ABOUT MYSELF

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Illegal Dumping Prevention Coordinator
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- Provide education and outreach to communities to help prevent illegal dumping and ensure proper scrap tire management
- Former employers include Capitol Area Council of Governments – Austin, TX, City of San Marcos, TX, and Texas State University
- Bachelors Degree in Environmental Science – Texas State University
OBJECTIVE

To educate Tribe members on how to identify illegal dumping and develop effective prevention measures in their communities.

POLLUTION

The Introduction of contaminants into the natural environment that cause adverse change.
"When you toss materials anywhere but the appropriate bin, it is considered dumping or littering, and it is illegal."

-- Recycle Santa Fe
ILLEGAL DUMPING

“... An Open Dumpsite is a land disposal site at which solid wastes are disposed of in a manner that does not protect the environment, is susceptible to open burning, and is exposed to the elements, disease vectors and scavengers.....”

-- U.S. EPA

ILLEGAL DUMPING

Also referred to as:
- Open Dumping
- Midnight Dumping
- Fly Dumping
TYPES OF ILLEGAL DUMPING

Household Trash

Source: NMED

TYPES OF ILLEGAL DUMPING

Discarded Furniture

Source: NMED
TYPES OF ILLEGAL DUMPING

White Goods

Source: NMED

TYPES OF ILLEGAL DUMPING

Construction and Demolition (C&D) Waste

Source: NMED
TYPES OF ILLEGAL DUMPING

Green Waste

Source: NMED

TYPES OF ILLEGAL DUMPING

Infectious Waste

Source: NMED
TYPES OF ILLEGAL DUMPING

Animal Carcasses

Source: NMED

Scrap Tires

Source: NMED
EFFECTS OF ILLEGAL DUMPING

Habitat/breeding grounds for disease-carrying vectors

Source: http://rippleeffectdisciplines.com
EFFECTS OF ILLEGAL DUMPING

Habitat/breeding grounds for disease-carrying vectors

Diseases Directly Transmitted by Rats
- Hantavirus Pulmonary Syndrome
- Leptospirosis
- Rat-bite Fever
- Salmonellosis

Diseases Indirectly Transmitted by Rats
- Black Plague
- Colorado Tick Fever
- Cutaneous Leishmaniosis

Source: https://naturalunseenhazards.wordpress.com/2010/09/
EFFECTS OF ILLEGAL DUMPING

Habitat/breeding grounds for disease-carrying vectors

Diseases Carried by Mosquitoes
- Dengue Fever
- West Nile Virus
- Encephalitis
- Zika Virus

EFFECTS OF ILLEGAL DUMPING

Indirect exposure to toxic chemicals/hazardous wastes

Nanakuli, Oahu, Hawaii - Source: http://www.carrollcox.com/NanakuliBarrels.htm
EFFECTS OF ILLEGAL DUMPING

Indirect exposure to toxic chemicals/hazardous wastes

EFFECTS OF ILLEGAL DUMPING

Direct exposure to hazardous objects
EFFECTS OF ILLEGAL DUMPING

Direct exposure to hazardous objects

C&D Waste - Source: NMED

EFFECTS OF ILLEGAL DUMPING

Direct exposure to hazardous objects

White Goods - Source: NMED
EFFECTS OF ILLEGAL DUMPING

Flooding caused by debris/wastes clogging drainage ditches and waterways

Source: www.thinkbluemaine.org

EFFECTS OF ILLEGAL DUMPING

Flooding caused by debris/wastes clogging drainage ditches and waterways

Source: Pima County, AZ (Tucson)
EFFECTS OF ILLEGAL DUMPING

Flooding caused by debris/wastes clogging drainage ditches and waterways

Source: http://ecycler.com/2010/04/15/texas-bottle-bill

EFFECTS OF ILLEGAL DUMPING

Fires

Bernalillo County Fire Fire - Source: KOB, Albuquerque
EFFECTS OF ILLEGAL DUMPING

Fires

Bernalillo County Tire Fire – Source: NMED

Fires

Tire fire near Socorro, NM – Source: NMED
## EFFECTS OF ILLEGAL DUMPING

### Fires

Tire fire smoke contains:
- Carbon Monoxide
- Zinc
- Xylene
- Nitrogen oxides
- Polyaromatic hydrocarbons (PAHs)
- Benzene
- Toluene
- Styrene
- Metals and dioxins
- Anthracene

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*Source: Environmental Protection Agency*
EFFECTS OF ILLEGAL DUMPING

Ecosystem

Everything is connected in a Watershed

EFFECTS OF ILLEGAL DUMPING

Ecosystem

Cochiti Lake – Source: http://karlfmoffatt.blogspot.com

EFFECTS OF ILLEGAL DUMPING

Ecosystem

Albuquerque – Source: abqjournal.com
EFFECTS OF ILLEGAL DUMPING

Ecosystem

Agriculture in Dona Ana County - Source: GettyImages

EFFECTS OF ILLEGAL DUMPING

Ecosystem

Fishing in the Rio Grande Gorge - Source: http://karlmooffatt.blogspot.com
EFFECTS OF ILLEGAL DUMPING

Ecosystem

Source: NMED

EFFECTS OF ILLEGAL DUMPING

Ecosystem

Source: NOAA
EFFECTS OF ILLEGAL DUMPING

Ecosystem

Source: Sierra Club

EFFECTS OF ILLEGAL DUMPING

Ecosystem

Source: ScienceClarified.com
EFFECTS OF ILLEGAL DUMPING

Financial Cost

Cleaning up trash costs

$\text{\color{green}{$\text{\$\$\$\$\$\$\$\$\$\$\$\$\$\$}}$}

EFFECTS OF ILLEGAL DUMPING

Financial burden on taxpayers and utility ratepayers

Dona Ana County cost of illegal dumping cleanup

\[\text{approximately $600,000/\text{year}}\]
EFFECTS OF ILLEGAL DUMPING

Loss of tax revenue
Property Devaluation
Loss of tourism revenue

WHAT MOTIVATES ILLEGAL DUMPING?
WHAT MOTIVATES ILLEGAL DUMPING?

- **Avoiding costs**
  - Individuals wanting to save money on disposal of furniture, tires, or other items
  - Construction, demolition, remodeling, roofing, or landscaping contractors wanting to save money on tipping fees
- **Lack of enforcement**
  - Lack of judicial understanding
  - Low fines

WHAT MOTIVATES ILLEGAL DUMPING?

- **Inconvenience**
  - Some landfills, transfer stations, and recycling centers are too far away or operate at inconvenient hours.
- **Unawareness**
  - Some may be unaware or misinformed of solid waste facilities in their community
WHAT MOTIVATES ILLEGAL DUMPING?

- Habit
  - Illegal dumping may be the traditional means of waste disposal for some families and individuals
- Heritage
  - Some “have the right to dump on their own property” as they have been doing for years.
    - Problem! Waste is much more harmful now!

WHERE DOES ILLEGAL DUMPING OCCUR?
WHERE DOES ILLEGAL DUMPING OCCUR?

- Unsecured properties
  - Undeveloped lots
  - Abandoned structures
  - Unused industrial facilities
  - Remote spaces
- Poorly lit access roads
- Property along railways, highways and alleys
- Borders of Cities and Counties

WHERE DOES ILLEGAL DUMPING OCCUR?

- Construction sites or public areas with waste containers
- Forest preserves and wooded sites
- Farms

Source: NMED
WHERE DOES ILLEGAL DUMPING OCCUR?

- Charity drop box locations

Source: NMED

WHERE DOES ILLEGAL DUMPING OCCUR?

- Shooting areas

Source: NMED
Illegal Dumping Prevention

Solutions

Education

Enforcement

Illegal Dumping Prevention

Cleanup

Convenient Disposal
EDUCATION

- Build consensus among local decision-makers and judges about the importance and value of illegal dumping prevention.
- Hiring environmental enforcement officers
- Receiving grant funds
- Giving presentations at local schools or civic organizations
- Conducting a community cleanup day
- Successfully prosecuting a case
Young People/Children

- Probably the most significant audience for education
- Builds family support for programs
- Open to new ideas
- Often eager to act constructively on new ideas

Activity Books

Source: SCSWA
Activity Books

C

Claro is a coyote who lives in the desert, and is concerned for himself and his friends. Can you guess why he is concerned?

Just look at all the trash Clar and his friends - Sara Skunks, Johnny Harebrained, and Shy Long-tailed Raccoon - have been left behind.

Source: SCWA

Education

Activity Books

H

Hi! Claro and his friends have their meal in the Trash and Station Truck area.

Source: SCWA
Cleanup Events

Source: Keep Luna County Beautiful

Social Media

Source: Instagram
Handout Materials

Illegal Dumping Prevention and Cleanup Manual

[PDF Link]

EDUCATION NEVER STOPS!!

Continuous education needs to happen for:
- New residents
- New community leaders
- Successive classes of school children
- Those already familiar with it, to reinforce the message
CONVENIENT DISPOSAL
Operate at convenient hours
- Most are open Wed-Sun., 8-5.
- Some can be open less, but make sure to focus operating times on citizen demand.
- No matter when a facility is open, complaints are going to arise from someone.

Turning people away is discouraged – could lead to illegal dumping!!!
- HOWEVER: make sure that the facility’s operations plan is not being violated by accepting unacceptable waste.
- Be prepared to advise customers on how to properly dispose of waste that is unacceptable at a facility, or have a plan for how to properly accept commonly unacceptable waste, for example....
- Infectious waste can be contained in an empty bleach/detergent bottle, duct taped and labeled, and legally disposed of in a landfill.

Advertise your transfer station as much as possible!!
- Government website
- Community Events/gathering points
- Community bulletins
- Newspaper
- Radio Ads
- Billing Inserts
- Fliers
- Brochures

Etc.........................
“…….building and sustaining vibrant communities through litter prevention, recycling and waste reduction, beautification and greening.”

- National Credibility
- Networking Opportunities
- Training/Educational Materials
- Grants
- Exclusive benefits to certified affiliates
  - National affiliate awards
  - Organizational and professional training
Remove illegally dumped items as soon as they appear so that they don’t act as magnets for more dumping!!

Broken Window Theory:
Dumping attracts more dumping!!!
Deterrents should be applied after dumping to prevent further dumping.
Finding illegal dumping

- Informal conversations with community members
- Online maps (aerial view)
- Building a map of dump sites
- Monitor common dumping areas previously discussed
- Develop reporting system...........

Surveillance

Illegal Dumping Caught On Camera

Source: www.clickondetroit.com
Surveillance

Backup-Box Cameras ~$600/unit

Game Cameras ~$70 - $300

Dummy Cameras ~$15 - $20

Hide cameras high in the trees or on the ground
No Dumping Signs

- Reflective
- DOT standard = 48’’x48’’
- NO DUMPING
- SITE MAY BE MONITORED
- Fine amount
- Call (insert phone number) to report illegal dumping
- Ordinance Citation
- Bilingual
Investigation

Tribal Police or Environmental/Conservation Officers discover dumping

- If dumping was committed by Tribal member, the matter is investigated by Tribal Police or Environmental officers and sent to Tribal Council and Chief Judge
- If dumping was committed by NON-Tribal member, the matter can be turned over to County or State enforcement officers.
- Per the State Solid Waste Act, Solid Waste Bureau enforcement officers may only request voluntary cleanup and issue a Notice of Violation (NOV)

Investigation

Document Complainant’s Information
WHO, WHAT, WHEN, WHERE, WHY & HOW?

- Who did it?
- What happened?
- When did it happen?
- Where did it happen?
- Why did it happen?
- How did it happen?
- How many times did it (or how often does it) happen?
- How do you know?
Investigation

- Exactly what did you see?
- What material or substance was involved?
- How much?
- Who owns the property?
- Who resides at the property?
- Who told you about this?
- What other agencies have you notified?
- Are the persons involved dangerous (guns/drugs/mean dogs)?
- May I contact you for more information later?

Evidence Collection

- Use Proper PPE for collection
- Use Proper Containers (Glass, Metal, Plastic)
- When sampling Coordinate with Laboratory regarding Protocol, Holding Times, Preservatives, Temperatures
- Label samples correctly
  - Date, Time, Sampler's/Investigator's Initials, Sample Number, Case Number, Sample Location and Description
- Do not photograph or video tape investigators or staff collecting samples or evidence
Evidence Collection

- Anything and everything can be used in an evidentiary matter, as long as its legally obtained.
- All elements of proof should be corroborated. Every element of proof should include two separate items of evidence to substantiate it.

Voluntary Cleanup

- Often the preferred method of enforcement
- Can prevent the fining of community members
- Avoids cleanup costs being placed on the Tribe
- Allow a defined period of time for violator to cleanup
Fines and Penalties

USUALLY…….

- Most first-offense, non-hazardous waste dumping will result in a misdemeanor.
- Penalties can range from up to $500 for first offense to up to $500 PLUS jail time for second and subsequent offense.
- For improper or illegal disposal of hazardous materials, a fine could reach $5000
- Each day a violation is committed can be considered a separate offense, resulting in a possible $500/per day/per offense fine.

.........BUT IT CAN VARY FROM JURISDICTION TO JURISDICTION
Eligibility

- Municipalities
- Counties
- Tribal Nations, Pueblos, and Tribes
- Land Grant communities
- Solid Waste Authorities
Funding

- Offsetting the cost of scrap tire collection and recycling
- Establishing recycling facilities
- Purchasing equipment for recycling and scrap tire mgmt.
- Performing marketing regarding recycling and scrap tire mgmt.
- Purchasing products produced by a recycling facility
- Providing educational outreach regarding recycling, illegal dumping, and scrap tire mgmt.
- Developing recycling infrastructure
- Abating illegal dumpsites
- Contracting with vendors to promote recycling