicle or drive with us.

Go Paperless!



If you would like to receive electronic versions of the Morongo Environmental Protection Department's Quarterly Newsletter and information on other Environmental Events, please email Debbie at dgandra@morongo-nsn.gov with your name, address and request to be added to our e-mailing list!



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**MORONGO
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MISSION
INDIANS**



A SOVEREIGN NATION

Environmental Protection Department

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