ALRRF COMMUNITY MONITOR ANNUAL REPORT 2017

Prepared for
ALRRF Community Monitor Committee

January 10, 2018

The photo on the cover of this report shows *Croton setiger*, commonly known as dove weed or turkey mullein. This low-growing native plant tolerates full sun and blooms in mid to late summer. Livestock generally avoid consuming it. The photo was taken on September 13, 2017 in the northeast portion of the ALRRF Conservation Plan Area, near Stock Pond 6.

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SECTION 1
Introduction

1.1 Background: Settlement Agreement

In December 1999, a Settlement Agreement was reached among parties involved in a lawsuit regarding the proposed expansion of the Altamont Landfill and Resource Recovery Facility (ALRRF). The settlement limited the expansion to a second permitted operational area, known as Fill Area 2, adjacent to the existing Fill Area 1. The Settlement Agreement established the Community Monitor Committee (CMC) and a funding mechanism for its technical consultant, the Community Monitor (CM).

The Settlement Agreement defines the purview of the CMC and the CM. The CM's scope of work is further defined in a contract between the CM and the CMC. The City of Livermore provides staff and administrative support to the CMC, as well as management of the CM contract and space for CMC meetings. The City also acts as financial agent for the CMC, pursuant to a letter agreement dated July 6, 2004.

In broad terms, the CM is to review certain reports and information, as defined; monitor incoming traffic by conducting truck counts, as described in the Settlement Agreement; and inspect the ALRRF site no more than twelve times each year. The Settlement Agreement describes the CM's Scope of Work to include "issuing a written report each year summarizing the ALRRF's compliance record for the period since the last such report with respect to all applicable environmental laws and regulations." This Annual Report provides that summary for 2017.

The Settlement Agreement also requires that the ALRRF operator, Waste Management of Alameda County (WMAC), pay invoices submitted by the CM to the CMC, if the work represented in those invoices is consistent with the CM's scope of work and role as defined in the Settlement Agreement.

1.2 Prior Community Monitor Work

Available records indicate that the CMC retained a technical consultant as the CM from 2005 through part of 2007.

In mid-2007, the CMC selected the current CM team of Environmental Science Associates and Langan (formerly Treadwell & Rollo). This team began work in February 2008. From 2008 through 2015, the team has carried out report reviews, Class 2 soil analysis file review, and site inspections as intended. In 2008, the primary concern was the rate at which groundwater monitoring wells were purged during sampling. This was resolved satisfactorily. In 2009, the CM team took a close look at the methodology used by ALRRF and its consultants to track variations in groundwater quality. No areas of concern were identified. In 2010, landfill gas

perimeter probes were installed to comply with new regulations, and one of those probes detected landfill gas at levels that exceeded regulatory limits. This was abated by installing several gas extraction wells close to those probes. In 2011, the ALRRF sought to use fine material[1] from the Davis Street Material Recovery Facility (MRF) as Alternative Daily Cover. The use of this material was approved by the LEA through a special study in 2013. Two ongoing problems, windblown litter and seagull activity, worsened in 2012; and while the gull problem has varied seasonally, the litter problem has continued as Fill Area 1 approaches its maximum permitted elevation. Since mid-2013, the CM's observations and document reviews have included the construction of Fill Area 2 and related mitigation measures. The excavation and preparation of the Phase 1 portion of Fill Area 2, together with related improvements including stormwater basins, a truck wash system, a leachate containment pond and access road, etc., were monitored in 2014 and 2015.

In March of 2015, the Five-Year Permit Review process began when the Local Enforcement Agency (LEA), which is the Alameda County Department of Environmental Health, requested the ALRRF to submit an application and a revised draft of its Joint Technical Document[2], which contains a detailed description of Fill Area 2 development plans, design details, and operating procedures.

On July 31, 2015, the revised JTD was submitted to the LEA and the Central Valley Regional Water Quality Control Board (Water Board). After a substantial number of revisions to address ALRRF concerns about the feasibility and reasonableness of certain requirements, Waste Discharge Requirements (WDRs) were issued in July 2016, with certain details to follow later in 2016.

Throughout this process, the LEA held its permit review in abeyance while the Water Board issues were resolved. Subsequently, the LEA's review has required more than a year to complete, and it was still in progress in late 2017.

1.3 Regional Context and Landfill Capacity Needs

Events in the landfill disposal industry and demographic shifts within the greater Bay Area have affected, and will continue to affect, operations and future developments at the ALRRF. Prior Annual Reports have discussed impending landfill capacity changes and changes in landfill usage that could directly affect the life expectancy of regional landfills including the ALRRF.

Those issues have largely abated, but legislative and regulatory developments have new implications for landfill life in the region and statewide. The bellwether for this trend was AB 1594, which was passed in 2014. It stipulates that beginning in 2020, green material alternative daily cover (ADC) will no longer count as diversion under the 50 percent diversion mandate for local jurisdictions established by AB 939. Green material ADC will instead count as disposal from that year forward.

The 2015-16 legislative session in California gave rise to several new laws that are intended to dramatically reduce the disposal to landfill of organic wastes (plant debris, food scraps and

[1] MRF fines: Fine material produced by sorting systems that recover materials at the Davis Street Transfer Station.
[2] Under California regulations, a Joint Technical Document (JTD) is a detailed description of all of the means and methods by which a disposal site will satisfy State requirements to protect water resources and safely dispose of permitted wastes.

similar materials that readily decompose). In Alameda County, this material is nearly 30% of the waste stream[3].

These new laws are now being implemented, with regulations in the final stages of development. The two pieces of 2016 legislation with the most direct effect are SB 1383 and AB 901. SB 1383 establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020, and a 75 percent reduction by 2025. The bill provides CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets, and establishes an additional target that not less than 20 percent of edible food that is currently disposed of is recovered for human consumption by 2025.

AB 901 changes how disposal and recycling is reported to CalRecycle. Waste, recycling, and compost facilities, as well as exporters, brokers, and transporters of recyclables or compost will be required to submit information directly to CalRecycle on the types, quantities, and destinations of materials that are disposed of, sold, or transferred inside or outside of the state. The intended effect is to provide a more accurate assessment of progress toward State goals.

One result of this activity has been a tangible commitment by waste industries in California to provide organics diversion facilities. In Alameda County, the largest-scale examples are the development of the 500 ton per day CASP facility at the ALRRF, and the proposal to add approximately 100 tons per day of anaerobic digestion and subsequent composting capacity to the diversion processes performed at the Davis Street Transfer Station. This could lead to a reduction of roughly 600 tons per day disposed at the ALRRF, which would be a 25% reduction in the current rate of disposal there. This has obvious implications for the landfill's phased-development plans, and it may also impact the rate at which energy can be recovered in the future.

1.4 Site-Specific Constraints and Opportunities

The 1999 Settlement Agreement added constraints on operations, by adding new conditions to the Use Permit for the ALRRF. Solid wastes from out-of-county sources are strictly limited to those covered by existing disposal agreements. During peak traffic hours, the number of refuse trucks entering the landfill is limited. Numerous conditions intended to protect natural resources on the ALRRF property were imposed. These were extensively refined during the development of permit conditions from the State and Federal natural resource agencies with permit authority: The US Army Corps of Engineers, the US Fish and Wildlife Service, the California Department of Fish and Wildlife, and the Central Valley Regional Water Quality Control Board. This process required several years and concluded in 2012.

Also, the size of the future expansion area was limited to 40 million tons of capacity, with a footprint of approximately 250 acres. In addition to Use Permit conditions, the Settlement Agreement establishes the CMC and the CM role, as described above; and it establishes mitigation funding related to the landfill expansion.

The physical setting of the ALRRF site also presents certain constraints and opportunities. Hilly terrain and high winds require constant attention to windblown litter, especially film plastic. As Fill Area 1 neared its final elevation in 2016, the windblown-litter problem continued due to the

[3] CalRecycle 2014 Waste Characterization Study: https://www2.calrecycle.ca.gov/WasteCharacterization/ , accessed December 2017.

increased exposure of its active face to wind. The landfill has added staff dedicated to litter cleanup and has taken other steps to reduce the exposure of refuse to the wind. Local and state bans on the use of plastic bags by retailers may be helping to reduce this problem, but the widespread use of plastic trash bags and plastic film continues to produce windblown litter at the ALRRF. Ultimately, the solution will occur when disposal operations move into Fill Area 2, which will be less exposed to the wind for many years into the future.

1.5 Overview of Operations, Regulations and Permits

1.5.1 Operational Functions and Requirements

Like most large landfills throughout California, the ALRRF performs a variety of functions that support the region's management of solid wastes. These functions continue to evolve as increasing emphasis is placed on reducing and recovering wastes, but the primary function of the site continues to be the safe disposal of solid wastes by placing, compacting and covering these materials. Federal, State and local regulations require that at the ALRRF:

- Wastes are covered to control litter, prevent fire, and prevent the spread of disease.
- Wastes are placed and compacted to be physically stable.
- Plant debris is not to be disposed; if received, it must be separated and reclaimed by composting or other methods. Currently it is back-hauled to the Davis Street facility for processing and eventual use as compost or biomass fuel.
- A liner and liquid recovery system prevents groundwater contamination by leachate.
- Landfill gas (LFG) is controlled by an extraction system. Currently the gas is used to produce fuel (liquefied and compressed natural gas, LNG/CNG) and electrical energy.
- Emissions from combustion and processing (diesel engines and landfill gas systems) are controlled to meet Bay Area Air Quality Management District standards.
- Other air pollutants and nuisances (dust, odor, litter, etc.) are prevented.
- Stormwater erosion is controlled and stormwater runoff is tested for pollutants.

Compliance with these requirements protects the environment and public health, and it also presents opportunities to develop and support innovative methods for improved waste management. Currently, such activities at the ALRRF include:

- using LFG to produce electricity and fuel (LNG/CNG);
- using CNG fuel for on-site operations, as fuel for tipper engines;
- stockpiling and processing materials for beneficial use on site, such as using waste concrete for wet-weather roads and access pads;
- blending liquids and other materials to make a soil-like product that can be landfilled or used as cover;
- using contaminated soils and other wastes (biosolids, shredded tires, MRF fines, treated auto shredder fluff, etc.) as cover material, as permitted;
- stockpiling construction and demolition (C&D) materials and scrap metal for processing elsewhere;
- providing an area for the separation of plant debris from other wastes, to avoid landfilling plant debris; and
- hosting site visits, by prior arrangement, for public education.

The ALRRF property covers more than three square miles. Within that area, the portion that is delineated as landfill is divided into Fill Area 1 (currently active) and Fill Area 2 (not yet active).

The active parts of Fill Area 1 cover approximately 211 acres. Fill Area 1 also includes an Asbestos-Containing Waste landfill operation which occupies several acres within the Fill Area 1 footprint.

In 2010, design revisions for the final shape of Fill Area 1 increased its capacity, further increasing its expected lifetime. Settlement of in-place refuse has also added to the life of Fill Area 1, so that Fill Area 2 is not expected to receive refuse until 2019.

Lands surrounding Fill Areas 1 and 2 are managed primarily as grazing land. These surrounding lands also provide suitable habitat for several special status species.

Much of the work done by the CM involves the review of data and reports produced by, or required of, the ALRRF by regulatory and permitting agencies, as described below.

1.5.1.1 Water

In California, the State Water Resources Control Board and its Regional Water Quality Control Boards (RWQCBs) protect groundwater and surface water resources through laws, regulations and permit requirements. Because most of the ALRRF property drains into the Central Valley, the Central Valley RWQCB issues and administers the Waste Discharge Requirements (WDRs) for the site. These WDRs set various operating requirements, and they also define the programs that monitor water quality by periodically testing groundwater wells as well as storm water basin contents and discharges. The RWQCB also requires the ALRRF to address incidents that increase risk to groundwater, such as the inadvertent receipt of wastes that contain unpermitted levels of hazardous materials. The CM reviews semiannual groundwater monitoring reports, the annual stormwater monitoring report, and the annual Winterization Plan update, as well as correspondence and required reports that the RWQCB posts on its GeoTracker web site.

1.5.1.2 Air

The Bay Area Air Quality Management District (BAAQMD) administers its own regulations, including Regulation 8 Rule 34 regarding landfill gas control, as well as relevant State and Federal regulations. At the Federal level these are referred to as Title V requirements. The operation of (and especially the air emissions from) the landfill gas control systems, various diesel engines, and other processes that produce air emissions are regulated through permit requirements. Every six months the ALRRF produces a “Title V report” that summarizes emission test results and system performance as required. The CM reviews these reports as they are issued. The landfill also produces an annual estimate of greenhouse gas emissions, as required by Federal regulations.

1.5.1.3 Disposed Wastes

There are two agencies that regulate solid waste disposal in Alameda County. The Alameda County Department of Environmental Health is the Local Enforcement Agency (LEA), and at the State level, the California Department of Resources Recycling and Recovery (CalRecycle) supports and oversees the LEA. The LEA is the main enforcement agency for the Solid Waste Facility Permit (SWFP) that delimits many aspects of operations at the ALRRF, such as operating hours, landfill cover materials and cover frequency, types of materials that are allowed to be disposed, etc. The SWFP is reviewed and updated every five years, and the CMC and CM closely follow that process, as delineated in the Settlement Agreement. The CM also reviews ALRRF inspection reports made by the LEA, as those reports become publicly available; and

each year at least four of the monthly CM site inspections are done in conjunction with the LEA, as required in the CM's Scope of Work.

1.5.1.4 Land Use

Concurrently with the Settlement Agreement, Land Use Permit C-5512 for the ALRRF site was updated to incorporate mitigations identified in the Settlement Agreement. These modifications include restrictions on waste quantities, limits on truck traffic, and other operational constraints, as well as certain biological resource protection measures discussed in Section 1.5.2 below. The CM tracks compliance through direct inspection, review of data from ALRRF operations, and review of periodic reports submitted to regulatory agencies by the ALRRF, including the annual Mitigation Monitoring Report submitted to County Planning. Annual monitoring surveys of the on-site Conservation Plan Area are also reviewed by the CM.

An additional Land Use Permit (PLN 2010-00041) was approved by Alameda County in March of 2013 for the future development and use of composting and material recovery operations at the ALRRF. Currently Waste Management's position is that this permit is not within the purview of the CMC, but the CMC has taken the position that the additional permit *is* within their purview. At this writing, the ALRRF is completing construction of a compost facility adjacent to the north end of Fill Area 1.

1.5.1.5 Waste Diversion Requirements

Section 1.3 of this Annual Report describes recent State legislation that requires increased solid waste diversion (or reduction) and more comprehensive reporting of disposed and diverted quantities. Currently, CalRecycle is developing regulations to implement these requirements.

At the local level, the Alameda County Waste Management Authority and the Source Reduction and Recycling Board (StopWaste) waste-diversion goal is continuing to be pursued, most recently through the implementation of mandatory recycling and composting at businesses and multi-family accounts. These requirements are implemented at the local level, by each of StopWaste's member agencies (except Dublin, as of 12/31/17); in most cases StopWaste provides monitoring and enforcement. In addition, StopWaste has developed, and all of its member agencies have adopted, a single-use bag ban ordinance; and StopWaste has adopted a countywide ban on the disposal of plant debris in local landfills.

1.5.2 Requirements For Fill Area 2 Development and Use

1.5.2.1 Background

The current active area (Fill Area 1) will be supplemented by the expansion area (Fill Area 2) in the near future. In 2011, the last major permits for the development of Fill Area 2 were obtained after agreement was reached between regulatory agencies and Waste Management regarding mitigation for the loss of a wetland channel and the loss of habitat for special status species. Mitigations were established by Alameda County in Use Permit C-5512 and in permits from several State and Federal agencies:

- US Army Corps of Engineers, which had jurisdiction over wetlands.
- US Fish and Wildlife Service, which consulted on wildlife protective measures.
- Central Valley RWQCB, which certified that the mitigations would protect water quality.

- California Department of Fish and Game (now Fish and Wildlife), which placed specific conditions on work in the stream bed and concurred with the USFWS' Biological Opinion.

The fundamental requirements of these permits are:

- The dedication of a large portion of ALRRF land as a Conservation Easement, in perpetuity.
- The creation of additional wetland, in the form of a new pond between Fill Area 2 and the Eastern Alkali Wetland.
- The enhancement of a riparian channel approximately the same size as the channel to be displaced by Fill Area 2.

To guide these efforts and the many related requirements, the ALRRF and its consultants prepared the following documents:

- Conservation Management Plan
- Pest Management Plan
- Grazing Plan
- Waters and Wetlands Mitigation Plan

The ALRRF dedicated the 991.6-acre Conservation Easement in 2012 and built the mitigation wetland pond in 2013.

1.5.2.2 Corridors and Connectivity

The Biological Opinion from the USFWS describes the need for wildlife connectivity and wildlife corridors in eastern Alameda County, to provide for wildlife movement and thereby enhance species health by preventing inbreeding. The Biological Opinion states that this need exists for three of the four protected species in the area: San Joaquin Kit Fox, California Red-Legged Frog, and California Tiger Salamander. The ALRRF's Conservation Management Plan contains the following requirements in the Minimization and Mitigation sections of the document:

> MIN-31 – The project proponent will contribute funding to conduct a research study of wildlife passage at local over- and under- crossings to determine if these conduits provide conductivity [sic] for wildlife through the Interstate 580 corridor. The study will entail the periodic placement of motion-activated camera station, track plates, and other approved sampling method. The project proponent will provide the Service and/or CDFG with as much as $50,000 to perform the study. With the approval of the Service and CDFG, the project proponent may contract the study to an approved third party.
>
> MIT-7 – The mitigation pond/wetland will be constructed in an upland area… immediately upstream from the Eastern Alkali Wetland. … This area provides suitable upland refugial habitat for tiger salamanders and suitable dispersal habitat for red-legged frogs to the Eastern Alkali Wetland and the Southern Alkali Wetland.

These requirements are also stated in the USFWS Biological Opinion, which in turn is referenced by the CDFG Consistency Determination.

1.5.2.3 Current Status

Unfortunately, the pond built in 2013 was badly damaged by sediment inflow due to unusually heavy rainfall in early 2014. Also, the channel enhancement was put on hold due to the drought that occurred between 2011 and 2016. To remedy this situation, the ALRRF is having the pond

rebuilt and is purchasing off-site wetland channel mitigation credits from the Cosumnes Floodplain Mitigation Bank in southern Sacramento County.

In 2017, the CM reviewed a summary of wildlife mitigation activities and issues. The CM also reviews the ALRRF annual mitigation monitoring report, which briefly summarizes the status of compliance with each of the 106 Conditions in Conditional Use Permit C-5512.

The final version of the Joint Technical Document for the ALRRF states that "Fill Area 1 is expected to reach capacity in about 2019. FA2 is currently being designed to be operational when FA1 approaches its final capacity.[4]" This estimate should be considered as tentative.

[4] JTD section 4.1.1.2, page 32.

SECTION 2
Community Monitor Activities and Issues

2.1 Introduction

Under the Settlement Agreement, the Community Monitor (CM) has three ongoing duties:

- Review reports, data and information that are required to be submitted by Waste Management of Alameda County to regulatory agencies, or that provide information regarding the ALRRF's compliance with applicable environmental laws and regulations (Settlement Agreement Sections 5.7.1.- 5.7.3)
- Conduct inspections of the ALRRF facility up to 12 times per year (Sections 5.7.7, 5.8)
- Review the records of testing and acceptance of "Class 2 soils", i.e. soils known to come from a contaminated site (Section 5.7.9)

Throughout 2016, the CM was active in each of these areas, as described below.

2.2 Monitoring of Improvements and Changes

Through report reviews and site visits, several new developments in ALRRF facilities and operations became apparent in 2017:

- **Landfill gas wells** that had been installed in the last few months of 2016 were brought on line by early 2017. Several landfill gas wells that were becoming unproductive were taken off line as well. A cluster of wells with higher than normal gas temperatures was identified and monitored for possible subsurface combustion, which was found not to be occurring.
- To **deter seagulls** visiting the active face of Fill Area 1, a depredation permit was obtained, and birds were periodically shot and killed for several months. The effect on bird visitation was minimal, and the practice was suspended.
- The two **Fill Area 1** ponds, intended to hold leachate and underdrain water separately, were completed. Discussion of the use of underdrain water to support compost operations was begun with the Water Board.
- **The maintenance shop parking area** was repaved and striped.
- **Operations roads and drainage** on the west side of Fill Area 1 were reworked to control erosion, improve drainage and trap silt. Fill Area 1 stormwater basins A, B and C were excavated to increase capacity, with the goal of improving the quality of discharged stormwater.
- In response to a directive from the Water Board, the ALRRF prepared a **plan to sample stormwater upstream of the Fill Area 1 stormwater basins,** in an effort to identify the sources of contaminants that have previously been detected in the basins.
- **In Fill Area 1,** the 10-acre Evapotranspirative (ET) Cover Test area was prepared by filling with refuse and applying intermediate cover as needed to achieve design grades with smooth slopes. Unfortunately, differential settlement caused uneven slopes, and the

application of test cover was delayed for one year to allow the refuse below the ET area to stabilize and be regraded.

- **The litter collection crew** was maintained at five employees.
- **The Bio-Fuel Systems, Inc. wood grinding operation** was unable to bring its wood stockpiles into compliance with regulatory requirements governing volume and throughput. The business ceased operation, and much of the stockpiled wood was shredded and used as alternative daily cover and solidification extender at the ALRRF. The former site of the Bio-Fuel operation is now vacant.
- The received tonnage of **Class 2 cover soil**, compared to that of municipal solid waste, grew from 37% to 48% from January through November 2017.
- In spite of extremely heavy rains from November 2016 through early April 2017, **erosion problems were minimal in and around Fill Area 1**. A minor landslide occurred on a side slope above Fill Area 2, but this was repaired in October and November of 2017.
- In response to a November 2016 Notice of Violation from the Water Board for **windblown litter**, landfill workers and management focused on this issue and removed virtually all litter that was impacting Fill Area 2 and the south and east sides of Fill Area 1. In addition, the ALRRF replaced its "Trilo" vacuum litter collector with a similar machine that is more effective and more easily repaired.
- In and around Fill Area 2, several **new groundwater monitoring wells** were installed, and samples were analyzed to establish background levels of naturally occurring minerals.

2.3 Compliance and Significant Incidents

As noted above, the Settlement Agreement defines the CM's Scope of Work to include "issuing a written report each year summarizing the ALRRF's compliance record for the period since the last such report with respect to all applicable environmental laws and regulations." This Annual Report provides that summary. The regulatory agencies that administer these laws and regulations, as well as the environmental permits held by the ALRRF, include the following:

- Alameda County Planning Department
- Alameda County Department of Environmental Health
- Bay Area Air Quality Management District
- US Environmental Protection Agency
- California Department of Resources Recycling and Recovery (CalRecycle)
- Central Valley Regional Water Quality Control Board
- California Department of Fish and Wildlife
- US Army Corps of Engineers
- US Fish and Wildlife Service

To determine if there are trends in the compliance record, a list of compliance issues has been compiled; it is shown in Table 2-1, below. Persistent issues appear in the upper part of the table, followed by infrequent or one-time issues. To compile this table, the CM reviewed publicly available data from the regulatory agencies listed above, ALRRF correspondence with those agencies, and the CM's monthly site inspection reports. The severity of the issues was rated subjectively by the CM using the 1 to 5 scale shown below Table 2-1. Issues that were judged to be beyond the control of the ALRRF are not included in the annual total of severity scores but are listed below the total line.

For the purposes of this report and table, the delivery of hazardous materials with incorrect profiles (showing them as non-hazardous) is considered to be beyond ALRRF's control; but the Water Board's position appears to be that ALRRF is responsible nevertheless. There were no new issues of this type in 2017, and cleanups were completed from two such incidents that occurred in 2016.

The total severity score for 2017 is significantly lower than in 2016. Also, on-site scrutiny by Water Board staff was less intensive in 2017, which may reflect some satisfaction by Water Board staff that issues identified in 2016 are being corrected. Also, for the first time in several years, there has not been an incident involving disposal of improperly profiled hazardous material at the ALRRF.

Four types of incidents that are of particular concern occurred in 2017:

- **End-dump Truck Overturns**. These seemingly random events become more frequent when more cover material is being delivered, and they were especially frequent this fall, with five occurring in September. In the ALRRF's written reports, inattention by the truck drivers is sometimes noted as a contributing factor. In one case, a truck overturned onto another vehicle; fortunately, there were no injuries from any of these incidents.
- **Leaks of leachate or landfill gas condensate from on-site piping**. These have occurred when a device (such as a check valve or pump) fails, or a pipe is broken by a piece of mobile equipment. In most cases these were discovered quickly enough to limit the volume spilled and quickly resolve the problem. In one case, the leak continued long enough to fill a secondary containment area to an estimated depth of 2 to 3 inches. Fortunately, the secondary containment functioned properly, and the liquid did not escape.
- **Seeps of leachate at the landfill surface**. The one such incident this year is noteworthy because it occurred on the opposite side of the landfill from the locus of several seeps that occurred in prior years. This may indicate a change in hydrology within Fill Area 1, possibly due to its increasing height.
- **Contamination at well MW-4A**. Until the spring of 2017, this well had no occurrences of contaminants; but beginning in May, sample analyses found several new VOC's as well as two minerals (bicarbonate alkalinity and calcium) with higher than normal concentrations. When retested, most of these contaminants continued to be found. The VOC's have also appeared in other wells along the east and south sides of Fill Area 1. The current hydrological model for the landfill, which describes the direction of groundwater flow, indicates that well MW-4 should be upgradient of the landfill; but these results indicate otherwise. This calls into question the assumptions that underlie the planning for current and future groundwater monitoring. In our estimation, this is a very serious issue.

Table 2-1
Compliance Issues Ranked by Severity

	Severity						
Issue	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Contamination at E-05, E-07, E-20B	2	2	2	2	2	2	2
Stormwater contamination	3	3	3	3	3	3	3
Windblown Litter	2	1	3	2	2	4	2
Birds	2	2	2	2	2	2	2
Erosion	2	1	-	-	3	2	1
Cover thin / absent	2	2	2	3	4	-	-
Worker injury	-	1	3	-	1	2	1
Condensate/Leachate Leakage	-	-	1	1	3	-	3
Ponding in low-lying area of landfill	-	1	1	2	-	-	-
Sediment in Wetland Mitigation Area	-	-	-	1	3	3	2
MRF fines suitability for ADC	4	4	-	-	-	-	-
Odor, on site	-	1	-	-	-	1	-
Leachate Seeps	-	-	-	-	1	1	2
Ponding on landfill due to water leak	1	-	-	-	-	-	-
Leachate Spill	-	4	-	-	-	-	-
CUPA inspection (Haz Mat Management)	-	-	4	-	-	-	-
Unpermitted construction of FA2	-	-	4	-	-	-	-
Groundwater Elevation Error	-	-	2	-	-	-	-
Sampling Pump Problem: VD-unsat	-	-	2	-	-	-	-
Late Annual Report to Water Board	-	-	-	-	4	-	-
Sampling Pump Problem: well E-05	-	-	-	-	2	-	-
Stormwater monitoring compliance (FA2 pond, tire and wood operations)	-	-	-	-	-	4	2
Material out of bounds (wood operation)	-	-	-	-	-	4	-
Erosion control (sitewide)	-	-	-	-	-	4	-
Waste outside active area (trash, pallets)	-	-	-	-	-	4	-
Leachate Leak Disposal							4
Contaminants at monitoring well MW-4A							4
Totals	18	22	29	16	30	36	28
Issues Beyond Control of ALRRF							
Truck overturn	1	1	1	1	1	3	3
Hazardous material delivered (ash, high in lead)	-	4	-	-	-	-	-
Fire in refuse &/or stored material	-	-	2	-	-	3	1
Material high in copper disposed (later removed)	-	-	4	-	-	-	-
Dinoseb solidification & disposal (later removed)	-	-	-	4	-	-	-
Liquid high in chromium, nickel received (removed before being disposed)	-	-	-	-	-	4	-
Soil high in benzene received, disposed	-	-	-	-	-	4	-
Methane Gas at Perimeter Probe(s) [cleared, 2016]	-	-	-	4	4	4	
Fire on ALRRF property, outside active areas	-	-	-	-	-	-	2

indicates that a violation was issued by a regulatory agency.

Severity Criteria

1: Minor or ongoing issue with little potential to harm environmental or public health; below regulatory thresholds.
2: Issue with some potential to harm environmental or public health; below regulatory thresholds; being addressed.
3: Issue with potential to harm environmental or public health; below regulatory thresholds; not improving, or new.
4: Issue with significant potential to harm environmental or public health, or resulting in a violation being issued.
5: Issue with significant potential to harm environmental or public health; violation issued; willful non-compliance.

2.3.1 Compliance Issues Documented by the LEA

In 2017, no Violations or Area of Concern notices were issued by the Local Enforcement Agency (LEA). LEA inspection reports indicate some concerns about the following:

- Muddy conditions and ponding during very wet weather in January through March
- Intermittent need for litter control on site and on Altamont Pass Road
- Condition of the yard that was occupied by Bio-Fuels, Inc. (now vacant)
- Bird activity at the refuse fill working face.

However, these concerns were comparatively minor and were not noted as formal Areas of Concern in the LEA's inspection report.

2.3.1.1 ALRRF Lessee Bio-Fuels Systems, Inc.

As noted elsewhere in this report, the waste wood processor Bio-Fuels Systems, Inc. ceased to operate at the ALRRF in mid 2017. Their on-site yard was vacated and all equipment and stockpiled materials were removed. Between October 2016 and June 2017, the ALRRF used several hundred tons per month of shredded wood waste from Bio-Fuels as alternative daily cover.

2.3.2 Water Board Violations and Concerns

2.3.2.1 2017 Violations

Disposal of escaped leachate into solidification basin – In early April 2017, ALRRF staff discovered leachate leaking from two failed gaskets in a leachate pipe. The liquid, including ponded rain water in the area, was cleaned up and disposed in a solidification basin. The event was reported to the Water Board in mid April. The current Waste Discharge Requirements explicitly prohibit the disposal of leachate in the solidification basins, so the Water Board issued a Notice of Violation and required that the landfill prepare and submit "a report prepared as an operation manual, outlining how accumulated liquid from any and all future leachate and/or condensate leaks will be contained, extracted, transported, and properly disposed."

Contamination at Monitoring Well MW-4A – Well MW-4A monitors the shallow aquifer on the northeast side of Fill Area 1. Based on the hydrologic model of the ALRRF site, it is intended to monitor upgradient groundwater, that is, groundwater that is flowing toward Fill Area 1 from the north and northeast. However, beginning in May of 2017, sample analyses began to detect several VOC's that also have been found in detection wells along the southeast and south edges of Fill Area 1. Because the Waste Discharge Requirements for the ALRRF explicitly prohibit "the discharge of waste constituents to … groundwater," the Water Board issued a Notice of Violation and required the ALRRF to submit a plan for a monitoring program to assess the effect of this apparent release along the entire 3,500-foot northern boundary of the landfill.

2.3.2.2 Other Issues

There are several open issues that have arisen between the ALRRF and the Water Board since the current Waste Discharge Requirements (WDRs) were finalized in July 2016. They are briefly described below.

Identifying Sources of VOC's in Storm Water – At the Water Board's direction, the ALRRF has developed a sampling plan to try to detect storm water pollutants close to their origin on site. This plan will be acted upon in the 2017-2018 rainy season.

Soil Gas Monitoring Locations – To comply with soil gas monitoring required by the WDRs, the ALRRF proposed to monitor soil gases using a combination of existing gas monitoring probes and one new probe in Fill Area 2. The Water Board responded by requiring more probes, at locations closer to the waste footprint, and directing the ALRRF to revise its proposed plan accordingly.

Fill Area 1 Leachate and Underdrain Liquids Management – The ALRRF has proposed to upgrade its Fill Area 1 liquids management system so that leachate, from above the landfill liner, and underdrain water from below the liner are kept separate and managed differently. Specifically, the ALRRF is seeking the option to use underdrain water in its nearby CASP composting operation. The Water Board's response notes that contaminants (VOCs) have been detected in the underdrain water, and therefore the ALRRF must obtain Waste Discharge Requirements for this use, by submitting a Report of Waste Discharge and going through a Water Board permit process.

Leachate Seep on North Side of Fill Area 1 – In early November, a leachate seep was seen where none had occurred before, along the northwest edge of Fill Area 1. The leachate was contained and disposed, and a drain was installed to capture any future seepage before it could leave the waste footprint. The Water Board response noted possible ponding in the area during the rainy season (actually biosolids), as well as the proximity of the solidification basins, and recommended that both the ponding and the basins be evaluated for their contribution to the seep. The Water Board also recommended that the northwest boundary be closely monitored for future seeps.

Contamination at Well E-20B – In 2014, Water Board staff took issue with the assertion by ALRRF and SCS Engineers that the VOC contamination found at groundwater monitoring well E-20B can be attributed to landfill gas. After further discussion it was agreed that ALRRF should install special gas extraction wells between E-20B and the landfill, as well as one or more new groundwater monitoring wells downslope / downgradient of E-20B. Well MW-12 was installed soon thereafter, some 650 feet east of E-20B. It has detected VOCs as well, but fewer of them and in lower concentrations. A second downgradient well, MW-20, was installed in September 2017. The initial samples from that well contained low levels of five VOCs, but two of those substances were also detected in the equipment blank and field blank samples, and one in the method blank, casting some doubt on the initial findings. The samples are being re-analyzed, and new samples will be taken and analyzed in December 2017, to determine if the new well is in fact detecting contamination.

2.3.3 Other Incidents

The following information is based solely on reports filed in the site's Special Occurrences Log.

2.3.3.1 Facility Damage or Worker Injury

During 2017, there was one incident that resulted in an injury to landfill staff requiring outside assistance. In January, a Waste Management mechanic was struck on the lip when a pry bar came loose. He received first aid on site and later sought medical attention.

2.3.3.2 Fire

In late May and early June, there were two fires in the engine compartments of bulldozers that were handling refuse. These occurred on May 26 and June 2. They were extinguished by site staff.

On August 18, in the open space north of Fill Area 1 and south of the CASP receiving and composting area (which was under construction), an electrical line caused a grass fire that was extinguished by on-site equipment and staff, with assistance from the Alameda County Fire Department.

2.3.3.3 Vehicular Accidents

No collisions were recorded in 2017, but (as noted at the beginning of this section), an unusually large number of end-dump trailers overturned while unloading. This was especially frequent in September, when five such incidents occurred in a two-week period. Fortunately, there were no injuries, although in one case (in late June) an overturning trailer fell onto another vehicle. The ALRRF has placed an increased emphasis on safe behavior by its customers, enforcing their requirement for truck drivers to wear personal protective equipment when outside their vehicles, and posting signs along the landfill entry road with other safety reminders.

2.3.3.4 Other Incidents

Most of the recorded incidents not listed above involve the release of liquids, from customer trucks (fuel tank puncture, hydraulic line break) or from on-site equipment (valve, seal or gasket failures; unintentional damage to piping during excavation). Two unique incidents also occurred. The first resulted in serious injury at the ALRRF lessee, Shamrock (a tire shredding company) when a customer attempted to help move a piece of equipment and his leg became caught in it. The other was a leak at the LNG plant that resulted in a substantial release to the atmosphere of over 500 pounds of refrigerant, which contains several "greenhouse" gases.

2.4 Review of Reports

2.4.1 Groundwater

Two groundwater monitoring reports were reviewed in 2017. The first covered the time frame from July through December of 2016; the second covered January through June of 2017. Although the current Waste Discharge Requirements were finalized in July of 2016, the related Monitoring and Reporting Program was still a work in progress at that point. Consequently, the first monitoring report partially fulfills the new requirements, and the second report addresses them fully.

In general, groundwater monitoring results were similar to those from prior years. Contaminants, when present, were below regulatory limits that would require immediate remediation. For most contaminants, trends in the data were indistinct. Specifically, the fuel additive MTBE and its degradation by-product tert-butyl alcohol continued to be found in wells E-5, E-7 and E-20B, but in varying concentrations that do not show a clear trend.

The new WDRs required the addition of groundwater monitoring wells in and near Fill Area 2, and downgradient of well E-20B. The wells required for Fill Area 2 have not detected any contaminants known to originate from the landfill, but the new well MW-12, downgradient of E-

20B, has found very low levels of one VOC, 1,1-dichloroethane, which also appears at E-20B. It is too soon to identify any trend in concentrations at MW-12, but sampling will continue.

The most serious groundwater-related issue is the detection of several VOCs at monitoring well MW-4. This could be interpreted as an early indication of a contaminant plume appearing in a completely unexpected area where monitoring wells are few and far between. A more detailed description appears in Section 2.3.2.1, above.

2.4.2 Storm Water

A new set of annual requirements for industrial storm water monitoring and reporting took effect throughout California on July 1, 2015. Stormwater samples are to be taken when a "qualifying storm event"[5] (QSE) occurs. Up to four such QSE's are to be sampled at each discharge point during a stormwater year (July through June).

The annual storm water report for 2016-2017 was submitted to the State Water Resources Control Board under the facility ID of 5S01I000600.

2.4.3 Air Quality

Title V is one of several programs authorized by the U. S. Congress in the 1990 Amendments to the federal Clean Air Act. The Bay Area Air Quality Management District (BAAQMD) administers Title V requirements for the ALRRF. Title V operating permits incorporate the requirements of all applicable air quality regulations. Hence, the semi-annual Title V reports provide a comprehensive review of compliance with BAAQMD permits and regulations.

In 2017, the CM received the Title V reports for the periods June – November 2016, and December 2016 – May 2017. These reports describe landfill gas control operations and source testing, and they also document new or unique developments at the site that can have an effect on air emissions. Results from 2017 are similar to those from 2016:

- Surface emissions monitoring continued to occur, and although exceedances of methane were found, they were typically remedied on the first try, without the need for repeated repairs.
- On June 6, 2016, the BAAQMD issued a permit to the ALRRF to continue to allow the landfill to decommission gas wells and install new wells, as needed, within specified limits. The limits in the previous version of this permit had been reached, because the ALRRF decommissions unproductive wells and installs replacements annually as needed. The new permit allows the landfill to decommission up to 100 vertical wells and 15 horizontal wells, and install up to 120 vertical wells and 25 horizontal wells or tire trench collectors.
- Under these new limits, nine vertical landfill gas wells were decommissioned, and 22 new wells were installed. The new wells began operation in December 2016.
- The LNG plant continued to operate, and unscheduled down-time was minimal, although scheduled repair and maintenance kept the plant off line for a total of 6 weeks in the second half of 2016.
- Two major power outages shut down the LNG plant and all other landfill gas combustion devices for a total of 5 days during the reporting year.
- All control devices passed their emissions tests without incident.

[5] a precipitation event that: (1) produces a discharge for at least one drainage area; and, (2) is preceded by 48 hours with no discharge from any drainage area.

2.4.4 Mitigation Monitoring

The Mitigation Monitoring and Reporting Program Annual Progress Report, covering calendar year 2016, was completed on January 31, 2017 and was received by the CM in March 2017. It is a table that lists each of the conditions described in the current Conditional Use Permit (CUP-5512), followed by a description of the implementation status of that condition or mitigation. The status descriptions together with the verification notes generally reflected the current status of each mitigation measure. Updates to this table from the previous year are listed below, with reference to the applicable CUP Condition number(s).

- 3(b) – This requirement, to maintain a current Report of Disposal Site Information and the corresponding Solid Waste Facility Permit that incorporates Fill Area 2, is being addressed through the required 5-year update that began in 2015.
- 3(c) – This requirement, to maintain a current Report of Waste Discharge and the corresponding Waste Discharge Requirements (as well as a Stormwater Pollution Prevention Plan and the corresponding General Industrial Stormwater Permit) that incorporates Fill Area 2, is being addressed through the required 5-year update that began in 2015.
- 4.6 – This requirement, to adjust tonnage limits for partial years, was annotated by ALRRF staff to indicate that the expected start date for Fill Area 2 operations would be in the first quarter of 2019 (revised from the 2016 revision, which stated the second quarter of 2016).
- 9 – Regarding the timing and design of site closure, the Implementation Status of this Condition was revised to state that closure planning and design have been addressed in the revised Waste Discharge Requirements and are being reviewed by CalRecycle and the LEA.
- 26 – This Condition requires the ALRRF to submit a post-construction compliance report to the US Fish and Wildlife Service within 45 days of completing each major Fill Area 2 project component. The update states that such reports for Phase 1 of Fill Area 2, and for the leachate storage impoundment, were submitted in 2016.
- 32 – This Condition requires the ALRRF to avoid existing ponds in Fill Area 2 until replacement wetlands have been established and the California Tiger Salamander has been resettled. The update states that CTS surveys are conducted as needed, and the replacement wetlands have been established.
- 40 – This Condition requires that survey monuments be established on and near the landfill to monitor long-term settlement. The update states that those monuments have now been established.
- 106 – This Condition requires that the Operator implement the project within three years of its scheduled implementation date. From the update, it appears that the ALRRF considers this to be three years from the most recent predicted start date for the use of Fill Area 2, i.e. the first quarter of 2019.

In addition to the Annual Progress Report described above, the ALRRF has begun to submit annual reports to inform the natural-resource agencies about progress on their permit requirements for Fill Area 2 expansion: establishing the Conservation Plan Area, constructing the wetland mitigation project, protecting existing wetlands and surface waters, etc. The first such report, for 2014, was provided to the CM in November 2015 and a number of deficiencies were noted. The report for 2015 was provided in August of 2016; it was more thorough and clear, but

it did not directly address several of the performance goals for the Conservation Plan Area. In 2016-2017, the ALRRF and its mitigation consultants focused on the need to restore the mitigation wetland and complete other mitigation requirements (channel enhancements), resulting in a plan outlined in a memo from ALRRF's consultants to the natural-resource agencies, as described in Section 1.5.2 above. To the best of our knowledge, the agencies have viewed this as a constructive approach and have not issued any violations or penalized the ALRRF to date.

2.5 Review of Records

Several types of site records were reviewed by the CM in 2017. The CM's scope of work requires the periodic review of files that contain lab analyses and other descriptions of **Class 2 soils** (considered hazardous by California standards, but not by Federal standards) that are brought to the site for use as cover soil. Also, the **Special Occurrences Log** for the ALRRF was examined twice during the year, as part of monthly site inspections. The **LEA's weekly inspection reports** are publicly available on the CalRecycle web site and were checked by the CM every few weeks, to identify any new issues that may have arisen.

2.5.1 Class 2 Soils

An ongoing task is the periodic review of files containing profiles (sample analyses) for Class 2 soils that are imported for use as cover soil in the Class 2 portion of the ALRRF. For efficiency, this is currently conducted two to three times per year, and it requires a full day for a qualified specialist from Langan to review each file to be sure that it is complete and within the regulatory limits for Class 2 materials. In 2017, these reviews were conducted in July and December. Because Waste Management has consolidated these files from many of its sites into one office, the July review was conducted in that office (Fresno). For the December review, the files were made accessible electronically from Waste Management's Oakland office, saving travel time.

A total of 233 files were reviewed in 2017, 15% more than the previous year. No out-of-compliance profiles were found, and all files were complete, with two exceptions. Both of those were from small residential excavation projects; in such cases, with no evidence of prior commercial or industrial use at the site, Waste Management does not require a full laboratory profiling.

2.5.2 Other Materials

In 2016, the ALRRF received a substantial amount of soil from restoration work at former salt ponds at the edge of the Bay in Newark. This soil was too salty to be used as cover, so it was disposed, causing a significant surge of more than 20% in monthly disposed tonnage for August 2016. Since the salt pond project is a multi-year undertaking, tonnage from Newark was tracked closely in 2017, to determine if this surge would recur. It did not, but other major projects in Newark led to a similar increase in special wastes received in August, September and October of 2017.

2.5.3 Special Occurrences Log

Each permitted solid waste disposal site in California must keep a Log of Special Occurrences to document unusual and potentially disruptive incidents, including fires, injury and property damage, accidents, explosions, receipt or rejection of prohibited wastes, lack of sufficient number

of personnel, flooding, earthquake damage and other unusual occurrences. The ALRRF log was checked four times during 2017. As in prior years, the most common incident involved large end-dump semi-trailers that become unbalanced while the bed is elevated, causing the truck bed to fall to one side. Fortunately, there were no injuries associated with these incidents, despite their being unusually numerous in 2017 (a total of 10). ALRRF staff attribute some of these overturns to high winds hitting the truck as it is emptying; in addition, the high volume of Class 2 soil loads received this year made overturns more likely during the high volume months of September (5) and October (1).

Other logged incidents included three fires. Two were small but destructive, taking place in bulldozer engine compartments where trash and wood particles had built up; they were extinguished by facility staff. The third incident required a response from Alameda County FD; it was a grass fire near the construction site for the future composting facility, caused by a hot electrical line.

2.5.4 LEA Inspection Reports

In 2017, there were no Violations or formal Areas of Concern noted in these reports. The reports did frequently note the presence of litter and large numbers of seagulls, as well as issues related to high precipitation early in 2017, oversize wood stockpiles at the site leased by Bio-Fuels, Inc., and a small landslide at Fill Area 2, among other things. They were consistent with Community Monitor observations.

2.6 Monthly Inspections

Twelve site inspections were held during 2017. To obtain the best possible understanding of the range of operating conditions, the inspection day and time were varied as shown in Table 2-2 below. Off-hours inspections, outside of the hours that the landfill is open to the public, are shown with gray highlighter.

Table 2-2
Site Inspection Summary

Date	Day of Week	Inspection Time	Announced in Advance?	With LEA staff?
Jan 19	Thurs	2:15 PM	yes	no
Feb 10	Fri	1:00 PM	yes	no
Mar 23	Thurs	1:30 PM	no	yes
Apr 12	Wed	2:00 PM	yes	no
May 23	Tues	5:00 AM	yes	no
Jun 27	Tues	12:30 PM	yes	no
Jul 7	Fri	11:15 AM	no	yes
Aug 15	Tues	4:00 PM	yes	no
Sep 13	Wed	2:45 PM	no	yes
Oct 10	Tues	10:30 AM	yes	no
Nov 28	Tues	9:00 AM	yes	no
Dec 20	Wed	9:00 AM	no	yes

In general, satisfactory conditions were observed, although windblown litter and bird (seagull) presence were persistent issues. Minor problems generally were rectified prior to the next inspection. Details are available in the monthly site visit reports provided in CMC meeting

packets. There were no observed problems regarding refuse placement, public safety or traffic management. Throughout these inspections, staff and management were forthcoming regarding operating practices and current conditions. Distinct operations, such as the stockpiling and processing of specific materials, took place in well-defined areas. No instances of unpermitted activities were noted.

In 2017, observations by the CM focused on:

- Construction of the evapotranspirative cover test area.
- Status and repair of the minor landslide on the west side of Fill Area 2.
- Operations during extreme wet weather in the early part of the year.
- Condition of wetland areas in the Conservation Plan Area.
- Occurrences of invasive plants in certain locations on the site.
- Storm drainage and erosion control, including the installation and performance of stormwater Best Management Practices and the status of the stormwater basins.
- Observation of issues of ongoing concern, including the presence of large numbers of seagulls and management of windblown litter.

The Scope of Work for the CM specifies that at least three inspections be performed off hours, and that approximately four to six be performed jointly with the LEA. As shown in the table above, two off-hour and four joint inspections were conducted in 2017.

In addition to the on-site inspections, a count of arriving refuse trucks was conducted by the CM in November of 2017. This count was well below the 50 truck per hour limit stipulated in the CUP.

SECTION 3
Looking Ahead: Anticipated Efforts and Issues

3.1 Introduction

In the 2018 contract year, the CM team will continue to perform report reviews, site inspections and Class 2 soils file review. As Fill Area 1 continues to be used, its increasing height and mass may cause new problems, such as increased seepage incidents; and existing issues such as windblown litter and bird activity are likely to continue. Also, as the ALRRF continues the development of Fill Area 2, the CM will review mitigation plans and reports for the Conservation Plan Area or other parts of the site, as needed. The four-year test of evapotranspirative (ET) cover methods is expected to begin in the latter part of 2018; the completion of construction will be documented, and monitoring reports will be reviewed as they become available.

3.2 Issues to be Tracked in 2018

3.2.1 Ongoing Review

The following issues will continue to be monitored in the coming year:

- Implementation of requirements of the 2016 Waste Discharge Requirements.
- Completion of the Five Year Permit Review.
- Concurrence of natural-resource agencies with off-site wetland mitigations.
- Groundwater monitoring methods and data quality.
- Groundwater quality, including the vadose zone.
- Stormwater quality and management practices.
- Performance of landfill gas handling equipment.
- Proposed changes to the landfill gas extraction system and the handling of extracted-water (condensate, leachate and underdrain liquids).
- Effects of any development of composting or material recovery operations on the landfill.
- Refuse truck traffic counts.
- Completion and performance of the 10-acre ET cover test site.

3.2.2 Site Inspections

All operations will continue to be observed, and the following areas will receive emphasis.

3.2.2.1 Landfill Gas Control System

Performance of this system is closely related to groundwater quality, and it takes place within a complex regulatory framework involving Federal permits, local permits, State regulations, and ALRRF CUP conditions. Physical changes to this system are likely to include the further addition of landfill gas extraction wells, decommissioning of wells that are no longer productive,

and ongoing operation of the LNG plant, turbines, flares, etc. In 2018, three topics will continue to be of interest:

- The effect of new gas wells on the concentrations of contaminants in well E-20B.
- The requirement to report landfill gas data to the Regional Water Board, and related requirements for increased gas probes and analyses.
- Gas temperatures, particularly in the high-temperature cluster of wells in Fill Area 1 Unit 2.

3.2.2.2 Stormwater Controls and Monitoring

Throughout the year, and especially during wet weather months, the CM will monitor conditions at all stormwater basins.

3.2.2.3 Windblown Litter

This will continue to be an issue for Fill Area 1. The effectiveness of current control measures, as well as any noticeable effect from upstream measures such as plastic bag bans, will be evaluated.

3.2.2.4 New Construction and Monitoring

The CM will observe work on the ET cover test area, as well as any Fill Area 2 construction that may take place. Reconstruction and establishment of the Mitigation Wetland, and progress reports regarding the Conservation Plan Area, will continue to be reviewed to the extent required by the Settlement Agreement.

3.2.2.5 Groundwater Contaminants and Groundwater Data

The CM team will continue to check concentrations of MTBE, tert-butyl alcohol, and tetrahydrofuran, which showed an increase in 2015 but not since then. The team will also watch data from wells E-20B, MW-4, MW-12, MW-20 and other wells that have shown traces of contamination. The quality of the groundwater sampling and analyses, especially the occurrence of contaminants in quality-control samples and field samples, will also continue to be monitored.

3.2.2.6 Responses to Notices of Violation

A serious NOV with long-term implications for groundwater quality monitoring was issued by the Regional Water Board in the latter part of 2017. The CM will review the ALRRF's responses as they become available.

3.2.3 Class 2 Soils File Review

As required in the Scope of Work, the CM will conduct this review at least twice during 2018.

3.3 Project Management Considerations

As the current contract continues, the budget is expected to be sufficient through 2018. Kelly Runyon will continue with the lead role as Community Monitor, as a subcontractor to ESA. Michael Burns will continue to serve as ESA's Project Manager and will provide his own expertise, that of other ESA staff, and the environmental consulting firm Langan, providing expertise related to groundwater quality protection.