

**BACWA SURVEY OF THE CAPACITY OF LOCAL LANDFILLS TO ACCEPT
BIOSOLIDS**

December 27, 2005

Survey conducted by:

SFPUC Staff

INTRODUCTION:

In order to assist both the San Francisco Public Utilities Commission (SFPUC) staff and colleagues at other agencies that comprise the Bay Area Clean Water Agencies (BACWA) determine options for Biosolids reuse and disposal at local landfills, the SFPUC Environmental Engineering staff conducted a survey of existing capacity at landfills within 200 miles of 750 Phelps Street, San Francisco.

APPROACH:

Staff first reviewed all permitted and active landfill information as presented on the California Integrated Waste Management Board website. An example page of information is attached for reference. From this information it was determined that there were 31 sites that had biosolids either listed as an accepted waste type or from previous conversations and contractual relationships, sites were known to accept biosolids. Survey questions were developed and reviewed by Marlaigne Dumaine (CASA) and a master spreadsheet was developed for tracking the data (both are attached for reference). SFPUC staff then attempted to contact all 31 sites.

RESULTS:

Of the 31 sites, four indicated that in fact they either do not or are not permitted to take biosolids, one facility is permanently closing in the next several months, seven either were unreachable or the phone was disconnected and one was a duplicate listing. Of the remaining 18 sites, nine take in-county material only. Therefore there are nine landfills that will either reuse or dispose of biosolids within 200 miles of San Francisco from out-of-county sources. Of these nine, four will accept biosolids for disposal only, but generally are not restricted by weather. All material must meet the non-hazardous waste criteria. Four sites indicated that they could accept either for Alternative Daily Cover or disposal, depending on current operating conditions. One site indicated reuse exclusively. Sites have different requirements regarding % solids. Several require > 15 % solids, others specified from 20 – 25% solids. Several of the reuse sites require Class B material and this should be interpreted as a minimum requirement.

Many of the contacts refused to give information regarding total capacity for biosolids and remaining capacity available. The table below summarizes the information that the industry contacts would disclose.

| Facility | Reuse or Disposal | Permitted Capacity for Biosolids | Unused Capacity for Biosolids |
|---|-------------------|----------------------------------|--------------------------------|
| Altamont Landfill and Resource Recovery | ADC/disposal | Not specified | |
| Vasco Road Sanitary Landfill | ADC/disposal | 500 tons/day | |
| Keller Canyon Landfill | Disposal only | | 1,000 tons/week |
| Salinas Valley Solid Waste Authority | ADC/disposal | Not specified | |
| Forward Landfill Inc | Disposal only | | 1,000 tons/week |
| Newby Island Sanitary Landfill | Disposal only | | 1,000 tons/week |
| Potrero Hills Landfill | ADC/disposal | 250 tons/day | |
| Norcal Waste Systems Inc. (Hay Rd. -LF) | Reuse | 40,000 tons/year | Some capacity in summer months |
| County of Yolo Public Works Dept | Disposal only | Not specified | |

RESULTS FOR SAN FRANCISCO:

San Francisco currently has a dry-weather contract with Vasco Road Landfill (50 tons/day), Potrero Hills Landfill (100 tons/day) and a wet-weather contract with Hay Road Landfill (40,000 tons/year). From this survey, it appears that only one other local site will reuse biosolids when operationally viable (Altamont Landfill). Another result of this survey is the capacity for reuse at the Salinas Valley Solid Waste Authority that might be available to the SFPUC. San Francisco currently disposes of its grit at Keller Canyon Landfill (Allied-BFI), but the available capacity for disposal of biosolids was a welcome discovery.

RESULTS FOR BACWA AGENCIES:

There are a total of 55 wastewater treatment plants and 53 wastewater treatment agencies (POTWs) in the nine-county Bay Area. Based on survey data from 16 agencies and estimates for the remaining agencies, the 55 POTWs produced an estimated 184,000 dry tons of biosolids in 2003, which is

equivalent to about 500 dry tons per day or about 2,000 wet tons per day (assuming 25% TS). (1). Based on a survey of BACWA agencies, most biosolids produced in the Bay Area are managed by private companies that haul and/ beneficially use or dispose of the material (see table appended). These biosolids are applied to land owned by farmers and ranchers, delivered to landfills for use as ADC, or are disposed of in landfills with municipal solid waste.

Two agencies, Palo Alto RWQCP and Central Contra Costa Sanitary District, have incinerators that burn biosolids. The ash is disposed of in landfills. Dedicated land disposal sites are used by DSRSD and Novato Sanitary District. These agencies own the disposal sites and have been using them for many years. VSFCDD owns a site called Tubbs Island in Sonoma County. Lime-stabilized biosolids cake is applied to the land, which is acidic and benefits from the high-pH material. The land is leased to a farmer. (1)

For the landfills for which either current or potential capacity values were given (six facilities), it appears that there is about 720 wet tons/day of capacity during wet-weather and 1250 wet tons/day of capacity during dry-weather. These values do not include the unstated capacities at Altamont Landfill, Salinas Valley and Yolo.

From these estimates, it appears that there is not sufficient capacity to dispose/reuse the biosolids from the BACWA agencies within a 200 mile radius of San Francisco and that both ensuring the continuation of land application programs and the development of either individual or regional Class A alternatives is critical to providing reliable reuse/disposal options for the region's facilities. As landfill sites close or further restrict the acceptance of biosolids, agencies could find themselves competing for scarce resources which would result in both high tipping prices and possibly longer hauling distances. Both options will increase the cost to POTWs for responsibly reusing this resource.

REFERENCES:

(1) "Bay Area Regional Biosolids Management Program Feasibility Study" (June 2004) Prepared for Bay Area Clean Water Agencies by CH2MHill.