Ute Mountain Ute Tribe
Solid Waste Management Plan

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INTRODUCTION

The Ute Mountain Ute Tribe has made great improvements in managing the disposal of tribal solid waste over the past seven years, beginning with a Solid Waste Engineering Study that was conducted in 1995. Information from this study initiated awareness of the need for management of solid waste on the reservation, and steps were taken to improve the traditional disposal methods. The Tribal community of Towaoc, Colorado currently has a system of residential trash collection, and a transfer station for drop-off recycling and public self-hauled waste. This system has greatly reduced the amount of trash in the community. Still needed is greater community awareness and education in the areas of reducing solid waste hazards through source reduction and recycling and hazards of improper and indiscriminate disposing of solid wastes, including a community system of trash receptacles in public places.

In the community of White Mesa, Utah, there is currently a residential curbside trash collection system. There are still two open dump sites that continue to be used by residents for indiscriminate dumping and are cause for concern of associated health and environmental hazards. At this time there is no recycling program in place in White Mesa.

This document is intended to provide a comprehensive solid waste plan that will address the problem of solid waste accumulation and provide recommendations to improve proper storage, collection, transportation, disposal, and control of solid waste from the Ute Mountain Ute Tribe. The project will include three phases; first, a community awareness and education program, second, establishing alternative collection and disposal methods (including establishing or expanding recycling opportunities) as needed for both communities, and third, cleaning up and closing the existing dump sites in the White Mesa community

Reservation Description

Geography

With the exception of White Mesa, tribal lands include 584,618 acres stretching across the southwestern corner of Colorado. Of this amount, 533,008 acres are trust lands, and the remainder are fee lands, comprised predominantly of ranches and range land. The land may be characterized as high plateau and mountainous, with elevations ranging between 6,000 and 9,300 feet. The property borders the Mesa Verde National Park to the northeast, the southern Ute lands to the east, Navajo lands to the south and west, and a mix of U.S. Bureau of Land Management (BLM) public lands and private lands, including the City of Cortez, to the north. The area lies predominately within the boundaries of Montezuma County, Colorado, with a portion of the southeast corner crossing into the

boundary of La Plata County, Colorado, and a section dropping south of the Colorado border into San Juan County, New Mexico.

The White Mesa community is separated from the larger property holding and consists of 4,300 acres of trust land and 1,700 acres of fee lands. The community of White Mesa is 12 miles south of Blanding, Utah on U.S. highway 191. White Mesa lies in San Juan County, Utah, and the surrounding property is a mixture of BLM land and state ownership.

SOLID WASTE MANAGEMENT ON THE RESERVATION: Past and Present Conditions

Disposal practices of the Tribe led to the establishment of many open dump sites on the Reservation. Many of these sites have been closed and cleaned up, with alternatives to open dumping made available. The solid waste problem is much improved in Towaoc, but general roadside and residential littering continues to be a problem. A recycling program has been put in place, with plans for including plastics and cardboard. White Mesa residents continue their open dumping practices at two locations, both within one-half mile from the center of town. There are many old cars and appliances which need to be removed from this site. There is residential trash pick-up available which has greatly reduced general littering in White Mesa. Recycling possibilities are being investigated for White Mesa.

The Tribal council and tribal members have recognized the need to clean up and permanently close the sites at White Mesa, and to continue clean-up and final closure efforts in Towaoc. An intensive public awareness and environmental education campaign needs to be implemented to assist in the efforts to manage solid waste disposal on the Ute Mountain Reservation.

HEALTH AND ENVIRONMENTAL HAZARDS

Health hazards exist from an increased insect and rodent population. Dogs rummaging through the disposal site are another possible disease vector. Many physical hazards are present due to cutting or piercing objects, poisonous gases, and fire explosions. (See Table 1) Contamination of the air occurs when solid wastes are openly burned at the disposal site. The practice of burning the belongings of tribal members who have died is a cultural issue that is difficult to address and little can be done other than identify a specific area for this procedure. Burning can be particularly dangerous when the waste burned includes hazardous materials and plastics.

HEALTH PROBLEMS ASSOCIATED WITH OPEN DUMPS AND INDISCIRMINATE DUMPING

BIOLOGICAL FACTORS	**AIR CONTAMINATES**	**PHYSICAL HAZARDS**	**WATER POLLUTERS**
Flies/maggots -Dysentery -Salmonellosis -Hepatitis Mosquitoes -West Nile virus Rats (rodents) -Leptospirosis -Plague -Hantavirus Ticks -Rocky Mountain -Spotted Fever Dead Animals -Anthrax -Tularemia Living Animals -Rabies -distemper -hoof and mouth disease -chronic wasting disease	Burning pollutes the air with particulate matter and can also release toxic chemicals. (dioxin from plastics) Freon Old Batteries (lead acid)	Cutting or piercing objects (glass, nails, hypodermic needles). Poisonous vapors Fire and explosions	Contamination of ground and surface water -household chemicals, bleach, pesticides, herbicides

EXISTING DISPOSAL SITE.

The existing disposal site for Towaoc is located in an area one mile south of town, in an arroyo . With spring run-off or summer flash-flooding there is a potential for contamination of Navajo Wash. (see maps) Contamination of the air occurs when solid wastes are openly burned at the disposal site.

One open dump site near the White Mesa community, approximately one mile south of town, is at the edge of a steep mesa and pollutants could rapidly move towards Cottonwood Creek. A second common dumping area is one half mile east of town, along the edge of a plateau, and contaminates from this site are likely to contaminate the Recapture Creek. (see map) Any burning at these sites would contribute to air pollution.

REGIONAL SOLID WASTE RESOURCES

Montezuma County currently owns and operates a landfill south of Cortez, approximately 17 miles north of Towaoc. Montezuma County has recently upgraded and expanded the Montezuma landfill. There is currently a 9% fill of phase one footprint, and the landfill facility life is anticipated to be 200-300 years. Baling began in September, 1996. Current fees are $26.50/ton for municipal waste, with s $7.00/ minimum for any loads.

The San Juan County landfill is one mile south of the Ute Mountain Ute community of White Mesa, just off Highway 191. The landfill accepts all household waste. They also take tires and used oil in tanks, both of which are hauled for recycling. Fees are $22.00/ton, $5.00/pickup load.

RESOURCE CONSERVATION AND RECOVERY ACT

The Resource Conservation and Recovery Act (RCRA), 42 U.S.C. 6901 et seq creates a comprehensive federal regulatory program for the management of hazardous and solid waste.
Part 257 and Part 258 of Title 40 Code of Federal Regulations provides guidelines for the disposal of solid waste and construction and operation of solid waste facilities. Implementation and enforcement of these regulations was delegated to the States and Tribes. The U. S. Environmental Protection Agency does not currently have permitting or enforcement authority over solid waste practices on Indian Lands. The U. S. Environmental Protection Agency encourages Tribes to take responsibility for implementing & regulating solid waste programs on Indian Lands. Title 40 Code of Federal Regulations Part 258 requires that owners/operators ensure their own compliance with these federal regulations.The Resource Conservation and Recovery Act, Section 7002(a), also authorizes citizen suits. The citizen suit provides for “any person” to bring a civil suit to enforce the provisions of RCRA. “Person” is defined to include municipalities, which includes in its definition, “an Indian tribe or authorized tribal organization.” A citizen filing a suit against an alleged violation on a Reservation, Rancheria, or Colony may be a member of the Tribe or a citizen from the surrounding community. The court may assess penalities.

GOAL AND SUMMARY OF PLAN

The goal of the project is to successfully manage the solid waste generated at the Ute Mountain Ute Tribe through the continuation and expansion of a service for solid waste storage, collection, transportation, and disposal system, including further developing opportunities for source reduction and recycling. It is not feasible to establish a disposal facility (sanitary landfill) on the reservation because of the small amount of waste generated, compliance with regulations, and the extreme cost of operating an approved landfill. Reaching this goal will involve an on-going, multi-phase program the Ute Mountain Ute Reservation.

Phase I will be to develop a community awareness of the health hazards resulting from improper disposal of solid waste and provide education on viable alternatives and regulatory requirements, emphasizing reduced packaging and recycling, as well as buying alternative chemicals that are less toxic.

It is essential to develop an educational program for all tribal members that includes the following:

1)reasons for change-health hazards associated with household and hazardous waste;
2)reasonable alternatives-waste reduction, recycling, and sanitary methods for waste disposal.

Phase II will include establishing an efficient, user-friendly recycling system for both communities, including the Ute Mountain Casino and attached hotel, and continue to evolve a program of residential collection that promotes cooperation from all tribal members and all entities located on the reservation.

Residential recycling bins for aluminum, glass, paper, and plastics need to be made available for all residents to use in their homes and put out for curbside pickup. This step will involve planning, management, and cooperation by the Environmental Department and Housing Department. Also in this phase will be the development of a system whereby corrugated cardboard containers are broken down and made into bales for recycling. This will require cooperation from the Ute Mountain Ute Casino and Hotel, and the Tribal offices, and provide for more possibilities for employment. Recycling possibilities in the White Mesa community are being investigated and developed.

Costs to be considered for this phase include recycling bins, four per household, at approximately $9.00 per bin. The Environmental Department has a cardboard baler available for use. Costs involved in making the baler operational involve obtaining three-phase power at the current transfer station near the Towaoc community.

The educational phase will be an integral component and an on-going process in the success of recycling on the Reservation.

Phase III is the clean-up and closure of the existing open dump sites in the White Mesa, Utah community of the Ute Mountain Tribe. Two options to be considered in this phase are as follows:

Option I: Close on-site, with the following considerations.

1)good final cover
2)fencing
3)signs posted
4)regulations for enforcement in place
5)ground water monitoring well down gradient

Option II: Move solid waste to another site, with the following considerations.

1)determine hazards(i.e., freon, abestos, chemicals)
2)cost to dig up
3)cost to transport
4)cost to dispose at San Juan County Landfill
5)cost to remediate (i.e., gross cover)

A 1995 Weston Engineering study conducted for the tribe estimated the cost for Option II to be approximately$314,566.00, a more current estimate puts the cost at roughly $425,000.00. Further delay in acting upon this site will undoubtedly result in continued cost increase.

Grant money is being sought from the U.S. Environmental Protection Agency's Tribal Open Dump Cleanup Project for the clean up and closure project. In addition, the establishment of a transfer and recycling station in White Mesa will be planned, with funds being pursued from the EPA and other Federal programs. Again, education will be a key component in the success of this phase.

These three phases will often be progressing simultaneously.

Continuation of Solid Waste Management Plan Development

This SWMP will be reviewed on an annual basis, with modifications and additions being implemented as new technologies and resources become available.

All Estimated Costs (Continued)

COSTS PER HOUSEHOLD

OPTIONS	1st year monthly costs/ household	1st year costs/ household	*2nd year costs/ household
Capital Costs			
1-Transfer Station	$63.13	$757.58	
1- 20 yd. mobile container	$112.37	$1,348.48	
Operating Costs*			
1- 20 yd. mobile container**	$30.73	$368.73	$379.79
Total	$206.23	$2,474.79	
2- Private Solid Waste Hauler	Not Available	Not Available	Not Available
3-Tribal Transfer	$30.33	$364.00	$374.38
Administration Share	$90.19	$1,092.00	$1,124.76
4-Small Quantity Landfill	$874.47	$10,493.64	$10,808.45
4-Performance Standard Landfill	$1,458.56	$17,502.76	$18,027.84

*Second year costs include an approximated 3% increase in landfill disposal costs but not an increase in labor or fuel costs.

**Includes 30 homes and one Administration Complex

All Estimated Costs (Continued)

COSTS FOR ADMINISTRATION COMPLEX

OPTIONS	1st year monthly costs	1st year Annual costs	*2nd year Annual costs
Capital Costs			
1-Transfer Station	$189.39	$2,272.72	N/A
1- 20 yd. mobile container	$337.12	$4,045.45	N/A
Total	$526.51	$6,318.17	
Operating Costs (Eureka)			
1- 20 yd. mobile container	$92.18	$1,106.18	$1,139.37
Total	$618.69	$7,424.35	N/A
Operating Costs (Austin)			
1- 20 yd. mobile container	$44.91	$538.90	$550.67
Total	$571.42	$6,857.07	N/A
2- Private Solid Waste Hauler	Not Available	Not Available	Not Available
3-Tribal Transfer	$91.00	$1,092.00	$1,124.76
4-Small Quantity Landfill	$2,623.41	$31,480.92	$32,425.35
4-Performance Standard Landfill	$4,375.68	$52,508.28	$54,083.53

CARS AND APPLIANCES	COST FOR REMOVAL
THE ATLAS TOWING SERVICE	$585/load (Appx .10 automobiles)
Total estimated costs:	$1,755.00

Table 3 - ESTIMATES

ESTIMATES*	COST FOR CLEANUP
1) Site One (Main Site)	$21,240.00
2) Site Two	$2,984.00
3) Site Three	$1,738.00
4) Site Four	$1,738.00
Totals	$47,700

Table 4 - TOTAL CLEANUP COSTS

TOTAL CLEANUP	COST
Dump Trucks w/Tribal Employees	$47,700
Cars & Appliances	$1,755
TOTAL	$49,455

FUNDING

Funding sources for solid waste alternatives and site clean-ups are limited. The following are principal sources.

U. S. Environmental Protection Agency

General Assistance Grants: Annual solicitation process. Limited to solid waste planning. Competitive.

Jobs through Recycling Grant: Annual solicitation process. Can be used to implement a recycling program that provides an added value to recyclable materials. Competitive.

Experimental Projects Grants: Must be innovative and test new technology.

Environmental Justice Grants: Annual solicitation process. Competitive.

Bureau of Indian Affairs

Very limited resources. May be able to provide some assistance with obtaining equipment. Has some funds for economic development.

Indian Health Service

Very limited resources. Tribe needs to work with IHS in defining project ranking. IHS traditionally gives water and sewage a higher priority, however this source should not be overlooked.

Department of Housing and Urban Development

The Community Development Block Grant can be used for construction of solid waste facilities, equipment used at solid waste site, and clean-up. Cannot be used to buy rolling stock used off-site such as waste collection vehicles. Annual solicitation process. Competitive.

Department of Energy

Indian Energy Program Grant. Annual solicitation. Competitive. Projects need to demonstrate energy conservation/energy development capability.

Small Business Administration

Loans for economic development. Small amount of grant money occasionally available for special projects and demonstrated needs.

Council of Energy Resources Tribes

This organization has access to a variety of funding sources and can provide consulting on strategic and economic development planning.

Beyond monies for damages suffered as result of military activity, disestablished military bases may have usable equipment.

RECOMMENDATIONS

PHASE I

For Phase I an educational program for all Tribal members that includes the following is recommended:

1) Health hazards associated with household and hazardous waste,
2) Waste reduction and recycling
3) Sanitary methods for waste disposal.

The U. S. Environmental Protection Agency can provide this at no cost to the Tribe.

PHASE II [insert section 3.4 from solid waste engineering study]

For Phase II, it is recommended that the Tribal Council and Tribal members assess the advantages and disadvantages of each option to find the one that best suits the needs and conditions present on the reservation.

Incentives and Disincentives

- The transfer station would provide a means of disposal for everyone but it is more costly than a Tribal member providing pickup and disposal services.
- Tribal pickup would provide employment for some Tribal members, however since there exists the potential for exposure to hazardous substances the Tribe could incur some liability.
- Construction of a Sanitary Landfill. Landfill construction, operation, and maintenance are economies of scale. The larger the landfill the less it costs per cu. yd. to construct, operate and maintain. A small landfill has the same costs a large landfill has. Even operating costs cannot be computed on a direct size to size ratio. Construction costs for a small landfill are estimated to be approximately $1,000,000. Operation, maintenance, financial assurance, and post closure care requirements add to the costs. This is the most expensive option and it is recommended that this be explored further only if the other options are completely unacceptable.

PHASE III

Options:

- Use dump trucks and hire Tribal members to perform the cleanup. Estimated costs are:

Labor=$7,480.00
Equipment=$10,896.00
Landfill Fees=$9,324
Total estimated costs for cleanup $17,700.00

For Phase III, it is recommended that residents consider hiring Tribal members to perform the cleanup. This could be the least expensive option and would also give temporary employment to some Tribal members. Involving members in the cleanup should provide an incentive to maintain the conditions of the Reservation.

APPENDIX 1

Site (BLM)

This site is located approximately 7 miles north of the Tribal administrative complex and on a ridge .25 miles west of State highway ??. It is a shallow pit about 12 yards wide, 30 yards long, and 1 yard deep. The site and its surrounding area contain an estimated 80 yards of ash, concrete, metals and construction materials. It has not been used recently and appears to have been abandoned. This site is not a Tribal site but is included due to its proximity to the Reservation.

The site is located approximately 3 miles west of the ?? River in the alluvial gravel typical to the western side of the ?? River basin. The site location does not pose a particular potential for leachate contamination. This is due to the paucity of annual precipitation and the high rate of evaporation. However, the soil geology would, under other conditions, lend itself to a risk for leachate contamination to ground-waters.