

MEMO



Meeting Date: January 24, 2025

To: Board of Directors
From: Safety Manager, Anthony Martin
Approved by: General Manager, Felipe Melchor

Subject: Discussion of Emergency Site Closure Protocol for Extreme Weather Events

RECOMMENDATION

That the Board authorize staff to development formal protocols and procedures for emergency site closures during extreme weather events.

BACKGROUND AND DISCUSSION

ReGen Monterey operates the 315-acre Monterey Peninsula Landfill, providing essential waste management services to the region's residents and businesses. Recent weather events have highlighted the need to establish clear protocols for emergency site closures during extreme conditions to ensure safety and environmental compliance.

On December 14, 2024, weather monitoring equipment at the landfill recorded two separate wind events reaching speeds of 57 miles per hour at the top of the landfill, occurring at 4:45 AM and 8:30 AM. For comparison, the weather station at the Administrative office recorded wind speeds of 48 miles per hour during the 8:30 AM event. Industry safety guidelines indicate that high-profile vehicles, particularly empty trailers, should not operate in winds exceeding 40 miles per hour. For reference, Colorado state regulations mandate landfill closures when wind gusts exceed 55 miles per hour or sustained winds reach 40 miles per hour.

The potential hazards associated with operating during extreme weather events include:

1. **Vehicle Safety:** High winds create a significant risk of vehicle tip-overs, particularly for empty transfer trailers and collection vehicles.
2. **Environmental Compliance:** Increased wind-blown debris can result in environmental violations and require extensive cleanup efforts.
3. **Infrastructure Hazards:** Falling trees and debris can block access roads and create unsafe conditions for staff and customers.
4. **Personnel Safety:** Flying debris poses a direct risk to staff and customer safety.

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Let's not waste this.

Other Potential Extreme Weather Events:

AQI Weather Event:

The Air Quality Index (AQI) can be impacted by events such as wildfires and/or wind and is a standardized tool used to measure and report air pollution levels, indicating how clean or polluted the air is and the associated health effects within a short timeframe. The AQI primarily considers pollutants such as particulate matter (PM_{2.5} and PM₁₀), ground-level ozone, sulfur dioxide, nitrogen dioxide, and carbon monoxide. Ranging from 0 to 500, AQI levels are categorized into six bands, from "Good" to "Hazardous," with each band correlating to specific health advisories.

A poor AQI can significantly impact the ability of ReGen Monterey to operate effectively. Businesses in sectors such as outdoor construction, agriculture, logistics, and manufacturing. The effects of high AQI levels on these operations are multifaceted:

- 1. Health and Safety Concerns:** Prolonged exposure to polluted air poses health risks, including respiratory issues, cardiovascular stress, and other long-term complications. Businesses have a duty of care to their employees and customers. If AQI levels exceed certain thresholds, regulatory bodies or health authorities may mandate operational changes, such as reduced work hours or complete shutdowns, to safeguard public health.
- 2. Regulatory and Compliance Requirements:** Governments and environmental agencies often impose restrictions during severe air pollution events. For example, limits may be placed on emissions, transportation, or outdoor activities. Non-compliance with these regulations could result in fines, legal consequences, or enforced shutdowns.
- 3. Employee Productivity and Absenteeism:** Poor air quality may lead to increased employee absenteeism due to health concerns or the inability to commute during pollution-related advisories. This disrupts workflow and reduces productivity.
- 4. Customer Behavior and Demand:** Businesses reliant on foot traffic or outdoor activities may experience a decline in customer engagement during high AQI periods. Consumers may avoid unnecessary exposure, leading to reduced revenue for affected businesses.

Flooding Weather Event:

Flooding is one of the most significant natural disasters that can disrupt landfill operations and associated infrastructure, such as entry roads and landfill modules. Flooding events can have immediate and long-term consequences for landfill operations, posing threats to health, safety, and environmental sustainability.

Flooding at a landfill site or its entry roads can severely impact the ability of the facility to operate effectively. The primary effects of excessive flooding on landfill operations are as follows:

1. **Structural Damage to the Landfill:** Prolonged flooding can destabilize the landfill's structural integrity, including the erosion of waste containment barriers, damage to leachate collection systems, and weakening of landfill caps. This can result in uncontrolled waste leakage and environmental violations.
2. **Obstruction of Entry Roads:** Flooded entry roads can block access for waste collection vehicles, staff, and essential equipment.
3. **Customer Inaccessibility to Enter/Exit Site:** Excessive flooding of entry and exit routes can leave customers, vendors, and staff stranded at the site. This poses multiple safety/liability concerns, as individuals may be unable to leave due to submerged or impassable roads.
4. **Health and Safety Concerns:** Flooded landfills and entry roads create hazardous conditions for workers and visitors. The presence of standing water can increase the risk of accidents, exposure to pathogens, and the spread of waterborne diseases.

Implementation of emergency closure protocols would impact:

1. **Public Access:** Residential customers would temporarily lose access to disposal services.
2. **Commercial Operations:** Franchise haulers would need to modify collection schedules or secure temporary alternative disposal locations.
3. **Customer Relations:** Site closures may result in increased customer complaints and require additional customer service resources.

FISCAL IMPACT

While there are no immediate fiscal impacts associated with this discussion item, implementation of an emergency closure protocol could result in:

- Lost revenue during closure periods
- Additional staffing costs for closure implementation and communication
- Potential overtime costs for extended operations to process delayed waste deliveries
- Communications and notification system costs

CONCLUSION

Staff seeks Board direction regarding the development of formal emergency closure protocols for extreme weather events. If directed, staff will incorporate Board input into a comprehensive procedure that addresses public safety, operational impacts, and communication strategies.

The final protocol would return to the Board for review and approval at a future meeting.