TO: HONORABLE CITY COUNCIL
FROM: CITY MANAGER DEPARTMENT: PUBLIC WORKS
DATE: OCTOBER 6, 2008 CMR:382:08
REPORT TYPE: INFORMATIONAL
SUBJECT: Fourth Annual Update Of The Palo Alto Landfill Capacity

This is an informational 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 actual tonnages, remaining landfill capacity and general landfill closure updates as they developed. This is the fourth annual report.

DISCUSSION
In order to determine the remaining landfill volume, a photogrammetric survey is performed each year in May. 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 May 15, 2008. The City’s landfill consultant completed a volume calculation in September 2008 and estimated that as of May 15, 2008, there is a total volume of 427,000 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. It should be noted that a revision to this final grading plan was approved by the Byxbee Park designer (Hargreaves Associates) in April 2008. The refuse fill volume difference between the approved and revised plans in the remaining fill area is approximately 2% and should have a minimal impact to the remaining time until closure. Staff projects that 173,000 cy of that remaining volume (in the remaining fill area) will be depleted by landfill final cover soil, leaving 254,000 cy of net landfill volume for filling refuse, asphalt-concrete waste, and cover soil. During the last five years, the volume calculations indicated volume depletions of 129,625 cy; 111,828 cy, 109,002 cy, 88,640 cy and 85,188 cy, (respectively). To determine the estimated landfill closure date, the average volume depletion over the last three years is calculated (104,857 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 (the net volume will be depleted) sometime late in 2010, about the same time projected as last year.
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, cover soil, and asphalt concrete waste, weight to volume density conversion ratios, estimates of on-site soil stockpiles, estimates of final cover soil volumes, plus an annual one percent tonnage increase due to population increase and economic activity. Also, it is possible that when additional zero waste operational plan 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.

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