

...he knew it could be only one thing-- the Fresh Kills Landfill on Staten Island. Brian felt a sting of enlightenment. He looked at all that soaring garbage and knew for the first time what his job was all about. Not engineering or transportation or source reduction. He dealt in human behavior, people's habits and impulses, their uncontrollable needs and innocent wishes, maybe their passions, certainly their excesses and indulgences but their kindness too, their generosity, and the question was how to keep this mass metabolism from overwhelming us.

-- From "Underworld", Don DeLillo¹

Waste management practices in the U.S. have become increasingly sophisticated and environmentally oriented. Sanitary landfills, for example, have replaced open dumps as the primary means of waste disposal. Enforcement and education programs on sound waste prevention and disposal have also expanded with increased knowledge of health and environmental effects of poorly disposed modern-wastestreams.

The improvement in solid waste management (SWM) technology is not distributed among communities equally. Due primarily to low income, poor education, and diseconomies of scale, rural communities generally fall behind urban populations in their waste programs². While rural in character also, Indian reservation communities experience still greater SWM problems generally; cultural, social, legal, and program infrastructural obstacles exist not encountered elsewhere. As a result of these unique circumstances, carrying out SWM as conventionally applied in non-reservation communities does not always work. So SWM problems are compounded on reservations. Technology is behind to begin with, and conventional SWM engineering is not reliable.

1.1 PURPOSE OF STUDY

The intent of this work is to (1) identify obstacles peculiar to Indian Reservations in carrying out sound SWM, (2) examine how these obstacles limit application of conventional SWM engineering, and (3) develop a conceptual framework of tribal SWM.

SWM technology on reservations is severely deficient, and unsound waste disposal is the primary environmental problem that Indian tribes face³. This study is the first systematic analysis and description of SWM problems on Indian Reservations, and so provides information and insight for tribal, governmental, and consulting engineers working on the problem. Because much of the SWM situation is applicable to other environmental management problems on reservations, such as water and air quality, the study should also help persons working in these fields. Additionally, the work is helpful to Native American scholars, tribes, and tribal legal experts by detailing the overall tribal environmental situation.

1.2 SCOPE

The focus of this study is not on the general SWM situation on reservations, but on the unique problems faced by tribal programs in handling the situation. Each of the 545 federally recognized

tribes is a singular entity characterized by a different culture, history, legal origin, and economy, as well as by a wide range of reservation characteristics and demographics. This study is intended as a general commentary on reservation SWM only. Conditions and circumstances described herein are in no way intended to characterize every tribe, or every reservation. However, each tribe faces some combination of the socio-cultural, legal, and program organizational issues examined in the study, and many tribes face them all.

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1.4 CONTENTS

The following chapters are included.

1. Introduction
2. Foundations and Practices of Conventional Solid Waste Management
3. Limitations of Conventional Solid Waste Management on Indian Reservations
4. Culture, Society, and Solid Waste Management
5. Federal Indian Policy and Jurisdictional Considerations in Reservation SWM
6. The Role of Program Organization and Institutions in Tribal SWM
7. A Conceptual Framework for Tribal SWM
8. Conclusions

- ¹ DeLillo, D., *Underworld*, Simon & Schuster, New York, 1997.
- ² Zender, L. and G. Tchobanoglous , "Assessment of illegal dumping of MSW in rural communities: procedure and evaluation" *Proceedings of the Eleventh International Conference on Solid Waste Technology and Management*, Philadelphia, Nov 1995.
- ³ U.S. Senate, *Workshop on Solid Waste Disposal on Indian Lands*, 102nd Congress, 1st session, 102-72, 1992.
- ⁴ *Workshop on assessment of open dumping and solid waste management planning on Indian Lands*, Indian Health Service, Red Lion Inn, Redding, Sacramento IHS Office, Sacramento, Double Tree Highland Resort, Rancho Bernardo, CA, Oct 10-11, 16-17, 22-23, 1996.
- ⁵ *Ecological Assessment Meeting*, sponsored by D-Q Univ. and UC Davis, hosted by Robinson Rancheria, Oct 5, 1996, and *Native American Pollution Prevention Workshop*, Apr 10, 11, D-Q Univ., Davis, CA, 1997.

