

## ***ADDENDUM***

### ***to the Sonoma County Central Disposal Site Improvement Program Final Environmental Impact Report (SCH # 1995073068) for the Reopening of the Central Disposal Site May 25, 2012***

#### ***I. Introduction***

This Addendum has been prepared in accordance with section 15164 of the CEQA Guidelines relative to the County's proposed reopening of the County's Central Disposal Site for full waste disposal, in areas that were evaluated in previous CEQA documents. This Addendum evaluates whether any of the circumstances or conditions required by Public Resources Code section 21166 and CEQA Guidelines 21152 have been met, which would require subsequent environmental review beyond the scope of the Sonoma County Central Disposal Site Improvement Program Environmental Impact Report (certified in November 1998, hereafter referred to as the "1998 EIR") and the Sonoma County Central Disposal Site Rock Extraction Project (certified in July 1998, hereafter referred to as the "REA EIR").

The County now proposes to complete the landfilling component of the project in the areas as described in the 1998 EIR and the REA EIR. The project is described in detail in a Joint Technical Document (JTD) prepared by Keller Canyon Landfill Inc., and SCS Engineers, on behalf of the Sonoma County Department of Transportation and Public Works (DTPW) (*Amended Joint Technical Document Central Disposal Site, Sonoma County, CA*; November 2011) for submittal, along with the appropriate permit applications, to the North Coast Regional Water Quality Control Board (NCRWQCB) for new Waste Discharge Requirements (WDRs), and to the Local Enforcement Agency and CalRecycle for a revision to the Solid Waste Facilities Permit (SWFP).

This Addendum supplements the 1998 EIR, and incorporates by reference the REA EIR. The 1998 EIR described an improvement program to provide solid waste disposal capacity at the Central Disposal Site on Meacham Road southwest of the city of Cotati. Also in 1998, the County certified the REA EIR for the excavation of rock in order to create an additional eight months of landfill capacity. The rock has been excavated but no waste disposal has yet occurred in this area, however, it is now included as part of the proposed project.

CEQA embodies a strong presumption that once an EIR has been prepared for a project, no subsequent environmental review is required unless conditions or circumstances present themselves which would trigger the need for such additional environmental review. Public Resources Code section 21166 and Section 15162 of the CEQA Guidelines define the conditions

that would require further environmental review, in the form of a Subsequent EIR or a Negative Declaration, for a project. These conditions are listed below:

**15162 Subsequent EIR's and Negative Declarations**

- (a) When an EIR has been certified or negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:
  - (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
  - (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
  - (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:
    - (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
    - (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
    - (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
    - (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

If none of the conditions described above has occurred, but some changes or additions to the previous environmental analysis are necessary, then the lead agency shall prepare an addendum to the previously certified EIR. (State CEQA Guidelines, § 15164)

This Addendum considers those changes in the project or project circumstances, or new information since preparation of the 1998 and REA EIR's that might trigger preparation of a subsequent EIR or Negative Declaration for the proposed reopening of the Central Disposal Site.

Below is a discussion of the proposed changes to the project described in the two EIR's, as well as changes in the setting and changes in circumstances since certification of the 1998 EIR. Each issue area in the 1998 EIR, including cumulative impacts, were reviewed, and are discussed here as warranted. The discussion of each relevant issue area is followed by an analysis of why these changes do not rise to the level requiring the preparation of a Subsequent EIR or Negative Declaration.

## **II. Background**

The 1998 Central Disposal Site Improvement Program EIR described various improvements to be made at the Central Disposal Site within the County's waste management system, including expansion into the East and West Canyons to gain additional waste disposal capacity, and other operational improvements. Phases I and II of the East Canyon (Landfill 2) expansion have been constructed and disposal of waste commenced in August 2002. Landfilling in this area will include placement of refuse up to and overlapping the first landfill at the site (Landfill 1).

The West Canyon expansion described in the 1998 EIR has not yet been constructed and is not proposed for development as part of the proposed project.

The 1998 EIR described a project to extract rock in an area that has been planned for refuse disposal since 1971, and create an area for approximately eight months of landfill capacity. This would include the placement of refuse up to and overlapping Landfill 1, within the 1971 permitted boundary of the Central Landfill. The rock extraction component of this project has been completed, but no preparation of the area for refuse placement has yet occurred. This preparation and placement of refuse in the REA is now part of the proposed project.

In May 2003, following construction and initiation of waste disposal in the first two phases of the East Canyon, the County confirmed trace amounts of volatile organic compounds (VOCs) in the underdrain beneath the lined portion of Landfill 2. The source of the contamination was traced back to a design flaw in the liner anchor trench, which allowed landfill gas to migrate around the liner and into the groundwater. (The investigation confirmed that no landfill gas was migrating from Landfill 1 through groundwater into the underdrain). The investigation also revealed damage to the Landfill 2 liner caused by an operational error during excavation. The County immediately initiated work to retrofit the liner anchor trench and repair the tear in the liner. On-going water quality sampling of the underdrain has shown significant reductions in the levels of VOCs detected. Monthly sampling events conducted over the last year have included multiple events where no VOC concentrations (<.5 ug/L- (Detection Limits)) have been detected in underdrain samples, and in events where they have been detected, they have been in the low parts per billion. None of the VOC concentrations detected exceeded the applicable California or EPA (federal) primary Maximum Contaminant Level (MCL) for drinking water. Further, all water generated in the Landfill 2 underdrain has been collected, never being allowed to discharge to the environment.

In response to the VOC detection, the NCRWQCB adopted corrective action Waste Discharge Requirements (WDRs) in June 2004 (order #R1-2004-0040). These WDRs prohibited placement of waste outside the permitted footprint of Landfill 1 and Phases I and II of Landfill 2, or further landfill expansion until the County submitted a new Report of Waste Discharge and Joint Technical Document with a revised liner design and new WDRs are issued. Under the corrective action WDRs, the County could continue disposal of waste within existing waste cells in Landfill 1 upon demonstrating that placement of waste would not impede ongoing corrective actions associated with the area, and within any remaining airspace in Phases I and II of Landfill 2.

In addition to corrective actions to address the VOC detection in Landfill 2, the 2004 corrective action WDRs also included additional remedial efforts to address a pre-existing condition of leachate buildup in Landfill 1. To comply with the corrective action WDRs, the County developed a site conceptual and numeric model with a long term landfill gas and leachate management plan for Landfill 1 to control landfill gas and remove leachate to the maximum extent practicable (annual average generation of 22 million gallons of leachate). In August 2009, an independent evaluation (*Technical Memorandum on the Compliance with the Waste Discharge Requirements for Landfill 1 at the Sonoma County Central Landfill*, Shaw Environmental, Inc., August 13, 2009) found Landfill 1 to be in compliance with the 2004 WDRs. For Landfill 2, the liner anchor trench was retrofitted and the liner damage repaired. The County has now complied with all required measures listed in the WDRs.

Because of these issues, in October 2005 the County began transporting all waste out-of-County for disposal at several landfills with available capacity. An Addendum to the 1998 EIR was prepared for the refuse outhaul project in 2005.

In 2006, the Board of Supervisors directed staff to pursue divestiture of the County's solid waste assets. In October 2009, the DTPW presented a proposal to the Board of Supervisors to divest the Central Disposal Site and the Annapolis and Sonoma Transfer Stations, and lease the Guerneville and Healdsburg Transfer Stations. The intent was for the Purchaser to assume the County's responsibilities with respect to operation of its solid waste facilities and to pursue all necessary permitting to allow resumption of landfilling at the Central Disposal Site consistent with the County's longstanding plans and permits. An Addendum to the 1998 EIR was prepared for this Landfill Divestiture project. The Board ultimately directed the DTPW to not proceed with the divestiture, and instead directed the DTPW to move forward with all necessary permitting to allow resumption of landfilling at the Central Disposal Site.

While the DTPW is preparing the necessary documents and obtaining the required permits for reopening the site, the DTPW, through a contract with Keller Canyon Landfill Inc., has resumed landfilling by bringing Landfill 2 to originally designed and permitted grades (when landfilling in Landfill 2 temporarily ceased in October 2005, there was approximately two years of capacity remaining in Phases I and II). Since September 2010, an average of 450 tons/day is being landfilled in the previously permitted area of the Landfill 2 (Phases I and II). Waste from the outlying transfer stations is continuing to be outhauled out-of-County for disposal. Only waste brought directly to the landfill is buried. Through this process, the County remains the owner and operator of record for the facility. At the time the County ceased landfilling and began

outhauling all waste (2005), the total existing remaining capacity at the Central Disposal Site was approximately 9.1 million cubic yards of airspace, which, at current waste volumes, will result in the landfill being open for approximately 15 - 20 years. These figures are based on completing waste placement in the REA and the Compost Area for Landfill 1, and Phases I through V for Landfill 2.

### ***III. Proposed Action***

The County proposes to construct new waste cells within the currently permitted footprint of the Central Disposal Site, and complete waste disposal operations in accordance with all applicable regulatory and permit requirements. The following areas are proposed to receive waste as part of this project: the remaining phases of Landfill 2 (Phases III, IV and V), the Compost Area of Landfill 1, and the Rock Extraction Area (within the 1971 permitted footprint). All of these areas have been fully evaluated in previous CEQA review – all phases of Landfill 2 were evaluated in the 1998 EIR for the Central Disposal Site Improvement Program EIR, while the REA was evaluated in the 1998 Central Disposal Site Rock Extraction Project EIR.

No change in operations from those already planned by the County and analyzed in prior environmental documents are proposed, other than incorporating more protective liners in the construction of landfill cells, and the addition of a liner system in areas where new waste will abut and overlap Landfill 1, which will direct leachate to the leachate collection system. These are additional protections above what was described in the 1998 EIR. The details are discussed below.

### ***IV. Changes to the Project Setting/Change in Circumstances***

The proposed project includes a number of changes in the setting and circumstances since the 1998 EIR was certified and the project approved. These changes include the detection of trace amounts of VOCs in the Landfill 2 underdrain, described above; the California Air Resources Board's (CARB) designation of diesel particulate matter (DPM) as a toxic air contaminant on August 27, 1998; and an increase in background traffic volumes on the local roadway system in the vicinity of the Central Disposal Site, as well as the construction of key roadway improvements; the designation of California tiger salamander (CTS) as an endangered species by the U.S. Fish and Wildlife Service (USFWS), and as a threatened species by the California Department of Fish and Game; and the designation of California tiger salamander Critical Habitat by the USFWS. The potential impact associated with these changes is discussed below.

### ***V. Changes to the Project Description***

Following is a discussion of the specific changes to the project description from that described in the 1998 EIR and the REA EIR.

Liner Design: The 1998 EIR and the REA EIR described a liner system, subsequently installed in Landfill 2, Phases I and II that were considered an “engineered alternative”, meaning, an alternate liner design that will meet the same Federal standards for preventing the release of leachate, even though the specified five-foot of separation of waste and groundwater would not be achieved. The EIR stated that the final liner design could differ slightly from this design, but it would differ only as necessary to meet or exceed the future landfill performance standards stipulated in the Federal regulations (commonly referred to as Subtitle D). The REA EIR described the same liner system. Given that the liner installed in Landfill 2 has experienced breaches during early operations (waste placement and liner system design), and landfill gas and leachate entered the drain under the landfill liner, the County has proposed an improved liner design for the proposed project.

All new wastes cells in Landfill 2 and the REA landfill areas placed over native ground will be contained by a double geocomposite liner system with a leak detection system and the ability to conduct electronic leak detection testing. The liner system floor is designed to separate the proposed waste cells from the underlying native ground and groundwater by a prescriptive 5-foot separation based on CCR Title 27 and CFR 40. The design will be as described below or as finally approved by the Regional Water Quality Control Board.

- a. *Soil Operations Layer:* Two feet of soil is placed on the liner components for protection from the overlying equipment and waste placement activities. Refuse is placed on top of this layer.
- b. *Leachate Collection and Removal System Layer:* A leachate collection and removal system (LCRS) layer will convey all liquids draining from the overlying waste to a collection sump. The LCRS sump will pump the liquid to one of two leachate ponds (class II surface impoundments) on site.
- c. *Upper Liner:* The upper liner consists of a 60-mil geomembrane.
- d. *Compacted Soil Layer:* A low-permeability compacted soil layer, 12-inches thick, will be placed on the floor areas of the liner system. The low permeability soil layer will not be placed on the sideslope areas due to the limitations of placing and compacting soil on side slopes. Additionally, the gradient of a side slope versus the floor area is conducive to better drainage, such that the accumulation of leachate against the side slope is less than for a floor area. On the side slopes, a geosynthetic clay liner (GCL) is substituted for the compacted soil layer. Geosynthetic clay liners are a manufactured barrier layer consisting of bentonite clay encapsulated between two geotextile fabrics. The GCL layer is equivalent to two feet of compacted clay. In the event of a penetration causing liquid to pass through this layer, the bentonite clay will swell to seal the leak due to the expansive nature of bentonite.
- e. *Leak Detection Layer:* A leak detection drainage layer is placed under the upper liner system. Any leak from the upper membrane liner into this layer would be readily detected and any leachate would be conveyed to a collection point at the toe of the landfill.

- f.. *Lower Liner:* The lower liner consists of another 60-mil geomembrane. This is a redundant system to ensure control of leachate and gas from the primary system above, thereby providing additional protection of groundwater.
- g.. *Compacted Soil Layer:* as described above.
- h. *Soil Separation Layer:* A layer of compacted soil 4ft. thick to provide 5 ft. of physical separation between the under drain system and the lower liner.
- i. *Underdrain System:* The liner system described above is underlain by various underdrain systems to control groundwater and prevent interaction with landfill gas and leachate above. The underdrain, constructed over prepared native ground, will intercept and drain natural springs and emerging groundwater maintaining a minimum 5 foot separation of groundwater from waste. This underdrain consists of a geocomposite drainage layer on side slopes and one-foot of drain rock over the prepared native ground. A geotextile separator fabric will be placed between the native subgrade and the drainrock. The collected water in the underdrain flows to a collection point at the toe of the landfill, where it will be monitored for water quality.
- j. *Liner System for Separation of New Waste and Landfill 1 Existing Waste:* Where new waste will abut and overlap existing waste in Landfill 1, a liner system will provide separation between new waste overlying existing waste and will provide the path to direct leachate to the LCRS. This liner system will consists of a 2-ft thick soil operations layer, a LCRS layer, single HDPE geomembrane, and a GCL over existing intermediate soil cover (soil used to cover refuse). This system may be modified on the compost deck area where 1 ft. of Compacted Soil Layer may be substituted for the GCL.

A landfill gas and leachate barrier will be installed at the limit of existing waste in Landfill 1 to intercept landfill gas and leachate from migrating from Landfill 1 into the underdrains of the new waste units. The landfill gas and leachate would be removed in a special geomembrane-lined collection trench with perforated pipe. The leachate would be collected and transported to the leachate storage ponds, and the landfill gas would be transmitted to the landfill gas collection system that supplies the on-site power plant and flare.

Design of Liner Connections in Anchor Trench: In order to prevent landfill gas migrating from the waste to the underdrain via contact between the LCRS and underdrain geocomposites in the anchor trench (as occurred in Phases I and II of Landfill 2, discussed previously), the upper and lower liner system 60-mil geomembranes will be welded together with a flap in the anchor trench.

Construction and Operational Quality Assurance: A comprehensive construction quality assurance (CQA) program and operational quality assurance (OQA) program will ensure proper liner system integrity, and confirm the various liner components are not damaged during construction or operation. The CQA program will include an electronic leak detection system, which typically consists of a network grid of electrodes placed under the liner system, to identify

possible defects after the liner components have been constructed. Prior to placement of waste, the electrodes are given a charge and electronic survey equipment is used over the liner to detect any perforations in the liner as indicated by electrical conductivity. Any necessary repairs would be made to the liner consistent with the Construction Quality Assurance Plan approved by the RWQCB before placement of waste commences. The OQA will require a waste screening process to ensure only select waste will be placed directly against the operations layer. The OQA also establishes procedures by which any excavation near critical components, e.g., anchor trench, will be controlled.

## ***VI. Discussion of Potential Impacts***

The following discussion considers environmental issue areas in the 1998 EIR relative to the revised project description, as well as changes in project circumstances that have occurred since certification of the 1998 EIR. The analysis addresses whether any of the changes would result in significant new or substantially more severe impacts than previously analyzed, such that the preparation of a Subsequent EIR or Negative Declaration would be required.

### **Water Quality:**

The proposed landfill liner design for the remaining phases of Landfill 2 and the REA is different than described in the 1998 EIR, however, the proposed changes in the liner design are improvements that will enhance the ability of all waste cells to meet and or exceed current landfill performance standards. This is demonstrated in the JTD submittal to the RWQCB, where an EPA model, Hydrologic Evaluation of Landfill Performance (HELP), was applied to the proposed liner in comparison to the prescriptive standard, and that the proposed liner was found to be more protective of groundwater than prescriptive.

Landfilling in the existing landfill cells within Landfills 1 and 2 and the REA will not result in a significant new or substantially more severe impact than previously analyzed. The 1998 EIR addressed the potential water quality impacts of landfill operations in Landfill 2 (East Canyon), and the REA EIR addressed potential water quality impacts in the REA. As described above in the Background section, following construction and commencement of waste disposal in Phases 1 and 2 of Landfill 2, water quality monitoring of the underdrain system detected the presence of trace amounts of VOCs. A retrofit and repair of the Landfill 2 liner system has been completed, which has eliminated any potential communication between the underdrain and landfill gas. Ongoing water quality sampling of the underdrain has shown significant reductions in the level of VOCs detected. Although very low levels (trace) amounts of VOCs are still being detected in the underdrain, the system is functioning as designed, capturing potential contaminants and preventing their entering the groundwater.

With respect to Landfill 1, the resumption of landfilling within Landfill 1 also will not result in new or substantially more severe water quality impacts. In compliance with the 2004 corrective action WDR to address a pre-existing leachate buildup, the County has developed a long term landfill gas and leachate management plan for Landfill 1 to control landfill gas and remove



leachate. No landfill-related VOCs or leachate have been detected in any of the perimeter compliance points at the site as shown in Figure 2.

The RWQCB's 2004 corrective action WDRs permit the addition of waste to these existing landfill cells within Landfill 1 and Phase 1 and 2 of Landfill 2 without the need for new WDRs, as long as the placement of waste in Landfill 1 would not impede ongoing corrective actions in the area. Accordingly, the landfilling operations are not expected to result in new or substantially more severe effects to water quality.

Based on the above discussion, landfilling in Landfills 1, 2 and the REA will not result in significant new or substantially more severe water quality impacts than were described in the 1998 Central Disposal Site Improvement Program EIR and the 1998 Central Disposal Site Rock Extraction Project EIR. As contemplated in those documents, all landfilling will be subject to appropriate permits from the applicable regulatory agencies, including the RWQCB, and must meet stringent current regulatory standards for the protection of water quality.

### **Air Quality:**

Air Emissions: The 1998 EIR addressed air quality impacts of constructing and operating the expansion of the Central Landfill and the other improvements proposed as part of the project. The 1998 EIR found all air emissions to be less than significant, with the exception of nitrogen oxides (NOx) and reactive organic gases (ROG) emissions from the landfill expansion component for the years 2005 to 2014. NOx and ROG are criteria pollutants that contribute to the formation of ozone. However, this impact determination assumed both the East and West Canyons would be constructed and operated during this period, and, as noted above, the West Canyon has never been developed and is not part of the proposed project. Accordingly, the NOx and ROG emissions identified in the 1998 EIR would be less than described, but would occur over a longer time frame than analyzed in the 1998 EIR. This would not be a significant new or substantially more severe impact than previously identified. It is in fact a lesser impact than previously identified. Moreover, the NOx emissions will likely be substantially reduced from the amounts shown in the 1998 EIR given the more stringent emission standards established by the CARB since 1998 for the waste hauling vehicles and the off-road equipment used at the site. These newer requirements are strict legal limits which mandate lower emissions than previously allowed under prior regulations. These reductions, combined with the fact that the West Canyon landfill component is not part of the proposed project, and most of the operational improvements have been constructed, means that the significant and unavoidable NOx impact from Central Landfill operations already identified in the 1998 EIR would likely be less than shown.

Since certification of the 1998 EIR, the CARB has designated diesel particulate matter (DPM), a human carcinogen, as a toxic air contaminant (TAC). Since DPM was not included in the analysis of TACs in the 1998 EIR, it is information that now must be considered as part of this analysis. The Bay Area Air Quality Management District (BAAQMD) has established the following significance threshold for DPM: the increased risk of contracting cancer for the Maximally Exposed Individual (MEI) as a result of the project exceeds 10 in one million people for a 70-year exposure. In order to determine if this threshold is met, a Health Risk Assessment

(HRA) was conducted (*Diesel Particulate Matter Health Risk Assessment for the Sonoma County Central Landfill Divestiture Project*, July 2009, Illingworth and Rodkin, Inc.). Although this study was conducted for the proposed Divestiture Project, the data and analysis is essentially the same for the proposed project as analyzed in this Addendum. The only difference is that the study assumed outhauling of refuse for five years following completion of landfilling, which would result in additional DPM emissions that will not occur with the proposed project.

This study calculated the DPM emissions for both the baseline (existing conditions, under which waste is hauled out-of-County) and the proposed project, taking into account both on-road and off-road equipment emissions. Consistent with standard modeling practice, the modeling assumes that the project vehicle fleet will be upgraded over time (with improved engine efficiencies and emission controls) as required by the CARB. The study modeled the emissions of the various landfill activities and the vehicles entering the facility to determine the increased health risk at the closest receptors to the facility, which include the homes along Mecham Road, the home located north of the landfill access road, and the home located directly north of the site. The residential receptor with the greatest exposure is located directly to the north of the facility.

The study found that the increased cancer risk, calculated as a time-weighted 70 year risk for a 70-year exposure, under existing conditions (baseline) is 5.9 per million and for the proposed project would be 4.8 per million. This actually represents a *reduction* in the increased cancer risk at the closest receptor with implementation of the project (i.e., 1.1 fewer excess cancer cases per million). The reason for the decrease with the proposed project compared to the baseline condition is that the reopening and operation of the landfill would result in the use of newer and fewer pieces of equipment at the landfill than the County has used in the past, and that the equipment will be spread out over a much larger area of the landfill than just the transfer station, increasing dispersion of DPM's. Accordingly, the increased cancer risk with the proposed project would be less than significant and less than under existing conditions, which is also less than significant.

GHG Emissions: Although GHG emissions were not discussed in the 1998 EIR, the effect and science of GHG emissions was generally known at that time, and as a result does not constitute new information within the meaning of Public Resources Code section 21166 and CEQA Guidelines section 15162. In *Citizens for Responsible Equitable Environmental Development v. City of San Diego*, 196 Cal. App. 4th 515 (2011), Petitioners challenged the City's preparation of an addendum to a 1994 EIR on the basis that the effect of GHG emissions on climate change was new information of substantial importance that required preparation of a Supplemental EIR. The Court disagreed, finding that the effect of GHG emissions on climate change was known long before the 1994 EIR was prepared and the time for challenging the sufficiency of that document had expired. SAs a result, the Court concluded that the effect of GHG emissions on climate change was not new information of substantial importance that was not known and could not have been known with the exercise of reasonable diligence at the time the 1994 EIR was prepared, and therefore an addendum rather than a supplemental EIR was the appropriate

environmental document.<sup>1</sup> The same rationale applies to the County's preparation of the 1998 EIR, and supports the conclusion that the effect of GHG emissions on climate changes is not new information requiring preparation of a supplemental EIR.

Notwithstanding that the effects of GHG emissions is not new information requiring further analysis, some analysis has been completed recently and is worth mentioning. In particular, according to a letter report by ESA (memo to Patrick Carter, Sonoma County Waste Management Agency, August 22, 2008, *Greenhouse Gas Emission Reductions Associated with Reuse of Central Landfill*), GHG emissions will be *reduced* with the proposed project compared to existing conditions. This report found that, with the resumption of landfilling at the Central Landfill site, there would be a net reduction of 2,334 metric tons per year of GHG emissions as compared to the baseline scenario which is occurring currently with outhauling.<sup>2</sup> This reduction is primarily due to the decreased vehicle miles traveled with in-County landfilling versus the out-of-County landfilling scenario. The proposed project represents a net benefit over existing conditions relative to GHG emissions. In addition, although landfills generate methane gas, a GHG contributor, the project site captures the gas through an extensive gas collection system, and generates power which is supplied to the PG&E power grid. Other landfills simply flare (burn off) this gas. The energy production used at the Central Disposal Site replaces energy that PG&E would otherwise produce and thus reduces the indirect GHG emissions associated with this production. The County will continue to capture the landfill gas and process it in a manner that produces renewable energy.

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<sup>1</sup> In arriving at that conclusion, the Court stated: "For instance, in *Massachusetts v. EPA* (2007) 549 U.S. 497, 507 [167 L. Ed. 2d 248, 127 S. Ct. 1438], the United States Supreme Court explained the issue began garnering governmental attention long before the City certified the 1994 FEIR for the precise plan. The opinion states: 'In the late 1970's, the Federal Government began devoting serious attention to the possibility that carbon dioxide emissions associated with human activity could provoke climate change. In 1978, Congress enacted the National Climate Program Act, 92 Stat. 601, which required the President to establish a program to 'assist the Nation and the world to understand and respond to natural and man-induced climate processes and their implications,' [citation]. President Carter, in turn, asked the National Research Council, the working arm of the National Academy of Sciences, to investigate the subject. The Council's response was unequivocal: 'If carbon dioxide continues to increase, the study group finds no reason to doubt that climate changes will result and no reason to believe that these changes will be negligible. ... A wait-and-see policy may mean waiting until it is too late.' (549 U.S. at pp. 507-508.)"

<sup>2</sup> Note that the analysis of GHG emissions in the Draft Supplemental Program EIR for the Amendment to the Sonoma Countywide Integrated Waste Management Plan (June 2009) has slightly reduced emissions compared to the August 2008 letter report used for this Addendum. According to the consulting firm that prepared both analyses, the difference is due to the use of updated emissions calculations for the Draft Supplemental EIR based on slightly different model years for the vehicle mix (pers. comm. Paul Miller, ESA, August 13, 2009).

## **Biological Resources**

At the time of certification of the 1998 EIR, the California tiger salamander (CTS) was a California Species of Special Concern and a candidate for federal listing as a threatened or endangered species. Since certification of the EIR, the California tiger salamander (CTS) has been designated as an endangered species by the U.S. Fish and Wildlife Service (USFWS, 2003), and a threatened species by the California Department of Fish and Game (CDFG, 2005). In addition, Critical Habitat has been designated by the USFWS in 2011.

CTS breed and develop in seasonal pools and ponds, but otherwise spend most of their post-metamorphic lives in widely dispersed underground retreats (e.g., small mammal burrows). Following the onset of fall or winter rains, CTS emerge from upland sites on rainy nights to migrate to breeding ponds. Breeding migrations have been recorded at distances of up to 1.3 miles between upland habitat and breeding ponds. CTS require relatively long-lasting pools to complete their metamorphosis. Studies have shown that larvae metamorphose into subadults and leave breeding ponds 60 to 94 days after the eggs have been laid, generally in late spring or early summer. Upon leaving the pond, CTS disperse and occupy upland refugia until maturity. It is known that CTS almost exclusively use mammal burrows most of the year (except during short portions of the rainy season). The closest known CTS breeding occurrence to the Central Landfill Site is approximately 1.3 miles to the northwest, south of the intersection of Stony Point Road and Mecham Road, and the closest known adult occurrence was on Mecham Road just north of the Happy Acres subdivision (California Natural Diversity Database, CDFG). The area in the vicinity of Stony Point Road and Mecham Road is well known as CTS habitat, including nearby breeding.

The 1998 EIR included detailed surveys for special-status amphibians, including juvenile CTS in the intermittent drainage features on the site. No CTS juveniles were found during the surveys, and the EIR noted that the Central Landfill Site did not have suitable habitat present for breeding.

Because the project site is now within the federal and state listed range of the CTS and its Critical Habitat, impacts to CTS must be considered. The project site does not have any suitable breeding habitat, as the water features on site (sedimentation ponds and leachate ponds) are too deep, remain hydrated year round and are maintained annually. Although the site does not contain breeding habitat, the potential for upland habitat must also be considered. All of the areas proposed for landfilling as part of the project are industrial in nature and highly disturbed, either by grading activity in which the topsoil has been removed (i.e., the Rock Extraction Area), areas with compacted cover soil (i.e., Landfill 1), areas with concrete surface and continual activity (i.e., the Compost Area), or areas where continual grading activities are occurring (i.e., Landfill 2). All of these activities preclude or severely limit the potential for small mammal activity creating potential refugia for CTS. In addition, there are migration barriers on the site that would likely preclude CTS from gaining adequate access to the site or to be able to travel any distance once on-site. These barriers include: many on-site roads travelled daily by heavy equipment and refuse trucks; many deep drainage ditches (CTS are adapted to relatively flat or rolling terrain and obstacles such as curbs or similar features can trap individuals and act as

barriers to movement); and the many leachate and gas pipelines throughout the site (these pipelines lay on the ground and it is not possible for a CTS to climb over these)

Based on the above analysis, the proposed project will not result in significant new or substantially more severe biological resource impacts than were shown in the 1998 EIR.

### **Community Odors:**

The 1998 EIR addressed odor impacts associated with Central Landfill operations and determined that they were significant and unavoidable, noting in particular, problems with the greenwaste shredding area and composting operations on the site and, to a lesser extent, inadequate daily cover of active landfill areas. The DTPW will comply with all mitigation measures imposed in the 1998 EIR to reduce odors from the site. With respect to daily cover of active landfill areas, the 1998 EIR includes mitigation measures to ensure there is adequate supply of cover materials available to cover refuse daily. In addition, the DTPW has required the operator of the compost facility to have in place an Odor Impact Minimization Plan to further address odor concerns of the compost operation. Accordingly, potential odor impacts from resumption of landfilling at Central Landfill will likely be less than identified in the 1998 EIR.

Based on the above analysis, the proposed project will not result in significant new or substantially more severe air quality impacts than were shown in the 1998 Central Disposal Site Improvement Program EIR. In fact, implementation of the proposed project will generally reduce air emissions over the current outhauling of refuse to out-of-County landfills.

### **Traffic:**

The 1998 EIR analyzed traffic impacts of the various operational improvements at the Central Disposal Site to a horizon year of 2014, as well as the cumulative traffic impacts associated with an additional 8 months of landfilling capacity achieved through the Rock Extraction Project (i.e., extending the horizon year until 2015). Outhauling of all County waste has been taking place since 2005, with a minor amount of landfilling occurring since September of 2010.

A traffic study (*Traffic Impact Study, Sonoma County Central Landfill*, Crane Transportation Group, June 16, 2009) was prepared to update the traffic analysis associated with extending the horizon year of waste disposal in the County to 2030 (although this traffic study was prepared for the proposed Divestiture Project, the study parameters are the same for the project as analyzed in this Addendum). This study considered the same intersections and roadway segments in the vicinity of the facility as in the 1998 EIR, and analyzed the a.m. peak hour traffic impacts at these locations (when traffic in the vicinity of the Central Disposal Site is heaviest), as was done in the traffic study for the 1998 EIR. The study updated the traffic counts for the a.m. peak hour on affected roads, traffic projections into the future on affected roadways, and also used revised projected trip generation information into and out of the facility during the a.m. peak hour.

For purposes of the traffic study, it was assumed that landfilling would continue for an estimated period of approximately 15 years, and for the remaining five years of the project, the waste would be outhauled to out-of County disposal sites, as is now being done.<sup>3</sup> The traffic study compared the project with the background traffic that exists today (with the outhauling of waste), which is defined as the base case. The base case traffic was then compared to the projected horizon years of 2010 and 2025 (assumed last year of landfilling)<sup>4</sup> to determine if the project would result in any new or substantially more severe significant impacts than disclosed in the 1998 EIR.

Consistent with the 1998 EIR, the updated traffic study found that, with implementation of the project, two significant traffic impacts would occur: 1) the intersection of Stony Point Road and Roblar Road would meet the peak hour signal warrant criteria, and 2) the intersection of Stony Point Road and West Railroad Avenue would also meet the same signal warrant criteria. These are the same significant traffic impacts described in the 1998 EIR (see Traffic Impacts No. 2 and 3a at pages 3-219 and 3-221). Accordingly, the traffic study confirms that the proposed project will not result in significant new or substantially more severe traffic impacts than were shown in the 1998 EIR.

### **Noise:**

The 1998 EIR analyzed and mitigated accordingly, the potential for short-term construction noise impacts, long-term off-site project-related traffic noise, long-term on-site project-related operational equipment noise, and combined traffic and operational noise impacts for the various improvements proposed.

*Traffic Noise:* The primary noise generated at the Central Disposal Site is related to traffic to and from the facility. The 1998 EIR addressed traffic noise on the primary routes used to travel to and from the facility, and mitigated impacts accordingly. As described above in the discussion of transportation impacts, the 1998 EIR estimated the number of vehicles accessing the facility during the a.m. peak hour, and made assumptions as to the mix of these vehicles (approximately 50% of the vehicles would be medium and large-sized trucks). For this project, the a.m. peak hour projections for traffic to and from the facility were updated from the 1998 EIR, based on actual traffic counts in 2003, when landfilling was still occurring. Based on these revised traffic projections, the proposed project will generate fewer a.m. peak hour vehicles than projected in the 1998 EIR for the landfilling phase and the potential outhauling phase. Because

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<sup>3</sup> Note it is likely that landfilling could occur for longer than 15 years, depending upon growth in the County, waste generation, and diversion rates of recoverable materials. The traffic analysis considered the above time periods in the analysis based on information available at the time. However, the change from landfilling to outhauling would not generate a substantial change in traffic to or from the Central Disposal Site, as the site would operate as a transfer station, and thus would not substantially affect the traffic study analysis.

<sup>4</sup> The traffic projections during the a.m. peak hour for landfilling in the future horizon years used in the traffic study were based on actual counts in 2003, and are less than those projected in the 1998 EIR, most likely because the growth rate and subsequent waste generation rate assumptions were over-estimated in 1998.

of this, there would be no new significant or substantially more severe long-term traffic-related noise impacts as a result of the proposed project than those already described in the 1998 EIR.

*Operational Noise:* The 1998 EIR found no significant impacts related to long-term operational noise from landfilling or the public tipping building. It is likely that, when full landfilling resumes, the operator will use newer equipment than the County has used in the past, will likely be using fewer pieces of equipment than the County has used, and the equipment will be more dispersed across the landfill site. Accordingly, long-term operational noise impacts are likely to be even less than identified in the 1998 EIR.

### **Cumulative Impacts:**

The 1998 EIR discussed cumulative impacts that could occur with implementation of the Central Disposal Site Improvement Program in conjunction with other projects in the vicinity. Included in the 1998 EIR as the key projects with potential to contribute to cumulative impacts were the following:

- Rock Extraction Project - the project included excavating a 14.3 acre rock outcrop at the Central Disposal Site, and extending the life of the Central Disposal Site by approximately 8 months. The rock extraction component is complete and therefore no longer contributes to any cumulative impacts associated with the proposed project. The landfilling component of the Rock Extraction Project is part of the currently proposed project.
- Stony Point Quarry - to accommodate the Rock Extraction Project, the Stony Point Quarry revised their operating permit to accept the rock excavated from the Rock Extraction Project. This project has been completed and therefore no longer contributes to any cumulative impacts associated with the proposed project.
- Stony Point Road/Highway 116 Intersection Improvements - These intersection improvements have been constructed and therefore would no longer contribute to any cumulative impacts associated with the proposed project.
- Stony Point Road Reconstruction - this project is complete (minus a short segment at the southern end near the City of Petaluma), and therefore would no longer contribute to any cumulative impacts associated with the proposed project.
- Dunham School Expansion - as described in the 1998 EIR, the school planned to increase enrollment from 128 students to approximately 175 students over several years; that expansion has occurred. The increased trips associated with the increased enrollment are reflected in the traffic counts for the project and are part of baseline, and therefore do not give rise to any additional cumulative impacts.
- Santa Rosa Wastewater Reclamation Project - the project described in the 1998 EIR was the construction of a large reservoir on the Button Ranch, one-half mile west of the West

Canyon Expansion area. The project would have included irrigation and transmission pipelines in many of the roads in the vicinity. This project was not constructed, and the City of Santa Rosa implemented a different project, which is now complete.

With the exception of the Dunham School Expansion, the potential cumulative impacts of all of these projects were associated with their construction. Since they have been completed, the potential for cumulative impacts with the proposed project has ceased. However, one new project with the potential to contribute to cumulative impacts has been identified:

Roblar Road Quarry - this project, which proposes a new, 65-acre hard rock quarry on Roblar Road. A Final EIR was certified in December 2010 by the County, but currently is under litigation. The quarry proposes to mine approximately 570,000 cubic yards of material annually, for a mining period of 20 years.

The following analysis considers issue areas in which the Roblar Road Quarry and the proposed project could result in cumulative impacts not previously addressed in the 1998 EIR.

#### Cumulative Water Quality

The two projects are in different watersheds: the Roblar Road Quarry site drains to Americano Creek, while the proposed project site drains to Stemple Creek. Due to the distance between the proposed Roblar Quarry site and the project site, and different watersheds, there is no potential for any cumulative water resource impacts.

#### Cumulative Air Quality

The Roblar Road Quarry Draft EIR (May 2008) found a significant unavoidable impact in NO<sub>x</sub> emissions from the project. The 1998 EIR also identified a significant cumulative impact in NO<sub>x</sub> emissions. As noted above, most of the projects analyzed as cumulative projects in the 1998 EIR have been constructed and are therefore no longer a factor in NO<sub>x</sub> emissions; however, because of the Roblar Road Quarry project's contribution of significant NO<sub>x</sub> emissions, there would continue to be a significant cumulative impact in NO<sub>x</sub> emissions.

#### Cumulative Traffic

The Draft EIR for the Roblar Road Quarry identified likely haul routes for quarry traffic. Some of these haul routes include the same intersections utilized by the proposed project, including the intersections of Stony Point Road/Roblar Road, Stony Point Road/West Railroad Avenue, and Stony Point Road/Mecham Road. The Stony Point Road/Mecham Road intersection has been signalized since preparation of the 1998 EIR, and no significant cumulative impact will occur there. Both the Stony Point Road/Roblar Road and Stony Point Road/West Railroad Avenue intersections are identified as meeting signal warrants in both the 1998 EIR and in the updated traffic study for this Addendum. The Roblar Road Quarry project would generate approximately 28 truck trips during the am peak hour. Given the low number of truck trips and their



distribution over the haul routes during the a.m. peak hour, the cumulative traffic impact at these two intersections would not be substantially more severe than previously identified.

### Cumulative Noise

The primary noise impact identified in the 1998 EIR is truck traffic on Mecham Road. Because Mecham Road is not a potential haul route for the Roblar Road Quarry project, there would not be a cumulative impact with the proposed project. Given the distance between the two project sites, operational noise also would not be a cumulative impact.

### Alternatives:

With respect to whether new alternatives to those previously considered in the 1998 EIR must be identified in addressing the proposed reopening of the County's Central Disposal Site as described above, the question is whether new information that was not known and could not have been known with the exercise of reasonable diligence when the prior environmental document was prepared shows either (1) that an alternative previously found to be infeasible would in fact be feasible and would substantially reduce one or more significant project impacts but will not be adopted, or (2) that an alternative considerably different from those previously analyzed would substantially reduce one or more significant project impacts but will not be adopted.

The 1998 EIR considered four alternatives to the proposed expansion of Central Disposal Site (three build alternatives and a "no project" alternative):

- East Canyon Only: This alternative considered developing the East Canyon only, with no expansion into the West Canyon. This is the current situation, and the proposed project does not include landfilling within the West Canyon.
- East Canyon Only (with reduced capacity): This alternative considered landfilling in the East Canyon only, limited to a period of 10 years.
- Alternate Site: This alternative considered four alternative sites in the County based on a siting study prepared by the County in 1989.
- No project: This alternative considered the consequences of no landfill expansion, with eventual closure of the existing landfill and siting of a new facility at an undetermined location.

The 1998 EIR also considered alternatives that had been discussed in the 1994 County Integrated Waste Management Plan (CoIWMP) Program EIR. Among the alternatives found to be infeasible and not carried forward for further consideration in the 1998 EIR were:

- Materials Recovery Facility (MRF) combined with a Waste Transformation Facility: Under this alternative, all commercial, industrial and residential waste would be

processed at the MRF to remove as much recyclable waste as possible, and the remaining combustible waste would be pelletized into a refuse derived fuel and incinerated in a facility that would generate both electricity and ash. The electricity could be used to power the facility and excess could be sold as renewable energy. The resulting ash would be landfilled at Central Landfill.

- **Municipal Solid Waste Materials Recovery with Transfer Station:** This alternative would involve construction of a MRF, either at the Central Disposal Site or elsewhere, with the remainder of the waste disposed of at the Central Landfill.
- **Municipal Solid Waste Composting with construction/demolition waste reuse and recycling:** Under this alternative, a MRF would be constructed (either on- or off-site), which would handle the commercial, industrial and residential waste stream and also recover construction and demolition wastes. All residual organic wastes; food, yard debris, wet cardboard, paper products, etc, would be composted using an in-vessel composting method. The product would be sold and/or disposed of at the Central Landfill.
- **Exportation of all of the County's waste out of County for disposal, by truck or rail.**
- **Transformation (mass burn):** A waste-to-energy facility would be constructed and all refuse would be burned to recover energy and reduce the volume of landfilled waste. The resulting ash would be landfilled.

Increased diversion, as the state increases its goals from the currently required 50% diversion rate, is expected to continue to be a centerpiece of the state's waste management program. The County and the Sonoma County Waste Management Agency continue to increase its diversion rate with a number of on-going programs. Thus, with implementation of the project, it is likely that diversion rates will exceed existing levels and will continue to exceed the current state mandated levels. It is presumed that the Sonoma County Waste Management Agency will continue to operate an organic material processing facility in the County. A waste-to-energy facility (described in the first and fifth bullets) continues to be a prohibitively expensive technology, as well as difficult to permit due to air quality impacts and ash disposal issues. There has not been a new solid waste incineration facility permitted in the State of California in the last decade. Accordingly, this previously identified alternative would continue to be infeasible.

Exportation of the County's waste by truck to out-of-County landfills (described in the fourth bullet) is currently underway. Although feasible, this alternative does not reduce significant impacts of the proposed project, and in fact results in substantially greater GHG emissions than local landfilling, as shown above, due to the greater distances waste must be hauled for disposal. Exportation of the County's waste by rail was evaluated as an alternative in the Draft Supplemental Program EIR for the Amendment to the Sonoma Countywide Integrated Waste Management Plan (certified February 2010, Sonoma County Waste Management Agency). However, this alternative would have greater GHG emissions than the proposed resumption of

in-County landfilling. In addition, this alternative would require new public infrastructure for loading and off-loading of the containers from the rail line, with associated operational noise impacts of these facilities. The air quality impacts associated with landfilling would not be eliminated, but rather would be transferred to the out-of-County facilities to which the waste is transported. Accordingly, this alternative would not reduce significant impacts of the proposed project.

## **VII. Conclusion**

The County's proposed resumption of in-county landfilling at the Central Disposal site as described and fully evaluated in the 1998 Central Disposal Site Improvement Program EIR and the 1998 Central Disposal Site Rock Extraction EIR, along with improved landfill liner systems, will offer substantial environmental benefits compared to existing conditions in the areas of GHG emissions and water quality.

As shown in this Addendum, although there are some minor changes in the project and project circumstances, these changes will not result in any new significant effects, or substantially more severe significant effects than previously examined in the 1998 Central Disposal Site Improvement Program EIR. In addition, no new information of substantial importance that was not known and could not have been known with the exercise of reasonable diligence at the time the prior EIR was certified has been identified that shows that mitigation measures or alternatives that were previously found to be infeasible are now feasible and would substantially reduce one or more significant effects of the proposed project, or that mitigation measures or alternatives considerably different from those analyzed in the prior EIR would substantially reduce one or more significant effects of the proposed project but are not being adopted.

Accordingly, a subsequent EIR or Negative Declaration is not required, and this analysis will serve as an Addendum to the 1998 Central Disposal Site Improvement Program EIR, as required under Section 15164 of the CEQA Guidelines.