



September 28, 1999

FY 2000/2001  
REGIONAL SOLID WASTE  
GRANTS PROGRAM

Closed Municipal Solid Waste  
Landfill Inventory  
Recommended Procedures and Forms

printed on  
recycled paper

Strategic Assessment Division

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TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

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**FY 2000/2001 Regional Solid Waste Grants Program  
Closed Municipal Solid Waste Landfill Inventory  
Recommended Procedures and Forms**

**1.0 INTRODUCTION**

The procedures and forms presented in this document are provided to the councils of governments (COGs) as recommendations for fulfilling the FY 2000/2001 regional solid waste grant contract requirements for work to compile a statewide inventory of municipal solid waste landfills.

**2.0 LEGISLATIVE REQUIREMENTS**

An inventory of closed municipal solid waste landfill units is required to be compiled by each COG under §363.064(a)(10) of the Texas Health & Safety Code, as amended by Senate Bill 1447, 76<sup>th</sup> Texas Legislature. Per the statutory provisions, the inventory is to include:

- a. landfill units no longer in operation;*
- b. the exact boundaries of each former landfill unit or, if the exact boundaries are not known, the best approximation of each unit's boundaries;*
- c. a map showing the approximate boundaries of each former landfill unit, if the exact boundaries are not known;*
- d. the current owners of the land on which the former landfill units were located; and,*
- e. the current use of the land.*

In addition to the requirements for compiling an inventory, §363.064(b) includes requirements for the COG to notify landowners and the county clerk of the location of the landfills. The recommendations in this document do not directly address the legislative requirements for deed recordation and property owner notification. It is recommended that the COGs work jointly, possibly through the Texas Association of Regional Councils (TARC), to arrive at a standard approach for addressing these requirements.

The Texas Natural Resource Conservation Commission (TNRCC) is available to assist the COGs as needed to determine appropriate procedures for the notification and deed recordation process, subsequent to completion of an inventory for each region. It is also recommended that a notification and deed recordation process not be conducted until the regional inventory is completed and incorporated into the regional solid waste management plan, through the plan amendment and approval process.

### 3.0 WHAT IS A CLOSED MUNICIPAL SOLID WASTE LANDFILL?

TNRCC's MSW regulations (30 TAC §330.951) include the following definition of a "closed municipal solid waste landfill":

*A discrete area of land or an excavation that has received only municipal solid waste or municipal solid waste combined with other solid wastes, including but not limited to construction/demolition waste, commercial solid waste, nonhazardous sludge, conditionally exempt small-quantity generator hazardous waste, and industrial solid waste, and that is not a land application unit, surface impoundment, injection well, or waste pit as those terms are defined by 40 CFR §257.2 (EPA Regulations).*

Under this definition, both permitted and unpermitted landfills are to be included in the inventory, with no specific minimum size limit. There is no additional definition of a closed municipal solid waste landfill beyond that provided above. However, in developing the original database for the closed landfill inventory, TNRCC's consultant, Southwest Texas State University (SWTSU), used the following guidelines for including sites in the inventory:

#### **! Permitted Sites**

The statewide inventory includes those sites recognized as a municipal solid waste landfill and assigned a number by the state, including: landfills that operated under a state permit; landfills that were in operation prior to the permitting requirements and were assigned a number under grandfather provisions; and other closed or abandoned landfills that were identified and assigned a number by the state.

#### **! Unpermitted Sites**

The statewide inventory includes other sites that were recognized by individuals, local officials, private companies, state inspectors, and/or others as a landfill. These sites may have been publicly or privately operated. In addition, the statewide inventory was limited to unpermitted sites greater than 1/4 acre in size.

For additional unpermitted sites which may be identified, the COG will need to determine whether the 1/4 acre criterion is applicable, depending on the particular situation. For the most part, uncovered illegal waste piles probably do not need to be included in the inventory. However, if a waste pile has been covered, such that development can occur over it without removal of the waste, it should probably be included.

Also, any closed permitted landfills subsequently identified should be included in the inventory, regardless of size.

## 4.0 CONTRACTUAL REQUIREMENTS

Article 3 of the grant contract outlines the requirements for work on the inventory using the FY 2000/2001 grant funds. Please review the directions in the contract carefully.

As explained in the grant application materials provided by TNRCC, a detailed work program for the inventory activities is not required as part of the original application. However, the COG must submit a work program for entry into the grant contract by the date specified by the COG in the application forms.

## 5.0 DETAILED WORK PROGRAM

A detailed work program for closed landfill inventory activities must be provided to TNRCC, either with the grant application or within a timeframe designated by the COG, and entered into the contract. The detailed work program must be preceded by an estimation of the timetable for completion of the inventory, which may extend beyond the FY 2000/2001 grant term. Although the timeframe for completion may extend beyond August 31, 2001, each COG will be expected to complete as much of the inventory work under the grant as is reasonable to show significant progress, with due consideration to the funding of local projects and other regional activities. Per the application instructions provided by TNRCC, the detailed work program must include:

- a. An estimated timeframe for full completion of the inventory and incorporation of the completed inventory into the regional solid waste management plan;
- b. A goal for the amount of work to be completed during the FY 2000/2001 grant term in support of meeting the estimated timeframe for full completion of the inventory; and
- c. A detailed scope of work for the activities to be conducted under the FY 2000/2001 grant term. **(Please refer to the example work plan format included in the application materials.)**

The following guidance should be considered in developing various tasks to be included in the detailed work program to be submitted to TNRCC for inclusion in the COG grant contract for FY 2000/2001. These main topics are intended as general examples, and each COG must determine the more detailed activities that will be necessary to complete the inventory, and those activities should be included in the work program.

### 5.1 Subcontracting

- ! If work will be subcontracted, the work program should include the steps necessary to solicit proposals and select a contractor. Remember that the contractor selection and subcontract cost must be approved by TNRCC, and the detailed subcontract work program must be provided to TNRCC
- ! Provide a timeframe and deliverables for the contracting process

## **5.2 Data Collection/Verification**

*(see Appendix C for resources on data collection and verification)*

- ! In addition to data provided by TNRCC and SWTSU, identify other possible data sources (e.g., county clerks, appraisal districts, county health departments, river authorities, etc.)
- ! Identify the types of data expected to be collected (e.g., deed records, affidavits to the public, land unit numbers and owners, inspection records, site visits, etc.)
- ! Identify all individuals/parties responsible for data collection
- ! Provide a timeframe and deliverables for the data collection process

## **5.3 Data Analysis**

- ! Identify each of the steps in analyzing the collected data (e.g., sorting by county or other geographic area, determination of data confidence level, determination of which sites have exact or approximate boundaries, etc.)
- ! Identify all individuals/parties responsible for data analysis
- ! Provide a timeframe and deliverables for the data analysis process

## **5.4 Data Presentation**

- ! Determine which maps will be produced through various methods (e.g., GIS, CAD, drafting, etc.)
- ! Determine how supporting information will be presented (e.g., word processing, scanning, photocopying, etc.)
- ! Identify all individuals/parties responsible for preparing maps and supporting information
- ! Provide a timeframe and deliverables for the data presentation process

## **5.5 SWAC and Local Review**

- ! Determine the extent to which data and information for the inventory will need to be reviewed by the Solid Waste Advisory Committee (SWAC) and other entities and the public, before it is finalized
- ! As appropriate, include activities to provide copies of draft material to the SWAC, local governments, and the TNRCC for review and comment as those materials are developed
- ! The COG may want to hold public meetings in each county to present and discuss the inventory data and information, and to obtain input on the accuracy of the data
- ! Provide a timeframe and deliverables for the review and input process

## **5.6 Approval and Amendment of the Regional Solid Waste Management Plan**

*(Note that, if needed, these steps may be added to the work program later, once the COG has a better idea of when the inventory work will be completed and the steps that will taken to incorporate the inventory into the regional plan)*

- ! If the inventory will be completed within the FY 2000/2001 grant term, the work program can include the steps necessary to approve the inventory and incorporate the inventory into the regional solid waste management plan (see Section 9.0)
- ! Determine the final public review process, to include the public hearing(s) required on the amendment to the regional plan
- ! Identify the steps to obtain input from TNRCC on the draft inventory before the COG approval process
- ! Identify the COG process for approving and adopting the amendment to the regional plan to incorporate the completed inventory
- ! Identify the process for submission of the approved plan to TNRCC for final review and adoption
- ! Provide a timeframe and deliverables for the plan amendment process

## **6.0 SUBCONTRACTING**

If the COG will be subcontracting any part of the closed landfill inventory work, the contract between the COG and the consultant should include a detailed work program with specific tasks, timeframes, and deliverables for the consultant, similar to the guidance provided in Section 4. All subcontracts must terminate by August 31, 2001. If work on the closed landfill inventory will be continuing beyond the term of the FY 2000/2001 COG grant contract, work done by the consultant should be phased accordingly.

It should be noted that if more than one aspect of the closed landfill inventory work is to be subcontracted, it may be necessary to consider more than one consultant. For example, a consultant with expertise in geographic information systems or drafting may not necessarily be best-suited for data collection and analysis tasks.

Per the provisions of the grant contract, all contractual costs must be authorized by TNRCC. In addition, a copy of the proposed subcontract scope of work must be provided to TNRCC for review and approval.

## **7.0 MINIMUM REQUIRED COMPONENTS OF THE INVENTORY**

For the most part, much of the minimum requirements of the closed landfill inventory can probably be completed without additional research (i.e., in most cases, the information collected thus far and provided to the COGs is sufficient to satisfy the basic inventory provisions of the statute, and only needs to be organized and presented in a consistent format). Further, although some of the COGs may intend to utilize geographic information systems, computer aided drawing, and supplemental databases, it is important to note that the approach to completing the inventory does not have to be highly technical or demand

significant additional resources.

However, it should also be noted that taking a minimal approach may have drawbacks in the long run, particularly in regard to obtaining sufficient information to fulfill the statutory requirements beyond completing the inventory itself (i.e., notification of certain property owners). In addition, for those sites where little is known or the information available is not verified, the COG may need to consider whether further research or even a site investigation are warranted.

At a minimum, the inventory should include those landfills, both permitted and unpermitted, entered on the closed landfill inventory database prepared by SWTSU. If it is determined that a particular site should no longer be defined as a closed landfill, either because it never existed, all materials have subsequently removed, or it was an open waste pile misidentified as a closed landfill, the site should still be included in the inventory with the appropriate qualifying information to indicate why the site should not be classified as a closed landfill. In addition, if the location of an existing closed landfill site is determined to be incorrect, the inventory should note the situation and show the correct location.

TNRCC will provide the COGs with additional information on recent landfill closures and applications to develop over any closed landfill sites not included in the existing inventory database. These additional sites should be included in the regional inventories. Further, if a COG becomes aware of any additional closed landfill sites through its own research or investigation, the COG must determine the validity of the information and include such additional sites as appropriate in the regional inventory.

The grant contract specifies the mandatory components that must be included in the inventory to satisfy the statutory requirements. These components are outlined below, and explained further in the following subsections.

- ! Where known, a description of the exact boundaries of former landfill units
- ! If exact boundaries are not known, a description of the approximate boundaries of the former landfill units
- ! Where the exact boundaries are not known, include a map of the approximate boundaries of the former landfill units
- ! If known, the current owners of the land on which the former landfill unit is located
- ! If known, the current use of the land

### **7.1 Exact Landfill Unit Boundaries**

Where known, the exact location and boundaries of the landfill units must be described. The COG will need to determine whether enough information is available to certify that the exact boundaries have been identified for a particular site. Several instances where it is recommended that the COG consider accepting the information as sufficient to describe the exact boundaries include:

- a. A certified metes and bounds description which has been publicly filed is available, such as found in an affidavit of closure;

- b. Certified engineering drawings and/or other certified surveys of the final landfill site are available in the records; or,
- c. A new survey has been conducted by the COG or other entity, preferably based on actual geographic coordinates.

## **7.2 Approximate Landfill Unit Boundaries**

Where exact landfill unit boundaries are not known, a description of the approximate boundaries must be provided. This description should include as much information as is available to describe the location and boundaries of the site. Reference should be made to major physical and geographic features in relation to the site location. To the extent possible, it is recommended, but not required, that reference be made to the applicable basic land unit numbers (i.e., block, tract, parcel, etc.), as well as any available information on the geographic coordinates of the site and the landfill boundaries.

## **7.3 Maps**

Where the exact location and boundaries are not known, the inventory must include a map of the approximate location and boundaries of the landfill unit. For consistency and overall usefulness of the inventory, it is recommended, but not required, that the inventory also include maps of those landfills where the exact boundaries are known.

In depicting approximate boundaries, showing only the approximate point location of a closed landfill site will not satisfy the mapping requirement. By the same token, nor will an overly broad boundary approximation, such as an entire quadrant of a county, be acceptable (i.e., the approximate boundaries indicated on a map must correlate as much as reasonably possible to the available information on the location of the site). In addition, as directed in the grant contract, all maps should show closed landfill boundaries in relation to identifying physical or geographic features, such as roads, waterways and lakes, rail lines, and/or other features.

For some of the sites, a detailed map of the landfill, based on engineering drawings or a survey, may already be available and can be included in the inventory. In most cases, however, a new map will need to be prepared.

Because a primary purpose of the inventory is to assist landowners and potential property buyers, public officials, and others in locating these sites, the COG should consider indicating on the maps the boundaries and identification numbers of affected land tracts (i.e., basic land units), to the extent that this information is available. Especially where the exact boundaries of a landfill are not known, indicating the basic land unit boundaries and unit numbers on the map may be one way to depict the approximate boundaries of the landfill in a manner that will fulfill the statutory requirement (an example map, using this approach, is provided in Appendix B).

Also, remember that even if exact boundaries are known, such as through a metes and bounds description, it may be difficult to exactly represent that site on a map. For instance, if the beginning geographic coordinates of the survey cannot be verified, the COG may not be able to present the map as "exact," even though a description of the exact boundary is available. For this reason, the maps should be considered as supplemental to the location and boundary descriptions in the inventory (e.g., metes and bounds description). The determination of whether the "exact" boundary of the landfill is known should be based on the location and boundary description and not on the accuracy of a map of the site.

For landfills where boundary lines are available, but cannot be accurately placed on a map, the COG should consider including a dotted line or other method to indicate that the position of those boundary lines is considered accurate within a certain distance or radius. Similarly, where boundary lines are not available, the COG should consider using this approach to indicate the approximate location and boundaries of the site, in relation to geographic and physical features and the boundaries of applicable basic land units (see Appendix B).

In addition to the boundary and geographic information provided on the map, it is important that the maps provide basic reference information. It is recommended that each map include the following or similar information:

- a. Title block, identifying county and landfill number;
- b. Block with map scale, orientation, COG name, and date of preparation;
- c. Sufficient geographic and physical reference features (i.e., roads, streams, political boundaries, etc.);
- c. Closed landfill unit boundaries (note as exact or approximate); and,
- d. Applicable basic land units, such as land tracts and identification numbers (as available).

It is also recommended that explanatory comments and a disclaimer be placed on each map, especially for those showing approximate boundaries. The disclaimer should note the legislative requirements.

If it has been determined that all materials were removed from the site, or that a landfill never existed in that location, it is not necessary to provide a map. However, the inventory form, as described in Section 8.0, should still be provided, stating as such.

#### **7.4 Ownership Information**

Per the grant contract, land ownership information will not be required by TNRCC, if this information is not available. However, if this information is not compiled for the inventory, the COG will later need to determine the owners of those tracts where the exact landfill boundaries are available, in order to fulfill the notification requirements of the statute.

In order to find ownership information, the COG will need to first determine the applicable land unit or units corresponding to the geographic coordinates of the site. For each basic land unit, the county appraisal records and/or deed records should show ownership information.

## **7.5 Land Use**

Per the grant contract, land use information will not be required by TNRCC, if this information is not available. However, land use information will be important to any subsequent work by the COG, local governments, or TNRCC to assess the risks posed by particular sites, based on land use.

TNRCC has not established standards for describing the land use for a site. To the extent possible, it may be best to provide land use information in descriptive terms. Several examples are provided below:

- ! commercial property with two storage warehouses located on the landfill site
- ! residential neighborhood with approximately 20 houses on the landfill site
- ! agricultural land, with no structures nearby

The extent to which a full description can be provided depends upon available information. If the COG or its consultant visually inspects the landfill site, or if analysis is done using aerial photos, then more descriptive information may be available. On the other hand, information derived from a local zoning map or land use plan may include reference to the land use designation of the area (i.e., commercial, industrial, residential, etc.).

## **8.0 RECOMMENDED INVENTORY FORMAT**

The components of the inventory should be presented in a consistent and useable manner. It is recommended that the inventory be compiled into a notebook or similar format. A looseleaf, three-ring binder may work best to allow for additions and changes to the regional inventory as needed.

The inventory should include a cover or title sheet, and a table of contents or other listing of the contents and the sites included in the inventory. The cover sheet should refer to the inventory as a required component of the regional solid waste management plan and include the date of adoption. It is also recommended that the information be sorted by county, with tabs for each county.

It is further recommended that the inventory include an executive summary, describing the legislative requirements and the inventory procedures and methodologies. It might also be helpful to include a map of the region with point locations of all the sites by county.

Preferably, all maps and supporting information should be submitted on 8½x11 sheets; 11x14 or 11x17 sheets may be submitted if properly folded and inserted into the binders (no larger sheets should be submitted).

Regardless of the format used by the COG, the required components of the inventory, as explained in Section 7.0, must be provided. To present the supporting information regarding the site, including the location and boundary description information, a recommended format is provided in Appendix A. The recommended information to be included, as outlined in Appendix A, is explained below.

### **Basic Identifying Information**

- a. **COG Name.** List the COG name on each form.
- b. **County.** To allow for easy sorting of sites by county, it is recommended that the county name be listed at the beginning of each form.
- c. **Site Number.** List the site identification number (as noted in the database) and indicate whether it is a permitted or unpermitted site. For previously unidentified sites, please assign a temporary site number in the form of: COG Number/T (for temporary)/three-digit unit number (beginning with 001). For example, 18T001, 18T002, 18T003, etc.

### **Site History and Current Status**

It is recommended, but not required, that available information about the history of the site be presented, such as previous ownership, dates of operation, enforcement history, and types of waste disposed of at the site. In addition, it is recommended that a description of the current status of the site be provided to give readers an understanding of the history and status of the landfill.

### **Boundary Description**

- a. **Confidence Level.** Provide a narrative explanation of the confidence in the location and boundary information. If the information is considered accurate and exact, state as such, and explain the basis for the information (i.e., certified closure affidavit, certified site survey, etc.). If the information is approximate, explain the degree of confidence in the information and how the information was derived.

This section can also be used to identify those sites still listed on the inventory which the COG determines with certainty that the landfill never existed or that all materials have been removed from the site. In such instances, the COG should provide sufficient information to explain why the site should be removed from the inventory database.

- b. **Geographic Location.** Provide the latitude and longitude (in decimal degrees) for each site. Note that the database compiled by SWTSU includes an exact or estimated latitude and longitude for each site.
- c. **Location Description.** Provide a narrative description of the exact or approximate location of the landfill (e.g., a 5-acre site located approximately 1,000 feet northwest from the intersection of US Highway 281 and State Highway 46, 5 miles east of the City of Anywhere). Include

information to locate the site in relation to major geographic and/or physical features.

- d. **Boundary Description.** (*Statutory requirement for all sites*) Boundary information should be presented in this section. If a metes and bounds description is available, or if the geographic coordinates of the location and boundaries of the landfill have been determined, those should be listed. If exact boundary information is not available, explain that fact in this section and provide the best available description of the approximate landfill boundaries.

### **Attachments**

- a. **Maps.** (*Statutory requirement for sites with approximate boundaries*) A map showing the location and boundaries of the landfill should be included with the inventory form for each landfill. Refer to the recommendations provided earlier, explaining what can be included on the map. Although a map is not required for those sites where an exact description of the landfill location and boundaries is provided, it is highly recommended that a map for those sites be provided with the inventory.
- b. **Land Use, Ownership, and Land Unit Information.** (*Land use and ownership information is required by statute, if the information is known*) If the information is known, the inventory form for each landfill should include a table showing current land use and ownership information for that site. It is recommended that the land use information include general land use categories (i.e., residential, commercial, institutional, mixed, etc.) as well as a narrative land use description (e.g., predominantly single-family residences interspersed with a few remaining undeveloped wooded lots, with one convenience store and a fire station). Any information on ownership should include the name(s) and addresses of the current owner(s) of the land that overlies the landfill. It is also recommended that this table identify the basic land units (i.e., block, parcel, tract, etc.) that overlie the identified closed landfill boundaries, where this information is known. *Be sure to indicate on the table that the information presented is current as of a specified date, since the land use and ownership information is subject to change over time.*
- c. **Documents.** It is recommended that copies of any affidavits of closure, site photos, other maps, and other appropriate information related to the site which may be useful for understanding the inventory information be attached.

## **9.0 ADOPTION AND SUBMISSION OF THE INVENTORY**

The completed regional inventory must be incorporated into the regional solid waste management plan. The plan adoption process is set forth in Subchapter O of the MSW Regulations. If the inventory is completed during the FY 2000/2001 grant term, the following steps will need to be followed for incorporation of the inventory into the regional solid waste management plan.

- 9.1 Draft Inventory.** The COG should keep its solid waste advisory committee (SWAC) informed of the progress of the inventory, and the SWAC should have a role in guiding the development of the inventory. The COG should also provide interim copies to TNRCC for review and comment as the work progresses.
- 9.2 Public Meetings and Input.** It is recommended, but not required, that the COG conduct public meetings and provide other opportunities for public input during the development of the inventory. The COG should consider holding public meetings in each county to review the draft inventory.
- 9.3 Public Hearing.** In accordance with the requirements for adoption and amendments to the regional solid waste management plan, the final draft inventory will need to be presented and discussed in a public hearing. This public review and comment process will be important to ensure that local officials, landowners, and the general public have an opportunity to review and comment on the inventory before it is finalized.
- 9.3 Formal Adoption by the COG.** Following the public comment period, the final proposed inventory will need to be approved by the SWAC and adopted by the governing body of the COG, as an amendment to the regional solid waste management plan.
- 9.4 TNRCC Review and Adoption.** The final inventory will then need to be submitted to TNRCC for review, approval, and adoption. TNRCC staff will review the inventory and recommend to the Executive Director whether the inventory should be approved. Once the inventory is tentatively approved by the Executive Director, notice will be published in the Texas Register and public comment accepted on the inventory. The final inventory will then be presented to the Commissioners for adoption. If approved and adopted by the Commission, the inventory becomes part of the regional solid waste management plan.
- 9.5 Distribution of the Approved Inventory.** In accordance with the statutory requirements, once the inventory is approved and adopted as an amendment to the regional solid waste management plan, the completed inventory must be provided to TNRCC and to the chief planning official of each municipality and county in which a landfill unit is located. TNRCC and the planning officials are to then make the inventory available for public inspection.
- 9.6 Updates to the Inventory.** Once the regional inventory is completed and approved, it is expected that the inventory will need to be updated periodically, to add any newly discovered unpermitted sites and to list permitted sites that close after the inventory is completed. TNRCC is considering options for an ongoing planning cycle that would include a schedule for periodic amendments to the regional solid waste management plans, possibly on a four-year cycle. In considering these options, TNRCC will work with the COGs to establish a procedure for updating the inventory as part of the regular amendments to the regional plans.

## **10.0 ELECTRONIC COPIES OF MAPS AND SUPPORTING INFORMATION**

It is not required that the COG incorporate the inventory information into electronic format. However, it is understood that many COGs may use geographic information systems (GIS), other computer mapping systems, and/or computer database software to compile and prepare the inventory.

As required in the grant contract, any products developed through a geographic information system must conform with TNRCC GIS standards, which can be found on the Internet (TNRCC home page) at:

<http://home.tnrcc.state.tx.us/gis/gisply.html>

This requirement specifically applies to geographic information entered into a GIS for use by the COG, but not necessarily to maps prepared through a GIS or other electronic mapping/graphics system strictly for presentation purposes.

If location and boundary information is entered into a GIS, or prepared using an electronic mapping or graphics system, TNRCC would appreciate receiving copies of those files. If maps and other documents are scanned electronically, a copy of those files would also be appreciated.

## **11.0 DATABASE**

The inventory database will be provided to each COG, to assist in compiling the regional inventory. For reference, the structure of the database with field names and descriptions is provided in Appendix C.

Although an electronic copy of the database will be provided, it is requested that any revisions to the database not be submitted electronically. Rather, it is requested that the COGs note any revisions to the database on a separate form (see Appendix D), which will not be part of the inventory itself, and submit the revision form to TNRCC. A brief explanation of why the change is necessary should be provided on the form. TNRCC will consider the information provided by the COG, and if appropriate, will revise the statewide database from these forms.

Many of the fields in the database correspond directly to the MSW permit application and status update process, or are fields added by SWTSU for its own purposes. Although these fields may still provide some useful information, they are not subject to revision. Those fields which are not subject to revision have been struck out. However, data on landfill unit dimensions, location, geographic coordinates, and types of waste disposed of may be subject to change with new or additional information.

The database revision form provided in Appendix D may be modified as necessary, as long as all of the basic information is still provided. Note that for newly-identified landfills which do not have a number, please assign a temporary site number in the form of: COG code/T (for temporary)/three-digit unit number (beginning with 001). For example, 18T001, 18T002, 18T003, etc. In administering the statewide database, TNRCC will subsequently assign permanent tracking numbers.

## **12.0 PUBLIC INQUIRIES**

Once the inventory is completed and incorporated into the regional solid waste management plan, TNRCC and local planning officials are to make that information available to the public. In addition, because the inventory will be incorporated into the regional solid waste management plan, the COG will also have an obligation to provide copies of the inventory to the public.

However, prior to completion of the regional inventories, it is likely that both TNRCC and the COGs will receive an increasing number of public inquiries concerning the inventory information. As has been TNRCC's current procedure, basic information from the statewide inventory database will continue to be made available to the public, with appropriate qualifiers concerning the accuracy of the data. It is recommended that during the development of the regional inventory, each COG also establish a procedure for dealing with requests for information.

## **13.0 NOTIFICATION OF LANDOWNERS AND COUNTY CLERKS**

In accordance with the statutory provisions, once the inventory is completed and incorporated into the regional solid waste management plan, the COG is required to notify landowners and county clerks of those landfills where the exact boundaries are known and which are located wholly on an identifiable tract of land.

The procedures for fulfilling this requirement will need to be determined by the COGs. It is recommended that the 24 COGs work jointly, possibly through the Texas Association of Regional Councils, to develop a consistent process and standard notification documents to comply with this requirement.

**APPENDIX A**  
**Recommended Inventory Format**

**BASIC IDENTIFYING INFORMATION**

- A. COG Name:
- B. County Name:
- C. Site Number:                    \_\_\_\_\_ Permitted Site        \_\_\_\_\_ Unpermitted Site

**SITE HISTORY AND CURRENT STATUS**

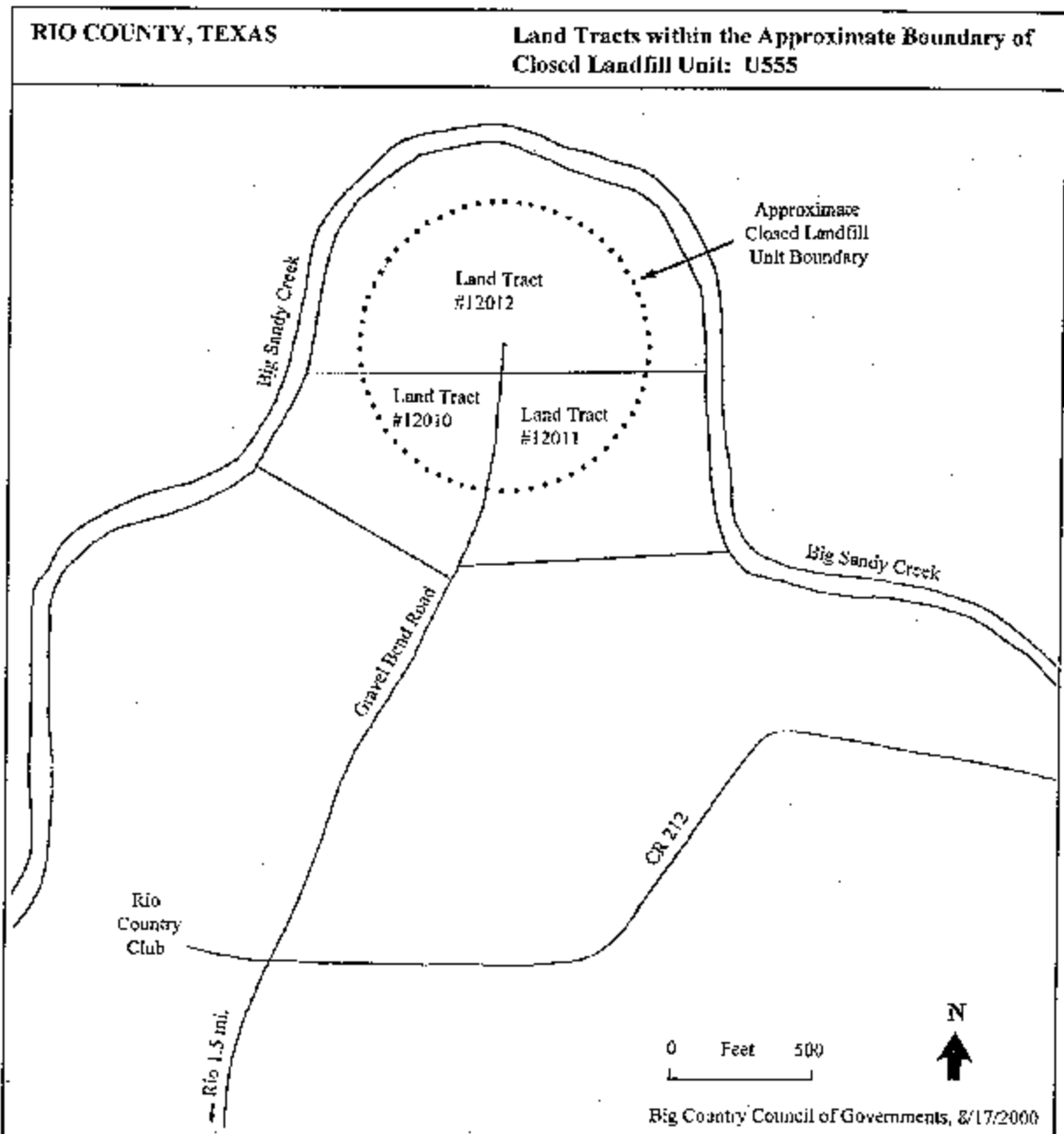
**LOCATION AND BOUNDARY DESCRIPTION**

- A. Confidence Level
- B. Geographic Location (latitude and longitude in decimal degrees)
- C. Location Description
- D. Boundary Description

**ATTACHMENTS**

- A. Map(s)
- B. Table Showing Land Use, Ownership, and Land Unit Information (*current as of a specific date*)
- C. Documents

APPENDIX B  
Example Map



**Comments:** Rio County Health Department records indicate that an unpermitted landfill was operated between 1975 and 1979 on a site of approximately 4 acres, approximately 2 miles north of the City of Rio at the end of Gravel Bend Road. A metes and bounds description of the closed landfill unit is not available. The approximate closed landfill unit boundary indicated on this map was derived by identifying the individual land tracts within a 500-foot radius of the end of Gravel Bend Road, which would reasonably include any 4-acre area.

**Disclaimer:** This map was prepared by the Big Country Council of Governments in direct response to provisions of Senate Bill 1447, enacted by the 76th Legislature of the State of Texas. The closed landfill unit boundaries indicated on this map are an approximation only, based on the best available information. Specific land tracts have been identified within this approximate boundary in order to inform current and prospective landowners that a closed landfill unit may exist on any or all of these tracts; this map is not intended to influence the sale or purchase of real property. Accompanying this map is additional information on the subject closed landfill unit and land tracts.

## APPENDIX C

### Resources for Researching and Mapping Location and Boundary Information

- 1. TNRCC/SWTSU Database.** The inventory database provided by TNRCC should serve as the basis for the COG inventory. The database compiled by SWTSU includes information from TNRCC historical records and the TNRCC permit database (PERMAPP files), records compiled from county and local sources, and information provided by the COGs and local governments. Appendix D provides the definitions for the various information fields in the inventory database.
- 2. SWTSU Boundary Files.** In addition to the inventory database, SWTSU has prepared ArcView shape files for those permitted sites where information was available to describe a landfill boundary. These files provide boundary lines, geographic reference points for the boundary, and either a verified or approximate geographic point for the beginning of the boundary lines. Where a file has been prepared for a site, the file will be helpful to those COGs that have access to a GIS, or contract for GIS services, to prepare a map of the site. Note, however, that these files do not include the underlying layers to show geographic and physical features necessary for a complete map. Also, while these files will be helpful in preparing maps of the sites, it may be difficult for the COG to determine just from the GIS file whether the “exact” boundaries of the site have been identified. Rather, the COG may need to base that determination on a certified boundary description in the records.
- 3. Records, Files, and Maps.** Copies of the records, files, and maps compiled by SWTSU in preparing the inventory database have been copied and are being provided to the COGs, along with the database. As a first step, the COG will need to review this information in conjunction with the database files, to determine the extent of information available for each landfill site. Note that these files may contain an *affidavit of closure* or other certified site survey that can be used to determine the exact boundaries of the landfill.
- 4. TNRCC Permit Files.** The TNRCC permit files are available at the Austin office, either in hard copy or microfiche. The COGs are free to review these files for more detailed information about a particular site.
- 5. TNRCC Regional Offices.** The COG staff may want to review the inventory information with the applicable TNRCC regional office staff to determine if any additional information is available from records maintained at the regional level. The regional staff may also have personal knowledge of some of the sites.

- 6. County Appraisal District or Land Office.** Once the COG has reviewed the data and information provided by TNRCC and SWTSU, COG staff may want to go to the county appraisal district or land office for each county wherein a closed landfill is located. For each geographic location identified in the inventory database and/or records, the appraisal district or land office should have information to identify the tract or tracts of land corresponding to that location. Some counties have land information entered into a GIS, which will make it much easier to research the information. The COG can obtain information on the basic land unit numbers and a copy of the plat map or other available map to show the land unit(s). The county records should also provide information on the current owners of the land. If needed, grant funds may be used to have county staff assist in the inventory research.
- 7. Deed Records.** Deed records should be available for each tract of land or basic land unit. It is strongly recommended that the COG review the county deed records for each tract(s) of land identified as possibly overlying a closed landfill. Of particular importance, the COG should determine whether a notification of the existence of the landfill has been entered into the deed record. Information from the deed records help to confirm the existence of a landfill on that tract and to certify the exact boundaries of the landfill.
- 8. Local Records.** During the process to compile the inventory database, SWTSU worked with the COGs to obtain information from various local entities (i.e., cities, counties, river authorities, county health districts, etc.). The COG should consider further coordination with local entities to verify the inventory information.
- 9. Landowners and Local Officials.** In addition to available records, the COG should consider additional coordination with local officials and, where appropriate, owners of the property where a landfill may have been located. For those landfills that were not permitted by TNRCC, local officials and/or landowners may be the best sources of information to verify the location of a landfill.
- 10. Site Visits.** It is recommended that the COG consider visiting as many of the sites on the inventory as possible, and obtaining pictures to include with the inventory. In many cases, the existence of a closed landfill may be obvious from a visual inspection.
- 11. Onsite Surveys.** Although not required, the COG may use grant funds to conduct surveys of selected sites to verify the existence and boundaries of the landfill. Particularly for sites located in sensitive areas (e.g., schools, residential neighborhood, near water supply, etc.), the COG may want to work with the local government to accurately determine the existence of the landfill and the landfill boundaries.
- 12. Remote Sensing.** A variety of new technologies have become available that may help to verify the existence of a closed landfill and to accurately determine the boundaries of the site. For instance, aerial photo coverages are or will soon be available for the entire state.
- 13. Geographic Data and Information.** TNRCC's GIS Web Site contains links to a wide variety of geographic data and GIS base maps (<http://home.tnrcc.state.tx.us/gis>).

## APPENDIX D

### DATA DEFINITIONS FOR ATTRIBUTES OF PERMITTED AND UNAUTHORIZED LANDFILL SITES

Field Name	Description
A_CLOSE_DATE	Last date in the records that the facility accepted waste
A_OPEN_DATE	Earliest date in the records that the facility began accepting waste
ACCURACY	Code for landfill coordinate source: 1=TNRCC files, 2=Geocoded at SWTSU from good location information, high confidence level, 3=Geocoded at SWTSU from very general location information, low confidence level, 4=no coordinates available
AGRICULTUR	If Y, facility accepts agricultural waste
AMENDMENT	Code used to indicate version of an amendment to the original permit application, i.e., A, B, C, D, etc.
APP_ADDRESS	Applicant street address or PO Box
APP_AREACD	Applicant area code
APP_CITY	Applicant city
APP_NAME	Applicant name, company or individual
APP_PHONE	Applicant phone number
APP_ST	Applicant state
APP_ZIP	Applicant zip
APP_ZIP4	Applicant zip +four
AREA_SERVE	County, city, geographical area served by the facility
BRUSH	If Y, facility accepts brush
BUS_TYPE	Code Used to identify business type; 0=city, 1=county, 2=individual, 3=business
COG	Texas Council of Government code
COMMENTS	General comments about the landfill
CONST_DEMO	If Y, facility accepts waste from consturction demolition
COOR_CD	Code used to identify the source of the coordinate data; this was historical data that is now irrelevant
COUNTY_CD	Texas county code where site is located
CNTY_NAME	Texas county name where site is located
DATE_CLOSE	Date landfill closed
DATE_OPEN	Date landfill opened
DATE_REG	Date the permit application or amendment received in the MSW Permits Section

**DATA DEFINITIONS FOR ATTRIBUTES OF  
PERMITTED AND UNAUTHORIZED LANDFILL SITES**

Field Name	Description
DEPTH_CD	<del>Code used to identify the source of the maximum depth data; this was historical data that is now irrelevant</del>
EST_CL_DT	<del>Estimated closure date for landfill at the time the application was submitted</del>
ETJ	Extra territorial jurisdiction; pertains to whether or not a landfill is within the jurisdiction of a city
FINAL_COV	If Y, final cover has been applied
HAZ_CERT	If Y, certain that hazardous waste was accepted
HAZ_PROB	If Y, probable that hazardous waste was accepted
HAZ_UNLIKE	If Y, unlikely that hazardous waste was accepted
HOUSEHOLD	If Y, facility accepts household waste
INDUSTRIAL	If Y, facility accepts industrial waste
INSPECTION	Last date of inspection, inspection comments
LATIT_DD	Latitude in decimal degrees
LATIT_DEG	Location of landfill - latitude degrees
LATIT_MIN	Location of landfill - latitude minutes and seconds
LEGAL	<del>If Y, landfill is a permitted facility</del>
LOCATION	Physical location or address of unauthorized facility
LONGI_DD	Longitude in decimal degrees
LONGI_DEG	Location of landfill - longitude degrees
LONGI_MIN	Location of landfill - longitude minutes and seconds
MAX_DEPTH	Maximum depth of the landfill
MIN_THICK	Minimum thickness of final cover
NEAR_CITY	City closest to landfill
ORIG_ACRES	<del>Landfill size, in acres, at the time the permit application was submitted. **Amendments may increase the size of the facility</del>
OTHER	If Y, facility accepts other types of wastes
OTHER_DES	Description of other types of wastes accepted
OWN_ADD	<del>Owner or contact street address or PO box</del>
OWN_CD	<del>Code used to identify the site owner; this was historical data that is now irrelevant</del>
OWN_CITY	<del>Owner or contact city</del>
OWN_NAME	<del>Land owner name or contact for application</del>

**DATA DEFINITIONS FOR ATTRIBUTES OF  
PERMITTED AND UNAUTHORIZED LANDFILL SITES**

Field Name	Description
OWN_ST	Owner or contact state
OWN_ZIP	Owner or contact zip
OWN_ZIP4	Owner or contact zip+four
PARTIES	Parties (areas, cities) served by the landfill
PERMIT_NO	Number assigned to an application when it is received in the MSW Permits Section office
PER_STATUS	Code used to indicate permit status, i.e., submitted, denied, issued, etc. Codes are shown in Attachment I.
POP_SERVED	Total number of population served by the facility
REGION_CD	Texas agency region code
RESP_ENG	Initials of TNRCC responsible engineer working on project
REVIEWER	Researchers notes
RIVER_CD	Texas Basin Code for closest river basin
SITE_LOC	Physical; location or address of landfill
SITE_NAME1	Name of unauthorized landfill site
SITE_NAME2	Alternate or local name of unauthorized landfill site
SITE_STATUS	Code used to indicate the condition of the site at the time the permit application was received. Code are shown in Attachment I.
SIZE_ACRES	Landfill size in acres
SIZE_CUYDS	Landfill size in cubic yards
SOURCE	Source of information
STATDATE	Date status change was made, in conjunction with the PER_STATUS
STATE_REM	Status remarks, based on site status -- what occurred at last status update
TIRES	If Y, facility accepts tires
TONS_DAY	Estimated tons/day at the time permit application submitted
TWC_DIST	Texas Water Commission district code; historical data
TYPE_FACIL	Code used to identify facility type according to the method of processing or disposal of municipal solid waste. Codes are shown in Attachment I.
UNAUTHOR	If Y, landfill is unauthorized
UNUM	Site number assigned at SWTSU for tracking unauthorized landfill sites
UPDATE	Code used to indicate changes that were made to the data as a result of site review and verification process. 0=no changes, 1=change to attribute, 2=change to location, 3=change to location and attribute, 4=new record, 5=contested site, 6=?, 7=?, 8=military data

**DATA DEFINITIONS FOR ATTRIBUTES OF  
PERMITTED AND UNAUTHORIZED LANDFILL SITES**

<b>Field Name</b>	<b>Description</b>
USE	If Y, the land is available for reuse; historical data that is now irrelevant
YDS_DAY	Estimated cubic yards/day at the time permit application submitted

## APPENDIX D -- Attachment 1

### TEXAS NATURAL RESOURCE CONSERVATION COMMISSION MSW PERMIT APPLICATION DATABASE

#### PERMIT STATUS CODE

A	APPLICATION SUBMITTED
B	APPLICATION ADMINISTRATIVELY COMPLETE
C	APPLICATION TECHNICALLY COMPLETE
D	APPLICATION DENIED
E	APPLICATION IN PUBLIC HEARING
F	APPLICATION IN FINAL PROCESSING
G	GRANDFATHERED SITE - APPLICATION SUBMITTED
I	PERMIT ISSUED
J	APPLICATION OR PERMIT COMBINED WITH ANOTHER PERMIT
K	SITE CLOSED, NO PERMIT ISSUED - (GF SITE)
Q	SITE CLOSED, PERMIT ISSUED
R	REGISTERED SITE (TYPE 7 TO WATERSHED MGMT.)
W	APPLICATION WITHDRAWN
X	PERMIT VOLUNTARILY CANCELLED PRIOR TO OPENING SITE
Z	PERMIT REVOKED
AP	APPLICATION SUBMITTED, POST-CLOSURE CARE ON PARTIAL SITE (GF SITE)
AK	APPLICATION SUBMITTED, SITE PARTIALLY CLOSED (GF SITE)
CT	SITE CLOSED TO WASTE (FINAL COVER IN PROCESS)
DK	APPLICATION DENIED, SITE CLOSED (GF SITE)
IP	PERMIT ISSUED, POST-CLOSURE CARE ON PART OF SITE
IQ	PERMIT ISSUED, SITE PARTIALLY CLOSED
PC	SITE UNDER POST CLOSURE CARE (30 YEARS)

#### SITE STATUS

GF	GRANDFATHER SITE (IN OPERATION PRIOR TO 1974)
NL	NEW LICENSE (COUNTY LICENSED SITES)
OK	PREVIOUSLY APPROVED SITE (ALL AMENDMENTS)
PS	PROPOSED SITE (PERMIT HAS NOT BEEN ISSUED BEFORE FOR THIS SITE)
RL	RENEWAL LICENSE (FOR COUNTY LICENSE, NO LONGER USED)
TB	TRENCH BURNER (NO LONGER USED)
XX	UNAUTHORIZED/NON-PERMITTED SITE (30,00 SERIES - TRANSFERRED TO ENFORCEMENT)
XS	ILLEGAL SLUDGE DISPOSAL SITE (TRANSFERRED TO WATERSHED MANAGEMENT)

**APPENDIX E**  
**Closed Municipal Solid Waste Inventory**  
**Database Revision Form**

**COG Name:**

**Date:**

Site Number*	Type of Revision (Check One)		Field Name	Data	Reason for Revision
	Data Change	New Data			

\* For previously unidentified sites, please assign temporary site numbers in the form of: COG code/T (for temporary)/three-digit unit number (beginning with 001). For example, 18T001, 18T002, 18T003, etc. In administering the statewide database, TNRCC will subsequently assign permanent tracking numbers.