

TO: HONORABLE CITY COUNCIL

FROM: CITY MANAGER DEPARTMENT: PUBLIC WORKS

DATE: SEPTEMBER 21, 2009 CMR: 355:09

REPORT TYPE: INFORMATION

SUBJECT: FIFTH ANNUAL UPDATE OF THE PALO ALTO LANDFILL CAPACITY

This is an information report and no Council action is required.

BACKGROUND

In the response to the City Auditor's review of the Environmental Service Center (ESC) proposal (CMR:114:05), staff agreed to provide City Council with annual reports on remaining landfill capacity and landfill closure updates as they developed. This is the fifth annual report.

DISCUSSION

In March 2009, staff submitted an updated Final Closure and Postclosure Maintenance Plan (FCPMP) for the remaining active phase of the landfill (Phase IIC) to overseeing agencies. These agencies include: The California Integrated Waste Management Board; The San Francisco Bay Regional Water Quality Control Board; The Bay Area Air Quality Management District; and the County of Santa Clara, Department of Environmental Health. The FCPMP includes an updated closure schedule as follows:

Current Closure Schedule (assuming acceptance of commercial refuse):

- **Mid 2011** Landfill reaches airspace capacity

- **End of 2011** Production of compost for closure
Receive and stockpile clean soil for closure

- **2012** Closure activities – including demolition and removal of existing structures, minor re-grading of refuse, placement and compaction of foundation soil layer, placement of low-permeable layer (cap), placement of vegetative soil layer, upgrade and burial of all above-ground gas and leachate system components and final documentation report preparation and submittal.

- **Early 2013** Final State agency approval expected.

Remaining Airspace Volume Calculation:

In order to determine the remaining landfill volume, a photogrammetric survey is performed in either April or May of each year. Photogrammetry is the science of taking measurements from photographs. The photogrammetric survey involves an aerial photograph of the landfill to help measure the remaining volume of air space. The latest aerial photo was taken on April 30, 2009. The City's landfill consultant completed a volume calculation in July 2009 and estimated that, as of April 30, 2009, there was a total volume of 249,000 cubic yards (cy) remaining in the landfill. This figure is calculated by subtracting the landfill's existing topography elevations from the elevations of the approved final grading plan, approved by the California Integrated Waste Management Board, Regional Water Quality Control Board, and the Santa Clara County Local Enforcement Agency. Staff projects that 71,000 cy of that remaining volume (in the remaining fill area) will be depleted by landfill final cover soil, leaving 178,000 cy of net landfill volume for filling refuse, asphalt-concrete waste, and cover soil.

Capacity Projection with Acceptance of Commercial Refuse:

During the last five years, the volume calculations indicated annual volume depletions of 111,828 cy, 109,002 cy, 88,640 cy, 85,188 cy and 76,199 cy (respectively). To determine the estimated landfill closure date, the average volume depletion over the last five years is calculated (94,171 cy) and projected into the future. Last year, the projection indicated the landfill would reach capacity sometime in late 2010. This year, the projection indicates the landfill will reach capacity sometime in early 2011, about 4-6 months later than last year's projection. This airspace depletion date is consistent with commercial refuse being disposed at the landfill.

Capacity Projection Without Accepting Commercial Refuse:

A commercial ban on refuse disposal was initiated by a Council motion during the January 12, 2009 Council Meeting. The ban was implemented by landfill staff on March 1st and remains in place. Relative incoming refuse tonnages compared to last years are listed below:

	2009 Tons of Refuse Per Month (Commercial Ban in place)	2008 Tons of Refuse Per Month (No commercial Ban)
March	528	1,318
April	560	1,585
May	459	1,529
June	553	1,717
July	674	1,537
August	<u>510</u>	<u>1,528</u>
Totals	3,283 tons	9,214 tons

Staff estimates landfill depletion sometime in 2013 if the commercial ban remains in place. That would be approximately two years longer than if commercial refuse is accepted. Projecting the airspace depletion date assuming that the commercial ban remains in place is more uncertain because: 1) There is only 6 months of tonnage data since the ban was implemented; and 2) it is uncertain what portion of the tonnage reduction to 36% of last years refuse can be attributed to the commercial ban or attributed to the recession.

It is important to note that the landfill site life estimate is based on assumptions and current conditions. Some of those assumptions and conditions utilized for this site life estimate are:

continued receipt of average amounts of incoming refuse; the amount of cover soil and asphalt concrete waste utilized; the weight to volume density conversion ratios (i.e. densification of the refuse); estimates of on-site soil stockpiles; estimates of final cover soil volumes; plus any tonnage increases due to population increase and economic activity. Also, it is possible that as additional zero waste operational plan programs and Construction and Demolition programs are implemented, less volume will be consumed per year, thus extending the site life estimate slightly. A change in any of these assumptions or conditions would likely produce a change in the landfill site life.

Staff will continue to provide Council with closure information on an annual basis and will return to Council sooner should conditions change.

RESOURCE IMPACT

Funding for the aerial survey used to calculate the remaining capacity is budgeted annually within the Refuse Fund. A landfill capacity update is also required by the California Integrated Waste Management Board each year.


POLICY IMPLICATIONS

This informational report does not represent any changes to existing City policies.

ENVIRONMENTAL REVIEW


This informational report is not a project as defined by the California Environmental Quality Act (CEQA) under California Code of Regulations Title 14, Section 15378.

PREPARED BY:



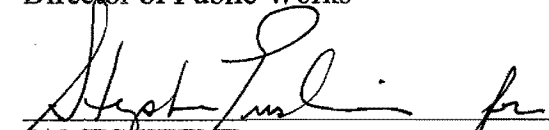
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