

ILLEGAL DUMPING PREVENTION

Tribal
Recycling
Workshop

ABOUT MYSELF

Layne Duesterhaus
Illegal Dumping Prevention Coordinator
NMED – Solid Waste Bureau

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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

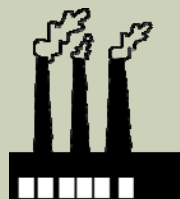
OBJECTIVE

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.



ILLEGAL DUMPING



Source: NMED

ILLEGAL DUMPING

“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

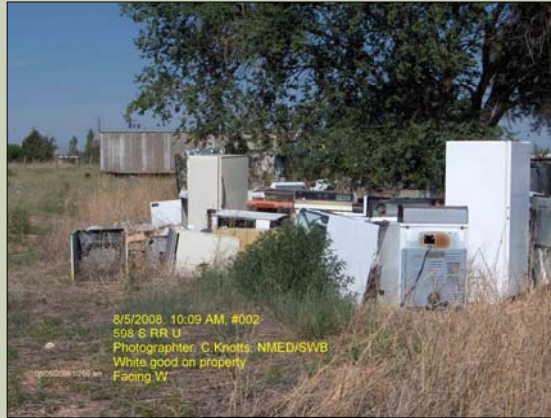
Discarded Furniture



Source: NMED

TYPES OF ILLEGAL DUMPING

White Goods



8/5/2008 10:09 AM #002
508 S RR U
Photographer: C. Knotts: NMED/SWB
White good on property
Facing W

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

TYPES OF ILLEGAL DUMPING

Scrap Tires



Source: NMED

LITTERING



Source: Alamy

LITTERING





EFFECTS OF ILLEGAL DUMPING

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

EFFECTS OF ILLEGAL DUMPING

Habitat/breeding grounds for disease-carrying vectors



Source: NMED



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



EFFECTS OF ILLEGAL DUMPING

Indirect exposure to toxic chemicals/hazardous wastes



Source: NMED

EFFECTS OF ILLEGAL DUMPING

Direct exposure to hazardous objects



Source: NMED

EFFECTS OF ILLEGAL DUMPING

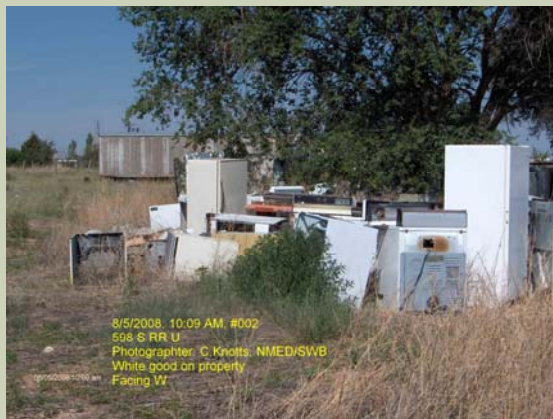
Direct exposure to hazardous objects



C&D Waste - Source: NMED

EFFECTS OF ILLEGAL DUMPING

Direct exposure to hazardous objects



8/5/2008, 10:09 AM, #002
508 S RR U
Photographer: C. Knotts, NMED/SWB
White good on property
Facing W

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



Buffalo Bayou, Houston, TX
Source: <http://ecycler.com/2010/04/15/texas-bottle-bill/>

EFFECTS OF ILLEGAL DUMPING

Fires



Bernalillo County Tire Fire - Source: KOB, Albuquerque

EFFECTS OF ILLEGAL DUMPING

Fires



Bernalillo County Tire Fire – Source: NMED

EFFECTS OF ILLEGAL DUMPING

Fires



Tire fire near Socorro, NM – Source: NMED

EFFECTS OF ILLEGAL DUMPING

Fires

Tire fire smoke contains.....

- Carbon Monoxide
- Benzene
- Zinc
- Toluene
- Xylene
- Styrene
- Nitrogen oxides
- Metals and dioxins
- Polyaromatic hydrocarbons (PAHs)
- Anthracene



Source: Environmental Protection Agency

EFFECTS OF ILLEGAL DUMPING

Fires



Illegal dump fire in Detroit, MI -- Source WXYZ, Detroit

EFFECTS OF ILLEGAL DUMPING

Ecosystem



EFFECTS OF ILLEGAL DUMPING

Ecosystem



EFFECTS OF ILLEGAL DUMPING

Ecosystem



Cochiti Lake - Source: <http://karlffmoffatt.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://karlffmoffatt.blogspot.com>

EFFECTS OF ILLEGAL DUMPING

Ecosystem



Source: Sierra Club

EFFECTS OF ILLEGAL DUMPING

Ecosystem



Source: Scienceclarified.com

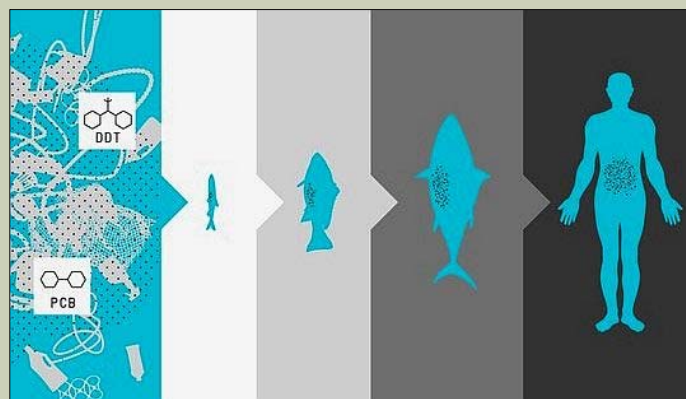
EFFECTS OF ILLEGAL DUMPING

Ecosystem



EFFECTS OF ILLEGAL DUMPING

Ecosystem



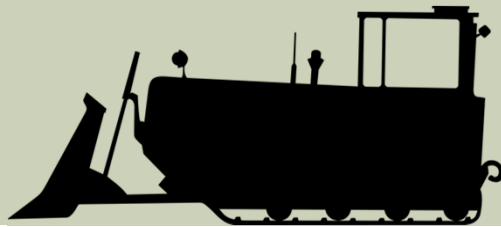
Broken down plastic on a beach – Source: 5Gyers

EFFECTS OF ILLEGAL DUMPING

Financial Cost

Cleaning up trash costs

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EFFECTS OF ILLEGAL DUMPING

Financial burden on taxpayers and utility ratepayers



Dona Ana County cost of illegal dumping cleanup



approximately \$600,000/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**



Source: NMED

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



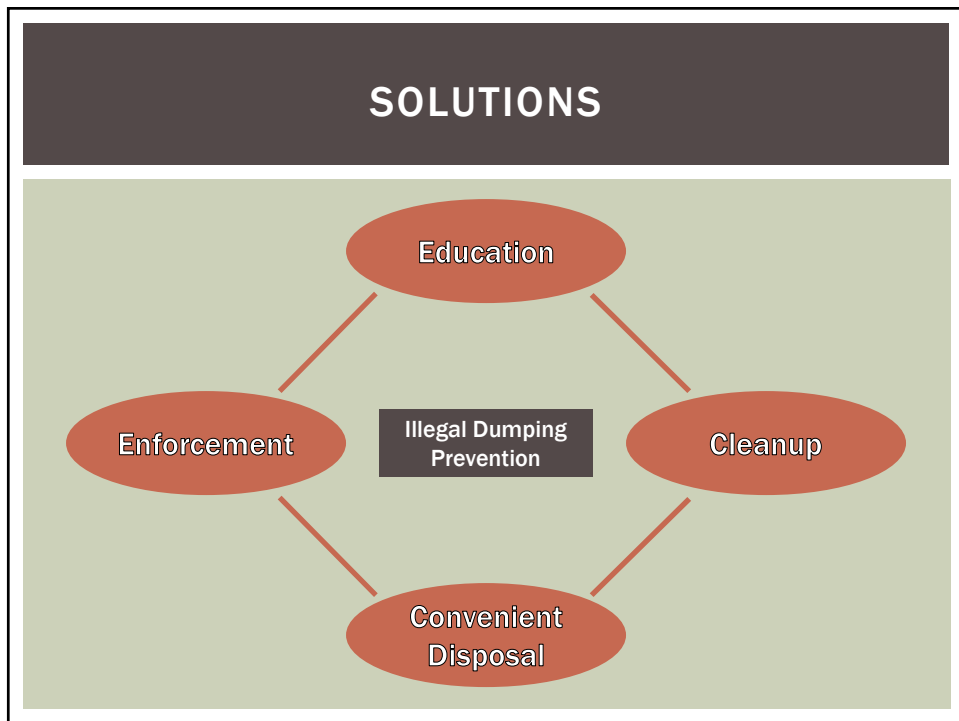
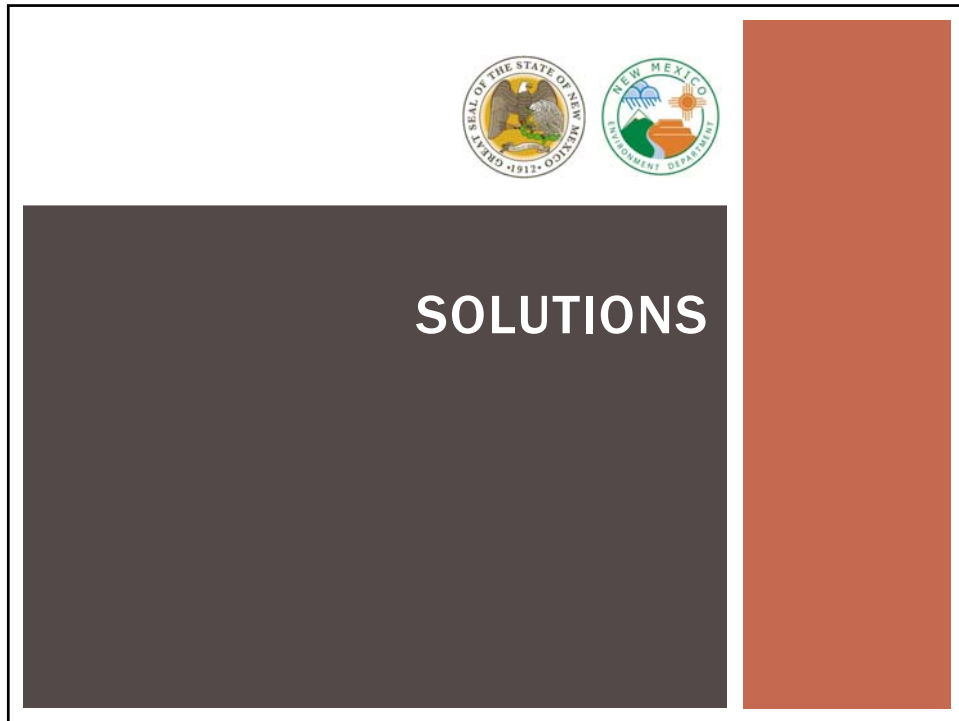
Source: NMED

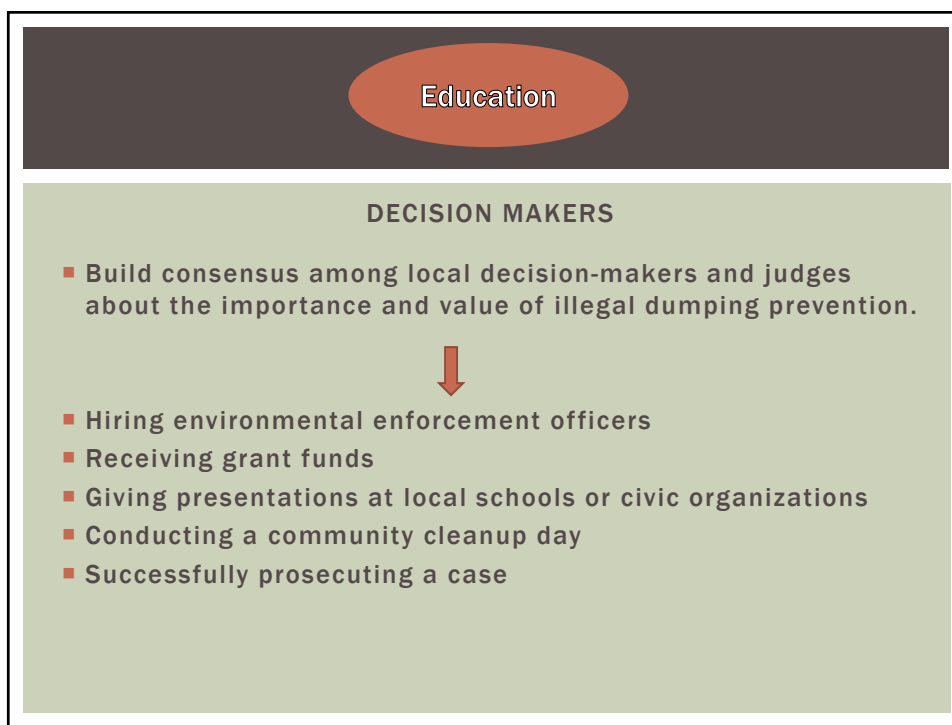
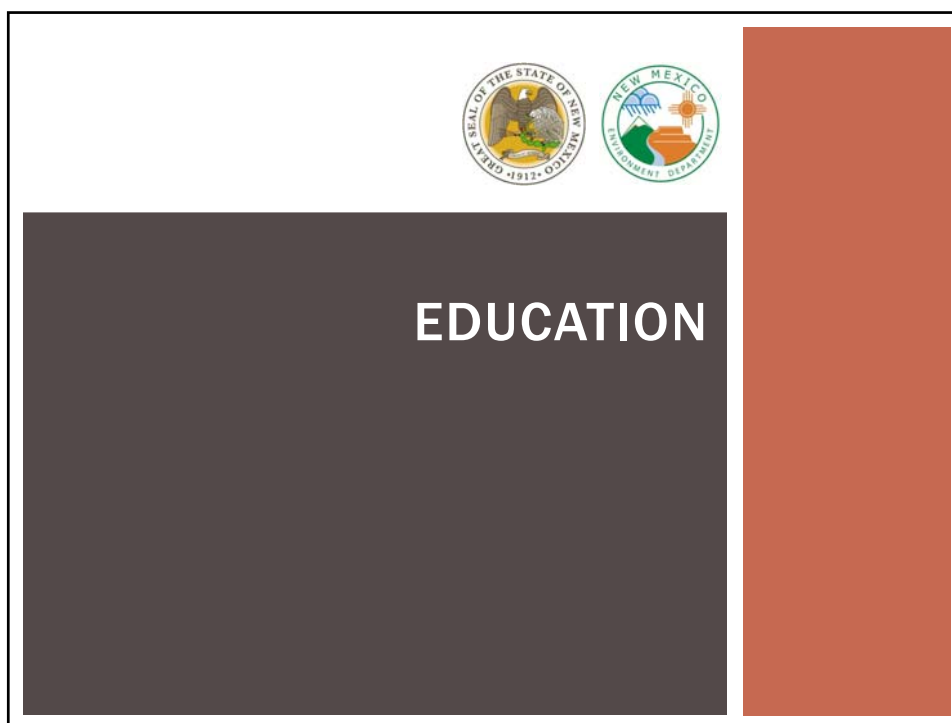
WHERE DOES ILLEGAL DUMPING OCCUR?

- Shooting areas



Source: NMED





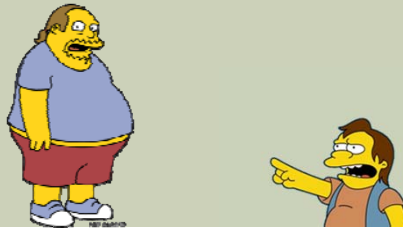
Education

Young People/Children

- Probably the most significant audience for education

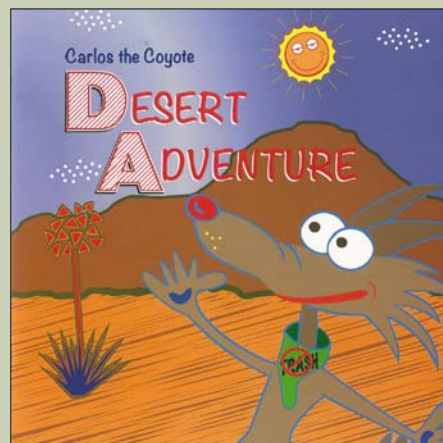


- Builds family support for programs
- Open to new ideas
- Often eager to act constructively on new ideas



Education

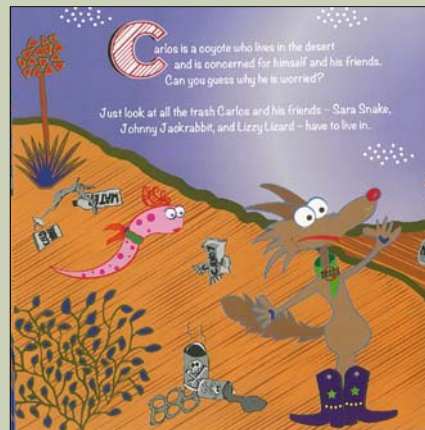
Activity Books



Source: SCSWA

Education

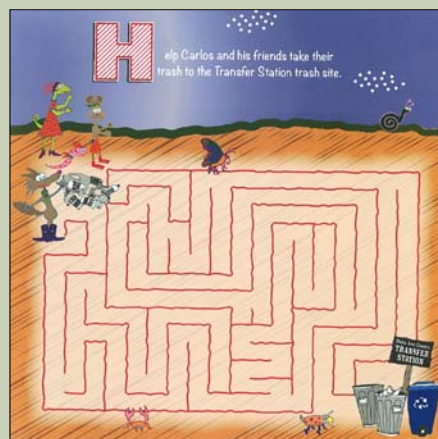
Activity Books



Source: SCSWA

Education

Activity Books



Source: SCSWA

Education

Mascots

CARLOS COYOTE



Source: SCSWA

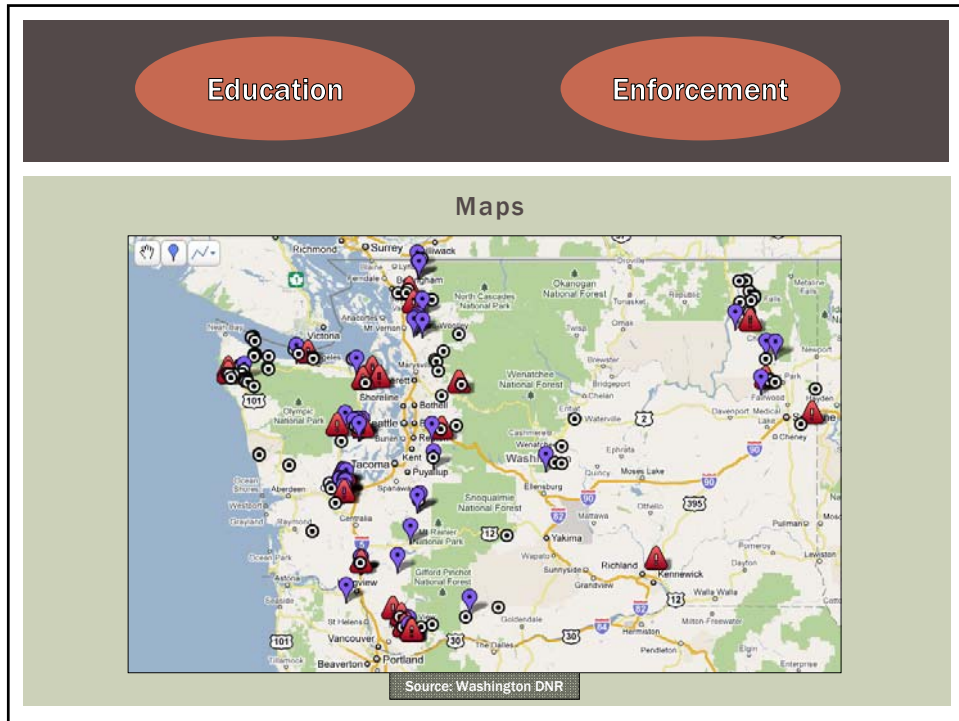
Education

Enforcement

Community Events




Source: SCSWA



Education
Cleanup

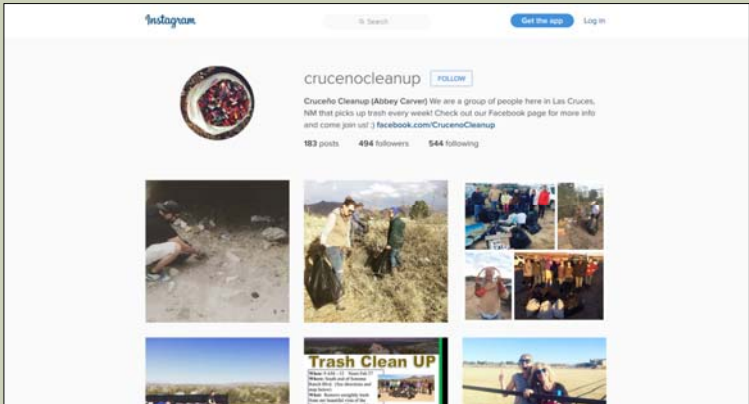
Cleanup Events



Source: Keep Luna County Beautiful

Education
Cleanup
Convenient Disposal
Enforcement

Social Media



Source: Instagram

Education
Enforcement

Handout Materials

HOW TO ESTABLISH AND OPERATE AN
ILLEGAL DUMPING
 PREVENTION & CLEAN UP
 PROGRAM



New Mexico Environment Department
 Solid Waste Bureau
 Harold Fennell Building
 1100 N. Francis Drive
 P.O. Box 26110
 Santa Fe, NM 87502-2611

MAY 2004

Illegal Dumping Prevention and Cleanup Manual
➔

<https://www.env.nm.gov/swb/documents/NMIllegalDumpingmanual05-2004.pdf>

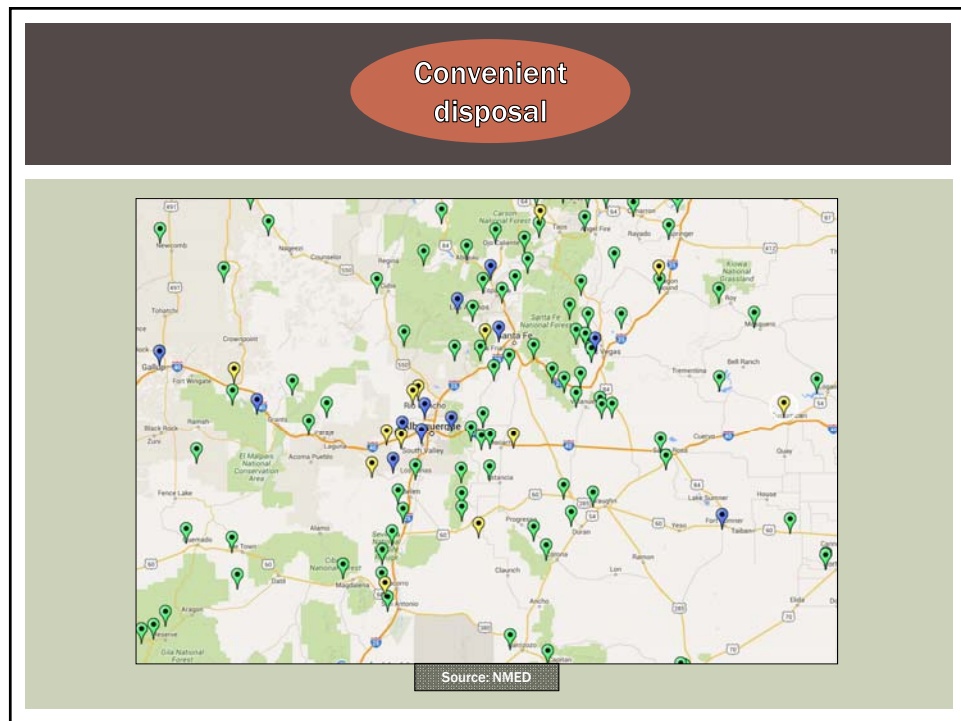
Education

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



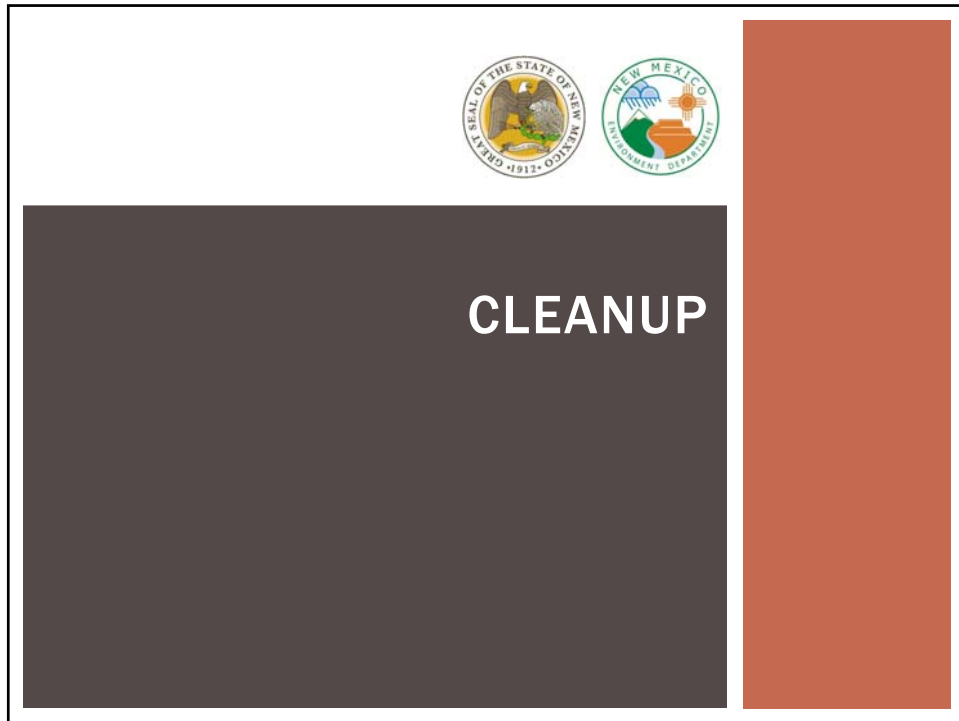
- **Operate at convenient hours**
 - Most are open Wed-Sun., 8-5.
 - Some can be open less, but make sure to focus operating times on citizen demand.
 - No matter when a facility is open, complaints are going to arise from someone. ☹
- **Turning people away is discouraged – could lead to illegal dumping!!!**
 - **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.

Convenient disposal

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

Etc.....





Cleanup

Keep America Beautiful

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

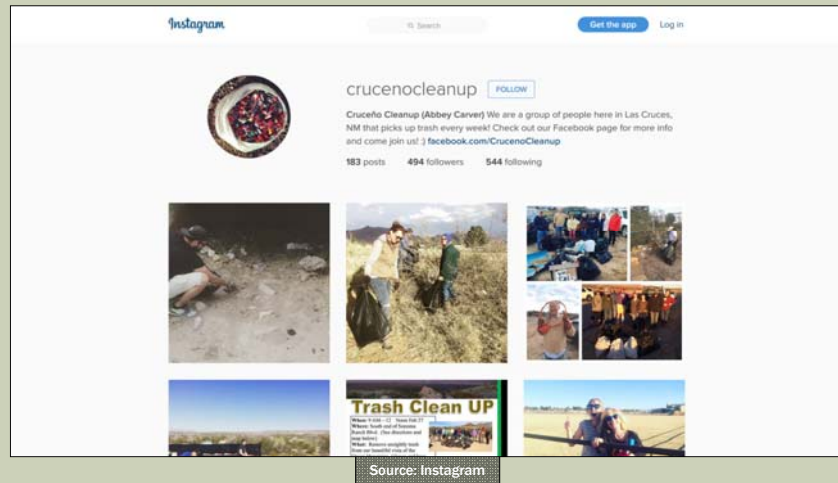


Cleanup

Keep America Beautiful

- National Credibility
- Networking Opportunities
- Training/Educational Materials
- Grants
- Exclusive benefits to certified affiliates
 - National affiliate awards
 - Organizational and professional training

Cleanup



Cleanup

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!!!



Cleanup

Deterrents

- Trees
- Boulders
- Berms
- Parks and Parklets
- Playgrounds
- Adopt-a-_____



Deterrents should be applied after dumping to prevent further dumping.



ENFORCEMENT

Enforcement

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.....

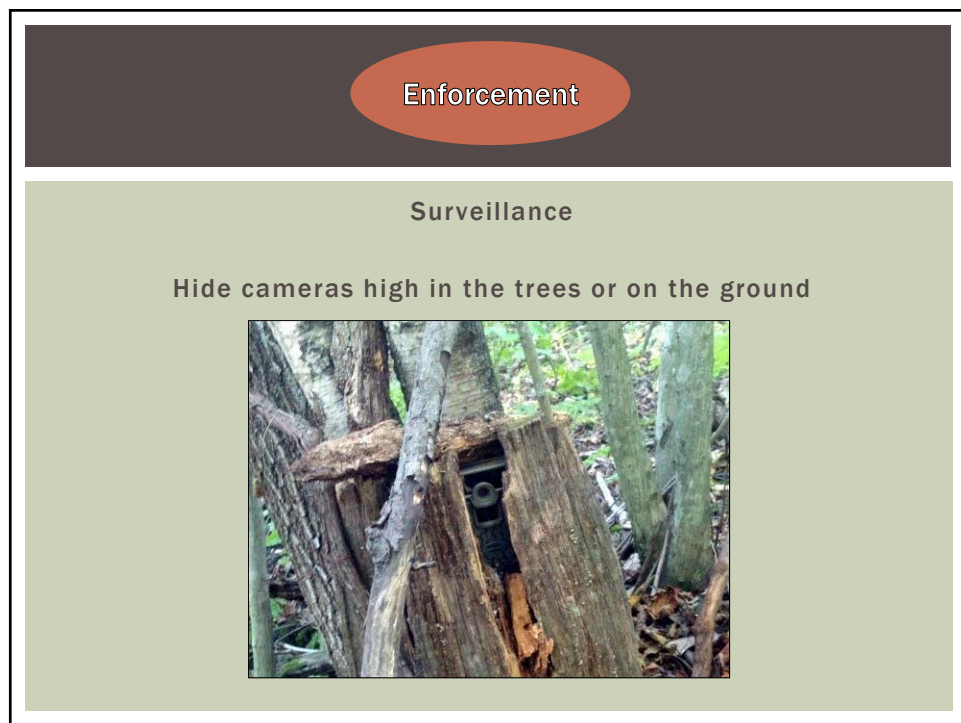
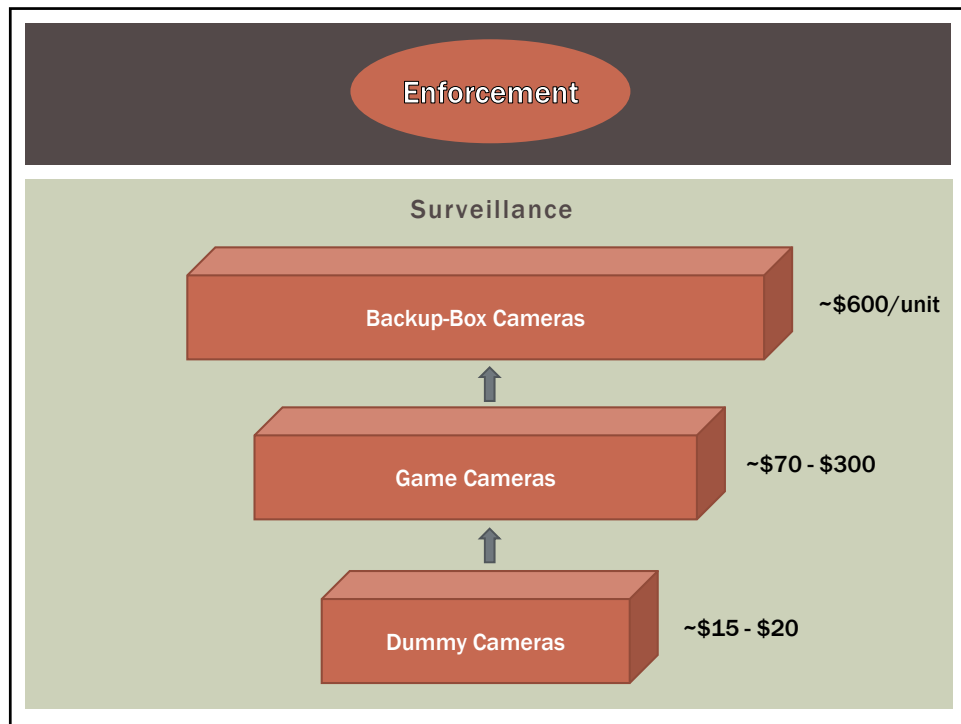


Enforcement

Surveillance



Source: www.clickondetroit.com



Enforcement

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

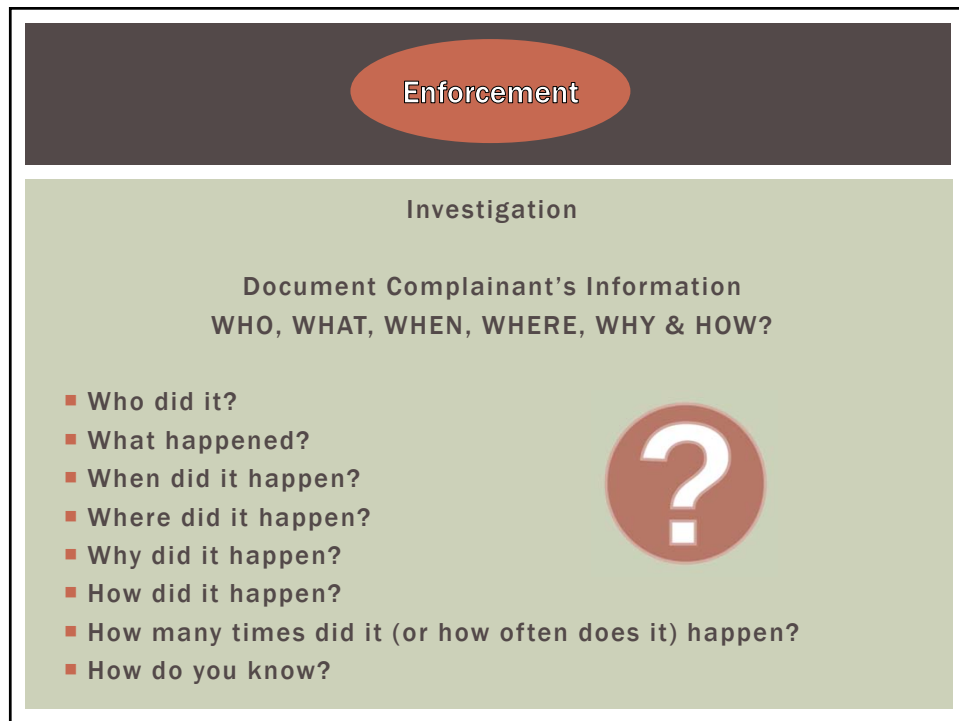
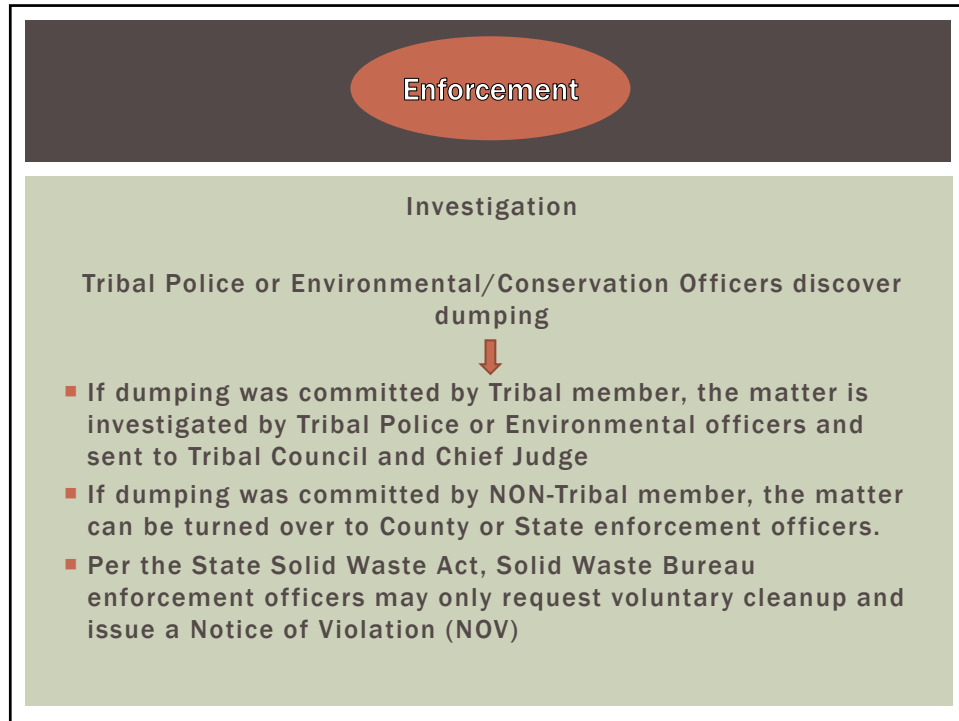
Enforcement

No Dumping Signs



VS





Enforcement

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?

Enforcement

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



Enforcement

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.



Enforcement

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



Enforcement

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



RECYCLING AND ILLEGAL DUMPING GRANTS

Education
Cleanup
Convenient Disposal
Enforcement



New Mexico Environment Department
PROTECTING OUR ENVIRONMENT, PRESERVING THE ENCHANTMENT
Solid Waste Bureau

Recycling and Illegal Dumping Act Grants

PURPOSE
 To protect health and welfare of current and future residents of New Mexico by promoting environmentally sound methods for reuse and recycling.

FUNDING
 Up to \$1,000,000 of funding available annually for:

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

At least two-thirds of budgeted grant money in each fiscal year is allocated to tire abatement and recycling programs, and one-third is allocated to abatement of illegal dumping and recycling of other solid wastes.

ELIGIBILITY
 Grants are only available for:

- Municipalities
- Counties
- Tribal nations, pueblos, and tribes
- Land grant communities
- Cooperative associations (as defined in the Recycling and Illegal Dumping Act)
- Solid waste authorities

Ineligible entities are encouraged to partner with eligible entities. The applicant must be able to complete the project within one year. Matching funds and in-kind contributions are not required but are encouraged.

APPLICATION
 Applications are accepted annually from January to April. Grants are awarded in May. The exact opening and closing dates are posted in e-mail announcements and on the Solid Waste Bureau website. Instructions and applications may be located on the Solid Waste Bureau website.

CONTACT
 Neal Denton, Recycling Coordinator, (505) 827-2453, neal.denton@state.nm.us
 New Mexico Environment Department, 1150 N. Franklin Drive, Santa Fe, NM 87505
 800-219-6157 www.nmstate.state.nm.us

Education
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Eligibility



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



Education
Cleanup
Convenient Disposal
Enforcement

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

CONCLUSION