ALRRF COMMUNITY MONITOR ANNUAL REPORT 2019

Prepared for
ALRRF Community Monitor Committee

January 15, 2020
Revised May 8, 2020

The photo on the cover of this report shows construction of the liner for the Phase 2/2B portion of Fill Area 2, viewed from the hill immediately to the west. The photo was taken on October 11, 2019.

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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 2019.

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

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 2019, the team has carried out report reviews, Class 2 soil analysis file review, and site inspections as defined in the Settlement Agreement.

- 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.
- In 2012, two ongoing problems, windblown litter and seagull activity, became more severe; and while the gull problem has varied seasonally, the litter problem has continued.

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, were monitored in 2014 and 2015.

In 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](JTD), 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). Waste Discharge Requirements (WDRs) were issued by the Water Board in mid 2016.

Throughout this process, the LEA held its permit review in abeyance while Water Board staff prepared, and the Water Board adopted, the WDRs. Subsequently, the LEA's review has required more than three years to complete. It has been difficult for the ALRRF to refine its JTD to conform to the requirements of the WDRs and subsequent directives from Water Board staff, and the sheer size and complexity of the JTD itself has also impeded progress. The JTD was in the final stages of review in December 2019.

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 may 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 resulted in 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 be counted as diversion for compliance with the 50 percent diversion mandate for local jurisdictions established by AB 939. Green material ADC will instead be counted as disposal from that year forward.

[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.

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 similar materials that readily decompose and produce methane, a potent greenhouse gas). In Alameda County, this material is approximately 30% of the waste stream[3,4].

The two pieces of 2016 legislation with the most direct effect are SB 1383 and AB 901. SB 1383 established targets to achieve a 50 percent reduction in the statewide disposal of organic waste from the 2014 level by 2020, and a 75 percent reduction by 2025. AB 901 changed how disposal and recycling is reported to CalRecycle. The intended effect is to provide a more accurate assessment of progress toward State goals. Regulations that implement AB 901 are now in place, and the regulations implementing SB 1383 are being completed.

One result of this activity has been a tangible commitment by waste industries in California to provide additional organics diversion facilities. In Alameda County, two examples are the 500 ton per day CASP facility at the ALRRF, and the implementation of 100 tons per day of anaerobic digestion and subsequent composting capacity at the Davis Street Transfer Station. Taken together, these could reduce disposal at the ALRRF by up to 600 tons per day, which would be a 25% reduction in the current rate of disposal there. This reduction may be offset somewhat by the need for to disposal of contaminants and oversize materials from compost operations.

Related State legislation passed in the 2017-2018 session provided further support for waste reduction through product stewardship, packaging, and enhanced organics-diversion requirements. The legislation passed in the first year of the 2019-2020 session has continued to focus on product stewardship while also removing some requirements to provide buy-back recycling centers.

Against this backdrop, the ALRRF began operation in Fill Area 2 on March 25, 2019. This triggered several constraints on the types, quantities and sources of materials received; these are described in the next section of this report.

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 were 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.

Some of these conditions did not take effect until Fill Area 2 began to receive refuse, on March 25, 2019. These conditions include limitations on the amounts of Sludges, Inert Waste and

[3] CalRecycle 2014 Waste Characterization Study: https://www2.calrecycle.ca.gov/WasteCharacterization/ , accessed December 2017.
[4] Alameda County 2017-2018 Waste Characterization Study: http://www.stopwaste.org/sites/default/files/2017-18%20Alameda%20County%20Waste%20Characterization%20Study.pdf , accessed December 2018.

Special Waste accepted from certain Bay Area counties, as well as self-hauled wastes from Contra Costa County. The specific restrictions are:

- Wastes collected for disposal under a municipal franchise may only be received from Alameda County, San Francisco, and the City of San Ramon in Contra Costa County. San Francisco and San Ramon wastes can only be received if those jurisdictions meet specified waste diversion goals.

- Non-franchise waste may only be received for disposal from Alameda County and San Francisco, plus up to 25,000 tons per year of sludges, inert waste and special waste from the other seven Bay Area counties. In addition, up to 25,000 tons per year of self-hauled wastes from Contra Costa County may be disposed.

Also, under the Settlement Agreement 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 established the CMC and the CM role, as described above; and it established mitigation funding related to the landfill expansion.

The physical setting of the ALRRF site presents certain constraints and opportunities. Canyons provide convenient high-volume fill sites, but hilly terrain and local high winds in the Altamont area require constant attention to windblown litter, especially film plastic. As Fill Area 1 has neared its final elevation, windblown litter has continued to be a problem due to the exposure of the landfill's active face to wind. That problem increased through 2019, despite the move to Fill Area 2 at a lower elevation. The landfill has added staff dedicated to litter cleanup and has repaired and augmented litter fencing downwind of Fill Area 2. Although the ALRRF's litter collection crew has been able to repeatedly remove litter from large expanses of the ALRRF property, high-wind events in 2019 quickly replenished windblown litter in those areas, requiring repeated cleanups.

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. The CASP (covered aerated static pile) compost system adjacent to the landfill provides a convenient location for plant debris that is inadvertently delivered to the landfill.
- A liner and liquid recovery system is in place to prevent 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, and to fuel trucks in Waste Management's regional fleet;
- Stockpiling and processing materials for beneficial use on site, such as using demolished concrete for wet-weather roads and access pads;
- Blending liquids with dry materials in a solidification process to make a 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.) for 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 and Fill Area 2. Fill Area 1 covers approximately 235 acres, including an Asbestos-Containing Waste landfill operation which occupies several acres within the Fill Area 1 footprint. The Fill Area 2 footprint is approximately 250 acres. Although most refuse and cover material are currently being delivered to Fill Area 2, Fill Area 1 has not closed, and it will likely receive additional refuse to reach its permitted final elevation. It is currently the site of an active asbestos landfill and two solidification basins.

Lands surrounding Fill Areas 1 and 2 contain grazing land and some construction-support activities related to the continuing construction of Fill Area 2, which will take place in phases over several years. These surrounding lands include a Conservation Plan Area, protected with a permanent easement, that provides suitable habitat for several special status species.

Much of the work done by the CM involves the review of data and reports 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 (Water Board) 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 Water Board 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 stormwater pollution prevention plan, annual stormwater monitoring

reports, and the annual Winterization Plan update, as well as correspondence and required reports that the Water Board 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 submits a comprehensive "Title V report" to the BAAQMD. This report summarizes emission test results and landfill gas control system performance as required. The CM reviews these reports as they are issued. The landfill also produces an annual estimate of greenhouse gas (GHG) emissions, as required by Federal regulations. The most recent data available, for 2018, indicate that the ALRRF is the third highest GHG-emitting landfill in California, behind the Puente Hills landfill in Los Angeles County and the Kiefer Landfill in Sacramento County.[5]

1.5.1.3 Disposed Wastes

Two agencies 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 governs 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 required by 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 specified by 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. In April 2018, the ALRRF began operation of its Covered Aerated Static Pile (CASP) compost facility northeast of Fill Area 1. Currently, Waste Management's position is that the CASP facility is not within the purview of the CMC. However, the CMC has taken the position that the additional permit *is* within its purview.

[5] Air Resources Board file https://www.arb.ca.gov/cc/reporting/ghg-rep/reported-data/2018-ghg-emissions-2019-11-04.xlsx, accessed December 24, 2019.

1.5.1.5 Waste Diversion Requirements

At the local level, the Alameda County Waste Management Authority, and the Alameda County Source Reduction and Recycling Board formed StopWaste as a joint powers agency to pursue local and state waste reduction and diversion goals. StopWaste has implemented mandatory separation of recyclables and compostables at businesses and multifamily properties throughout the County, and it provides public education, training and other assistance. 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.

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.

1.5.2 Requirements For Fill Area 2 Development and Use

1.5.2.1 Background

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 through Alameda County Use Permit C-5512 and 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 Wildlife, which concurred with the USFWS' Biological Opinion and placed specific conditions on work in the wetland channel.

The fundamental requirements of these permits are:

- The dedication of 750 acres 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 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. In late 2017, the ALRRF executed an agreement with the Cosumnes Floodplain Mitigation Bank to fund river channel restoration and preservation in southern Sacramento County. The current status of these efforts is described in Section 1.5.2.3 below.

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 CDFW Consistency Determination.

1.5.2.3 Current Status

Unfortunately, the wetland mitigation 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 has purchased off-site wetland channel mitigation credits from the Cosumnes Floodplain Mitigation Bank in southern Sacramento County and had the pond rebuilt and replanted in 2018. Also, to protect the pond from sediment inflow, in late 2018 the very extensive sedimentation basin SB-H was constructed between the pond and Fill Area 2. This performed well throughout the 2018-2019 wet season. In the pond itself, it appeared that there was some mortality among the plants that were installed in late 2018, but the extent of this problem will need to be evaluated by the consultant that is monitoring the pond for the ALRRF.

In 2017, the CM reviewed a summary of wetland and wildlife mitigation activities and issues. Wetland and wildlife mitigation activities continued in 2018 and 2019, with monitoring of construction areas and wildlife protection measures (e.g., relocating sensitive species such as California Tiger Salamander, when encountered). ALRRF staff have stated that a report is being prepared by their natural resources consultant, Dudek, but no reports were provided to the CM for review in 2019.

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.

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 2019, 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 were monitored in 2019:

- On March 25, 2019, refuse disposal operations began in the Phase 1 portion of Fill Area 2. Excavation of the Phase 2/2B portion of Fill Area 2 began in June, and liner construction began in August. Also, the monitoring wells at the toe of the Phase 1 area were decommissioned and replaced by wells at the toe of the Phase 2/2B area. The lower portion of the Phase 2/2B Area was ready for use in late 2019 while liner installation was being completed on the side slopes.
- In the 12 months from June 2018 through May 2019, 23 poorly-performing landfill gas wells were decommissioned and 24 new wells were brought on line. Wells with higher than normal gas temperatures were monitored for possible subsurface combustion (none was detected).
- For the two Fill Area 1 ponds intended to hold leachate and underdrain water separately, installation of the liquids separation equipment and piping was completed in 2019, but earlier in 2019 the future underdrain water pond (LSI-2) was needed to hold excess stormwater from the CASP compost facility. This delayed the use of the liquid separation system through 2019.
- In 2019, further efforts were made to reduce stormwater pollution. Drop inlets were fitted with "Ertec" filter cloth barriers to screen out silt. Specialized Filtrexx™ wattles, designed to trap metals and hydrocarbons, were placed in ditches and along the bases of slopes, to trap hydrocarbons and other pollutants.
- Stormwater was sampled upstream of the Fill Area 1 stormwater basins, in an effort to identify the sources of volatile organic compounds that have previously been detected in the basins. It was not possible to identify specific sources, so monitoring will continue in 2020.

- The 10-acre Evapotranspirative (ET) Cover Test area was observed several times throughout the year as the hydroseeded plants grew in and local plants also appeared. These observations have found that the hydroseeded species germinated successfully but were joined by local species, including some invasives, as the year progressed. No erosion problems were seen. A late-summer inspection by the Water Board noted some surface cracking of the soil in sparsely vegetated areas. In late 2019, with the return of the rainy season, grasses and forbs began to reappear. The plans for the ET Cover Test Area includes annual monitoring, followed by a report to the Water Board at the conclusion of the four-year study period.
- The windblown litter problem was expected to improve with the move to Fill Area 2, but that was not the case. Several high-wind events, and generally windy conditions throughout the site, caused litter to repeatedly spread toward and occasionally beyond the east and north boundaries of the site.
- In the period from January through November 2019, as disposal activities shifted to Fill Area 2, the ratio of **Class 2 cover soil** to municipal solid waste declined to 25%. In 2018 that ratio was 68%, as cover soil for Fill Area 1 was accumulated in anticipation of the shift to Fill Area 2.

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. Issues from 2011 – 2014 are shown in the 2017 Annual Report.

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, incidents involving the delivery of hazardous materials with incorrect profiles (showing them as non-hazardous) are considered to be beyond ALRRF's control; but the Water Board's position appears to be that ALRRF is responsible nevertheless. Fortunately, no such issues occurred in 2019.

The total severity score for 2019 is slightly lower than in 2018.

Three types of incidents that are of particular concern occurred in 2019:

- **End-dump Truck Overturns**. Within the ALRRF operating area, four end-dump truck overturns occurred during 2019, and the average number of overturns per year from 2012 through 2019 has been 6. This is a tiny fraction of the roughly 16,000 truckloads of class 2 soil and treated auto shredder fluff brought to the facility each year, but the risk of injury and damage in such incidents continues to be a concern for Committee members and ALRRF management. The ALRRF increased its oversight of end-dump truck unloading in 2018, which moderated the problem but did not eliminate it. An analysis of end-dump overturn statistics is provided in section 2.3.3.3 below.
- **Fire**. There were three fires in the ALRRF in 2019. One occurred in Fill Area 2 near the toe of the active area, and the other two occurred in grasslands close to Fill Area 2. They are described further in section 2.3.3.2 below.
- **Windblown Litter**. This may be the single most persistent problem at the ALRRF. With the move of refuse fill operations from the Fill Area 1 hilltop into the Fill Area 2 canyon, a reduction in windblown litter was expected. However, this did not occur, and due to strong west winds, litter was being deposited beyond the east property line. Damaged litter fences are being repaired, and the number of portable fences has increased. The litter cleanup crew has been enlarged and is now a permanent part of the ALRRF work force. When necessary, the crew removes litter from neighboring properties to the east of the ALRRF. The ALRRF also redeploys other staff to retrieve litter when necessary.

Table 2-1: Compliance Issues Ranked by Severity

	Severity				
Issue	**2015**	**2016**	**2017**	**2018**	**2019**
Contamination at E-05, E-07, E-20B	2	2	2	2	2
Stormwater contamination	3	3	3	3	3
Windblown Litter	2	4	2	3	4
Birds	2	2	2	2	2
Erosion	3	2	1	-	3
Cover thin / absent	4	-	-	-	1
Worker injury	1	2	1	-	1
Condensate/Leachate Leakage	3	-	3	3	3
Ponding in low-lying area of landfill	-	-	-	1	2
Sediment in Wetland Mitigation Area	3	3	2	-	-
Odor, on site	-	1	-	-	1
Leachate Seeps	1	1	2	-	4
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	2	-
Material out of bounds (wood operation)	-	4	-	-	-
Erosion control (sitewide)	-	4	-	-	3
Waste outside active area (trash, pallets)	-	4	-	-	-
Leachate Leak Disposal	-	-	4	-	-
Contaminants at monitoring well MW-4A	-	-	4	-	-
Release of condensate from secondary containment	-	-	-	4	-
Release of leachate at leaking flange	-	-	-	4	-
Windblown litter beyond last litter fence	-	-	-	4	2
Disposal of liquid into pond without prior approval	-	-	-	4	5
Lack of means to record liquid level in ponds	-	-	-	4	-
Failure to monitor landfill gas well	-	-	-	4	-
Incomplete groundwater monitoring report	-	-	-	4	-
Liquid separation not implemented, Fill Area 1					4
Totals	**30**	**36**	**28**	**44**	**40**
Issues Beyond Control of / Refuted by ALRRF					
Truck overturn	1	3	3	3	2
Methane Gas at Perimeter Probe(s) [cleared]	4	4	-	-	4
Liquid high in chromium, nickel received (removed before being disposed)	-	4	-	-	-
Soil high in benzene received, disposed	-	4	-	-	-
Fire in refuse &/or stored material	-	3	1	-	3
Fire on ALRRF property, outside active areas	-	-	2	2	3
Hazardous material delivered (high in lead)	-	-	-	4	-
Water Board not notified before ET Cover area constructed	-	-	-	4	-

indicates that a violation was issued by a regulatory agency.

Severity Criteria

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

2.3.1 Compliance Issues Documented by the LEA

In 2019, several Area of Concern notices were issued by the Local Enforcement Agency (LEA). LEA inspection reports indicate concerns about the following:

- Frequent need for litter control east of Fill Area 2
- Erosion and ponding in wheel ruts during wet weather
- Bird control, especially during winter months

The LEA issued a Notice of Violation for methane in perimeter gas probe GP-9C, on July 31. The ALRRF adjusted gas extraction in nearby wells, and the methane was not found when the probe was tested on August 10, so the Violation was removed.

2.3.2 Water Board Violations and Concerns

2.3.2.1 2019 Violations

Holding excess storm water from CASP operation in underdrain water pond – Although Water Board staff acknowledged that this was a sensible approach to preventing destructive overtopping of the basin in the CASP facility, they issued several violations, both to the CASP and the ALRRF, for this action. In addition to the initial violations dated February 13, they issued an additional Notice of Violation dated August 14 for continuing to hold CASP stormwater in the underdrain pond. The remaining stormwater has since been returned to the CASP area, but the ALRRF has advised Water Board staff that until the CASP has additional stormwater capacity, the underdrain pond might be used for this purpose again.

Windblown Litter – On February 27, prior to the opening of Fill Area 2, Water Board staff issued a violation stating that "Windblown trash was observed in FA2, well outside the boundaries of the active working face of FA1, in violation of WDR Prohibition A.4, which states: The discharge of wastes outside of a Unit or portions of a Unit specifically designed for their containment is prohibited." ALRRF management contested the logic of this Violation, because it was based on a regulation that was written to control materials that present special risks to groundwater, not to control litter. However, the violation was not withdrawn.

Leachate Seeps – On August 14, a Violation was issued for failure to correct persistent leachate seeps in Fill Area 1. The ALRRF has since installed leachate extraction systems in the three areas where those seeps were noted.

Liquid Separation – On August 14, a Violation was also issued for failure to implement the separation of underdrain water from leachate in Fill Area 1, as explicitly required by the WDRs. The ALRRF has not implemented this because the underdrain pond, LSI-2, has been, and may continue to be, used for emergency storage of stormwater runoff from the CASP area.

2.3.2.2 Other Concerns

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 VOCs in Storm Water –The ALRRF's 2018-2019 stormwater sampling again detected VOCs in several locations, but the data still did not clearly indicate specific sources, in spite of having added sample points to narrow down the possible sources. Meanwhile, more is being done to reduce stormwater pollution throughout the site, and other improvements (e.g., eliminating leachate seeps) may further reduce stormwater pollution. We will continue to track this issue.

Solidification Basin Compliance –Water Board staff has expressed concern when they find standing liquid in the solidification basins. The ALRRF has responded by pointing out that this is inherent in the operation of these basins. ALRRF staff have mentioned that the basins will be moved, and constructed to be impermeable, in a location not above refuse. However, that has not yet taken place.

2.3.3 Other Incidents

The following information is based on reports filed in the site's Special Occurrences Log and on Community Monitor site inspections.

2.3.3.1 Vehicular Accidents

In addition to trailer overturns (discussed below), there was an incident on May 23 in which a large trash compactor fell off of the rolloff truck that had brought it to the site. Later in the year, on August 19, a bulldozer backed into a rolloff truck, which was also backing at the time. Fortunately, there were no injuries in either incident.

2.3.3.2 Fire

Three fires occurred at the ALRRF site in 2019:

- June 9: A fire caused by hot material in refuse in Fill Area 2 spread to grasses on the adjacent hillside. This occurred on a Sunday morning with limited staff on site. Local fire agencies assisted with on-ground equipment and crews. The extent of the burned area was approximately 3 acres.
- July 10: Failure of a pole-mounted electrical transformer at the edge of the CASP composting area ignited dry grasses on the hillside above the Fill Area 2 access road. Fire agencies responded with ground and air support, limiting the burned area to approximately 8 acres.
- July 12: A refuse fire occurred near the toe of the active area. It was extinguished by on-site staff in less than an hour. The apparent cause: hot material in refuse.

2.3.3.3 Trailer Overturns

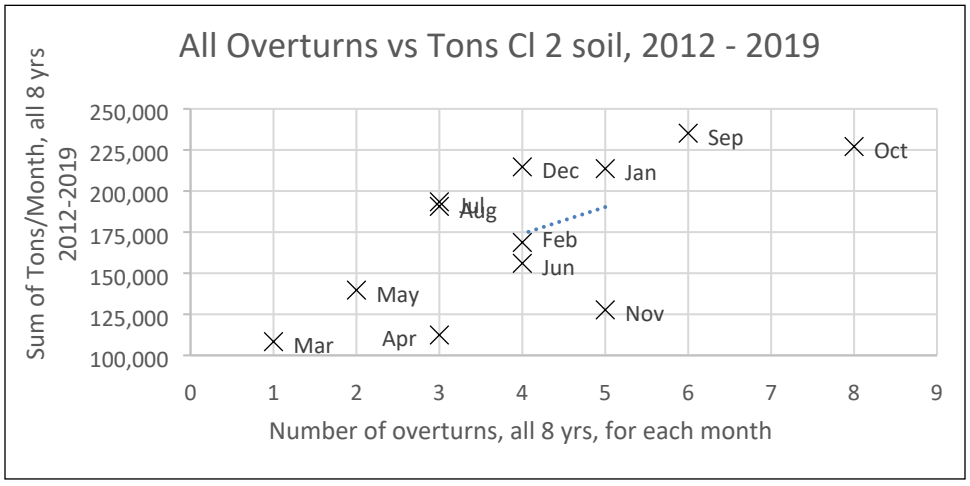
One collision was recorded in 2019, and there were four incidents of end-dump trailers overturning. At the request of Committee members, records of prior overturns have been summarized and analyzed, with the goal of suggesting ways to reduce these incidents based on causative factors.

As background, there are three high-volume material streams delivered using end-dump trailers: Class 2 soils (62% of loads), treated auto shredder waste (36%), and clean soil(2%). All of them are somewhat susceptible to one factor that contributes to overturn accidents: when a portion of their load remains stuck in the trailer while it is elevated for unloading, the center of gravity of the truck and payload is suddenly high off the ground, and what was a minor imbalance can cause an overturn.

Records were readily accessible for the time period 2012 – 2019 (the most recent eight years). We found that in that period, the average number of these incidents was 6 per calendar year. Dividing the calendar into dry seasons (April – September) and wet seasons (October – March), we found that the average number of occurrences was slightly higher during the wet season (3.6 then, vs. 2.7 in the dry season). This was surprising, since it is generally true that more end-dump deliveries occur during the dry season. This suggests that wet-season conditions such as lower visibility and softer soils may be causative factors.

Overturn accident records often cite driver inexperience as a factor. There are likely to be more inexperienced drivers when deliveries surge, as haulers are using all available drivers to expedite their projects. Auto fluff deliveries are generally steady, and clean soil is a tiny fraction of the total, so we focused on Class 2 soil haulers to investigate this further.

We used the sum total of tonnage each month as a proxy for the number of loads and compared that to the number of overturns – for all types of loads – in a given month. To reduce the effect of year-to-year variation, we made this comparison using the sums of tonnage and overturns for all eight years. For example, the number of January overturns for all 8 years is 5, and the amount of Class 2 soil received in all eight Januaries is 213,621 tons. Graphing these pairs for all 12 months and calculating the best-fit straight line gives the result shown in Figure 2-1 below.



In the figure above, the R^2 value, known as the coefficient of determination, indicates the extent to which the number of overturns correlates with the number of tons. $R^2 = 1$ would indicate a perfect correlation; the data points would all be in a straight line. An R^2 value of 0.45 indicates a moderate correlation. There appears to be a relationship between these two factors, but other factors are probably also having an effect.

This suggests that the ALRRF should consider making a greater effort to prevent overturns during months when Class 2 soil deliveries are at their peak. While this may seem like an obvious result, it is interesting to note that when the same analysis was run for the treated auto shredder waste tonnage, there was no relationship between that tonnage and the overturns per month. It may be that in the busiest months, the unloading areas are more congested, some drivers are inexperienced, some drivers are more hasty, and some are distracted by other traffic. There also may be trucks coming to the site with mechanical problems, as older equipment is placed in service to move more material.

2.3.3.4 High Wind Incidents

In an effort to understand the windblown litter problem in 2019 more completely, we examined wind data from the closest State of California weather station, comparing 2019 to 2018. The "Altamont" weather station is approximately 4 miles SSE of the ALRRF and should have wind speed data that correlates reasonably well with windspeeds at the landfill.

To compare the two years, we defined a wind event as any day containing a period of 4 hours or more when the wind velocity did not drop below 20 MPH. We then counted the number of wind events each month by visually examining monthly graphs of wind speed over time.

The two years were quite similar. The number of wind events in a month ranged from 1 to 18 and averaged 8 per month. The primary difference was that 2018 had fewer wind events in winter months and more wind events in summer months. This suggests that the more difficult windblown litter problem in 2019 was not due to an exceptionally windy year, but rather to the location of the active landfill area, at the north end of Fill Area 2.

2.4 Review of Reports

2.4.1 Groundwater

Two groundwater monitoring reports were reviewed in 2019. The first covered the period from July through December of 2018; the second covered January through June of 2019.

The data in these reports indicate that monitoring wells with VOC contamination are responding to intensified landfill gas extraction nearby, but some VOCs diminish more quickly than others.

One new development has been an increase in concentrations of inorganic constituents in certain wells in Fill Areas 1 and 2. Near Fill Area 1 these are MW-2A and MW-4A, on opposite sides of Fill Area 1 itself. In Fill Area 2 these are MW-8A, MW-8B, PC-1A and PC-1C, all near the bottom of the Fill Area 2 canyon and over half a mile from the active portion of Fill Area 2. The groundwater reports do not explain these phenomena but will continue to track them.

In other respects, groundwater monitoring results were similar to those from prior years. Contaminants, when present, were below regulatory limits that would require immediate corrective action.

The two groundwater reports, especially the second one, present some disturbing QA/QC issues with field sampling and laboratory practices: contaminated trip and equipment blanks, hold time exceedances, and an increasing number of VOCs attributed to laboratory contamination. SCS Engineers has responded to this concern by defending the quality of the laboratory work, stating that these issues are normal for all laboratories.

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"[6] (QSE) occurs. Up to four such QSE's are to be sampled at each discharge point during a stormwater year (July through June). For each type of industrial facility, certain key pollutants must be monitored; and if concentrations of those pollutants exceed specified Numeric Action Levels (NALs), the facility must make a plan that describes Exceedance Response Actions (ERAs) to be implemented. In the first year of exceedance, "Level 1" ERAs are selected, which emphasize minimum Best Management Practices (BMPs). These are low-cost measures such as improving housekeeping, cleaning drain pipes, etc. If the exceedance continues into its second consecutive year, Level 2 ERAs must be developed, and these typically involve advanced BMPs such as specialized equipment, paving projects, etc.

Stormwater monitoring and reporting is especially complex at a landfill site, and even more so at a site that is expanding, like the ALRRF. Since the current regulations took effect, the number of sampling points has increased from three to six, and exceedances have persisted in spite of initial efforts to reduce silt, metals and organics. Each year the ALRRF has applied more Best Management Practices, especially in the current wet season (2019-2020). The landfill has implemented all applicable minimum BMPs and several types of advanced BMPs. Sampling and analyses will take place as the wet season continues, and the results should indicate improvement, especially in the vicinity of Fill Area 1 where disposal activity is diminished. The Stormwater Pollution Prevention Plan does need to be updated to include Fill Area 2 in its Industrial Activity Area.

It is important to note that under these stormwater regulations, a Violation is not triggered by the exceedance of an NAL. Rather, an industry will receive a violation if it fails to (a) sample its stormwater discharges or (b) plan and implement any necessary ERAs. ALRRF has exceeded several NALs but has not received any Notices of Violation.

The ALRRF has also been tracking the presence of VOCs in stormwater, under a separate requirement in the WDRs. After two years of sampling, the program has found VOCs in some channels, and not in others, but more sampling is needed to identify the origins of these VOCs. This program is continuing in the 2019-2020 wet season.

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 2019, the CM received the Title V reports for the periods June – November 2018, and December 2018 – May 2019. 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 the current reporting year are similar to those from the previous year:

- The required surface emissions monitoring (checking for methane leaks through the landfill cap) continued to occur, and although exceedances of methane were found, they were typically remedied on the first try, without the need for repeated repairs.

[6] 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.

- From June 2018 – May 2019, 23 landfill gas wells were decommissioned, and 24 new wells were installed and began operation.
- The LNG plant continued to operate at a fairly steady production rate. There were a few brief unscheduled down-time events (several days at most), but after each of those problems was resolved, the gas plant returned to steady production.
- All control devices passed their latest emissions tests without incident.

2.4.4 Mitigation Monitoring

The Mitigation Monitoring and Reporting Program Annual Progress Report, covering calendar year 2018, was received by the CM on February 4, 2019. 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.

- 4.6 – This requirement, to adjust tonnage limits for partial years, was annotated by ALRRF staff as follows: "Expect Fill Area 2 Operations to begin in March – April 2019" (revised from the previous year' report, which stated March 2019).

In addition to the Annual Progress Report described above, in prior years the ALRRF has prepared 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 Community Monitor did not receive any formal reports on mitigation activities in 2019. Considerable mitigation work took place in 2019, establishing an irrigation system in the mitigation pond and supplying it with water, by truck, in late summer. According to ALRRF staff, biological surveys were conducted in the Conservation Plan Area, and a report on this subject is in preparation.

2.5 Review of Records

Several types of site records were reviewed by the CM in 2019. 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.

The **Special Occurrences Log** for the ALRRF was examined four times during the year and summarized for the Committee. The **LEA's weekly inspection reports** are publicly available on the CalRecycle web site and were checked by the CM every few weeks, to note any new issues that may have been identified by the LEA.

2.5.1 Class 2 Soils

An ongoing CM 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 generally conducted two to three times per year, and it requires at least one 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. This review was conducted once in 2019, in mid July. Attempts to schedule a second review near the end of the year were hindered by

schedule conflicts, but the next review will be scheduled as soon as possible in 2020. The files are made accessible electronically from Waste Management's Oakland office.

A total of 119 files were reviewed in July 2019. No out-of-compliance profiles were found, but there were 19 files in the review that required further attention. Langan staff are looking into this issue and will update the CM team when more is known.

2.5.2 Other Materials

In late 2019, a large surge of soil (approximately 30,000 tons) containing high concentrations of salt was delivered to the ALRRF for disposal in September and October. This material originated from development project on salt flats in the City of Newark.

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 by the CM four times during 2019. As in prior years, a common incident involved large end-dump semi-trailers that became unbalanced while the bed was elevated, causing the bed to fall to one side. Fortunately, there were no injuries associated with these incidents, and they were relatively infrequent in 2019 (a total of 4, versus 10 in 2018). In their reporting, ALRRF staff attributed many of these overturns to driver inexperience.

Other logged incidents included three fires, two employee injuries (one serious), a condensate spill near Basin A, and several minor vehicular accidents on site.

2.5.4 LEA Inspection Reports

In 2019, there were three types of Areas of Concern noted in these reports. Eight involved windblown litter, one concerned bird activity, and two focused on erosion on and near roadways. These Areas of Concern were consistent with Community Monitor observations.

2.6 Monthly Inspections

Twelve site inspections were held during 2019. The inspection day and time were 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 17	Thurs	1:00 PM	no	yes
Feb 8	Fri	8:15 AM	yes	no
Mar 18	Mon	1:00 PM	yes	no
Apr 9	Tues	1:00 PM	no	yes
May 28	Tues	5:30 AM	yes	no
Jun 18	Tues	11:00 AM	yes	no
Jul 12	Fri	1:00 PM	no	yes
Aug 15	Thurs	5:00 AM	yes	no
Sep 9	Mon	11:00 AM	yes	no
Oct 11	Fri	12:00 PM	no	yes
Nov 14	Thurs	8:00 PM	yes	no
Dec 12	Thurs	8:30 AM	yes	no

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

In 2019, observations by the CM focused on:

- The transition to the use of Fill Area 2.
- Completion and maintenance of the mitigation pond.
- Plant growth and soil conditions in the evapotranspirative cover test area.
- Storm drainage and erosion control, including the sampling points chosen for stormwater VOC testing.
- Observation of issues of ongoing concern, including the presence of large numbers of seagulls and management of windblown litter east of Fill Area 2.
- Excavation and construction of Fill Area 2 phases 2 and 2B.
- Any changes at the site that could harm the environment or public health.

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 Table 2-2 above, three off-hour and four joint inspections were conducted in 2019.

No truck traffic counts were conducted in 2019, because ALRRF data on tonnage and traffic made it clear that the traffic volume requirements of the Conditional Use Permit were being met.

SECTION 3
Looking Ahead: Anticipated Efforts and Issues

3.1 Introduction

The 2020 contract year is the beginning of a new Community Monitor contract, with Langan providing CM services, assisted by ESA. The CM team will continue to perform report reviews, site inspections and Class 2 soils file reviews.

The four-year test of evapotranspirative (ET) cover methods will be ongoing; the liquids separation system may begin to operate; and the mitigation pond with stormwater basin SB-H will be functioning. Exceedances at several monitoring wells will continue to be tracked. The ALRRF may also be installing and operating new solidification basins that meet recent Water Board prescriptive requirements.

3.2 Issues to be Tracked in 2020

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, and possibly, the initiation of the next such review.
- Concurrence of natural-resource agencies with off-site wetland mitigations.
- Groundwater monitoring methods and data quality.
- Groundwater quality, including the vadose zone below the landfill liners.
- Stormwater quality and management practices.
- Performance of the landfill gas system; decommissioning and installation of gas wells.
- Effects of any composting or material recovery development or operations on the landfill.
- Refuse truck traffic counts, if needed.
- Performance of the 10-acre ET cover test site.

3.2.2 Site Inspections

All operations will continue to be observed, with close attention to the following areas.

3.2.2.1 Landfill Gas Control System

This system protects both air and groundwater quality, and it operates 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 2020, four topics will be of special interest:

- The effect of the gas system on the concentrations of contaminants in wells E-20B and MW-4A.
- Gas temperatures, particularly in the high-temperature cluster of wells in Fill Area 1 Unit 2.
- Implementation of gas collection in Fill Area 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. The effects of the newest additions to stormwater pollution controls – skimmers, flocculant addition, Filtrexx check dams, and additional discharge points – will be of special interest.

3.2.2.3 Windblown Litter

This will continue to be an issue for Fill Area 2 and downwind areas.

3.2.2.4 New Systems

The CM will directly observe, and review available performance data, for:

- The ET cover test area
- The reconstructed wetland mitigation pond
- Sediment basin SB-H
- Tipper and truck wash equipment in Fill Area 2
- The liquids separation system, if it begins operation.
- Modifications to solidification operations

In addition, monitoring reports on the Mitigation Wetland and the Conservation Plan Area, will be reviewed as they are provided.

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 evidence 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.

In addition, the results of a one-time round of sampling and testing for per- and polyfluoroalkyl substances (PFAS) will be reported. This was mandated by the State Water Resources Control Board (SWRCB) in 2019 to determine the extent of PFAS presence at landfills throughout California. These substances are present in a wide variety of consumer products, and certain members of this class of substances have been found to cause negative health effects in humans and animals. The SWRCB's web page on PFAS states that "The four major sources of PFAS are: fire training/fire response sites, industrial sites, landfills, and wastewater treatment plants/biosolids.[7]" Testing for PFAS is intended to detect it at extremely low concentrations (parts per trillion), and this requires extreme care during sampling and analysis.

[7] Source: https://www.waterboards.ca.gov/pfas/, accessed December 30, 2019.

3.2.3 Class 2 Soils File Review

As required by the Scope of Work, the CM will conduct this review at least twice during 2020.

3.2.4 Permit Requirements Triggered by Expansion Date

In the Settlement Agreement, Section 4.3 defines the Expansion Date as "the date of the first deposition of solid waste in [Fill Area 2]." That occurred on March 25, 2019, triggering specific requirements in Conditional Use Permit C-5512, and in the resource-protection permit conditions that were imposed through the mitigations in the landfill-expansion EIR and the associated natural-resource-agency permits (Army Corps wetland permit, USFWS Biological Opinion, etc.; see Section 1.5.2, above).

3.2.4.1 Tonnage Limitations

Section 4 of the Settlement Agreement contains numerous restrictions on the types and source jurisdictions of wastes that can be brought to the ALRRF during specified time frames prior to and after the Expansion Date. Specifically:

- After the Expansion Date, the amounts of Sludges, Inert Waste and Special Waste from outside San Francisco and Alameda Counties is limited to 25,000 tons per year, and these materials may only originate within the nine Bay Area counties.
- Self-Hauled wastes (of all types) from Contra Costa County are limited to 25,000 tons per year.
- Materials brought for disposal may only originate from Alameda County, San Francisco, and San Ramon.

3.2.4.2 Natural Resource Protections and Reporting

The natural resource permits issued in connection with the ALRRF expansion contain over 80 explicit permit conditions, too many to enumerate here. In the near term, the following monitoring and reporting conditions are especially significant for the Community Monitor Committee:

- Every four years after the start of construction of Fill Area 2 (which began in 2015), the California Department of Fish and Wildlife (CDFW) is to receive a status report on the required periodic surveys of the Conservation Plan Area. The wildlife surveys focus on Western Burrowing Owl, San Joaquin Kit Fox, California Red-legged Frog, and California Tiger Salamander.
- Annual wetland monitoring reports are required by the Lake and Streambed Alteration Agreement, which was issued by the CDFW, for the first five years of operation of the wetland mitigations, i.e. the constructed pond.
- Reconnaissance survey reports for the Conservation Plan Area are also required by the CDFW. These include baseline and periodic surveys for sensitive wildlife species (see list above), and annual rangeland and general reconnaissance surveys. These are due on January 15 of the calendar year following the survey.

In 2019, these reports reportedly were being prepared, but none were received by the CM.

3.3 Project Management Considerations

In 2020 Kelly Runyon's role will be limited to assisting Langan with its transition to the lead role as Community Monitor; ESA will continue as a subcontractor. Rachel Brownsey will serve as ESA's Project Manager and will provide her expertise in biology / botany and that of other ESA staff. Langan's work will continue to include reviewing groundwater monitoring reports and Class 2 soil files.