

February 2010

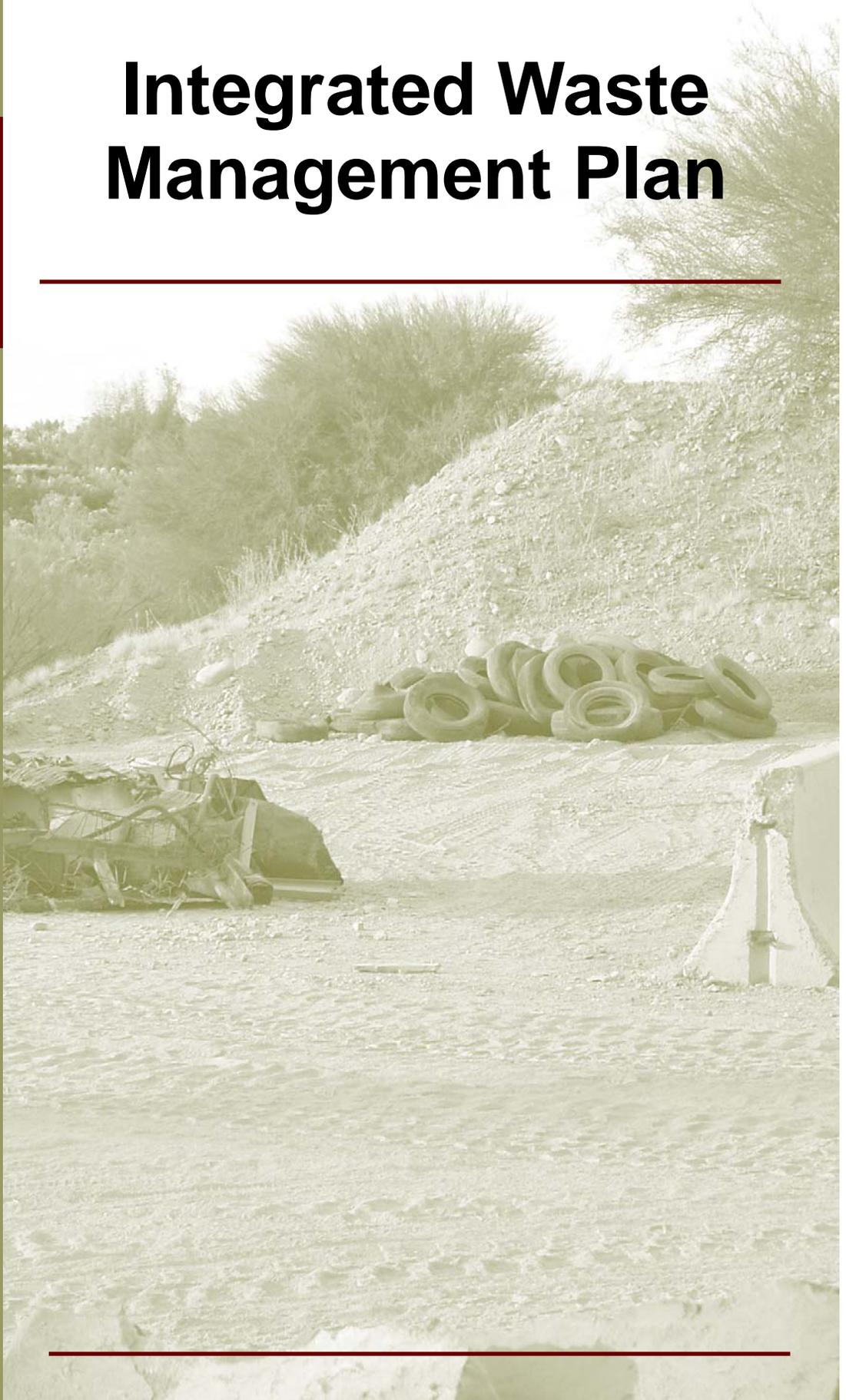


SALT RIVER PIMA-MARICOPA INDIAN COMMUNITY

Environmental Protection  
& Natural Resources

# Integrated Waste Management Plan

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ENVIRONMENTAL PROTECTION &  
NATURAL RESOURCES

# Integrated Waste Management Plan

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February 2010

prepared by:  
Environmental Protection & Natural Resources  
&  
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Cave Creek, Arizona 85331

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NATURAL RESOURCES  
INTEGRATED WASTE MANAGEMENT PLAN

## Approval Page

**Approval of Plan**

The Integrated Waste Management Plan for the Salt River-Pima Maricopa Indian Community is approved and accepted by:

  
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## List of Acronyms

AQP - Air Quality Program  
ARC (Grants) - Assessment, Revolving Loan Fund, and Clean-Up (Grants)  
CARP - Community Action and Revitalization Program  
CDD - Community Development Department  
CEO - Chief Executive Officer  
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act  
CERT - Community Emergency Response Team  
CES - Cultural and Environmental Services  
CFLs - Compact Fluorescent Lights  
CFR - Code of Federal Regulation  
CIP - Capital Improvement Project  
cy - Cubic Yard  
DOT - Department of Transportation  
E&C - Enforcement and Compliance  
ECEC - Early Childhood Education Center  
ECS - Engineering and Construction Services  
EDD - Economic Development Division  
EPA - U.S. Environmental Protection Agency  
EPNR - Environmental Protection and Natural Resources  
EPPD - Environmental Policy and Program Development  
ESA - Environmental Site Assessment  
FY - Fiscal Year  
GAP - General Assistance Program  
GIS - Geographical Information System  
H&UW - Hazardous and Universal Wastes  
HASP - Health and Safety Plans  
Hazmat - Hazardous Material  
HAZWHOPER - Hazardous Waste Operations and Emergency Response  
HHW - Household Hazardous Wastes  
HSWA - Hazardous and Solid Waste Amendments  
HWP - Hazardous Waste Program  
ITCA - InterTribal Council of Arizona, Inc.  
IVRP - Inoperable Vehicle Removal Program  
IWMP - Integrated Waste Management Plan



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LUC - Land Use Compliance  
MRF - Materials Recovery Facility  
MRPM - Membership & Real Property Management  
OSHA - Occupational Safety and Health Administration  
PS - Planning Services  
PW - Public Works Department  
QA/QC - Quality Assurance and Quality Control  
QAPP - Quality Assurance Project Plan  
RCRA - Resource Conservation and Recovery Act  
RMP - Range Management Program  
RTOC - Regional Tribal Operations Committee  
SAP - Sampling and Analysis Plan  
SOP - Standard Operating Procedure  
SRHD - Salt River Housing Division  
SRHS - Salt River High School  
SRLF - Salt River Landfill  
SRMG - Salt River Materials Group  
SRP - Salt River Project  
SRO - Salt River Ordinance  
SRPMIC - Salt River Pima-Maricopa Indian Community  
SWAC - Solid Waste Advisory Committee  
SWDA - Solid Waste Disposal Act  
SWM - Solid Waste Management  
SWO - Solid Waste Ordinance  
SWP - Solid Waste Program  
SUP - Special Use Permit  
TAS - Treatment-as-a-State  
TCO - Tribal Code of Ordinances  
TSCA - Toxic Substance Control Act  
UW - Universal Wastes  
WQP - Water Quality Program





## Introduction

*Environmental Protection & Natural Resources has developed this Integrated Waste Management Plan to demonstrate the Community's commitment to improving waste management services beyond basic compliance.*

**E**nvironmental Protection & Natural Resources (EPNR) is one of the four (4) divisions that make-up the Community Development Department (CDD). EPNR, Economic Development (EDD), Membership & Real Property Management (MRPM), and Planning Services (PS) comprise the CDD which is one of the largest departments in the Salt River Pima-Maricopa Indian Community (SRPMIC) government. EPNR is charged with protecting and managing the Community's precious environmental, archeological, and natural resources. It strives to maintain the balance between Community development and protecting the Community's health and natural resources.

Furthermore, EPNR is the Community's designee as the primary responsible party for ensuring compliance with all tribal and federal environmental laws. EPNR is strategically working towards achieving delegated authority over certain federal programs and treatment-as-a-state (TAS) status.

EPNR is organized around the five (5) following programs:

1. Air Quality Program (AQP)
2. Environmental Programs and Policy Development (EPPD)
3. Land Use Compliance (LUC)
4. Range Management (RMP)
5. Water Quality Program (WQP)



*EPPD is responsible for EPNR's waste management and policy issues.*

EPPD is the EPNR program responsible for the Community's solid waste management issues. EPPD is further organized into the following four (4) sub-programs; Policy Development, Solid Waste, Recycling, and Hazardous Waste and Pesticides. The current organization chart for EPPD is shown in **Figure 1.1**.



**Figure 1.1 EPPD's Current Programmatic Organization**

Together, these four EPPD programs holistically address the Community's waste management concerns and issues with its focus on source reduction. In order to address the waste management issues, EPPD actively coordinates and collaborates with other SRPMIC entities such as Public Works Sanitation, Engineering and Construction Services, Community Development Department, Economic Development, Membership & Real Property Management, and Planning Services. Further collaboration with Community enterprises like the Salt River Landfill allows EPPD to stay current with the Community's waste cycle literally from cradle to grave.

## Background

### Purpose of Integrated Waste Management Plan

When it comes to solid waste control and management for the Community, collaboration is the key to success. Public Works (PW) Sanitation provides curbside residential solid waste and recycling waste collection, collection at most of the Community buildings (such as government and administrative buildings and schools), and transfer to the Salt River Landfill (SRLF), an SRPMIC enterprise. PW also oversees the contracted waste collection of the Community's commercial and leased properties. The SRLF is the final disposal place for the Community's solid wastes as well as contracted collection from within the SRPMIC and surrounding cities. While PW and SRLF provide the foundation and framework of the Community's solid waste collection and disposal activities, EPPD completes the waste management activities by providing additional waste removal services, such as Inoperable Vehicles and Waste Tire Removal, to the Community as well as waste reduction and recycling outreach and

*Integrated waste management involves using a combination of techniques and programs to manage the Community's waste stream.*



education. EPPD focuses on programs and outreach that result in minimizing the amount of waste collected and disposed in the SRLF.

This Integrated Waste Management Plan (IWMP) was developed to present the SRPMIC's existing solid waste management (SWM) programs and identify specific needs in the programs, implementation, and monitoring. It primarily focuses on how EPNR EPPD can enhance the Community's existing SWM. Secondary recommendations are made on overall SWM issues that require EPPD collaboration with the SRLF or PW when applicable.

Extensive collaboration and planning went into the development of this IWMP. There were over twenty-four (24) meetings held in preparation of this Plan. These meetings included collaboration with staff from Public Works Sanitation, the Chief Executive Officer (CEO) of the SRLF, facilities managers from the two Community casinos, the two maintenance managers and program coordinator from the Community's schools system, the facilities manager from Two Waters (the government campus), staff from River Recycling – the materials recovery facility, as well as other participants in the Solid Waste Advisory Committee (SWAC). A full list of meetings and attendees is presented in **Appendix A**.

The first three (3) chapters of this Plan present an overview of the Community and its waste control and management activities. This overview includes waste characterization based on land use and population. Waste stream generation rates are presented for the last ten (10) years. Descriptions of Public Works Sanitation, the Salt River Landfill, and the materials recovery facility (MRF) are presented in the discussion of Existing Facilities.

The next three (3) chapters are dedicated to each of the three (3) EPPD waste programs; Solid Waste, Recycling Waste, and Hazardous Waste. Each chapter contains background information on the current status of each program, its short- and long-term goals and objectives, planned activities, education and outreach activities, and estimated schedules that will provide roadmaps for each program over the next five years and beyond. A chapter on the Community's Brownfields Program is also included to complete the comprehensive overview of EPNR's waste management activities.

Finally, the last chapter presents the overall implementation plan and outlook on the EPPD activities. SRPMIC departmental collaboration along with EPPD program collaboration will be discussed and the organization chart from **Figure 1.1** will be revisited to include any additional positions that are recommended as a result of this IWMP.

*Short-term is 0-5  
years.*

*Long-term is 6-10  
years.*

The planning period for this IWMP is ten (10) years. Short-term goals/activities are those anticipated to occur in years 0 – 5. Long-term goals/activities are those considered for the years 6 – 10. This IWMP will be reviewed after five (5) years, 2014, to ensure that it is current and applicable updates and changes are made.



In summary, this comprehensive “living” plan will:

- ◆ Describe existing waste management practices.
- ◆ Identify existing system limitations and improvement opportunities.
- ◆ Delineate a plan of action to address these limitations and make improvements.
- ◆ Describe priorities, goals, and objectives.
- ◆ Be revisited and revised on a regular schedule.

#### Other Agency Involvement

In 1992, Congress passed the Indian Environmental General Assistance Program (GAP) Act which authorizes the U.S. Environmental Protection Agency (EPA) to provide GAP grants to federally-recognized tribes. The goal of GAP is to assist tribes in developing the capacity to manage their own environmental protection programs, and to develop and implement solid and hazardous waste programs in accordance with individual tribal needs and applicable federal laws and regulations.

*EPNR continues to strengthen its collaboration with EPA on environmental issues.*

Over the past several years, GAP funding has served as the foundation for the development of the Community’s environmental program infrastructure. These GAP funds have been supplemented by a strong financial commitment from the Community that has allowed EPNR to leverage its resources to enhance the development of environmental programs and promote staff capacity to manage complex environmental initiatives. EPNR has continued to strengthen its collaboration with the EPA on waste management issues.

EPPD staff participates in EPA’s Regional Tribal Operations Committee (RTOC) as an elected representative of central Arizona tribes. The goal of the Committee is to assist EPA in understanding specific tribal environmental concerns and to secure additional funding to complete various projects and activities (which include solid waste) within tribal lands. Specifically, a Solid Waste Workgroup provides a quarterly report to the RTOC and EPA staff which outlines goals and objectives for the upcoming quarter.

EPPD staff participates in the InterTribal Council of Arizona (ITCA) Solid Waste Working Group, a forum arranged and facilitated by ITCA Solid Waste staff. The meetings are arranged to provide technical updates, opportunities for networking with other tribal solid waste program managers and EPA, and other federal agency information exchange. The working group meeting is scheduled bi-annually or on an ‘as needed’ basis. SRPMIC actively participates on the planning, coordination, and conducting the meetings.

#### Pertinent Laws and Regulations

In accordance with the 1984 Statement of Policy by the EPA entitled “EPA Policy for the Administration of Environmental Programs on Indian Reservations”, the Community fulfills the principle role as the appropriate non-federal party for decision-making and carrying out program responsibilities affecting the Community, its



*The SRPMIC Tribal Code of Ordinances sets the primary regulations for Community waste management.*

environment, and the health and welfare of its people. In keeping with this policy, the SRPMIC has addressed several waste management issues in its Tribal Code of Ordinances (TCO). The following TCO sections are pertinent to the Community's waste management:

**Chapter 13 Article III § 13.6** designates PW as the responsible party for collection and haulage of solid waste from commercial enterprises within the SRPMIC, allowing these services to be provided by an external contractor or provided by self-haulers.

**Chapter 13 Article III § 13.3 & 13.7** addresses illegal dumping of wastes within the Community.

**Chapter 13 Article III § 13.51** addresses the proper use of pesticides within the Community. SRO-60-79, the Pesticide Ordinance, has been newly updated (2009) and includes the proper disposal of pesticides.

**Chapter 18 Article III § 18.41 – 18.47** provides guidance on Environmental Protection including hazardous waste management and Federal Law Enforcement. According to Salt River Ordinance (SRO) 180-95 § 1 (Oct. 12, 1994) the Community shall have the responsibility and capability of regulating any environmentally harmful conduct by any commercial lessee who is a party to a contract, lease, or other instrument with the SRPMIC.

*The draft Waste Ordinance will be updated to reflect hazardous and recycling waste needs.*

The Community has a draft Waste Ordinance that provides significant guidance on the collection, handling, and disposal of solid waste within the Community, both residential and commercial. Currently, however, the draft Waste Ordinance does not provide guidance on the disposal of hazardous material or mentions recycling wastes. This outdated draft Waste Ordinance requires significant updating to reflect the advancements in waste reduction and control that is actively occurring in the SRPMIC.

Further, in adherence with the Tribal Code of Ordinances, EPPD enforces the following (but not limited to) list of Federal environmental laws enacted by the U.S. Congress to protect the environment:

1. Toxic Substance Control Act of 1976
2. Solid Waste Disposal Act of 1976
3. Comprehensive Environmental Response, Compensation, and Liability Act of 1980

The Toxic Substance Control Act (TSCA) of 1976 regulates the introduction of new or already existing chemicals. One pertinent enactment to the TSCA is the "Asbestos Hazard Emergency Response" in 1986 that authorizes the EPA to impose requirements for asbestos abatement in schools and requires accreditation of persons who inspect for asbestos-containing materials.

In October 1965, the Solid Waste Disposal Act (SWDA) became law in a general attempt to address the solid waste problems facing the United States. The following



ten-years after its passage revealed that the SWDA was not sufficiently structured to address the increasing number of waste disposal issues challenging the nation. As a result, several amendments were made to SWDA with the passage of the Resource Conservation and Recovery Act of 1976 (RCRA).

*Tribes are not currently eligible for treatment as a state delegation over its RCRA program. SRPMIC and EPNR need to encourage EPA and Congress to modify RCRA to include provisions for delegation to tribes.*

RCRA is structured to protect human health and the environment from the potential hazards of waste disposal, conserve energy and resources, reduce the amount of wastes generated, and manage waste in environmentally sound manners. However, RCRA is not one of the federal environmental laws authorizing EPA to treat eligible federally-recognized Indian tribes in the same manner as states (TAS) for implementing and managing its RCRA program.

In 1980, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) was enacted as a related law that deals with the clean-up of inactive and abandoned hazardous waste sites, whereas RCRA was enacted to address concerns of active disposal practices. Further, in 1984, the Hazardous and Solid Waste Amendments (HSWA) significantly expanded and reinforced RCRA by bringing about the following changes:

1. Established treatment standards.
2. Established an enforcement program.
3. Established RCRA corrective action requirements.
4. Established permitting system and deadlines for hazardous waste facilities.
5. Extended regulation to include small quantity generators.

All of these Federal waste regulations are located in Title 40, Protection of the Environment, of the Code of Federal Regulation (CFR). Subchapter I – Solid Waste is the main guidance for EPPD compliance.

## Goals of the Integrated Waste Management Plan

Since solid waste management touches many aspects of tribal life – health, environmental quality, economic development, community pride, cultural identity, and land stewardship - the goals of the Integrated Waste Management Plan are intended to ensure these aspects are enhanced. These goals include:

*The IWMP will set goals/priorities in order for EPNR to allocate resources and achieve its solid waste management goals.*

- ◆ Assess current and future waste management needs.
- ◆ Set program goals (priorities) in order to allocate resources accordingly.
- ◆ Establish objectives with implementation steps that include criteria for decision-making when appropriate.
- ◆ Identify resources needed along with budgets and schedules.
- ◆ Serve as a springboard for future workplans and proposals.

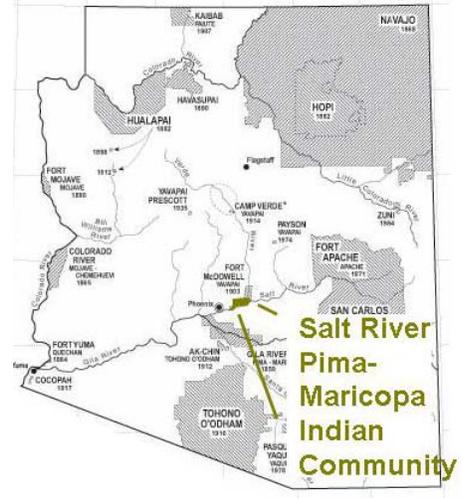


## Characteristics of the SRPMIC

### Description of the SRPMIC

The SRPMIC, a federally recognized tribe located in Maricopa County in central Arizona, was established by Executive Order on June 14, 1879 by President Rutherford B. Hayes. It is comprised of approximately 52,675 acres covering an estimated 80 square miles. **Figure 1.2** shows the Community's size and location in respect to the state of Arizona.

The SRPMIC is home to 5,229 members who reside within the reservation land (the total enrolled number of Community members is roughly 9,105). The Community is comprised of two distinct tribes, the Onk Akimel O'Odham and Xalychidom Piipaash (Pima and Maricopa).



**Figure 1.2 Vicinity Map** (obtained from Arizona Geographic Alliance)

*The SRPMIC strives to preserve its culture and environment while surrounded by a growing metropolis.*

The Community boundaries are bordered by Mesa, Tempe, Scottsdale, Fountain Hills, the Fort McDowell Yavapai Nation, and U.S. Tonto National Forest. However, the SRPMIC shares most of its west/northwestern border with the city of Scottsdale Arizona, which in turn, is adjacent to the growing Phoenix metropolitan area. Phoenix is the fifth largest city in the U.S. according to the 2000 census and part of the rapidly growing Sunbelt of the Southwest.

The tribal government consists of nine elected members (President, Vice President, and a seven-member Community Council) who preside over SRPMIC governmental affairs. The Community government administers public policy and social services much like a state or municipal government. The top-down administrative structure consists of a Community Manager and Assistant Community Managers that oversee various Departments.

### General Description and Land Use

Historically, the SRPMIC has been an agricultural community. Even today, about twenty percent (10,565 acres) of its total area (52,675 acres) is dedicated to agricultural activities. Much of the Community is dedicated open space or natural reserve land. These areas can be considered 'low-impact' areas as far as waste generation is concerned. Much of the remaining land use is rural housing, sub-division neighborhoods, government buildings, schools, and other miscellaneous leased properties.



The SRPMIC has the confluence of the Salt River and Verde River within its borders. This is a unique and precious natural resource. Portions of these rivers located within the Community contain fragile riparian habitat utilized by various species of animals including the desert nesting Bald Eagles during their annual breeding season. Just downstream of the rivers confluence is the Granite Reef Dam which diverts most of the river flows into supply canals for the metropolitan area. Downstream of the dam, the Salt River channel is a dry altered riverbed. The Salt River Materials Group (SRMG), a Community enterprise, has extracted sand and gravel products from this river bed for the past several decades. Since its beginning, the SRMG has provided the Community with revenue, employment, and construction material.

*The adjacent freeway systems allow substantial commercial opportunities for the Community.*

There are three major transportation routes that run through the Community, State Route 87 (often called the Beeline Highway) and highways 101 (Pima Freeway) and 202 (Red Mountain Freeway) part of the federal interstate system (I-10 and I-17). The western border of the Community runs parallel to the Pima Freeway (101) and has developed into the Community's commercial corridor, known as the Pima Corridor. The corridor is eight (8) miles long and approximately 8,000 acres in size. This corridor has seen extensive development over the last several years and can be expected to be built-out in the next few decades. This corridor will be reference in the next Chapter, Waste Characterization, as it is an area of 'high-impact' waste generation for the Community. **Figure 1.3** on the following page illustrates the SRPMIC's general land use.

There are two Community-owned casinos (Casino Arizona) that generate revenue for the Community. One casino is currently expanding to a 15-story resort and 497-room hotel, set to open in 2010. The Talking Stick Golf Course is another Community enterprise that not only generates revenue for the Community, but also wastes. These facilities will be described in further detail in the following chapter as they have an extensive waste management program already in place.

Community leadership has also undertaken a wide range of economic development activities (in addition to the previously mentioned enterprises) that take advantage of the warm winter climate and proximity to a large urban area. These enterprises and economic development activities provide revenue for tribal government as well as employment for Members. The Community's for-profit enterprises include:

- ♦ Casino Arizona
- ♦ Talking Stick Golf Course
- ♦ Saddleback Communications
- ♦ Salt River Landfill
- ♦ Salt River Devco
- ♦ Salt River Materials Group



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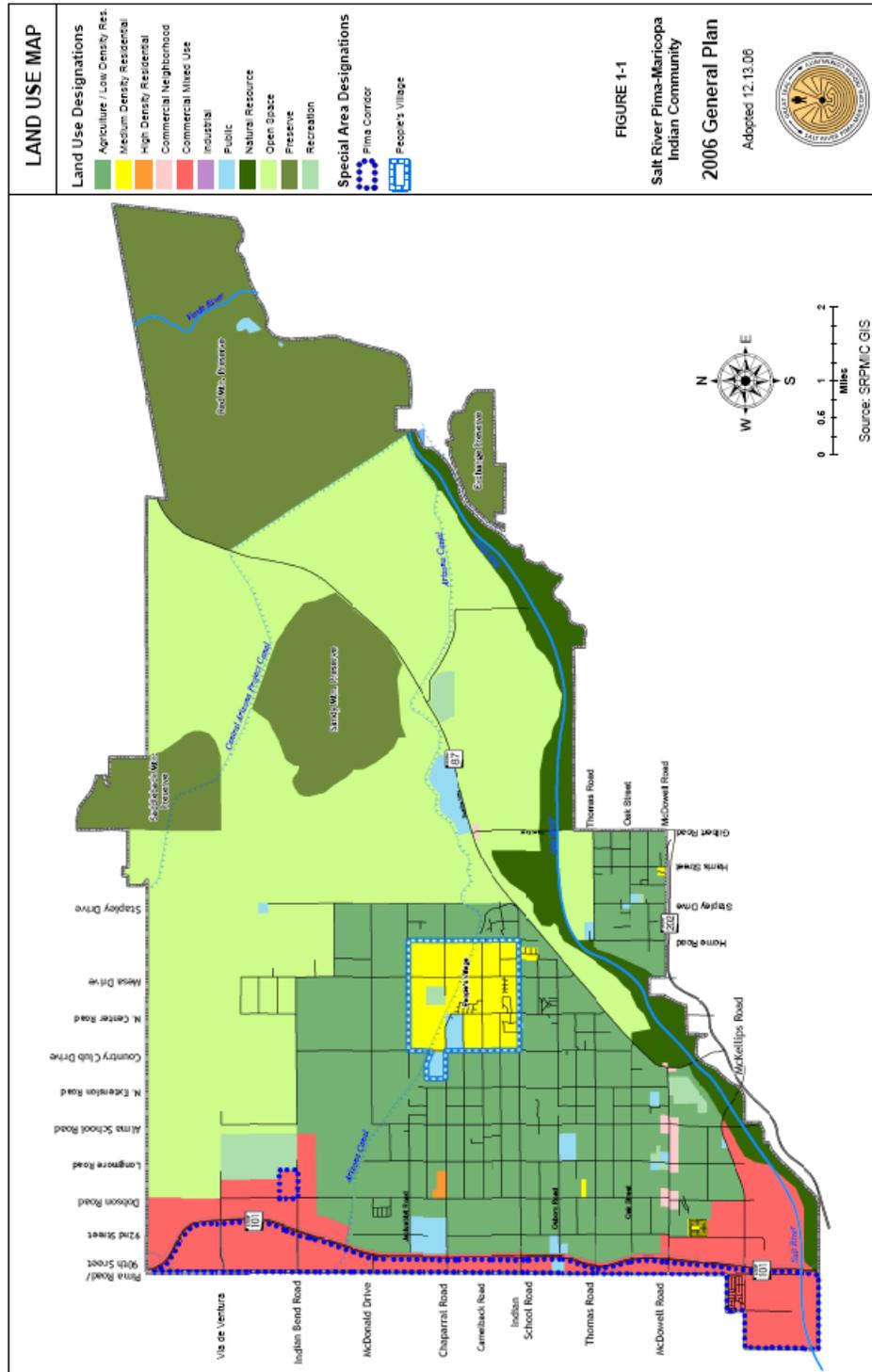


Figure 1.3 Approved Land Use Map for the SRPMIC. Total area approximately 52,675 acres (SRPMIC General Plan 2006)





## Waste Characterization

*Understanding how and where the Community generates its wastes is essential in the success of the waste management program.*

When it comes to the Community's waste generation and characterization, it is important to consider how the Community uses its land. As described in the previous chapter, the majority of the Community's land is agricultural, natural resources, open space, preserves, and recreational areas; areas of low waste generation (low impact). There are higher density housing divisions and individual home sites interspersed throughout the low impact area, as well as government and school campuses. The Pima Corridor is a highly developed commercial area that extends along the SRPMIC's west border. This combination of land use creates a variety of waste management needs.

In June and July 2009, EPNR conducted a thorough solid waste inventory throughout the SRPMIC. This inventory focused on understanding the potential hazardous waste generators in the Community as well as identifying opportunities to increase the wastes that are recycled and diverted from the Salt River Landfill. All waste generated within the Community's boundaries end up at the Salt River Landfill. Extending the life of the landfill provides the Community with a continued source of revenue and employment, as well as a disposal solution for the Community's own waste generated.

This inventory included Community facilities and government buildings, as well as a majority of the lease-held properties in the Community's commercial area, the Pima Corridor. The method and results from this inventory can be found in the *Community Recyclable and Hazardous Waste Inventory (September 2009)*. As part of the waste inventory, fifteen (15) Community facilities (including Casino Arizona) and 70 lease-held facilities were surveyed regarding their recycling methods and hazardous material disposal. These surveys provided information for the following discussions. A complete list of facilities surveyed can be found in **Appendix B**.



## Population & Waste Source Generation

This discussion pertains to the waste generating population within the SRPMIC, not just the Community population but the sizable visitor population. The total Community Member enrollment is 9,105 (as of January 2010). Approximately 57% of the total enrollment (5,229 Members) lives on the Community, with approximately 3,876 living off the Community.

*The Community's visitor populations at its casinos and retail area significantly increase in the winter months.*

There is a high visitor population due to the two Community owned casinos, with higher winter visitation. The commercial properties located along the Pima corridor have a substantial visitor population, increasing in the retail sector during the holiday shopping season in the winter months, as well.

### Residents and Housing

There are approximately 1,375 home sites throughout the SRPMIC. This includes approximately 250 houses under management of the Salt River Community Housing Division (SRHD). SRHD's latest construction consisted of 60 homes in 2000 with an additional 91 homes scheduled for construction between 2011 and 2014. This will bring the number of home sites close to 1,500 within five years. The Community manages two land leases for mobile home parks within the reservation boundaries. There are approximately 900 spaces total. At this time, there are limited numbers of Community Members utilizing this housing option.

For the 250 residences that are managed by the SRHD, the SRHD Maintenance responds to work orders for housing repair. Through the multiple services SRHD Maintenance provides to these homes, the following is an example of waste material generated by the homes and collected by SRHD:

- ◆ Weekly removal and replacement of florescent light tubes that need to be properly disposed. (Averaging about two per week).
- ◆ Broken thermostats are removed and replaced, needing proper disposal.
- ◆ Appliances (white goods) that are replaced and not repairable are collected by an appliance salvage company for recycling at no charge to the SRHD.
- ◆ Paints, cleaning products, and chemicals that are used during renovations need to be properly disposed.

In addition to these services provided by the SRHD, Public Works provides the remaining waste removal and recycling services to all Community residents, described in greater detail in the next chapter.



## Community Facilities

### *Two Waters Government Campus*

In the heart on the Community lays the newly constructed (2009 completion) SRPMIC Government campus, Two Waters. Two Waters is comprised of the following four (4) buildings:

1. Building A – ‘Water’ or Administration – is home to:
  - Floor 1. Finance, Community Relations, and Internal Audit
  - Floor 2. Office of the Treasurer, People Soft Support, and IT Technology
  - Floor 3. Administration, Executive Administration and Office of Congressional and Legislative Affairs
2. Building B – ‘Earth’ or Support – is home to:
  - Floor 1. Human Resources
  - Floor 2. Engineering and Construction Services
  - Floor 3. Community Development Department and EPNR
3. Building C is the Council Chambers.
4. Building D is the cafeteria.

*With over 400 employees, Two Waters is a great opportunity to raise awareness on proper waste disposal and increased recycling.*

These facilities were constructed using local supplies and state-of-the-art technology. EPNR is actively working with Public Works to ensure that adequate recycling containers are available and easily accessible, as well as universal wastes, such as energy-efficient fluorescent light bulbs, are properly handled and disposed. Two Waters has approximately 440 employees working within the four buildings, which poses a significant opportunity to provide recycling and hazardous waste education to the Community’s Members and employees. Raising awareness to proper waste disposal and recycling can help to prolong the life of the Salt River Landfill.

### *Other Community Facilities*

The following Community facilities were surveyed for the waste inventory:

- ◆ Early Childhood Education Center (ECEC)
- ◆ Salt River Elementary
- ◆ Education Administration
- ◆ SRPMIC Schools - Food Services
- ◆ Public Works - Sanitation
- ◆ Department of Transportation - Fleet
- ◆ Salt River Community Housing Division including Maintenance
- ◆ Salt River Community Center including offices and recreational area
- ◆ Department of Corrections
- ◆ Salt River Fire Department
- ◆ Cultural Preservation Program



Public Works provides extensive services to all of the Community buildings and facilities. These services range from changing light bulbs and thermostats to waste removal services. Public Works is the key entity for a successful waste program. However, the findings from the inventory indicated that multiple layers of improvement are still needed to increase recycling of wastes and the proper disposal of hazardous and universal wastes throughout the Community facilities. These include:

- ◆ Improved training of the janitorial staff on properly emptying recycling containers and disposal of hazardous material such as universal wastes. This was the main concern for most facilities.
- ◆ Updated training for personnel responsible for disposal of universal wastes, whether it is class-room teachers who generate spent batteries or Public Works personnel who change out fluorescent light bulbs. Often time appropriate disposal methods are available, but not every participant is informed of new available methods.
- ◆ Increasing the number and type of recycling containers in all buildings, as well as providing visual reminders of what is recyclable and hazardous.
- ◆ Increasing the number or size of external recycling containers at certain facilities that generate more recyclable wastes.
- ◆ Educating staff on what is recyclable as well as how to inform students and visitors on recyclable material.

#### Casino Arizona – a Community Enterprise

Representatives from Casino Arizona actively participated in several meetings in preparation of the IWMP, as well as the Waste Inventory. Through these meetings, the vast amounts of waste management conducted and thorough recycling program at the two facilities were highlighted. There are two Casino Arizona locations; Indian Bend (North location – opened in 1999) and McKellips (South location – opened in 1998), both located across the highway from the Pima Corridor. In early 2010, the Indian Bend location will be opening its new fifteen-story resort and casino. This resort will have a 497-room hotel, 22 conference rooms, multiple restaurants, a spa, as well as new casino floors that will replace the current casino. In preparation for the opening of the new resort and casino, the waste management efforts that are currently carried out will be maintained and expanded to handle the increase in waste generation. The following list summarizes some of the waste and recycling efforts, as well as challenges:

*Casino Arizona has an exemplary recycling program in place.*

- ◆ There are currently 2,470 employees with another 750 additional when resort opens providing a significant opportunity for recycling and universal waste education.
- ◆ Both casinos have recycling containers on the casino floors for guests and back-of-the-house podium tables, as well in all office areas and by copy/print machines.
- ◆ Allied Waste provides waste removal and recyclable removal for both locations.
- ◆ Currently, the Indian Bend Casino has 8-yd dumpster collected 7 days a week and a 40-yd roll-off once every two weeks.



- ◆ McKellips has two 8-yd dumpsters collected daily and the warehouse facility on Chaparral Road has an 8-yd dumpster.
- ◆ Due to the increased winter visitation, more waste and recyclables are generated during the winter months.
- ◆ Playing cards are shredded along with office paper by Iron Mountain.
- ◆ Spent batteries are collected by Interstate Batteries, including alkaline batteries from all automated washing equipment in restrooms.
- ◆ Veolia Environmental Services collects compact fluorescent light bulbs (CFLs) and provides proper manifest, and will begin accepting broken thermostats.
- ◆ Stericycle provides monthly removal of bio-wastes.
- ◆ There are cardboard balers at both locations which allow the bales to be taken to River Recycling at the Salt River Landfill. However, the new resort will need to find a solution for getting the bales into a roll-off.
- ◆ The proposed waste generation rate for the new resort is currently under evaluation, however lighting supplies and wastes are anticipated to be extensive.
- ◆ There will be combination waste and recycling containers in all of the 497-guest rooms at the new resort.
- ◆ Design of the new resort began before recycling program was underway, so there are some challenges in implementing the recycling program such as the 750-ft underground maintenance tunnel.

#### Tenants and Visitors

Along the Pima Corridor, there are seven (7) areas that were included in the waste inventory, with a total of 70 properties. These areas are highlighted on the aerial view in **Figure 2.1**. Of the 70 businesses surveyed, about 20% (15 businesses) have an active recycling program in place. According to the surveys, all businesses with recycling services had to pursue their own service and contract directly with Allied Waste, no property management (as of the time of the survey) actively provided this service to its tenants. Public Works initiated the coordination of recycling services at the Chaparral Business Park.

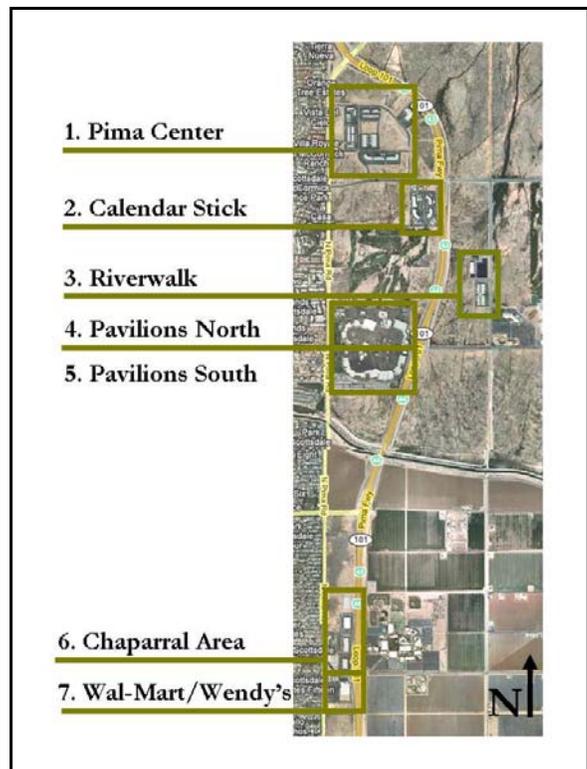


Figure 2.1 Pima Corridor with Inventoried Areas



*Recycling cardboard throughout the Pima Corridor would keep tons of this material from entering the Salt River Landfill each year.*

There was one critical finding from the survey and waste inventory throughout the commercial businesses; the need to recycle cardboard. The retail businesses generate tons of cardboard wastes that are currently not being recycled. Some businesses expressed concern with regard to excessive cardboard stockpiles (as waste containers are full) creating fire hazard conditions during the holiday shopping season. If cardboard-only recycling was provided in the retail and warehouse locations, this portion of the waste stream could be diverted from the Salt River Landfill. Coordination with the SRPMIC, property management companies, and Allied Waste needs to come up with an appropriate solution for this recycling need and extending the life of landfill.

## Waste Stream Generation

Due to lack of complete records, generation rates are difficult to determine. Since Public Works services not only the Community residences but the vast number of Community facilities and buildings, roadways, and irrigation canals, per capita waste generation is not a reasonable assessment.

Visitor estimates are difficult to determine, as is evident in Casino Arizona having challenges evaluating proposed waste generation rates. The number of retail businesses has declined over the last few years, which can lead to the assumption that the number of retail visitors has also declined.

*Through EPNR's rigorous outreach and education about the extensive waste recycling services the SRPMIC offers to the Community, EPNR is striving to increase the recycling rate for the SRPMIC which has averaged about 2.4%.*

Based on these facts, waste generation rates are not broken down any further than the actual tonnages recorded for each year. **Table 2.1** summarizes the volume of solid waste and recyclable waste collected from Public Works throughout the SRPMIC over the last ten (10) years. The materials recovery facility (MRF) was not in operation until 2001. Proper records are not available on SRPMIC recyclables until 2005.

The excessive volumes of wastes generated in 2001 through 2003 were due to the demolition and destruction of older Community buildings, such as administration buildings, fire houses, and the old Lehi Community building. The average recycle rate for the last three years for the Community is about 2.4 % of the total waste stream. In 2005, that rate was almost doubled. One goal of EPNR's Recycling Program is to continue to increase that rate.



**Table 2.1 SRPMIC Waste Generation Summary**

<i>Year</i>	<i>Community Streams (Serviced by PW)</i>		
	<i>Waste (to Landfill) tons</i>	<i>Recyclables (to MRF) tons</i>	<i>Percentage of total waste recycled = recyclables/ (waste + recyclables)</i>
2008	8,892	228	2.5 %
2007	9,162	249	2.6 %
2006	9,642	221	2.2 %
2005	7,317	352	4.6 %
2004	10,064	n/a	n/a
2003	13,204	n/a	n/a
2002	19,584	n/a	n/a
2001	26,399	n/a	n/a
2000	16,716	Not in service	Not in service
1999	13,660	Not in service	Not in service

*It has yet to be determined what impact the new casino resort will have on waste generation.*

**Table 2.2** summarizes the waste generated from Casino Arizona and Talking Stick Golf Course from 2005 to 2008. These numbers can be used as a baseline of waste generation conditions prior to the resort expansion in 2010.

**Table 2.2 Casino Arizona and Talking Stick Waste Generation**

<i>Year</i>	<i>Community Enterprises Streams (Serviced by Allied Waste)</i>	
	<i>Casino Arizona Waste (tons)</i>	<i>Talking Stick Waste (tons)</i>
2008	1,489	434
2007	1,639	608
2006	1,675	646
2005	1,569	639

**Table 2.3** serves as a placeholder for the volumes of waste and recyclable material generated from the commercial lease-held properties serviced by Allied Waste. At the time of this writing (September 2009) numerous requests for data were made to Allied Waste to no avail. Allied Waste was unresponsive and the data has not been provided. This table remains included so future attempts can be made to obtain data during future revisions of this document. The statistical data, provided by the Economic Development Division (EDD) of the Community Development Department (CDD), illustrates the changes in commercial leases and construction over time.



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**Table 2.3 Summary of Commercial Leases and Waste Generated**

<i>Year</i>	<i>Commercial Streams (Serviced by Allied Waste)</i>		<i>Statistics</i>		
	<i>Waste (tons)</i>	<i>Recyclables (tons)</i>	<i>No. of Commercial Leases</i>	<i>Total Acreage (constructed)</i>	<i>percent constructed</i>
<b>Total</b>			37	2483.17	100%
<b>2008</b>			37	2337.04	94.1%
<b>2007</b>			35	2332.41	93.9%
<b>2006</b>			35	2332.41	93.9%
<b>2005</b>			34	2332.41	93.9%
<b>2004</b>			33	2332.41	93.9%
<b>2003</b>			33	2332.41	93.9%
<b>2002</b>			29	1864.06	75.1%
<b>2001</b>			28	1834.85	73.9%
<b>2000</b>			27	1833.85	73.8%
<b>1999</b>			26	1823.85	73.4%





## Existing Solid Waste Facilities

*The Community's waste management has evolved into a comprehensive and integrated system ranging from volunteer trash collection to advanced, state-of-the-art technologies.*

Since the 1970's, the SRPMIC's waste management activities have increased exponentially, with new programs being added almost yearly. As was common in much of the United States prior to 1970, the Community's waste management program is not well documented, such as its three historic landfills:

1. Cypress Landfill – which operated prior to 1970.
2. North Center Street Landfill – which operated after 1970.
3. Tri-Cities Landfill – which operated from 1972 – 1993.

In 1972, the Community's Tri-Cities Landfill opened. This is the approximate time when Public Works Sanitation began residential curbside collection for the Community. Since its sparse beginnings, the Community's waste management activities have evolved with solid waste technologies and have added and expanded programs to reflect the advancements in the solid waste industry.

In 1993, the Tri-Cities Landfill was closed and the Salt River Landfill was opened to serve not only the Community but many neighboring cities. The Salt River Landfill is a Community enterprise that provides the Community with three valuable assets; solid waste disposal, revenue generated by servicing the surrounding cities, and employment opportunities for the Community.

In 2001, River Recycling, a materials recovery facility (MRF), opened at the Salt River Landfill providing recycling opportunities for the Community as well as additional revenue and employment opportunities.

Over the last decade, EPNR, formerly known as Cultural and Environmental Service (CES), has developed and expanded its solid waste program. Together these entities are the core of the Community's waste management. **Figure 3.1** on the following page illustrates the SRPMIC's extensive waste management activities and history.



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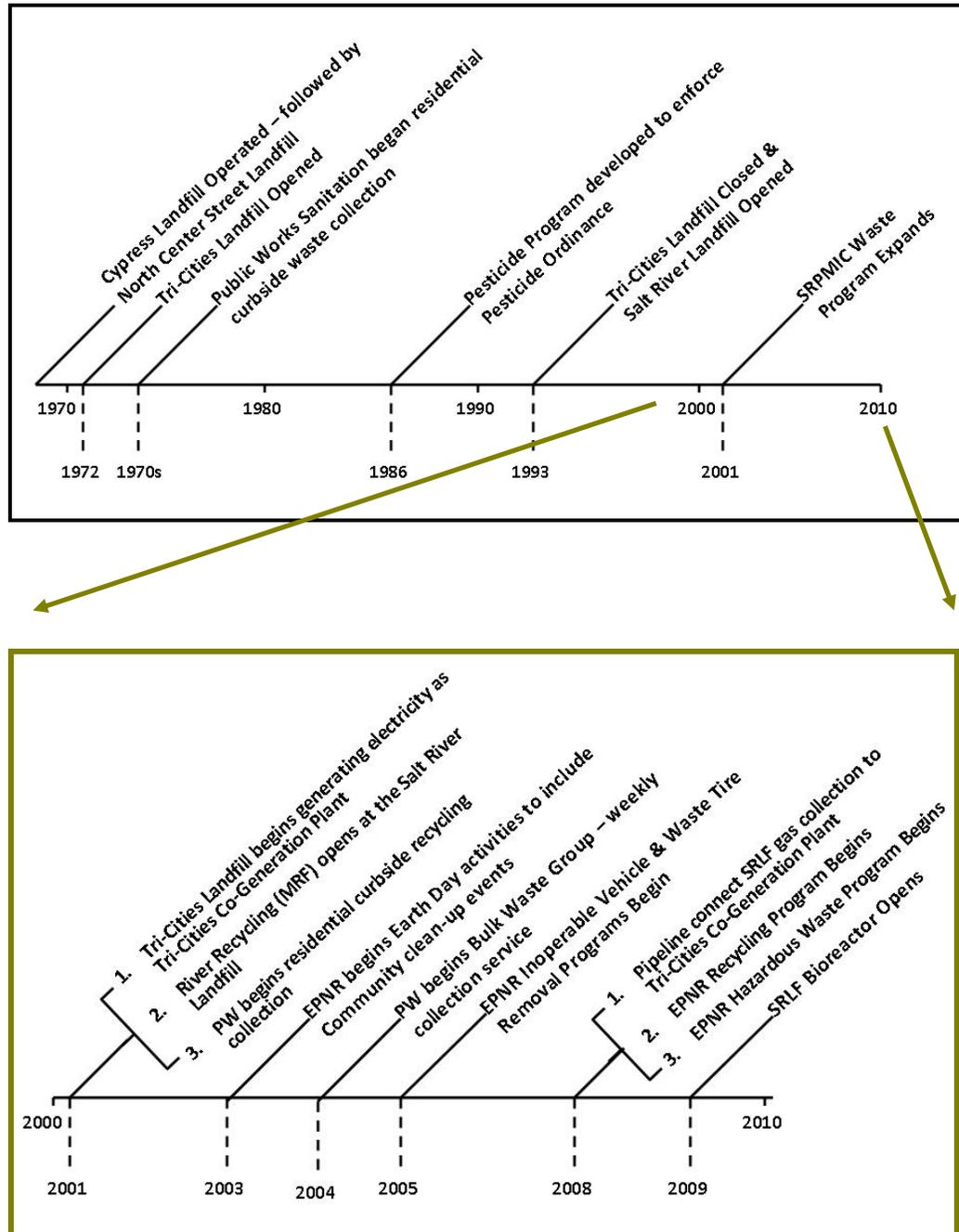


Figure 3.1 Timeline of SRPMIC Waste Management Development

*SRPMIC’s waste management activities have increased exponentially over the last decade.*

As shown in the timelines, the SRPMIC’s waste management has rapidly advanced within the last decade. The latest activity listed in the timeline, the Salt River Landfill (SRLF) Bioreactor Opens, occurred this past Earth Day, April 22, 2009. New activities, such as a Community Hazardous Waste Collection Event, are already in the planning stage and are a testament to the momentum of the Community’s waste management.



## Solid Waste Collection

*Public Works is the key to successful waste management for the Community.*

### Facilities Maintenance

Public Works Facilities Maintenance plays an important role in not only the up-keep of the many Community buildings but also for the proper waste removal for the Community buildings. Every Community building/facility is serviced by Public Works (PW). PW personnel are responsible for the proper removal and disposal of a number of universal wastes, such as compact fluorescent light bulbs (CFLs), thermostats, batteries, as well as paints, pesticides, and cleaning supplies. Due to the large number of services provided and PW personnel involved, not all personnel are adequately informed of the proper disposal methods for universal wastes. Efforts are currently being expended to improve communication and guidance on the proper disposal of these wastes.

### Special Events

PW provides the necessary waste removal services and recycling containers for the Community's numerous special events, such as the Veteran's Day Pow Wow and Earth Day Celebration. These events have hundreds of attendees with extensive refreshment wastes and recyclable materials that require thorough planning and coordination. The effort of PW ensures that these events are fully equipped and completely cleaned-up upon conclusion. One example, reflective of the level of effort and detail in which PW is responsible for, is changing the batteries in the hand-held microphones. One event can require dozens of batteries. These batteries require proper disposal, which again not all personnel are adequately informed on the best method of collection and disposal.

### Community Fleet Maintenance

Department of Transportation (DOT) Fleet is responsible for the servicing and maintenance of the Community's 650 vehicles. DOT has an exemplary waste program in place for the fleet services. The used oil and oil filters are collected by a contracted company that reclaims the oil, including historic drums of old oil and fluids. Between 1,200 and 1,400 used tires are properly disposal annually. Waste metal and spent vehicle batteries are also properly recycled. New opportunities for coolant are being investigated to eliminate the use of an average of 140 gallons of waste coolant every six (6) months.

### Existing Waste Collection Program

Currently, there are two types of waste collection that occurs in the Community.

1. Community Waste Collection - This type includes all Community residences, government buildings, administrative buildings, schools, Community Centers, Department of Corrections, police and fire stations, and all service-oriented facilities. This collection is provided by Public Works Sanitation.
2. Commercial Waste Collection - This includes all leased properties and Community enterprises, such as the casinos and Salt River Materials Group.

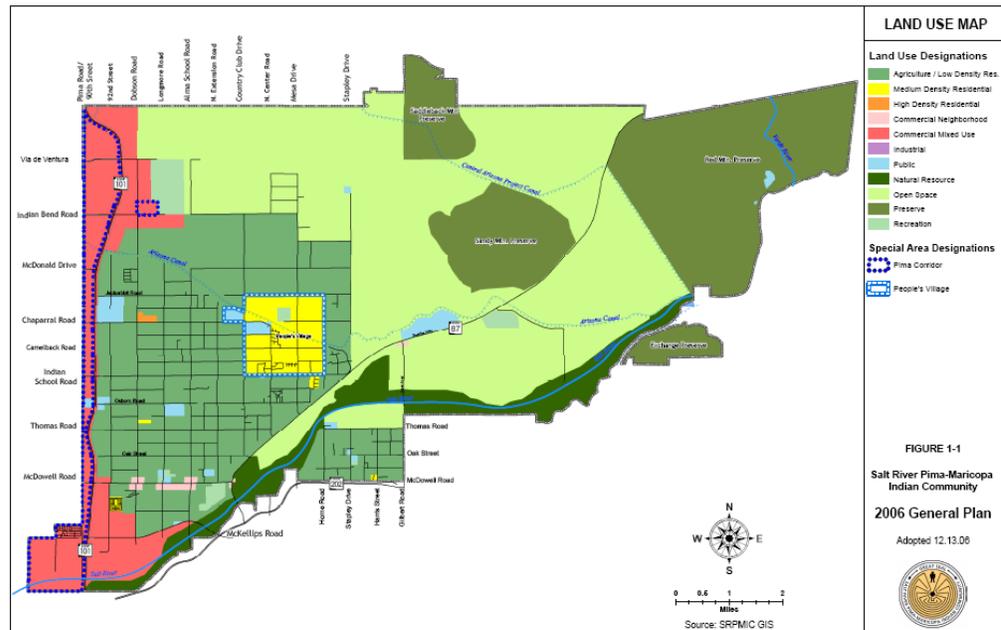


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This collection is provided by a contractor (currently Allied Waste) overseen by Public Works Sanitation.

**Figure 3.2** is the general land use map that was presented previously in **Figure 1.3**. From this map, the commercial area shaded in red is primarily the area that is serviced by the contractor. There may be some individual properties that are interspersed throughout the Community that are serviced by the contractor, but the majority is in the red-shaded area. The remaining areas on the map (non-commercial properties) are serviced by Public Works Sanitation.

*The SRPMIC's has two waste collection systems in place; one for Community wastes and one for Commercial wastes.*



**Figure 3.2 General Map Highlighting (in red) Area Serviced by Contractor**

Collection

Public Works Sanitation began the Community's residential curbside waste collection in the 1970's. Since that time, PW has developed two full-time waste collection groups:

1. The Residential Group
2. The Bulk Waste Group

Together, these two groups provide extensive waste collection services to the Community residences and Community government and school campuses.

PW also oversees the Commercial Waste Collection contractors. This includes performing contract surveillance. The following general terms for the contracted waste-collection provider apply:



1. Contracted for five-year period with review and option to renew/extend contract.
2. Contractor must dispose all collected material at the Salt River Landfill at the standard tipping rates.
3. Must provide commercial/leased properties with the opportunity to recycle.

Currently, PW does allow any leased business to use their own self-hauler with the conditions that the hauler's name is on the collection container, as well as the collection truck, and must dispose collected material, both wastes and recyclables, to the Salt River Landfill at the standard tipping rates. As of the 2009, the Wal-Mart store is the only commercial property using a self-hauler.

#### Current Collection System

Each of the over 1,375 Community residences is equipped with at least two (2) 95-gallon waste containers. One container is for household solid wastes for the landfill and a second is for co-mingled recyclable wastes. Some multi-family residences can request additional waste containers through Community Housing Authority. New to PW waste collection is the opportunity for residents to request a green-waste container that PW Bulk Waste Group will collect.

*PW addresses many of the Community's waste issues through the combination of the Residential Group and Bulk Waste Group.*

In 2004 when PW began its Bulk Waste Group, the collection services provided to the Community became quite expansive. Together the Bulk Waste Group and the Residential Waste Group address many of the waste needs of the Community. The Bulk Waste Group provides on-going services every week. The Community is divided into three (3) sections (in the east-west direction) with a team for each section. Their weekly schedule includes:

Monday - Hand Collection of wastes along roadsides and throughout SRPMIC.

Tuesday - Tractor Collection of wastes from Monday collection and larger items.

Wednesday - Responds to residential and special requests.

Thursday - Collection of appliances and tires, and (as of the summer 2009) electronic wastes (e-wastes).

Friday - Repairs and maintenance of containers and equipment.

The Residential Waste Collection provides the SRPMIC with solid waste collection and recyclables collection. Clarendon Road is the boundary for this collection. As of June 2009, this collection schedule consists of:

Monday - Collection of waste north of Clarendon Road.

Tuesday - Collection of waste south of Clarendon Road.

Thursday - Collection of recyclables north of Clarendon Road.

Friday - Collection of recyclables south of Clarendon Road.



Available Inventory & Equipment

Public Works Sanitation is comprised of fourteen (14) employees. **Table 3.1** is a list of their available equipment.

**Table 3.1. List of PW Sanitation Equipment**

<i>Residential Group</i>	
1 - front loader (30 cubic yards (cy)) truck	For commercial bins
4 - automated side loaders (22 cy) truck	For residential containers
1 - 10 cy truck	For special services (such as elders that can not move containers to street side – then small truck can go up to the residence)
1 - 8 cy truck	For special services
<i>Bulk Waste Group</i>	
4 - rear load (30 cy) truck	For bulk collection
4 - front load Caterpillar	For bulk collection

Programmatic Efficiency

Public Works Sanitation continues to strive for improvement and enhanced services to the Community. Transportation costs add up quickly in the Community where the residences are spread out over a large area. However, when new trucks with improved gas mileage came on line they had a shorter lifetime (7-years as compared to the older trucks with a 12-year lifetime). PW responded by increasing the capacity of the residential containers from 45-gallons to 95-gallons thereby reducing the number of container lifts the vehicles made ultimately reducing the wear on the new vehicles. Similar capacity increases were made to the Community building containers, from 200-gallon to 300-gallon containers.

The Bulk Waste Group has larger capacity trucks that have allowed them to reduce the number of routes from six to three in order to improve efficiency. PW is continuing to develop new path routing that will reduce customer confusion. Finally, when new waste management issues arise, PW responds with programmatic efforts to resolve these issues.

In addition to operational improvements, PW conducts random spot checks on the residential recycling containers to ensure that residents are recycling the correct material. The drivers also hand out the SRPMIC recycling brochure to residents to assist in raising awareness on which wastes are recyclable. PW shares EPNR’s outreach goals and strives to increase Community awareness on the proper disposal of recyclable material and hazardous wastes.

Public Works has recently acquired proper collection and storage containers for CFLs, ballasts, and batteries. Once these containers are full, they will be sent to a destination facility for final and proper disposal. EPNR Hazardous Waste Program will assist PW in developing SOPs and other safety procedures for proper handling and storage.

*Public Works Sanitation continues to improve and enhance waste services to the Community.*



## Existing Solid Waste Disposal Facilities

### Innovative History

Since the 1970's, the SRPMIC has had a working landfill for their waste disposal needs. These landfills have provided additional opportunities for generating revenue and creating employment for the Community. From 1972 to 1993, the Tri-Cities Landfill serviced the SRPMIC and surrounding cities. In 1993, the Salt River Landfill was opened. The SRPMIC has turned these two landfills into opportunities to create and share energy.

*The SRPMIC's has turned its landfills into opportunities to create and share energy.*

Arizona's Salt River Project (SRP), a major energy provider for the state, uses methane gas produced by decomposing landfill garbage. Landfill gas is about 50 percent methane, a harmful greenhouse gas, which if not collected, could contribute to global warming. In 1998, the SRPMIC began its partnership with SRP to capture and convert the landfill gas from the closed Tri-Cities Landfill and the operating Salt River Landfill.

In August 1999, SRP installed a thermal hybrid electric dish at the Salt River Landfill. This dish was the first of its kind to generate electricity using heat from the sun when available and landfill gas when it's not.

In 2001, the Tri-Cities Co-Generation Plant, a four-megawatt powerplant, was opened at the Tri-Cities Landfill. **Figure 3.3** is a photograph of the Tri-Cities Co-Generation Plant. This powerplant is situated on about 1-acre of the closed landfill, which contains approximately 10 million tons of decomposing waste. The plant converts methane into enough electricity to power about 2,000 homes per year. As constructed, the powerplant was expected to generate electricity for 10 – 15 years (2011-2016). However in January 2008, a three-mile gas pipeline was completed that connects the Salt River Landfill's gas collection system to the Tri-Cities Co-Generation Plant. This allows the current landfill gas to be beneficially converted to power and reduces the need for burn off, as well as extends the life of the Tri-Cities Co-Generation Plant.



Figure 3.3 Tri-Cities Co-Generation Plant



### The Salt River Landfill

Since 1993, the Salt River Landfill (SRLF) has been leading the way to solutions for the Community's solids waste problems. For the SRPMIC, the land provides for the families and the Community and at the SRLF, the land continues to provide for the Community. The SRLF is a comprehensive solid waste management facility that not only services the SRPMIC, but also the surrounding cities of Mesa and Scottsdale, the Town of Gilbert, and the Fort McDowell Yavapai Nation. Since the SRLF is an SRPMIC enterprise, all profits are directed to the Community's General Fund where they are used for the many services the Community provides its Members, including the extensive waste collection services. The SRLF also provides employment opportunities to the Community (as of May 2009, 69% of the employees are Community Members).

The SRLF consists of 200 acres of land with approximately 144 acres for landfill disposal, with an annual volume of over 600,000 tons. The remaining acreage is used for the landfill's administrative, maintenance, and scale house buildings, as well as stormwater drainage and retention, landfill gas collection and flare station, and the materials recovery facility.

The SRLF strives to recycle as much material as possible to reduce the landfill volume and extend the life of the landfill. There is a Green Waste Processing Area that receives green landscape/yard wastes as well as untreated lumber scraps. This material is ground about every four (4) to six (6) weeks, and the chipped material is continually shipped out to a secondary processing facility that screens it into three usable products. The 'overs' or bulkier material is shipped to a biomass plant and burned to make "green" energy. The fines are further processed into compost products, and the mid-size material is mulch. On average, the SRLF receives about 48,000 tons of green waste per year. This is equivalent to 8% of the landfill's annual volume. By diverting green waste from the landfill every ten (10) years, the SRFL is able to add approximately one (1) year of life to the landfill. As part of the 2009 contract, a provision is included that provides a certain percent of the mulch back to the Community.

*For every ten years of deterring green wastes from the landfill, one year is added to the life of the SRLF.*

In addition to the Green Waste Processing Area, the SRLF has a Convenience Area where SRPMIC Members, and other cities or private parties, can drop off other recyclable waste materials. The Convenience Area accepts White Goods, as shown in **Figure 3.4**.



**Figure 3.4** Part of the White Goods Collection Area



By collecting White Goods, such as refrigerators, stoves, and other large appliances, the harmful Freon is removed, appliances are dismantled, motors and compressors are removed, and all parts and metal is sent for re-smelting or reuse. The SRLF handles about 1,000 tons of metal per year through this collection, saving valuable space in the landfill. The SRLF also provides a storage area for the Community's Waste Tire Program. The landfill is also working with the Salt River Material Group (SRMG) to develop an opportunity for the SRMG to take inert material, thereby diverting this material from the valuable landfill space.

*In the spring of 2009, the SRLF began collecting and recycling e-wastes.*

As of May 2009, the SRLF began offering the Community an opportunity to dispose of its electronic wastes (E-wastes) such as televisions, computer equipment, telecom equipment, point-of-sale equipment, printing equipment, audio/visual equipment, batteries (all types - alkaline, nickel cadmium, lead acid, lithium, etc.), electronic components, miscellaneous electronic items, as well as surplus metals, wires and cables. By providing its customers and the Community with electronic recycling, not only is the SRLF providing a means of safely disposing these items, it will also be able to generate some revenue for the Community in doing so. E-waste recycling pays about \$30/ton. **Figure 3.5** is a photograph taken within a few weeks of the start of collection. Over 5,000 pounds of e-wastes were collected just within the first five (5) weeks of collection start-up.



**Figure 3.5 E-Waste Collection Container**

The SRLF celebrated Earth Day 2009 (April 22, 2009) in a unique way; they held a Ribbon Cutting Ceremony for the new bioreactor cell. On March 19, 2009, the landfill received EPA approval of its Research and Development Project to operate its Phase VI landfill as a bioreactor. This bioreactor essentially captures and recycles the cell leachate and supplements with water in order to speed up the decomposition rate. This technology has several benefits; reduces the time that the landfill generates gas and leachate; decomposes faster to allow for additional waste placement; extends the life of



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the landfill. By utilizing the bioreactor technology, the SRLF will be able to extend the life of the landfill from 2017 to 2021. **Figure 3.6** is an aerial photograph of the landfill's bioreactor and MRF building. **Figure 3.7** is a photograph from the Ribbon Cutting Ceremony, where one garbage truck from the SRPMIC, Scottsdale, Mesa, and Gilbert descended into the new cell and deposited their loads together at the bottom.



**Figure 3.6 SRLF Bioreactor and MRF** (taken from [www.saltriverlandfill.com](http://www.saltriverlandfill.com))



**Figure 3.7 Trucks from the SRPMIC and Partner Cities** (taken from [www.saltriverlandfill.com](http://www.saltriverlandfill.com))



### Recycling Facility

In January 2001, the materials recovery facility (MRF), owned and operated by River Recycling LLC (non-Community enterprise), began diverting recyclable materials from the landfill. The original agreement began January 1, 2001 and ends January 1, 2011, with the option to renew for twenty (20) years, until 2031. The facility, per the initial agreement, has an Educational Center that is used by the SRLF for training classes and for tours with numerous schools.

*The MRF is designed to separate and bale co-mingled recyclable material, thereby increasing recycling at the source.*

The MRF continually strives to improve facility efficiency. It operates 14-hours per day, with 25 crew members per 7-hour shift. This is a co-mingled operation, meaning that the recyclable wastes do not have to be separated prior to entering the facility. The waste is processed on a line of conveyer belts that separates the recyclable material as it moves through the facility. **Figure 3.8** shows the end of the line containing paper products that are baled for final transport. **Figure 3.9** is a photograph of baled plastic gallon-milk containers.



Figure 3.8 Paper Bales and Processing Belt



Figure 3.9 Crushed and Baled Plastic Gallon-Milk Containers



In 2008, the MRF diverted 84,742 tons of recyclable material from entering the SRLF, which is an average rate of 323 tons per day. The facility does experience a decrease in material in the summer months, both due to schools being out of session and decrease in vacation visitors.

The Community benefits economically from the MRF. In addition to the annual revenue generated by the lease for the facility, the MRF contributes \$1/ton towards an education fund as well as additional per tonnage revenue to the Community. The MRF must also use the SRLF for its reject material and pay the standard tipping fees.

## Solid Waste Systems Needs

While the Community's Solid Waste System is quite extensive and well-established, there are areas for improvement and opportunities. The biggest concern facing the SRPMIC is the location of the SRLF and it being land-locked and unable to expand. Even using state-of-the-art technology and improvements, the SRLF will reach the end of its lifetime around 2021, just over 10-years. The Community has no additional land to build another landfill within its boundaries. This results in the need for future planning. The Community is facing not only losing its waste disposal system; it will lose the opportunity for generating millions of dollars annually.

*The SRPMIC will be faced with planning challenges in the future when the SRLF nears the end of its lifetime.*

At the time when the SRLF closes, the Community will either need to spend money to haul their wastes to an off-reservation landfill or develop an alternative solution. One solution can utilize the waste infrastructure already in place at the SRLF for the Community and surrounding cities. This solution is the construction of a transfer station at the current SRLF location. A transfer station could be anticipated to retain possibly 50% of the current SRLF employees and generate approximately 5-10% profit. By constructing a transfer station, the current MRF would also be able to continue to provide recycling services to the Community and nearby cities, continuing to generate revenue for the Community. The Community could also consider purchasing land outside of the SRPMIC for constructing a new landfill that would continue to service the Community and surrounding cities, while retaining the opportunity to generate revenue for the Community. This is a challenge that will be addressed within this document planning period and will be updated in the next IWMP's revision.

Prior to this landfill challenge, a more timely concern within the current waste system is the handling of hazardous and universal wastes Community-wide. Extensive outreach and programmatic changes need to be made with SRPMIC personnel such as PW, educators, janitorial personnel, and others regarding the proper handling, storage, and disposal of these wastes in the Community. Additional outreach to the residents and businesses that generate these wastes is also a priority to keep this material out of the Salt River Landfill, the Community's land.





## EPNR's Solid Waste Program

*EPNR's Solid Waste Program enhances the Community's waste management activities by ensuring all Community waste issues are addressed and coordinating effort with Public Works Sanitation.*

**E**PNR's Solid Waste Program actively collaborates and coordinates with several SRPMIC departments, other EPNR programs, and the Salt River Landfill on many waste management activities. These activities include the following:

1. Solid Waste Advisory Committee
2. Illegal Dump Site Clean-up
3. Construction and Demolition Wastes
4. Inoperable Vehicle Removal Program
5. Waste Tire Removal Project
6. Earth Day and Other Special Clean-Up Events

Some of these activities are well-developed and successful activities, such as the Earth Day Clean-Up Events. Other activities require further development, such as addressing illegal dumping. The following section describes the existing programs as they are currently operating. The programmatic goals/priorities, objectives, and tentative actionable schedules are discussed in the short-term and long-term sections.

### Existing Program

#### Solid Waste Advisory Committee

The Solid Waste Advisory Committee (SWAC) was created in 2006 to bring together various SRPMIC departments and enterprises to discuss solid waste issues within the Community. The SWAC is a means to unify efforts in bringing about proper solid waste management and disposal, including source reduction and recycling.

Because solid waste has many facets, it is important to understand the needs of the Community as a whole, which will allow the committee to assist in the development of information that is necessary for the promotion of proper waste handling.



The committee is coordinated by EPNR and meets on a quarterly basis to discuss various issues of solid waste that is impacting the Community. Participation is voluntary and all Community departments that handle/manage waste are encouraged to join the SWAC. Representatives from the SRPMIC PW, Purchasing, Schools Systems, and enterprises, such as the Salt River Landfill and Casino Arizona have all been active participants.

*In June 2009, the SWAC had a successful meeting after over a year of inactivity.*

During the period of preparing this document, a SWAC meeting was held on June 11<sup>th</sup>, 2009, after being in-active during a portion of FY08 and FY09 due to staffing challenges. **Appendix B** contains the meeting information (attendance sheet and meeting minutes). It was a round-table lunch meeting that was comfortable and informal where each participant was able to provide departmental or program updates as they pertain to solid wastes. It was a successful renewal to the SWAC. Future meetings are anticipated to occur on three to six month intervals, when possible.

#### Illegal Dump Site Clean-up

There are approximately 70 known historical dump sites throughout the Community. Many of these sites are off the beaten path, along the dry river channel and in the open space, preserve areas. Many are not easily accessible, requiring planning and coordination for clean-up. These sites continue to be identified, photographed, GIS-mapped, and prioritized for clean-up. In 2007-2008, EPNR coordinated the successful clean-up of seven (7) large illegal dump sites for a total removal of approximately 1,800 tons of material, which was either recycled or properly disposed of. **Table 4.1** lists the seven clean-up locations along with the type and quantity of material removed. EPNR continues to clean-up many smaller illegal dump sites each year with the assistance from other departments.

**Table 4.1 Summary of Cleaned-Up Large Illegal Dump Sites in 2007 - 2008**

Site No.	Site Location	Description of Material	Tons Removed
1	Loop 202 , East of Hayden Road	Concrete, wood, tires	338
2	Dobson Road, North of AZ Canal	Wood, concrete, organic debris	48
3	Indian School Rd., So. of AZ Canal	Tires, autos, appliances	38
4	So. of Beeline, NE of AZ Canal	Appliances, organic & household debris	109
5	E. Thomas Rd., Loop 101	Construction & demolition debris	448
6	W. Thomas Rd., Loop 101	Concrete, wood, fill (dirt)	227
7	Southeast Corner of Pavilions	Wood pallets, organic debris, fill (dirt)	589
<b>Total</b>			<b>1,797</b>

#### Construction & Demolition Waste

EPNR partnered with SRPMIC Housing, Salt River Landfill, Engineering and Construction Services (ECS), and other Community groups on the coordinated demolition and removal of structures of concern. SRPMIC Administration identified three (3) structures of concern. EPNR Land Use Compliance (LUC) conducted Environmental Inspections of the sites and EPPD, along with the partnering team, consulted with an environmental contractor who conducted the clean-ups which



included asbestos and lead abatement and hazardous material clean-up. **Table 4.2** summarizes the three structures that were successfully demolished and sites cleared.

**Table 4.2 Summary of Demolished Structures**

Structure	Location	Cost
Former Fruit Stand	No. of McDowell Rd., East of Alma School Rd.	\$4,864
Former Native Hands	No. of McDowell Rd., West of Loop 101	\$27,211
Former Dud's Lawnmower Shop	East of Alma School Rd., So. of McDowell Rd.	\$12,909
<b>Total</b>		<b>\$44,984</b>

**Inoperable Vehicle Removal Program**

In 2006, the Solid Waste Program developed a voluntary Inoperable Vehicle Removal Program (IVRP). Through the IVRP, Community Members can call in a request for removal of an inoperable vehicle at no charge to the Community Member. After verifying vehicle ownership, the EPNR Solid Waste Program coordinates with a contractor the removal and proper disposal of the vehicle free of charge to the Community Member. The final disposal includes recycling many vehicle components. EPPD has developed an outreach brochure for this program in order to increase the Community's awareness to this free service. Over the last three (3) years, since program start-up, about a dozen vehicles have been properly removed from the Community through this program. In 2009, a total of six (6) vehicles have been removed from the Community. One goal for the EPNR's SWP is to markedly increase the number of vehicle removed in the next five-years.

**Waste Tire Removal Project**

The Solid Waste Program has developed a Waste Tire Removal Project. Similar to the IVRP, this service is free to Community Members. Community Members can drop off their worn-out and waste tires at the Salt River Landfill. On a regular basis, or as-needed, EPNR notifies the on-call service provider and requests collection and haulage of the stored tires. Public Works often collects tires throughout the Community and deposit them with the stored tires. These tires are disposed of by the contractor at the Maricopa County Southeast Waste Tire Collection Site (Mesa, AZ). This process is documented and recorded using a 'Waste Tire Disposal Manifest'. Since project inception in 2005, this project has kept more than 7,000 tires out of the landfill. **Table 4.3** has a breakdown of annual tires collected since fiscal year (FY) 2007.

*Since 2005, the Waste Tire Program has kept over 7,000 tires from entering the Salt River Landfill.*

**Table 4.3 Summary of Tire Disposal**

Fiscal Year	Tires
2007	2,500
2008	1,929
2009 (Oct. 08 – June 09)	829
<b>Total</b>	<b>5,258</b>



*The Earth Day clean-up challenge has increased its waste collection from 2 to 10 TONS in just two years.*

*Future activities will focus on empowering Community staff and Members to engage in service projects related to beautification and clean-up functions throughout the Community.*

### Earth Day Clean-Up Events

In April 2004, EPNR began its annual Earth Day celebrations. One activity that has continued to expand each year is the ‘Team-Up Clean-Up Challenge’ where Community Members, employees, and other volunteers team-up to do a Community-wide clean-up of road-side litter and debris, as well as senior residents’ home sites upon request. The following results for the last three (3) years show that the success of the clean-up events continues as well as sets records each year.

- ◆ **2007** – 300 bags of solid waste were collected in two hours and **2 tons** over two days.
- ◆ **2008** – Over 20 miles of roadway were cleaned-up with 450 bags collected and two senior resident’s home sites were cleaned-up, for a total of **6 tons** of waste collected.
- ◆ **2009** – 36 miles of roadway and four senior resident’s home sites were cleaned-up with a total coverage area of 25-acres and **10 tons** of waste collected.

## Short-Term Goals & Objectives

There are seven (7) main short-term goals or priorities identified for the Solid Waste Program. Many of the Solid Waste Program activities are developed while lacking proper documentation and actionable plans. By achieving these goals, the Solid Waste Program will have a qualitative set of documents that will assist in achieving the program’s long-term goal of developing enforcement and compliance elements. The implementation steps for each goal will be carried out in the next five years. These seven goals are:

1. Increase the number of inoperable vehicles and waste tires removed.
2. Develop comprehensive waste training program for SRPMIC departments, enterprises, schools, and residents.
3. Prepare uniform, coordinated standard operational procedures (SOPs) and planning documents.
4. Update Environmental Ordinances, Codes, and Policies regarding solid waste issues.
5. Develop Action Plan for the start-up and term-limited operation of the Community Action and Revitalization Program (CARP).
6. Develop Illegal Dump Site Clean-Up Action Plan.
7. Develop annual Community update on solid waste activities.

The following section describes each of the short-term goals in more detail including the objectives associated with each goal. Implementation steps are listed for each objective. Together the objectives and steps provide the framework for achieving each goal.



Goal 1 – Increase the Number of Inoperable Vehicles and Waste Tires Removed

In the first year of the Waste Tire Program, two (2) collection events were held. Since that time, personnel and programmatic changes have resulted in minimal removal rates of both inoperable vehicles and waste tires. The Solid Waste Program has identified the following objectives to achieve improved removal rates for both programs. The objectives and implementation steps associated with this goal are:

*The number of inoperable vehicles properly removed may be increased by using an incentive program.*

**Obj. 1. Develop a tracking and database for monitoring results.**

- Step 1. Coordinate with SRLF and contracted tire provider on proper communication regarding collection and disposal.
- Step 2. Request copies of manifests from contracted companies.
- Step 3. Develop record and manifest retention system.
- Step 4. Develop and maintain database for monitoring results.

**Obj. 2. Investigate incentive opportunities.**

- Step 1. Determine reasons for lack of participation.
- Step 2. Perform windshield survey to determine number of potential inoperable vehicles needing removal.
- Step 3. Based on the findings from Step 2, investigate possibility of piloting a test project, such as a two-month period with a monetary incentive for removal of vehicles.

**Obj. 3. Conduct pilot project.**

- Step 1. If funding allows, conduct pilot project mentioned in Obj. 2.
- Step 2. Provide adequate outreach to potential target residents in need of the waste removal services.
- Step 3. Investigate results of pilot project for opportunities for continuation.

**Obj. 4. Monitor results and expand effort if warranted.**

- Step 1. If results indicate increased rates, continue project if funds allow and investigate other potential incentive programs, such as similar incentives for dilapidated trailer removal.
- Step 2. If results show little or no improvement, increase outreach and investigate reasons.
- Step 3. Re-evaluate project and continue to investigate opportunities and possibilities.

Goal 2 – Develop Comprehensive Waste Training Program for SRPMIC Departments, Enterprises, Schools, and Residents

Through the collaborative effort with EPPD's Recycling Waste Program and Hazardous Waste Program, the Solid Waste Program will develop a comprehensive waste training program that will educate SRPMIC departments, enterprises, schools, and residents on the proper methods of handling and disposing recyclable, hazardous, and universal wastes. The objectives and implementation steps associated with this goal are:



**Obj. 1. Determine specific training needs for targeted audiences.**

- Step 1. Develop list of participating audiences.
- Step 2. Determine which specific SRPMIC entities will need unique training; i.e. PW new employees may require complete training while other PW employees may just need universal waste training.

**Obj. 2. Determine method of training.**

- Step 1. Assess all outreach material available.
- Step 2. Determine gaps in outreach.
- Step 3. Determine which outreach methods are most successful

**Obj. 3. Develop and conduct appropriate training sessions.**

- Step 1. Based on results from Obj. 2, develop appropriate training and outreach materials.
- Step 2. Conduct appropriate training sessions.
- Step 3. Investigate opportunities to improve training materials and methods.

**Goal 3 – Prepare Uniform, Coordinated SOPs and Planning Documents**

Currently, the Solid Waste Program has fully functioning programs in place that lack the proper guidance documents to enhance the facilitation of these programs. By further developing and drafting the proper documentation, the Solid Waste Program can efficiently evolve into an enforcement program. The Solid Waste Program has identified the following objectives and implementation steps:

**Obj. 1. Develop White Goods Removal SOP.**

- Step 1. Coordinate with the Public Works Sanitation and Housing Division to determine needs and how EPNR can assist.
- Step 2. Coordinate with the Salt River Landfill to determine needs and how EPNR can provide assistance.
- Step 3. Develop an approach for effectively managing white goods and scrap metals within the Community.
- Step 4. Draft Plan to include Community Outreach on program.
- Step 5. Review Plan with PW, SRLF, and other pertinent SRPMIC entities.
- Step 6. Implement Approved Plan.

**Obj. 2. Prepare uniform, coordinated SOPs.**

- Step 1. Work with EPPD Policy Analyst to develop an EPNR Standard Operational Procedure (SOP) format that is uniform, coordinated, and increases EPNR recognition.
- Step 2. Once SOP format has been selected, revise and finalize SOP for Inoperable Vehicle Removal Program.
- Step 3. Revise and finalize SOP for Waste Tire Removal Project.
- Step 4. Draft SOP for White Goods and Scrap Metal Removal.
- Step 5. Revise and finalize SOP for Illegal Dump Site Clean-Up.
- Step 6. Draft SOP for Construction and Demolition Projects.
- Step 7. Identify other SWP activities that need appropriate SOPs.

*Developing standardized SOPs is an important component for managing a waste program.*



#### Goal 4 – Update Environmental Ordinances, Codes, and Policies Regarding Solid Waste Issues

Currently, the Solid Waste Ordinance is in draft form and is in need of updating and revisions. In addition to updating current codes and ordinance, newly drafted environmental ordinances and codes may be needed to address the solid waste issues facing the Community. The Solid Waste Program has identified the following objectives to achieve this goal. The objectives and implementation steps associated with this goal are:

**Obj. 1. Update and amend Solid Waste Ordinance.**

- Step 1. Coordinate with EPPD Policy Analyst on facets of the current Solid Waste Ordinance (SWO) that require updating and/or amending.
- Step 2. Coordinate with EPPD’s Recycling Waste Program to ensure Recycling is incorporated into the revised SWO.
- Step 3. Coordinate with EPPD’s Hazardous Waste Program to ensure hazardous waste issues are incorporated into the revised SWO, including universal wastes and household hazardous wastes.

**Obj. 2. Assist in the development of new Environmental Ordinances.**

- Step 1. Develop list of possible solid waste issues that could be incorporated into new ordinances, including the prevention of illegal dumping and enforcement of illegal dumping rules.
- Step 2. Develop means to encourage Community Member involvement in the pursuit of new ordinances. Example would be to encourage Community Member input on local waste issues, such as litter control in yards, to Council.
- Step 3. Assist EPPD Policy Analyst in any and all aspects of new Environmental Ordinances as they pertain to solid waste.

#### Goal 5 – Develop Action Plan for the Start Up and Term-Limited Operation of the Community Action and Revitalization Program

EPNR and other governmental and non-governmental partners have been working together to beautify and revitalize the Community through events like the annual EPNR Earth Day “Team Up Clean-Up Challenge”. Additional projects have included interdepartmental partnerships to assess and demolish structures and abandoned buildings. These activities were initiated to promote environmental stewardship and reduce ecological hazards within the Community. EPNR has proposed developing the Community Action and Revitalization Program (CARP) as a mechanism to expand these efforts into a more long-term endeavor. EPNR has proposed to initiate CARP and head the program for two to four years until it has gained momentum and would be taken over by CDD. Funding would be secured through SRPMIC’s Capital Improvement Project (CIP) funds.

*The proposed Community Action & Revitalization Program is a solution for long-term environmental improvements.*



*Implementation will begin with the projects requiring the least resources in order to gain support.*

**Obj. 1. Develop CARP framework.**

- Step 1. Determine types of projects that will be addressed and how they differ from, as well as enhance, previously mentioned tasks such as Illegal Dump Site Clean-up, and Construction and Demolition.
- Step 2. Determine specific partnerships needed.
- Step 3. Determine realistic time frames and schedules for pilot projects and full-scale implementation projects.
- Step 4. Investigate funding opportunities.

**Obj. 2. Identify targeted sites and schedules.**

- Step 1. Project specifics need to be determined, such as identifying and selecting sites for improvements.
- Step 2. Determine coordination required, volunteers available, estimate costs and timelines for implementation.

**Obj. 3. Draft Plan.**

- Step 1. Draft plan based on Objectives 1 & 2.
- Step 2. Develop CARP Action Team to support Plan.

**Obj. 4. Implement Plan.**

- Step 1. Begin implementing the projects requiring the least amount of time, effort, or money first, illustrating success and gaining support.
- Step 2. Pursue additional funding for larger-scale implementation.

**Goal 6 – Develop Illegal Dumpsite Cleanup Action Plan**

Under Goal 3, the SOP for Cleaning-up Illegal Dumpsites will be revised. To fully address the problem with these sites, an action plan needs to be developed that provides detailed guidance on how to proceed with clean-up activities as funding allows. This goal sets out to develop an Action Plan that will make cleaning-up the Community's numerous dumpsites a feasible reality.

**Obj. 1. Identify and classify target areas.**

- Step 1. Identify approximate locations and map.
- Step 2. Identify priority dump sites.
- Step 3. Classify areas into; high priority, recent & multiple dumps, low priority, challenging to clean-up, expensive to clean-up.

**Obj. 2. Develop clean-up schedule based on classification.**

- Step 1. Develop schedule to address high priority and easiest, least expensive clean-ups.
- Step 2. Continue schedule to address more challenging and costlier clean-ups and finally include low priority sites.

**Obj. 3. Determine coordination and partnerships needed.**

- Step 1. Determine personnel assistance needed, such as coordination with PW, ECS, SRHD, and volunteer groups.
- Step 2. Determine resource assistance needed, such as assistance with waste containers from the Salt River Landfill.



**Obj. 4. Draft Action Plan.**

Step 1. Draft plan based on Objectives 1, 2, & 3.

Step 2. Include Community map with locations identified by priority.

**Obj. 5. Implement Plan.**

Step 1. Begin implementing the projects requiring the least amount of time, effort, or money first, illustrating success and gaining support.

Step 2. Pursue funding opportunities for larger-scale implementation.

**Goal 7 – Develop Annual Community Update on Solid Waste Activities**

The Solid Waste Program should present its annual accomplishments to the Community not only to highlight the Program’s efforts, but to provide additional outreach to the Community reminding them what services are available. While EPNR produces an annual Accomplishments Report, a short summary of Solid Waste Program accomplishments should be developed and presented to the Community Members increasing their awareness to the solid waste issues on the Community. This is an easily accomplished goal with few objectives and implementation steps.

*Communication is the key to successful implementation of waste programs.*

**Obj. 1. Determine information and format to be presented.**

Step 1. Identify data to be presented, such as tires removed, inoperable vehicles removed, number of dump-site cleaned-up and/or tons of debris cleared, etc.

Step 2. Identify format in which it will be presented; an article in Authm Action News, mailer to Community residents, in the EPNR annual calendar, etc.

**Obj. 2. Develop data base to track this information.**

Step 1. Developing a simple spreadsheet can effectively track the data and allow for quarterly updates to management and/or Community Council or Members.

Step 2. Develop procedure for obtaining data regularly and maintaining a current database.

**Obj. 3. Produce annual report.**

Step 1. Draft annual report.

Step 2. Distribute annual report per format identified in Objective 1.

**Obj. 4. Analyze annual data.**

Step 1. Analyze annual data (comparing years and quarters etc.) to determine areas needing additional Community outreach.

Step 2. Use data to set goals for the next year.

**Short-Term Solid Waste Program Schedule**

The short-term time period is considered the next five years. **Table 4.4**, on the following page, is a summary of the goals and objectives with an estimated short-term schedule. This schedule will be used as a tool and provide guidance for future annual workplans and budgeting.



ENVIRONMENTAL PROTECTION &  
NATURAL RESOURCES  
INTEGRATED WASTE MANAGEMENT PLAN

Table 4.4 Short-Term Solid Waste Program Schedule

Goal/Objectives	FY10	FY11	FY12	FY13	FY14
1. Increase the Number of Inoperable Vehicles and Waste Tires Removed					
<i>Develop a tracking and database for monitoring results.</i>	X				
<i>Investigate incentive opportunities.</i>	X				
<i>Conduct pilot project.</i>	X				
<i>Monitor results and expand effort if warranted.</i>	X	X			
2. Develop Comprehensive Waste Training Program for SRPMIC Departments, Enterprises, Schools, and Residents					
<i>Determine specific training needs for targeted audiences.</i>	X				
<i>Determine method of training.</i>	X				
<i>Develop and conduct appropriate training sessions.</i>	X	X			
3. Prepare Uniform, Coordinated SOPs and Planning Documents					
<i>Develop White Goods Removal SOP.</i>	X				
<i>Prepare uniform, coordinated SOPs.</i>	X	X			
4. Update Environmental Ordinances, Codes, and Policies Regarding Solid Waste Issues					
<i>Update and amend Solid Waste Ordinance.</i>	X	X	X		
<i>Assist in the development of new Environmental Ordinances.</i>	X	X	X	X	X
5. Develop Action Plan for the Community Action and Revitalization Program					
<i>Develop CARP framework.</i>	X	X			
<i>Identify targeted sites and schedules.</i>		X	X		
<i>Draft Plan.</i>		X	X		
<i>Implement Plan.</i>			X	X	X
6. Develop Illegal Dumpsite Cleanup Action Plan					
<i>Identify and classify target areas.</i>	X				
<i>Develop clean-up schedule based on classification.</i>	X				
<i>Determine coordination and partnerships needed.</i>	X				
<i>Draft Action Plan.</i>	X	X			
<i>Implement Plan.</i>		X	X	X	X



Table 4.4 continued. Short-Term Solid Waste Program Schedule

Goal/Objectives	FY10	FY11	FY12	FY13	FY14
7. Develop Annual Community Update on Solid Waste Activities					
<i>Determine information and format to be presented.</i>	X				
<i>Develop data base to track this information.</i>	X				
<i>Produce annual report.</i>	X	X	X	X	X
<i>Analyze annual data.</i>	X	X	X	X	X

## Long-Term Goals

The long-term goals for the Solid Waste Program are to:

*Communication is the key to successful implementation of waste programs.*

1. Structure the Solid Waste Program to include inspection, compliance, and enforcement components.
2. Increase the waste services to the Community thereby reducing the volume of wastes entering the Salt River Landfill.

The short-term goals of developing guidance documents, Amendments to the Solid Waste Ordinance, new Environmental Ordinances, Action Plans, SOPs, and data tracking will set the foundation for the Solid Waste Program to implement inspection, compliance, and enforcement components. The SWP will continue to pursue additional funding, increase project management, increase solid waste training opportunities to enhance skill set, and seek new opportunities to provide waste services to the Community.

## Public Education & Outreach

The SWP provides valuable services to the Community through programs such as Inoperable Vehicle and Waste Tire Removal. However, many Community Members are not aware of these services or may not know how to receive these services. EPNR distributes program brochures and provides annual information through news articles and the EPNR calendar. By developing and distributing an Annual Solid Waste Accomplishments report to the Community, the SWP will increase awareness to the services available and illustrate that they are successful programs.

By developing Action Plans, the SWP will have opportunities to develop relationships with coordinating parties, as well as to seek funding opportunities. These Action Plans will be forms of outreach to many SRPMIC entities that may be unaware of the solid waste activities and clean-up projects needed throughout the Community.

Further, the SWP continues to provide outreach to SRPMIC departments, employees, and Members on all aspects of solid waste management here in the Community, especially through the annual Earth Day Celebration and clean-up challenges.





## EPNR's Recycling Program

*In 2008, the SRPMIC furthered its commitment to the Community's waste program by fully funding a Recycling Coordinator in EPNR.*

In 2008 during EPNR's reorganization, EPPD was enhanced by the addition of a Recycling Coordinator. This newly created position was fully funded by the SRPMIC illustrating the commitment to the Community's waste control and importance placed on reducing wastes throughout the Community. As previously mentioned the Salt River Landfill is land-locked and nearing the end of its lifetime. Deterring as much recyclable material from the landfill will aid in extending the life of the landfill. By effectively implementing a Recycling Program, recyclable material can be recovered at the MRF and turned into revenue for the Community instead of being disposed of with the solid waste entering the landfill.

Since the Recycling Program is such a new program, it is in a rigorous development stage. This IWMP will serve as the main guidance document for the next several years. The Community continues to be in a dynamic growing period and the Recycling Program intends to grow and expand as the Community develops

### Existing Program

#### Clean and Green Campaign

In 2008, EPNR began the Clean and Green Campaign, a twelve (12)-month project designed to build healthy environmental habits in the Community. The basis behind the Campaign was that by changing some simple daily practices at home and at work can result in a cleaner and healthier environment today and for future generations. Each month, a new habit was introduced to participants through email and in an article printed in the Au Authum Action News.

The habits included small steps to save energy, money and create a better overall environment for the Community. Some examples included conserving water and energy, replacing harsh household cleaning agents with environmentally-friendly



products, reusing and recycling, and ceasing or reducing the use of Styrofoam, plastic bags and plastic water bottles. Participants received incentive gifts to encourage the implementation of the new monthly habits, and an average of six (6) lunch meetings were hosted to give participants a chance to discuss their successes.

*The Clean and Green Campaign is in its second year of building healthy environmental habits.*

The Campaign proved successful, with participating families reporting significant savings in their electric bills and departmental representatives spreading the word to coworkers and phasing out their regular habits for more environmentally-friendly ones. EPNR renewed the campaign again in 2009 with an invitation to all Community families, programs and businesses to sign up for the Campaign at the EPNR booth at the 2009 Earth Day Celebration.

## Short-Term Goals & Objectives

There are five (5) main short-term goals/priorities for the Recycling Program. Each goal complements the other in order to achieve the overriding programmatic goal of reducing the amount of recyclable material entering the Community's landfill. The implementation steps for each goal will be carried out concurrently to attain these goals in the next five years. These five goals are:

1. Develop and implement a Community-wide Recycling Program.
2. Measure Recycling Program Effectiveness.
3. Increase Community's and businesses' recycling awareness.
4. Increase the Community's and businesses' recycling rates.
5. Ensure Program success as a result of voluntary participation rather than ordinances and laws.

The following section describes each of the short-term goals in more detail including the objectives associated with each goal. Implementation steps are listed for each objective. Together the objectives and steps provide the framework for achieving each goal.

### Goal 1 – Develop and Implement Community-wide Recycling Program

Currently, the SRPMIC is equipped to begin developing and implementing a full-scale, comprehensive Recycling Program. The Recycling Program has identified the following objectives that will be further developed over time that when fully implemented will serve as the Community's Recycling Program. The objectives and implementation steps associated with this goal are:

#### **Obj. 1. Provide technical assistance to the Community's Waste Management Program.**

- Step 1. Coordinate with the Public Works Department on recycling issues for residential and Community programs.
- Step 2. Provide recycling expertise as part of the Solid Waste Advisory Committee (SWAC).



- Step 3. Pursue assistance and training in order to perform economic and cost/benefit analysis on recycling opportunities.
- Step 4. Investigate opportunities for new sources of recycling material to be collected.

**Obj. 2. Provide critical input on governing processes and Community permits.**

- Step 1. Incorporate recycling language into the revision of the Community's Solid Waste Ordinance.
- Step 2. Make recommendations regarding potential and future Community ordinances for the Recycling Program.
- Step 3. Provide Recycling Review of Community Development Department (CDD) Special Use Permits (SUPs) for large scale events ensuring that adequate recycling containers are available.
- Step 4. Develop voluntary initiatives – such as Buy Recycled initiative.

**Obj. 3. Address Community-wide recycling needs and inquiries.**

- Step 1. Develop curbside recycling guidelines for Community residents.
- Step 2. Respond to recycling inquiries received from the EPNR hotline and email.
- Step 3. Develop a Recycling Plan for Community businesses and/or require businesses and institutions to prepare their own recycling plans.

**Obj. 4. Coordinate recycling efforts within Community.**

- Step 1. Coordinate with Community Housing on recycling outreach and opportunities.
- Step 2. Coordinate recycling efforts with Salt River Landfill.
- Step 3. Coordinate with EPPD Hazardous Waste Program to develop opportunities to recycle hazardous materials from residences and businesses.

**Obj. 5. Serve as technical lead on emerging pollution issues.**

- Step 1. Serve as EPNR's liaison on climate change as it pertains to pollution prevention.
- Step 2. Serve as EPNR's liaison on sustainable and renewable issues.

**Obj. 6. Continually Review Outreach and Monitoring Protocols.**

- Step 1. Draft and implement an Annual Recycling Plan that includes general scope of projects, timelines, and measurable desired results.
- Step 2. Develop method to review outreach material distribution and determine effectiveness.
- Step 3. Develop method to review monitoring protocols and determine effectiveness.

*The Recycling Program is aggressively developing outreach material to increase Community's recycling rates.*



### Goal 2 – Measure Recycling Program Effectiveness

In order for the Recycling Program to be effective, there needs to be a protocol in place that allows the effectiveness to be measured and/or determined. The objectives and implementation steps associated with this goal are:

*The key to success is to have measurable system in place.*

**Obj. 1. Develop protocol between EPPD, PW, MRF, and SRLF that effectively exchanges the Community’s recycling information.**

Step 1. Specify information needed.

Step 2. Create strong communication link between all parties.

Step 3. Develop method and schedule of data exchange.

**Obj. 2. Develop an analytical database for reports.**

Step 1. Determine information needing to be monitored.

Step 2. Determine monitoring frequency.

Step 3. Determine reporting frequency and recipient list.

Step 4. Set up database for appropriate and desired data.

**Obj. 3. Compile baseline conditions.**

Step 1. Obtain past data determined in Obj. 2.

Step 2. Generate and distribute data and reports.

**Obj. 4. Track Program effectiveness.**

Step 1. Input data determined in Obj. 2.

Step 2. Monitor changes in recycling rates.

Step 3. Determine effectiveness of Program based on changes in recycling rates.

**Obj. 5. Report Program effectiveness.**

Step 1. Generate reports determined in Obj. 2.

Step 2. Present results and statistics to the Department Director, Tribal Government Administration, and tribal Council as necessary.

### Goal 3 – Increase Community and Business Recycling Awareness

Currently, the Recycling Program has developed a rigorous outreach and educational component in order to increase the recycling rates of the Community and is prepared to take outreach to the next level. Thus far, the Recycling Program has focused on increasing Community members’ recycling awareness and will increase that goal to include tribal entities and businesses.

**Obj. 1. Continue extensive current outreach activities.**

Step 1. Publish quarterly articles in the Au Authm Action newspaper.

Step 2. Develop, purchase, and distribute recycling promotional items that can be reused or are made from recyclable material.

Step 3. Continue the themes and messages from the Clean and Green Campaign.

Step 4. Develop recycling page for annual EPNR calendar.

Step 5. Maintain recycling brochure with current and new information when needed/appropriate.



*The Recycling Program intends to tap into the creativity of the Salt River High School art students to develop unique outreach material.*

**Obj. 2. Develop new outreach material.**

- Step 1. Develop a Community-specific recycling book that explains aspect of waste management, such as where the Community's wastes go, how the Salt River Landfill works, and the benefits of recycling.
- Step 2. Develop culturally appropriate recycling outreach materials, especially incorporating Piipaash/Maricopa language.

**Obj. 3. Increase recycling education and training to the Community, enterprises, schools, and Tribal Government.**

- Step 1. Post recycling events or outreach information on the intranet website for increased accessibility for the Community.
- Step 2. Include recycling training as part of Community's new employee training.
- Step 3. Conduct follow-ups with Community programs on recycling efforts.

**Obj. 4. Develop Recycling Plan for leased lands/businesses.**

- Step 1. Coordinate with EPPD Hazardous Waste to determine business outreach needs (many hazardous materials can be recycled).
- Step 2. Conduct waste surveys on leased lands/businesses to determine business recycling needs.
- Step 3. Coordinate with facilities management, Public Works, and contracted waste haulers on recycling options available to the businesses.
- Step 4. Develop a hard-copy document that can be distributed and used to educate and provide guidance on recycling options for leased lands and businesses.

**Goal 4 – Increase Community and Business Recycling Rates**

Once Goals 1 and 2 are well underway, the Recycling Program will gage its efforts by the change in recycling rates. It will require time and dedication to see noticeable increases in the Community's recycling rates. But by remaining dedicated to the goal, the recycling rate will increase in time. The objectives and implementation steps associated with this goal are:

**Obj. 1. Increase opportunities for recycling for the Community.**

- Step 1. Increase the number of recycling containers in public places, casinos, and government buildings.
- Step 2. Explore options for providing residents recycling waste containers for inside their homes, making it easier to separate and carry to the curbside container.
- Step 3. Investigate opportunities for recyclable materials and inform appropriate parties. (Example – broken concrete barricades can be reused as benches along river projects or parks.)



**Obj. 2. Inform the Community on the benefits of recycling.**

- Step 1. Develop outreach material that relates recycling to tangible benefits for the Community, such as increased revenue from the MRF.
- Step 2. Investigate opportunities for contests and incentives that give back to the Community as a result of recycling.

**Goal 5 – Ensure Program Success as a Result of Voluntary Participation**

EPNR believes that the recycling program will only be successful if it results from voluntary participation and is not enforced by ordinances and laws. This goal will be achieved by the following objectives and implementation steps:

*As evident from Earth Day’s clean-up challenges, the SRPMIC has numerous and generous volunteers.*

**Obj. 1. Increase opportunities for voluntary participation for the Community.**

- Step 1. Increase participatory events for the Community – such as collection events.
- Step 2. Develop annual recycling event that could take place around Earth Day.

**Obj. 2. Create official volunteer program.**

- Step 1. Explore opportunity to develop a Recycling Group comprised of volunteers throughout the Community lead by EPNR. It could consist of a few teachers, representatives from the casinos and from Community groups, interested Community members, and Community staff.
- Step 2. The Recycling Group would meet every few months to explore recycling opportunities within their classrooms, places of business or groups and exchange information.

**Short-Term Recycling Schedule**

The short-term time period is considered the next five years. The ideal scenario is to have these five goals near completion by the end of this period. It is an aggressive goal, but a realistic one. Most of these goals will be achieved by their own momentum, once they are started. **Table 5.1** is a summary of the goals and objectives with an estimated short-term schedule. This schedule will be used as a tool and provide guidance for future annual workplans and budgeting.

Most goals and objectives will be carried out as on-going tasks and continue throughout the five-year period, or after it is begun. Some tasks are presented with later estimated start times as a result of limited personnel resources.



ENVIRONMENTAL PROTECTION &  
 NATURAL RESOURCES  
 INTEGRATED WASTE MANAGEMENT PLAN

**Table 5.1 Short-Term Recycling Program Schedule**

Goal/Objectives	FY10	FY11	FY12	FY13	FY14
1. Develop and Implement Community-wide Recycling Program					
<i>Provide technical assistance to the Community's Waste Management Program.</i>	X	X	X	X	X
<i>Provide critical input on governing processes and Community permits.</i>	X	X	X	X	X
<i>Address Community-wide recycling needs and inquiries.</i>	X	X	X	X	X
<i>Coordinate recycling efforts within Community.</i>	X	X	X	X	X
<i>Serve as technical lead on emerging pollution issues.</i>	X	X	X	X	X
<i>Continually review outreach and monitoring protocols.</i>	X	X	X	X	X
2. Measure Recycling Program Effectiveness					
<i>Develop protocol between EPPD, PW, MRF, and SRLF that effectively exchanges the Community's recycling information.</i>	X				
<i>Develop an analytical database for reports.</i>	X				
<i>Compile baseline conditions.</i>	X				
<i>Track Program effectiveness.</i>	X	X	X	X	X
<i>Report Program effectiveness.</i>	X	X	X	X	X
3. Increase Community and Business Recycling Awareness					
<i>Increase opportunities for recycling for the Community.</i>	X	X	X	X	X
<i>Inform the Community on the benefits of recycling.</i>	X	X			
<i>Increase recycling education and training to the Community, enterprises, schools, and Tribal Government.</i>	X	X			
<i>Develop Recycling Plan for leased lands/businesses.</i>	X	X			
4. Increase Community and Business Recycling Rates					
<i>Increase opportunities for recycling for the Community.</i>	X	X	X	X	X
<i>Inform the Community on the benefits of recycling.</i>	X	X			
5. Ensure Program Success as a Result of Voluntary Participation					
<i>Increase opportunities for voluntary participation for the Community.</i>	X	X	X	X	X
<i>Create official volunteer program.</i>	X	X			



## Long-Term Goals

The long-term goals for the Recycling Program are to:

1. Increase the recycling rates throughout the Community and make recycling commonplace in the Community's facilities, homes, and businesses.
2. Continue to find new and innovative opportunities to recycle materials as well as opportunities to generate revenue.
3. Implement sustainable technologies throughout the Community thereby reducing energy consumption and wastes generation.

*The main long-term goal is to instill recycling as a common practice throughout the SRPMIC.*

The short-term goals of increasing awareness and training along with tracking recycling rates will allow the Recycling Program to determine if its efforts are resulting in increases in recycling, the ultimate long-term goal of the Recycling Program. Amendments to the Solid Waste Ordinance and any newly developed Environmental Ordinances will have recycling guidance included, thereby providing an enforceable opportunity if the voluntary structure does not produce adequate recycling.

## Public Education & Outreach

Over the past year, since its inception, the Recycling Program has developed an extensive outreach practice. Through the use of funds made available from the revenue generated from the MRF, the Recycling Program has been able to procure unique incentive items for the Community participants of the Earth Day activities and Clean and Green Program. It has also developed a recycling brochure for Community Members advising them on proper material that is recyclable at the MRF as well as Recycling in the Workplace brochure packet.

As a result of the Recyclable and Hazardous Waste Inventory conducted in the summer 2009, the need for additional visual reminders has prompted the Recycling Program to develop a set of decals for containers and posters to be placed near recycling containers, reminding the Community to use the recycling containers and the proper material to recycle. The Recycling Program is investigating additional opportunities to develop outreach material for children and households that will incorporate the O'Odham and Piipaash languages.

Finally, the Recycling Program will investigate opportunities for giving training sessions, workshops, and presentations to teachers and educational personnel, so that recycling education can begin in the classroom.





## EPNR's Hazardous Waste Program

*Through the Hazardous Waste Program, EPNR provides necessary services to protect the Community's health and natural environment.*

Prior to 2008, EPNR's hazardous waste management was primarily focused on the proper use and disposal of pesticides throughout the Community. During EPPD's reorganization in 2008, EPNR's Hazardous Waste Program (HWP) was formed. Although the program is currently in its strategic programmatic planning stage, it has already initiated changes that improve how the Community handles its hazardous material. The next several years will be critical for developing the foundation and framework for a successful HWP.

### Existing Program

#### Community's Emergency Response

EPNR's Hazardous Waste Program plays an important support-role in the Community's Emergency Response. There are several types of emergencies that require trained responders to arrive and assess the situation. The First Responders for the Community are the Fire Department and Police Department. These trained professionals can assess the emergency and address immediate needs. The First Responders can conduct search and rescue, law enforcement, emergency management, emergency medical assistance and transport, as well as assess situations involving potential explosives or hazardous materials.

After conducting a complete assessment of the emergency, the First Responder will determine if possible hazardous materials (hazmat) are involved, requiring certified and trained professionals to properly clean-up the material. Upon determination of hazmat clean-up, the First Responder will manage the situation and notify the Hazardous Waste Program (HWP) that there is an emergency requiring hazmat clean-up. Depending on the potential threat of the hazmat (time-sensitivity of the clean-up), the



HWP will either visit the site prior to contacting the on-call service provider or call the provider immediately to coordinate the hazmat clean-up

The HWP is the point of contact between the Community and the hazmat clean-up service provider. The HWP maintains and oversees the annual contract with the service provider to ensure there is no lapse in the Community's emergency response. As this is an annual contract, the provider can change during this planning period (the next five years). Therefore **Appendix D** contains the current provider's contact information that should be updated annually upon contract continuation or changes. At the time of preparing this IWMP, Envirosolve Inc. (Phoenix, AZ) is the on-call service provider.

#### SRPMIC Hazardous Waste Round-Up

*The June 2009 Hazardous Waste Round-Up successfully removed 460 pounds of hazardous solids and 2,094 gallons of liquid wastes from the Community.*

On June 19, 2009, the HWP coordinated a hazardous waste round-up for SRPMIC departments such as Public Works and Salt River Housing Division (SRHD). This clean-up event resulted in the successful removal of 460 pounds of hazardous waste solids and 2,094 gallons of non-hazardous and hazardous liquid wastes (flammables, corrosives, waste paints, isocyanates, aerosols, diesel fuel, used oil, pesticides) from these two departments. **Figures 6.1, 6.2, and 6.3** are some photographs that capture the event. The event was conducted by the on-call provider, Envirosolve Inc., at a cost of \$17,000. Additional photos can be found in **Appendix E**.



Figure 6.1 SRHD Participation



Figure 6.2 Portion of Material Removed



Figure 6.3 Characterization of Materials for Proper Disposal



*The July 2009  
Departmental  
Hazardous Waste  
Round-Up successfully  
removed 19,000  
pounds of hazardous  
material and over 360  
fluorescent and HID  
lamps from the  
Community.*

A second SRPMIC Departmental Round-Up event occurred July 31, 2009. It cost \$23,695.50 for two days of inventorying all Community sites and four days of pick-ups. The total waste removed included:

- ♦ 147 cubic yards of drums, containers and lab packs.
- ♦ 15 cubic yards of hazardous and non-hazardous paints.
- ♦ Approximately 360 fluorescent and HID lamps.
- ♦ Approximately 19,000 pounds of material.

Hazardous material was removed from Salt River Day School building, Public Works, Engineering and Construction Services (ECS) maintenance yard, Housing Division maintenance yard, Salt River High School (SRHS), Early Childhood Education Center (ECEC), Secured Vehicle Storage, Salt River Community Center, the former Pavilion Lakes Golf Course, the former Cypress Golf Course, and Red Mountain Trap and Skeet.

## Short-Term Goals & Objectives

There are four (4) main short-term goals/priorities for the Hazardous Waste Program:

1. Coordinate and initiate annual Community-wide Household Hazardous Waste (HHW) Collection Events.
2. Increase training for EPNR staff and other SRPMIC employees on hazardous material response and handling and other applicable issues.
3. Increase awareness (for Community Members, employees, and businesses) regarding proper disposal of hazardous and universal wastes (UW) in homes, public, and workplaces.
4. Develop framework and expand SOPs for Hazardous Waste Inspection, Compliance, and Enforcement.

The following section further describes each of the short-term goals along with the objectives and implementation steps needed to achieve each goal.

### Goal 1 – Coordinate Household Hazardous Waste Collection Events

The first official HHW Collection Event was held Saturday November 7, 2009. It successfully resulted in the collection and proper removal of 23 inoperable vehicles from the Community along with household hazardous material removal at a cost of \$7,700. The objectives and implementation steps associated with this goal are:

#### **Obj. 1. Determine resources needed for event and schedule event based on availability.**

Step 1. Contact partners in event; Public Works, Fire Department, Police Department, Salt River Landfill, EPNR staff, Cultural Preservation Program, Salt River Community Housing Division, etc.

*Conducting annual  
HHW Collection Events  
is a critical goal for  
keeping these wastes out  
of the Salt River  
Landfill.*



Step 2. Determine if any complimentary activities can occur simultaneously, like a thermometer swap – provide digital thermometer for an old mercury-containing thermometer.

Step 3. Determine any special needs – assistance to seniors or disabled residents.

Step 4. Determine event needs – water, tents, personnel, etc.

Step 5. Schedule event with on-call provider and all participants. (The first official event is scheduled for Saturday November 7, 2009).

**Obj. 2. Increase Community residents' awareness on common hazardous and universal wastes in the households that require proper disposal.**

Step 1. Develop Outreach Plan that should include a series of advertisements and articles in the Community newspaper, Au Authm Action, leading up to the event.

Step 2. Develop mailer or flyer for distribution to the Community.

Step 3. Develop, print, and display poster advertising date of event.

**Obj. 3. Apply lessons learned for successful annual events.**

Step 1. Track event numbers and statistics.

Step 2. Interview personnel to determine challenges and obstacles.

Step 3. Develop annual planning committee, possibly the SWAC to provide technical support for events.

**Obj. 4. Report prompt results.**

Step 1. Follow-up event with short technical memo for participating departments to provide successes and challenges encountered.

Step 2. Conclude public participation with a final article in the newspaper informing the Community on the success of event, thus increasing Community awareness and future participation.

**Goal 2 – Increase Training for EPNR Staff and Other SRPMIC Employees**

EPNR is committed to its initiative of having a multi-talented staff that is cross-trained within its internal programs. This goal is in line with that initiative by ensuring that EPNR staff and other interested SRPMIC employees receive valuable hazardous response training. The Hazardous Waste Program has identified the following objectives to achieve this goal. The objectives and implementation steps associated with this goal are:

*Providing hazardous response training to SRPMIC employees will enhance the Community's technical assets.*

**Obj. 1. Investigate unique funding opportunities to conduct training.**

Step 1. Investigate other departmental budgets on opportunities for cost-sharing multi-departmental training such as Hazardous Waste Operations and Emergency Response (HAZWOPER) training.

Step 2. Investigate potential grant funds for training.

**Obj. 2. Determine participating personnel and needed training sessions.**



Step 1. Investigate which personnel need HAZWOPER training and what type of training (8-hour, 24-hour, or 40-hour).

Step 2. Investigate potential interest in additional training, such as Community Emergency Response Teams (CERT) that would volunteer during a Community emergency.

**Obj. 3. Coordinate training sessions.**

Step 1. Plan and schedule all training sessions.

Step 2. Maintain record of trainees and include in Emergency Plans.

Step 3. Develop refresher course schedule to keep trainees current.

**Goal 3 – Increase Awareness Regarding Proper Disposal of Hazardous and Universal Wastes (UW)**

The outreach effort and increased awareness associated with Goal 1, the HHW Collection Event, will aid in achieving this goal of increasing hazardous and universal waste awareness. The HWP will continue its goal to increase awareness regarding proper handling and disposal of hazardous and universal wastes throughout the SRPMIC, including Members, employees, and businesses. The following objectives and implementation steps associated with this goal are:

*Increased awareness regarding proper hazardous waste disposal is needed to keep these wastes out of the Salt River Landfill.*

**Obj. 1. Address gaps in current outreach activities.**

Step 1. Assess current outreach methods in place.

Step 2. Identify gaps in current methods.

Step 3. Identify specific audience in need of additional outreach.

Step 4. Develop appropriate outreach methods, such as Hazardous Waste Guidebook, and target gaps and audience.

**Obj. 2. Increase program's visibility.**

Step 1. Follow-up all collection events with newspaper articles highlighting the event's successes.

Step 2. Continue SRPMIC departmental collaboration and assistance.

Step 3. Develop additional outreach opportunities to the Community Members.

**Obj. 3. Develop training session for SRPMIC Departments.**

Step 1. In collaboration with Goal 2, increasing training, investigate need to develop EPNR training session on new SOPs for handling and proper disposal of hazardous wastes.

Step 2. Investigate opportunity to train janitorial staff, maintenance staff, as well as Public Works personnel and new employees.

Step 3. Assist other departments in developing SOPs for proper hazardous wastes handling, storage, and disposal.

**Obj. 4. Continue to attend a variety of Community meetings.**

Step 1. Provide updates and collection events successes at Council meetings as well as general public meetings.

Step 2. Explore opportunities for participating in school presentations.



**Goal 4 – Develop Framework for Hazardous Waste Inspection, Compliance, and Enforcement**

One of the long-term goals of the HWP is to have a hazardous waste permitting system in place that requires generators to register with the Community similar to the required state registration. Developing a framework for inspection, compliance, and enforcement in the short-term will set the foundation for achieving this long-term permitting system goal. The following objectives and implementation steps associated with this goal include:

**Obj. 1. Assist EPPD Policy Analyst in the development of Environmental Ordinances and Codes.**

- Step 1. Identify changes in current Solid Waste Ordinance that would address the proper handling and disposal of hazardous and universal wastes.
- Step 2. Recommend hazardous waste language for new Environmental Ordinances and Codes.
- Step 3. Pursue initiatives that would reduce the use of hazardous wastes throughout the Community.
- Step 4. Improve guidance and assistance on codes, policies, ordinances, compliance, etc.

**Obj. 2. Identify generators of hazardous and universal wastes.**

- Step 1. Revisit the preliminary results from the *Recyclable and Hazardous Waste Inventory (September 2009)* that indicated only a handful of generators exist in the Community.
- Step 2. Identify SRPMIC departments and enterprises that generate hazardous and universal wastes (H&UW).
- Step 3. Identify lease-held properties that generate H&UW.

**Obj. 3. Conduct generator visits.**

- Step 1. Develop point of contact for each generator.
- Step 2. Determine type and quantity of records/manifests maintained at the facility and retention time of records.

**Obj. 4. Develop Request for Annual Reporting.**

- Step 1. Determine appropriate and specific information the HWP wants to collect and track.
- Step 2. Develop and distribute Request for Annual Reporting.
- Step 3. Develop procedures to follow-up on requests.

**Obj. 5. Develop database to track this information.**

- Step 1. Developing a simple spreadsheet can effectively track the data and allow for annual updates to management and/or Community Council or Members.
- Step 2. Develop procedure for obtaining data regularly and maintaining a current database.
- Step 3. Produce and analyze annual data to determine if a permitting system is warranted in the long-term.
- Step 4. Use data to establish inspection and monitoring schedules.

*This goal would allow the Community to track the hazardous waste generators within the SRPMIC.*



Short-Term Hazardous Waste Program Schedule

The short-term time period is considered the next five years. **Table 6.1** is a summary of the goals and objectives with an estimated short-term schedule. Many of these activities are on-going tasks that will continue to be improved upon and carried out annually. This schedule will be used as a tool and provide guidance for future annual workplans and budgeting.

**Table 6.1 Short-Term Hazardous Waste Program Schedule**

Goal/ <i>Objectives</i>	FY10	FY11	FY12	FY13	FY14
1. Coordinate Household Hazardous Waste Collection Events					
<i>Determine resources needed for event and schedule event based on availability.</i>	X				
<i>Increase Community residents' awareness on common hazardous and universal wastes in the households that require proper disposal.</i>	X	X	X	X	X
<i>Apply lessons learned for successful annual events.</i>	X	X	X	X	X
<i>Report prompt results.</i>	X	X	X	X	X
2. Increase Training for EPNR Staff and Other SRPMIC Employees					
<i>Investigate unique funding potential to conduct training.</i>	X				
<i>Determine participating personnel and training sessions needed.</i>	X				
<i>Coordinate training sessions.</i>	X	X	X	X	X
3. Increase Awareness Regarding Proper Disposal of Hazardous and Universal Wastes (UW)					
<i>Address gaps in current outreach activities.</i>	X	X			
<i>Increase program's visibility.</i>	X	X	X		
<i>Develop training session for SRPMIC Departments.</i>	X	X	X		
<i>Continue to attend a variety of Community meetings.</i>	X	X	X	X	X
4. Develop Framework for Hazardous Waste Inspection, Compliance, and Enforcement					
<i>Assist EPPD Policy Analyst in the development of Environmental Ordinances and Codes.</i>	X	X			
<i>Identify generators of hazardous and universal wastes.</i>	X				
<i>Conduct generator visits.</i>	X		X		X
<i>Develop Request for Annual Reporting.</i>	X	X	X	X	X
<i>Develop database to track this information.</i>	X	X	X	X	X

*Many of the HWP tasks occur annually with continued adaptations.*



## Long-Term Goals

The long-term goals for the Hazardous Waste Program are to:

1. Structure the Hazardous Waste Program as a permitting system with enforcement and compliance (E&C) elements.
2. Develop the Hazardous Waste Program to be a tiered program with supporting staff fulfilling E&C needs.
3. Reduce the amount of hazardous and universal wastes entering the Salt River Landfill.

*The HWP's main long-term goal is to have a permitting system in place, similar to current required state permits.*

The short-term goals of increasing awareness and training along with data reporting and tracking will set the foundation for the Hazardous Waste Program to become an E&C Program, with the possibility of implementing a permitting system if warranted. Amendments to the Solid Waste Ordinance and any newly developed Environmental Ordinances will have inspection, compliance, and enforcement elements incorporated into the policies, such that the HWP can carry out the proper E&C. Since the HWP is starting from the ground up, it will be essential to develop the program structure to incorporate support staff that can conduct the enforcement and compliance aspects of the program. Hosting collection events and training workshops are directed at reducing the amount of hazardous material entering the Salt River Landfill.

## Public Education & Outreach

The HWP has developed a series of brochures that provide guidance on proper disposal of common household hazardous material and universal wastes. The three (3) brochures in the current series include:

1. Pesticide Safety in the Home – provides tips for proper disposal of excess pesticides and includes a list of pesticides and hazardous wastes.
2. Recycling Household Compact Fluorescent Lamps (CFLs) – provides disposal options for CFLs and other common household items that contain mercury (thermometers, thermostats, and irons).
3. Universal Wastes in the Workplace – defines universal wastes, along with some examples, and provides guidance on proper disposal methods.

In the next few years, the HWP will focus the majority of its outreach on training Community employees on proper handling and disposal of hazardous and universal wastes. It will continue to develop innovative outreach material for the Community residents and its businesses to ensure that steps are taken to keep these hazardous materials from entering the Salt River Landfill. The HHW Collection Events will be highly advertised and results tabulated to ensure that, as in the Earth Day Team-Up Clean-Up Challenge, participation increases each year.





## EPNR's Brownfields Program

*The Integrated Waste Management Plan would not be complete without including EPNR's Brownfields Program.*

**B**y definition, a brownfield has the presence or potential presence of a hazardous substance, pollutant, or contaminant that requires clean-up prior to appropriate reuse. EPNR's Brownfields Program (or "Tribal Response Program") is included in the Integrated Waste Management Plan because it is a critical component in addressing the Community's hazardous wastes.

*EPA created CERCLA to address and assist in the clean-up of brownfields.*

In 1980, the EPA's Office of Solid Waste and Emergency Response defined brownfield sites as "real property where the reuse, expansion, or redevelopment may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant", and created the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) to address such brownfields through cooperative agreements. Brownfields can take many forms, from abandoned warehouses and gas stations to closed mining operations.

Substantial funds were made available for the assessment and cleanup of brownfields, thus giving CERCLA its second name, 'Superfund'. By the 1990s it became evident that the Superfund was not sufficient enough to fund all the brownfields requiring clean-up. In 1995, EPA officially created their Brownfields Program with its foundation built on providing grants for assessment and clean-up. In 2002, the passage of the Brownfields Amendments authorized (among other things) two main sources of funding that may assist tribes in revitalizing contaminated land:

1. Section 128(a) State and Tribal Response Program Funding
2. Section 104(k) Competitive Grant Program Funding – Assessment, Revolving Loan Fund, and Clean-up Grants (ARC Grants)



The objectives of the brownfield assessment and cleanup cooperative agreements are to build programs, develop expertise and technical skills, and focus on the following:

1. To leverage additional funding and resources to meet gaps in funding and technical assistance.
2. To inventory, characterize, assess, and conduct planning and community involvement related to brownfield sites.
3. To coordinate, manage, and oversee Phase I and Phase II assessments in order to streamline the assessment process and reduce the costs associated with characterizing a property.
4. To increase Community awareness and education while preserving cultural traditions.
5. To develop ordinances, awareness, and training protocols for the prevention of future brownfields.

EPA has developed four (4) elements required of all EPA-funded Tribal Response Programs, which in essence include the previously mentioned objectives. These elements include:

1. Timely survey and inventory of brownfield sites.
2. Oversight and enforcement authorities or other mechanisms and resources to ensure that a response action will protect human health and the environment.
3. Mechanisms and resources to provide meaningful opportunities for public participation.
4. Mechanisms for approval of a clean-up plan and verification and certification that the clean-up is complete.

## Existing Program

The Community has had the unique opportunity to tap into three federal funding programs to address the Community's two (2) brownfield sites, the closed Cypress Landfill and the Feedlot Site.

### Cypress Landfill

The Cypress Landfill, located north of the Salt River, just south of the closed Cypress Golf Course, was approximately 200 acres with close to 120 acres (60%) of environmentally impaired land. The Community was awarded \$400,000 of CERCLA 104(k) funds to assess and clean-up the landfill. The clean-up effort began in 2003 and was completed in 2005.

*In 2005, the SRPMIC successfully completed the \$400,000 on-site investigation and clean-up of the Cypress Landfill.*

The SRPMIC involved Community Members and numerous departments throughout the process. Extensive notice was provided not only by using the Community newspaper, but also by targeting the Community Members within a 1.5 mile area with additional mailings.



The clean-up of the Cypress Landfill resulted in the following environmental outcomes/benefits:

1. 2,200 old tires were removed and properly disposed.
2. 7.75 tons of metals were removed and recycled.
3. 580 tons of waste were removed and properly disposed (See **Figures 7.1** and **7.2**).
4. An underground fire was extinguished.
5. The landfill was capped with clean soil and is now suitable for redevelopment.
6. This clean-up project contributed to the Community receiving the 2005 EPA Award for Environmental Excellence.
7. The successful and timely completion of this project resulted in a positive performance evaluation for the Community and contributed to the second award of federal funding for the assessment and clean-up of the Feedlot Site.



Figure 7.1 Cypress Landfill Drums Before



Figure 7.2 Cypress Landfill Drums Removed

#### Feedlot Site

The Feedlot Site is approximately 160 acres formerly operated by Texzona Cattle Feeders from 1963 to 1990. At peak capacity, the feedlot held up to 60,000 head of cattle in more than 200 fenced lots. It was estimated to have generated and accumulated 129,000 cubic yards of cow manure bio-waste. The feedlot closed in 1990 and most of the facility was dismantled in 1991. Because of the high potential for groundwater contamination, the Community was awarded Clean Water Act Nonpoint Source 319 funds, for 2003 – 2005, to assess the extent of soil and groundwater pollution, begin clean-up, and draft a proposal and apply for additional federal funds to continue the assessment and clean-up. In 2006, the Community was awarded \$550,000 through the EPA Brownfields Program to assess, characterize, clean-up, and remediate the site. Project effort began in 2007 and is planned for completion in 2011.

*In 2006, EPA awarded the SRPMIC \$550,000 to assess and clean-up the 160 acre feedlot site.*



A Phase I Environmental Site Assessment (ESA) was completed in 2008 to identify areas of the site that may have been impacted by the operation. Records review, historical research and interviews were conducted to develop the scope of the Phase II analysis. Two existing production wells were redeveloped into monitoring wells. **Figure 7.3** shows one of these monitoring wells.

Existing structures were surveyed for the presence of asbestos. Geophysical analysis was initiated to locate buried containers and other metal wastes at the northwestern section of the project area. The EPA-approved Sampling and Analysis Plan (SAP) that outlined scientifically accepted methods and protocols for collecting and analyzing soil and groundwater samples was carried out as the Phase II ESA to further characterize existing site conditions.



**Figure 7.3** Monitoring Well

Soil and groundwater sampling has been completed and is being evaluated to draft the clean-up plan and end-use plan. Upon completion of the Feedlot clean-up, the following long-term benefits are anticipated:

1. Reduced health risks for the Community.
2. Improved and protected groundwater quality.
3. Created green-space.
4. Additional 160-acres of useable land within the Community.
5. Provide suitable areas for economic development, home sites and other potential uses.



## Short-Term Goals & Objectives

There are three (3) main short-term goals for the Brownfields Program. The implementation steps for each goal will be carried out to attain these goals in the next five years. These three goals are:

*EPNR's Brownfields Program has three main short-term goals.*

1. Complete clean-up and revitalization of the Feedlot Site
2. Complete survey and inventory of Community's potential brownfields.
3. Develop and implement a Tribal Response Program.

The following section describes each of the short-term goals in more detail including the objectives associated with each goal. Implementation steps are listed for each objective. Together the objectives and steps provide the framework for achieving each goal.

### Goal 1 – Complete Clean-up and Revitalization of the Feedlot Site

Currently, the Feedlot Site is nearing the completion of the assessment phase. Once the site is completely assessed the following objectives will be carried out to clean-up the site. The objectives and implementation steps associated with this goal are:

#### **Obj. 1. Develop Clean-up Plan.**

- Step 1. Completely evaluate all site data.
- Step 2. Determine if additional analysis or data is warranted.
- Step 3. Develop clean-up alternatives based on findings.
- Step 4. Select appropriate clean-up alternative.
- Step 5. Review and approve Clean-up Plan.

#### **Obj. 2. Develop End-Use Plan.**

- Step 1. Completely evaluate all site data.
- Step 2. Develop alternative end-uses based on data and Clean-Up Plan.
- Step 3. Select appropriate end-use(s).
- Step 4. Review and approve End-Use Plan.

#### **Obj. 3. Implement Clean-up.**

- Step 1. Ensure all Health and Safety Plans (HASPs) are complete and relevant to site conditions.
- Step 2. Implement clean-up according to approved Plan.

#### **Obj. 4. Implement End-Use.**

- Step 1. Verify that the clean-up is complete.
- Step 2. Implement end-uses.
- Step 3. Draft final close out report.
- Step 4. Notify Community about clean-up and end-use status.



## Goal 2 – Complete Survey and Inventory of Community’s Potential Brownfields

Using lessons learned from assessment and efforts expended at the Feedlot Site, other potential brownfield sites will be surveyed and inventoried throughout the Community. The objectives and implementation steps associated with this goal are:

**Obj. 1. Determine challenges and obstacles (if any) encountered during the Feedlot Site assessment.**

Step 1. Review document notes and reports.

Step 2. Review field data notes and reports.

Step 3. Discuss with the Feedlot Site Project Manager challenges encountered during assessment process.

**Obj. 2. Develop overall Survey Plan.**

Step 1. Develop preliminary map of potential brownfield sites, along with possible obstacles at each site.

Step 2. Develop reasonable time schedule to survey sites based on locations and obstacles.

Step 3. Draft basic protocols for carrying out survey.

Step 4. Draft Survey Plan.

**Obj. 3. Implement Survey.**

Step 1. Ensure all health and safety issues are considered.

Step 2. Carry out survey according to Plan.

*One critical goal is the development of the Community’s Tribal Response Program.*

## Goal 3 – Develop and Implement a Tribal Response Program

This is the critical goal for EPNR’s Brownfields Program. Until recently, there was no official program in place, only the two specific clean-up projects previously presented. In 2008, the Community was awarded \$100,00 of 128(a) funds to develop a Tribal Response Program, which is the focus of this goal.

The first objective is the development of EPNR’s Brownfields Response Program Management Plan. This document will set the tasks, schedules, and resources needed to carry out the remaining objectives. It will serve as a road map for EPNR’s Brownfields Program and may be used to assist in obtaining additional funding and allocating resources. It will ensure that all EPA requirements and elements are included in the Tribal Response Program. The objectives and implementation steps associated with this goal are:

**Obj. 1. Draft EPNR Brownfields Response Program Management Plan.**

Step 1. Determine appropriate Community Ordinances and codes (as well as recommended changes) that support response effort.

Step 2. Prioritize existing sites (from Goal 2 Survey) based on liability, public safety, accessibility, and costs.

Step 3. Develop criteria for clean-up plan and approval process.



*A Management Plan  
will set the  
framework for  
EPNR's Brownfields  
Program.*

- Step 4. Determine SOPs for enforcement in the existing inspection, compliance, and enforcement policies.
- Step 5. Develop a task schedule that the Brownfields Program can use as a tool for resource and funding allocation as it continues to develop the program.
- Step 6. Draft plan to ensure all Four EPA Elements are addressed.
- Step 7. Describe Public Record Protocol (determined in next objective).
- Step 8. Ensure that all of the following Objectives are incorporated into the Management Plan.

**Obj. 2. Develop Brownfields Program Public Record.**

- Step 1. Determine distribution methods and format.
- Step 2. Determine how to highlight the successes of the past Brownfield Clean-ups such as the Cypress Landfill and the Feedlot.
- Step 3. Include updates on current year activities.
- Step 4. Include updates on planned activities.
- Step 5. Include Community map showing potential locations with descriptions.
- Step 6. Include narrative of any site needing additional description such as completion of response action and/or suitable for unrestricted use, etc.
- Step 7. Determine frequency and how the public record will be updated.

**Obj. 3. Determine training needs for EPNR staff to develop assessment capacity.**

- Step 1. Determine hazardous material and safety training needs.
- Step 2. Determine training needs for personnel conducting Phase I assessment as well as Phase II oversight.
- Step 3. Determine any additional training needed.

**Obj. 4. Carry out Phase I assessments of potential brownfield sites.**

- Step 1. Using Survey results from Goal 2, develop Phase I assessment protocol to ensure consistency for all sites assessed.
- Step 2. Carry out Phase I assessments of potential brownfield sites.
- Step 3. Determine sites with high priority for Phase II assessments.

**Obj. 5. Develop framework for oversight and enforcement authorities and mechanisms.**

- Step 1. Determine appropriate Community Ordinances and codes (as well as recommended changes) that support response effort.
- Step 2. Determine enforcement organizational structure and resources needed.
- Step 3. Develop protocols for enforcement and quality assurance and quality control (QAQC).
- Step 4. Develop protocols for site QAQC.
- Step 5. Determine other resources needed to support response effort.



**Obj. 6. Develop framework for approval and certification process.**

- Step 1. Develop SOPs for clean-up plan approval.
- Step 2. Develop SOPs for clean-up verification and certification.
- Step 3. Determine resources needed to carry out this process.

**Short-Term Brownfields Program Schedule**

The short-term time period is considered the next five years. **Table 7.1** is a summary of the goals and objectives with an estimated short-term schedule. This schedule will be used as a tool and provide guidance for future annual workplans and budgeting.

*EPNR's Brownfields Program will achieve its short-term goals within five years.*

**Table 7.1 Short-Term Brownfields Program Schedule**

Goal/Objectives	FY10	FY11	FY12	FY13	FY14
1. Complete Clean-up and Revitalization of the Feedlot Site					
<i>Develop Clean-up Plan.</i>	X				
<i>Develop End-Use Plan.</i>	X				
<i>Implement Clean-up Plan.</i>	X	X			
<i>Implement End-Use Plan.</i>	X	X	X	X	X
2. Complete Survey and Inventory of Community's Potential Brownfields for 128(a)					
<i>Determine challenges and obstacles (if any) encountered during the Feedlot Site assessment.</i>	X				
<i>Develop overall Survey Plan.</i>	X				
<i>Implement Survey.</i>	X				
3. Develop and Implement a Tribal Response Program					
<i>Draft EPNR Brownfields Response Program Management Plan.</i>	X				
<i>Develop Brownfields Program Public Record.</i>	X				
<i>Determine training needs for EPNR staff to develop assessment capacity.</i>	X				
<i>Carry out Phase I assessments of potential brownfield sites.</i>	X	X			
<i>Develop framework for oversight and enforcement authorities and mechanisms.</i>		X	X		
<i>Develop framework for approval and certification process.</i>		X	X		



## Long-Term Goals

The long-term goals for the Brownfields Program are to:

1. Structure the Brownfields Program as a component of EPNR's existing Enforcement and Compliance (E&C) Program to not only clean-up current sites but to also prevent future brownfields.
2. Be fully operational and functioning to assist in future closures of sand and gravel operations.

*EPNR's Brownfields Program strives to compliment existing enforcement and compliance efforts.*

The short-term goal of developing the Brownfields Response Program will set the foundation for the Brownfields Program to become part of an E&C Program. Amendments to current Ordinances and any newly developed Environmental Ordinances will have inspection, compliance, and enforcement elements incorporated into the policies, such that the Brownfields Program can carry out the proper E&C.

## Public Education & Outreach

Through the development of the Public Record Requirement and continued educational outreach, EPNR plans to raise awareness throughout the Community regarding the current brownfields, as well as preventing future sites. This outreach and education will also keep the Community current on clean-up activities, planned activities, and site suitability for unrestricted use.





## Implementation

*The implementation of the SRPMIC's waste management program requires the cooperation and coordination of several Community entities.*

A single Community entity does not hold the key to implementing the SRPMIC's waste management program, but rather several entities need to work together to successfully manage the Community's waste. Separately each entity provides valuable services and resources to the Community's waste management, but combined the level of services and waste management is notable. Continued and expanded collaboration is necessary for the Community to positively grow and develop while maintaining the health of the residents, employees, and the environment.

## Administration

The Solid Waste Advisory Committee (SWAC) is the ideal venue for the Community's critical waste system personnel to actively engage in the administration of the SRPMIC's waste management. Administration includes planning, development, contracting, legal, technical, record keeping, staffing, and public education responsibilities involved in managing the Community's wastes. The members of the SWAC possess all of these responsibilities and bring them together in one forum.

The roles and responsibilities involved in the administration of solid waste management is diverse and complex, and have grown more so over the last decade and will continue to grow and change in the future. The SWAC meetings will continue to provide a platform for administrative discussions to keep the Community's waste management current on various changes that are occurring. EPNR will remain the lead for the SWAC and pursue additional members as roles and responsibilities change and new opportunities arise.



Personnel and Responsibilities

**Figure 8.1** is a diagram illustrating how Public Works, EPNR, the Salt River Landfill, and River Recycling address the waste management needs of the Community. These entities need to leverage their resources together to provide improved, more efficient waste management for the entire Community. **Table 8.1** summarizes the programs and its responsibilities involved in the waste management for the Community.

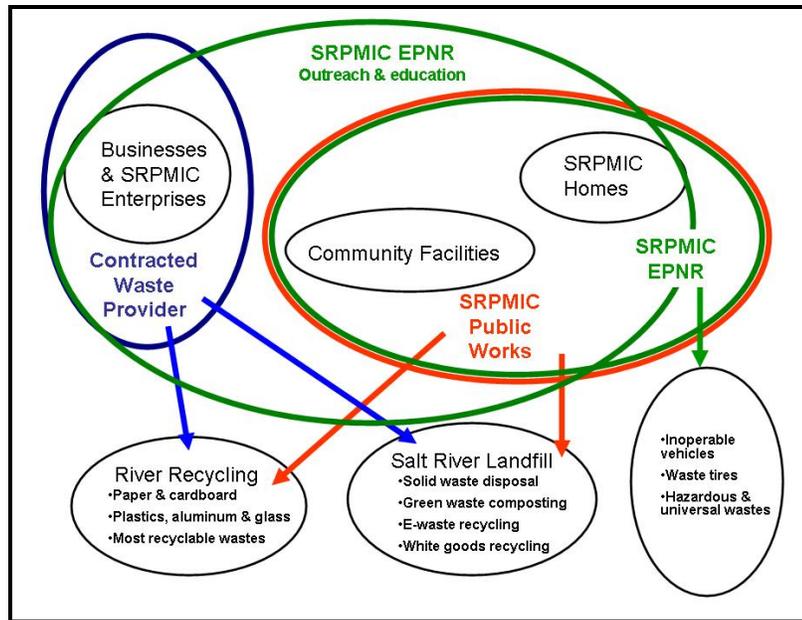


Figure 8.1 Community Waste Management Diagram

Table 8.1 Summary of Community Waste Management Structure

Program/Entity	Responsibility
Public Works Sanitation	Collection and transport of Community’s wastes, recyclables, white goods, tires, e-waste, and green wastes to the Salt River Landfill and River Recycling.
Public Works Sanitation	Oversee contracted waste provider for the Community’s enterprises and commercial lease-held properties.
EPNR Solid Waste Program	Coordinates the Community’s Inoperable Vehicle and Waste Tire Removal Programs.
EPNR Solid Waste Program	Coordinates SRPMIC departmental training and workshops.
EPNR Recycling Program	Coordinates outreach and recycling awareness. Support PW Sanitation with recycling efforts.
EPNR Hazardous Waste Program	Coordinates the proper handling and disposal of the Community’s hazardous and universal wastes.
Salt River Community Housing Division	Provides removal of reclaimable and universal wastes to Community housing.
Salt River Landfill	Provides final disposal for wastes and transport mechanisms for reclaimable material.
River Recycling	Provides separation and transport of co-mingled collected recyclable wastes.





Increased communication is a critical need throughout every entity with waste management responsibilities. Some of the increased communication needs include:

- ◆ Training regarding the proper handling and disposal for hazardous and universal wastes for SRPMIC employees within EPNR, Public Works, Salt River Housing Division, and others.
- ◆ Developing standardized SOPs regarding waste management activities.
- ◆ Outreach and education to the Community’s employees and residents to increase awareness on what materials are recyclable and which are not.
- ◆ Outreach to Community residents on the Inoperable Vehicle and Waste Tire Removal Programs.
- ◆ Outreach and awareness on new Household Hazardous Waste (HHW) Collection Events that will occur, including what material is acceptable at the events.
- ◆ Awareness to Community residents on new waste collection services Public Works may initiate as well as changes to old services.
- ◆ Outreach and awareness on new waste services or changes in old services that the Salt River Landfill provides.
- ◆ Awareness on changes in the list of acceptable recyclable material at River Recycling.
- ◆ Outreach to Community enterprises and businesses on the proper disposal of universal wastes.
- ◆ Discussions with property managers of lease-held properties and the contracted waste service provider to increase cardboard recycling in appropriate areas.

## Contractual Services & Agreements

**Table 8.2** summarizes the contractual services and agreements in place between the Community and contracted service provider.

**Table 8.2 Summary of Contractual Waste Service Providers**

Provider	Service
Allied Waste	Waste and recyclable hauler for commercial lease-held areas and Community enterprises.
Fast Towing	Hauler of Community’s inoperable vehicles to proper destination.
J.J. Tires	Hauler of Community’s waste tires to proper destination.
Envirosolve	On-call hazmat responder and clean-up, as well as hazardous waste collection events.
Mesa Oil	Collects and reclaims Public Works Fleet used oil and oil filters.
Lighting Resources	Provide collection containers and transport to destination facility for Community’s universal wastes.
Salt River Landfill	Provides final disposal for wastes and transport mechanisms for reclaimable material.
River Recycling	Provides separation and transport of co-mingled collected recyclable wastes.



## Monitoring Reporting & Measuring Effectiveness

Currently, monitoring and reporting is occurring within individual departments and programs. It would be beneficial to the Community if this effort was compiled into an annual report such as a short summary that could be summarized appropriately for posting on the Community’s website and in the newspaper that would be an annual reminder of the many waste services that SRPMIC and its enterprises provide the Community. The SWAC could provide the platform for information exchange with EPNR’s Solid Waste Program leading the compilation of the annual data. **Table 8.3** provides some example data that specific programs could contribute to the report.

**Table 8.3 Summary of Community Waste Reporting Needs**

Program	Report Contributions
Public Works Sanitation	Monthly collection rates of Community’s wastes, recyclables, white goods, and other bulk collections.
Public Works Sanitation	Monthly collection rate for the contracted waste provider for the Community’s enterprises and commercial lease-held properties.
Public Works Sanitation	Annual total of universal wastes properly disposed.
EPNR Solid Waste Program	Annual total of inoperable vehicle and waste tire removed.
EPNR Solid Waste Program	Annual total number and tonnage of illegal dump-sites cleaned-up.
EPNR Recycling Program	Monthly collection rates of Community’s and commercial areas and enterprises recycling rates.
EPNR Hazardous Waste Program	Annual tonnages of hazardous and universal wastes removed.
Salt River Community Housing Division	Inventory of reclaimable, white goods, and universal wastes from Community housing.
Salt River Landfill	Annual wastes and revenue to the General Fund.
River Recycling	Annual total diversion tonnage and revenue generated for the Community.

By generating annual reports, program and outreach effectiveness can be measured on an annual basis. Increases in recycling rates can indicate that expended efforts are effective. Annual changes may also indicate areas that need monitoring and/or if certain waste services may need to be enhanced with incentives. By tracking current practices and waste rates, alternative needs and possible requirements may be warranted.

## Concluding Note

The SRPMIC spends significant funds annually to provide not only adequate, but commendable, waste management services to the Community. As the Salt River Landfill nears the end of its lifespan, the SRPMIC’s 20-year forecast can go from making millions of dollars annually in revenue from the landfill to costing millions per year to transport and dispose of its wastes. Spending funds today on outreach and educational activities, as well as waste separation, reduction and recycling services that extend the lifespan of the Salt River Landfill is well worth the investment.



- A-List of Planning Meetings
- B-SWAC Meeting Notes
- C-List of Facilities Surveyed  
in the Waste Inventory
- D-On-Call Service Provider for  
Hazmat Clean-Up
- E-Additional Photos from the  
Hazmat Round-Up





*Appendix A -  
List of Planning Meetings*



ENVIRONMENTAL PROTECTION &  
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INTEGRATED WASTE MANAGEMENT PLAN

March 13, 2009 – Project Planning Meeting

In attendance: Jenifer Williams, EPNR Project Manager (PM)  
Joan Estergard, Gable Ink (contractor)

March 18, 2009 – Project Kick-off Meeting

In attendance: Jenifer Williams, PM & EPNR Recycling Program  
Mark Aaron, EPNR Hazardous Waste Program  
Debra Yazzie, EPNR Solid Waste Program  
Joan Estergard, Gable Ink (contractor)

March 23, 2009 – Programmatic Planning Meeting

In attendance: Jenifer Williams, PM & EPNR Recycling Program  
Mark Aaron, EPNR Hazardous Waste Program  
Debra Yazzie, EPNR Solid Waste Program  
Joan Estergard, Gable Ink (contractor)

March 30, 2009 – Coordination Meeting with EPNR, Contractor, & Salt River Landfill (and tour)

In attendance: Debra Yazzie, EPNR Solid Waste Program  
Stephanie Hinson, Salt River Landfill  
Joan Estergard, Gable Ink (contractor)

March 30, 2009 – Solid Waste Advisory Committee (SWAC) Development Discussion

In attendance: Jenifer Williams, PM & EPNR Recycling Program  
Mark Aaron, EPNR Hazardous Waste Program  
Debra Yazzie, EPNR Solid Waste Program  
Kari Morehouse, EPNR Supervisor  
Joan Estergard, Gable Ink (contractor)

April 3, 2009 – Three One-On-One Programmatic Planning Meetings

In attendance: Mark Aaron, EPNR Hazardous Waste Program  
Jenifer Williams, PM & EPNR Recycling Program  
Debra Yazzie, EPNR Solid Waste Program  
Joan Estergard, Gable Ink (contractor)

April 30, 2009 – Coordination Meeting with EPNR, Contractor, & SRPMIC PW Sanitation

In attendance: Jenifer Williams, EPNR Project Manager (PM)  
Russell Phillips, PW Sanitation  
Joan Estergard, Gable Ink (contractor)

April 30, 2009 – Project Meeting with EPNR & Contractor

In attendance: Jenifer Williams, EPNR Project Manager (PM)  
Joan Estergard, Gable Ink (contractor)

May 7, 2009 – Project Meeting with EPNR & Contractor

In attendance: Jenifer Williams, PM & EPNR Recycling Program  
Mark Aaron, EPNR Hazardous Waste Program  
Debra Yazzie, EPNR Solid Waste Program  
Joan Estergard, Gable Ink (contractor)

May 15, 2009 – Tour of River Recycling (MRF) with EPNR & Contractor

In attendance: River Recycling Representative (Bob)  
Jenifer Williams, EPNR Project Manager (PM)  
Joan Estergard, Gable Ink (contractor)



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May 21, 2009 – IWMP Policy Meeting

In attendance: Tudor Montague, EPNR Policy Analyst  
Jenifer Williams, EPNR Project Manager (PM)  
Joan Estergard, Gable Ink (contractor)

May 21, 2009 – IWMP Coordination Meeting with EPNR and Casino Arizona (CA)

In attendance: Ruben Alcazar, Maintenance Manager CA Indian Bend  
Chuck Mielak, Maintenance Manager CA McKellips  
Jenifer Williams, EPNR Project Manager (PM)  
Mark Aaron, EPNR Hazardous Waste Program  
Joan Estergard, Gable Ink (contractor)

May 21, 2009 – EPNR Brownfields Program Discussion

In attendance: Dan Daggett, EPNR Supervisor  
Kevin Evanishyn, EPNR Brownfield Program  
Joan Estergard, Gable Ink (contractor)

May 29, 2009 - IWMP Coordination Meeting with EPNR and SRPMIC Schools

In attendance: Roy Swearingin, Maintenance Manager SRPMIC Schools  
Michael Johnson, Maintenance Manager SRPMIC Schools  
Martina Ashley, Programs Coordinator SRPMIC Schools  
Jenifer Williams, EPNR Project Manager (PM)  
Mark Aaron, EPNR Hazardous Waste Program  
Joan Estergard, Gable Ink (contractor)

June 8, 2009 – Waste Inventory Meeting with EPNR & Contractor

In attendance: Jenifer Williams, PM & EPNR Recycling Program  
Mark Aaron, EPNR Hazardous Waste Program  
Joan Estergard, Gable Ink (contractor)

June 11, 2009 – Solid Waste Advisory Committee (SWAC) Meeting

In attendance: Jenifer Williams – EPNR/Recycling & SWAC Coordinator  
Mark Aaron – EPNR/Hazardous Wastes  
Juan Nieto – Purchasing  
Martina Ashley – Education  
Roy Swearingin – Public Works/Schools  
Michael Johnson – Public Works/Schools  
Ruben Alcazar – Maintenance Casino Arizona/Indian Bend  
Don Long – Public Works/Property Manager Two Waters  
Stephanie Hinson – Salt River Landfill  
Don Balint – IT  
Russell Phillips – Public Works/Sanitation  
Gene Andreas – Public Works/Operations  
Rich Allen – Salt River landfill  
Joan Estergard – Gable Ink (contractor to EPNR)

June 18, 2009 – Community Waste Surveys Begin

Jenifer Williams, EPNR Project Manager (PM)  
Joan Estergard, Gable Ink (contractor)  
Meetings with: SRPMIC Early Childhood Education Center  
SRPMIC Housing Services  
SRPMIC Housing Services Maintenance  
Salt River Fire Department



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June 19, 2009 – Community Waste Surveys Continue

Mark Aaron, EPNR Hazardous Waste Program  
Joan Estergard, Gable Ink (contractor)  
Meeting with: SRPMIC Public Works Fleet Department

June 22, 2009 – Community Waste Surveys Continue

Jenifer Williams, EPNR Project Manager (PM)  
Joan Estergard, Gable Ink (contractor)  
Meetings with: Salt River Community Building Maintenance & Administration  
SRPMIC Cultural Preservation Program

June 23 – July 1, 2009 – Waste Surveys at the 78 Community lease-held properties

July 1, 2009 – Waste Survey Meeting

In attendance: Jenifer Williams, PM & EPNR Recycling Program  
Joan Estergard, Gable Ink (contractor)  
Corey Perrella, Gable Ink (contractor)

July 2, 2009 – Waste Survey Meeting with Casino Arizona (CA) Representatives

In attendance: Mark Aaron, EPNR Hazardous Waste Program  
Ruben Alcazar, Maintenance Manager CA Indian Bend  
Chuck Mielak, Maintenance Manager CAMcKellips  
Bruce Tunnicliff, Safety and Security Director, CA  
Miranda Wato, Casino Arizona  
Corina Lester, Casino Arizona  
Joan Estergard, Gable Ink (contractor)  
Corey Perrella, Gable Ink (contractor)

July 23, 2009 – EPNR Brownfields Program Discussion

In attendance: Tudor Montague, EPNR Policy Analyst  
Ann-Denise Taylor, Project Manager 128(a) Program  
Joan Estergard, Gable Ink (contractor)

July 23, 2009 – IWMP Project Meeting with EPNR & Contractor

In attendance: Jenifer Williams, PM & EPNR Recycling Program  
Ondrea Barber, EPNR Manager  
Joan Estergard, Gable Ink (contractor)

July 30, 2009 – IWMP Project Meeting with EPNR & Contractor

In attendance: Jenifer Williams, PM & EPNR Recycling Program  
Mark Aaron, EPNR Hazardous Waste Program  
Joan Estergard, Gable Ink (contractor)





Appendix B -  
SWAC Meeting Notes



ENVIRONMENTAL PROTECTION &  
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INTEGRATED WASTE MANAGEMENT PLAN

Solid Waste Advisory Committee (SWAC)  
Thursday June 11, 2009  
12:00-1:00 pm  
Two Waters B305-Stars Conference Room

Meeting Minutes

Attendees (in no particular order):

1. Juan Nieto – Purchasing
2. Martina Ashley – Education
3. Roy Swearengin – Public Works/Schools
4. Michael Johnson – Public Works/Schools
5. Ruben Alcazar – Maintenance Casino Arizona/Indian Bend
6. Don Long – Public Works/Property Manager Two Waters
7. Stephanie Hinson – Salt River Landfill CEO
8. Don Balint – IT
9. Russell Phillips – Public Works/Sanitation
10. Gene Andreas – Public Works/Operations
11. Rich Allen – Salt River landfill
12. Jenifer Williams – EPNR/Recycling & SWAC Coordinator
13. Mark Aaron – EPNR/Hazardous Wastes & Pesticides
14. Joan Estergard – Gable Ink/contractor to EPNR

Jenifer Williams opened the meeting and gave the following updates:

1. Background information and status on the SWAC.
2. EPNR is working with Gable Ink on an Integrated Waste Management Plan (IWMP).
3. EPNR will be conducting a waste inventory and survey (with Gable Ink) throughout the Community in the next several weeks.
4. EPNR Solid Waste Position (previously filled by Debra Yazzie) is vacant and opened for applications with anticipating being filled in July-August timeframe.
5. Salt River Landfill does have a roll-off container in the convenience area for electronic wastes – Rich Allen from the SRLF detailed what types of items are acceptable in the roll-offs.

Introductions followed with these additional updates:

- 1) Mark Aaron is working on a universal waste initiative over the next few months – increasing awareness in Community facilities and advising departments how to handle these wastes.
- 2) Russell Phillips contacted Lighting Resources and has obtained 55-gal barrels for ballasts, separate containers for different batteries (can not be co-mingled), and storage containers for lamps.
- 3) Roy Swearengin is also anticipating receiving containers for lights and batteries.
- 4) Roy is working with teachers at the high school (more specifically the chemistry lab and art lab teachers) on preferred liquid waste disposal in the lab sinks.
- 5) Mark inquired (of Roy) the status of bulbs at the high school. Roy is waiting for contractor to pick them up or will need assistance from Public Works. Roy has most hazardous wastes go to the warehouse.
- 6) Mark confirmed that Public Works is collecting hazardous material of any kind from the Community and has asked the SWAC to spread the word and get all wastes to the Fire Dept. for a clean-up planned for June-July time frame.
- 7) Stephanie Hinson asked the group if the Community has thought about designating a 'hazardous waste center' or 'drop place' and/or if it has been brought to Council.
- 8) Mark replied that he is taking action on that now.
  - a) There are about 3 tons of wastes at the warehouse and that designated the Community as a Large Quantity Generator.



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- b) The SRPMIC has been assigned an EPA number and will be required to file annual reports.
- c) Mark is coordinating efforts with PW, EPNR management, safety, and the Fire Dept. to address these issues.
- d) Farmers and commercial businesses are regulated.
- e) Planning a Household Hazardous Waste collection event for the Community residents in September, possibly on “Make a Difference Day”?
- f) Envirosolve is the on-call service provider for hazardous waste clean-ups.
- g) ACTION ITEM – Stephanie requested this contact for the landfill.
- 9) Ruben Alcazar provided an update on the extensive recycling occurring at the casinos.
  - a) Started recycling batteries and lamps last year.
  - b) The casinos ship lamps to Viola Recyclers in Phoenix. Receive “Letter of disposal” for records.
  - c) Purchase recycle-packs from battery supplier, Granger. These packs are sent to Interstate Batteries in Mesa and receive “Letter of disposal for records”.
  - d) Trying to determine waste generation rate for the new resort opening on Indian Bend.
  - e) Current Indian Bend Casino has 8-yd dumpster collected 7 days a week and a 40-yd roll-off once every two weeks.
  - f) Chuck Mielak (not in attendance) runs same kinds of programs at the McKellips property.
  - g) Generate more trash and recyclables during the winter months.
  - h) Lighting supplies and wastes are anticipated to be extensive at the new resort.
  - i) Cardboard is baled on site and hauled by Freedman Recycling (assume to MRF at landfill). New resort will need to find way to get bales into a roll-off.
  - j) Design of resort began before recycling program, so there are some challenges in implementing recycling program. 750 ft underground tunnel for maintenance.
  - k) 497 rooms – all will have combination waste and recycle containers.
  - l) Recycle containers in casinos – out on the floor, at the tables, and in office areas by all copiers.
  - m) Latest issue at the casinos is ink cartridges. Current vendor will not take them.
  - n) Juan Nieto mentioned Corporate Express (now Staples) always takes cartridges and that there is a business (similar to ‘Cartridges R Us’) in the Pavilions Shopping Plaza that takes ink cartridges but gives no credit. ACTION ITEM – Juan to provide contact/name to Ruben.
  - o) Opening date for the resort is November 2009 – January 2010.
  - p) The tents need to be down before other resort can open – so anticipate a short down time between casinos. Existing tents and buildings will be parking.
- 10) Juan Nieto discussed the current status of purchasing recycled products in the Community.
  - a) There are three vendors that provide recycled products and offer a wide selection in their “Green Catalogs”. Purchasing is promoting this effort and asked the SWAC group to spread the word. Recycled paper is only slightly higher than non-recycled paper.
  - b) Stephanie asked if this initiative has been brought to Council for support.
  - c) Juan said that talks with Council and Mr. Meyers are gaining momentum and acceptance. Purchasing is researching costs to back up discussions.
- 11) Russell Phillips mentioned that Public Works Sanitation is organizing its pick-ups to include e-waste pick ups on Thursdays with the white goods and tires.
- 12) Russell is also developing program for green wastes – that will allow residents to request a green waste container and PWS will deliver container and pick-up these wastes on specified days.
- 13) ACTION ITEM - Russell requested support from members of the SWAC to attend district meetings with him as well as school program and Senior Center to increase awareness about recycling throughout the Community.



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- 14) Don Long brought up the concern at the Two Waters cafeteria is generating a lot of grease.
  - a) They have a 2,500 gal tank that should be pumped out by a designated recycler.
  - b) Ruben mentioned that Bakers Commodity pumps and reclaims the grease generated at the casinos.
  - c) ACTION ITEM – Jenifer will follow up on this with Aramark management Paul Johnston. Follow up complete the cafeteria is using Bakers Commodity to reclaim their grease per Miriah Smith.
- 15) Stephanie recommended sending out an email or posting flyers reminding people to use the recycling containers and to send this out/post regularly.
  - a) Don Balint added that something should be posted on the containers that show what is acceptable.
  - b) ACTION ITEM – Jenifer is working on these outreach items. (in progress)
- 16) Rich Allen gave an update on the landfill:
  - a) Tours of the landfill are increasing. And really make an impact on the visitors.
  - b) They are doing a lot of effort to keep wastes OUT of the landfill, such as the new e-waste roll-off. It has collected 3,000 pounds of e-waste in the first 3 weeks and a similar volume in the second two week period.
  - c) Stephanie added the landfill is being registered with Earth911 an interactive internet tool for finding recycling facilities.
  - d) In addition to the e-waste collection, the citizen drop-off area also has recyclable drop-off area, white goods, scrap metal, and green wastes.
  - e) Under the new contract with the green waste contractor, there is a provision that they will provide a certain % of mulch to the Community.
  - f) They offer tire storage for the Community until it can be collected and transported to a designated tire facility.
  - g) The landfill is working with the Salt Rivers Material Group to investigate opportunities for the SRMG to take inert materials in one of their unused mining pits, rather than putting this material in the new bioreactor cell at the landfill.
  - h) The landfill is always in need of clean cover soil.
- 17) Mark Aaron asked for a contact at Fountain Hills for possible collaboration on HHW collection event. ACTION ITEM – Stephanie may have contact information.
- 18) Jenifer reminded group that CDD Director will send email to department heads informing them of the upcoming waste inventory.
- 19) Next meeting will be scheduled for August-September. Jenifer will send a “Save-the-date” email when it has tentatively been scheduled.

All contact names have been underlined for ease of reference.

The following ACTION ITEMS were identified and highlighted in the meeting minutes. Please follow-up on these items if they you are the designated responder. Please feel free to update group on any action item that could be applicable to others.

ACTION ITEMS:

1. Stephanie Hinson requested Envirosolve contact for the landfill, Mark Aaron to respond. (Action item completed)
2. Juan Nieto will provide contact/name of ink cartridge store to Ruben Alcazar.
3. Russell Phillips requested support from members of the SWAC to attend district meetings with him as well as school program and Senior Center to increase awareness about recycling throughout the Community.
4. Jenifer Williams will follow up with Aramark management Paul Johnston regarding reclaiming cafeteria grease. (Action item completed – Jen sent an email to Paul and Miriah on 6/16/09)
5. Jenifer Williams will work on recycling outreach items for Two Waters.
6. Stephanie Hinson to provide Mark Aaron with contact at Fountain Hills





*Appendix C -  
List of Facilities Surveyed  
in the Waste Inventory*



ENVIRONMENTAL PROTECTION &  
 NATURAL RESOURCES  
 INTEGRATED WASTE MANAGEMENT PLAN

#	Date	Facility
<b>SRPMIC Department/Enterprise</b>		
1	6/18/09	ECEC
2	6/18/09	Housing Division
3	6/18/09	Housing Maintenance Dept.
4	6/19/09	Fleet, Dept. of Transportation.
5	6/22/09	Salt River Community Center
6	6/22/09	Salt River Community Center Administrative Offices
7	6/22/09	Cultural Preservation Program
8	6/23/09	Dept. of Corrections
9	6/29/09	Salt River Fire Department
10	7/2/2009	Casino Arizona
11	7/21/2009	Salt River Elementary
12	7/24/2009	Public Works Sanitation
13	7/21/2009	SRPMIC Schools Food Services
14	7/14/2009	Engineering & Construction Services
15	7/21/2009	Education Administration
<b>Chaparral &amp; Business Center</b>		
1	6/24/09	Western International University
2	6/24/09	Fender Guitar
3	6/29/09	Wal-Mart
4	6/29/09	Wendy's
<b>Calendar Stick Business Center</b>		
5	6/23/09	Sonoma Coffee Café
6	6/29/09	Carewise
7	6/29/09	Cold Stone (Kahala Group)
8	6/29/09	Solanna Pima Group
9	6/29/09	WJ Bradley Mortgage Lending
10	6/29/09	Pyzam.com
11	6/29/09	Prime Earth Development Company
12	6/29/09	Arapahoe Utilities & Infrastructure
13	6/29/09	BandCon
14	6/29/09	Telesphere
<b>Other</b>		
15	7/1/2009	Scottsdale Marine Center



ENVIRONMENTAL PROTECTION &  
 NATURAL RESOURCES  
 INTEGRATED WASTE MANAGEMENT PLAN

#	Date	Facility
<b>Pavilions South</b>		
16	6/22/09	Toys R Us
17	6/22/09	Sleep America
18	6/22/09	Radio Shack
19	6/22/09	Jo-Ann Fabric
20	6/22/09	Bookstar
21	6/22/09	Glossy Nails
22	6/22/09	Guitar Center
23	6/22/09	Cartridge World
24	6/22/09	Bath and Body Works
25	6/22/09	World of Rugs
26	6/22/09	Hall of Frames
27	6/22/09	Michael's Crafts
28	6/23/09	Men's Wearhouse
29	6/23/09	ULTA
30	6/23/09	Eyemasters
31	6/23/09	Sport's Authority
32	6/24/09	Discount Tire
33	6/29/09	Arby's
34	6/29/09	Starbucks
35	6/29/09	Taco Bell
<b>Pavilions North</b>		
36	6/22/03	Payless Shoes
37	6/23/09	Barbeques Galore
38	6/23/09	Lamps Plus
39	6/23/09	PetCo
40	6/23/09	Hi-Health
41	6/23/09	Famous Footwear
42	6/23/09	Lane Bryant
43	6/23/09	Ross
44	6/23/09	Sally Beauty Supply
45	6/23/09	Gamestop
46	6/23/09	Target
47	6/24/09	Home Depot
48	6/24/09	Bernina, Sew From the Heart
49	6/24/09	SAS Shoes



ENVIRONMENTAL PROTECTION &  
 NATURAL RESOURCES  
 INTEGRATED WASTE MANAGEMENT PLAN

#	Date	Facility
<b>Pima Center</b>		
50	6/25/09	Gregory Matthew Furniture
51	6/25/09	Able Distributing
52	6/25/09	European Windows and Doors
53	6/25/09	Cadd/Engineering Supply
54	6/25/09	Zoe Shower Systems
55	6/25/09	Patrick McCourt Furniture
56	6/25/09	Marin Shower and Mirror
57	6/25/09	Xyron
58	6/25/09	SafeGuard
59	6/25/09	Wellements/Santae
60	6/25/09	Fluidic Energy
61	6/25/09	Style Door and Trim
62	6/25/09	Bosch, Thermador, Gaggenau
63	6/30/09	AZ Breast Cancer Specialists
64	6/30/09	AxoSoft
65	6/30/09	NE and Camelback Valley AFO/State Farm
66	6/30/09	C.S. Innovations
67	6/30/09	Monterey Benefits
68	6/30/09	Amtech Associates LLC
69	6/30/09	N'Genuity
70	6/30/09	Calex Homes





Appendix D -  
On-Call Service Provider  
for Hazmat Clean-Up







Appendix E -  
Additional Photos  
from the Hazmat Round-Up



ENVIRONMENTAL PROTECTION &  
NATURAL RESOURCES  
INTEGRATED WASTE MANAGEMENT PLAN



Figure E1 – Waste Characterization 1



Figure E2 – Waste Characterization 2



Figure E3 – Containers for Removal



Figure E4 – Labeling and Loading



Figure E5 – Inside Transport Truck



Figure E6 – Transport Truck

