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October 17, 2007

Via Registered Mail Return Receipt Requested

Owner/Managing Agent Waste Management, Inc. Redwood Landfill, Inc. P.O. Box 793 Novato, CA 94948

Re: Notice of Violations and Intent to File Suit Under Resource Conservation and Recovery Act

Dear Managing Agent and/or Owner:

I am providing statutory notification, on behalf of Northern California River Watch ("River Watch") to Waste Management, Inc. and Redwood Landfill Inc. ("Redwood") of continuing and ongoing violations of the Federal Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. §§ 6901, et seq. in conjunction with Redwood's continuing operations of its landfill located at or near 8950 Redwood Highway North, Novato, Marin County, California.

River Watch hereby places Redwood on notice that following the expiration of ninety (90) days from the date of this **Notice** River Watch intends to amend the Complaint filed with the U.S. District Court, Northern District of California on October 7, 2007 entitled *Northern California River Watch, a non-profit Corporation v. Waste Management Inc., Redwood Landfill, Inc., et al.* Case No. C07-05058 WHA, to add the following claims:

- 1. Violation of 42 U.S.C. § 6972(a)(1)(A) Redwood's operations at its facilities as identified in this **Notice** have and continue to violate permits, standards regulations, conditions, requirements and/or prohibitions effective pursuant to RCRA.
- 2. Violation of 42 U.S.C. § 6972(a)(1)(B) Redwood's operations at its facilities as identified in this **Notice** have caused contamination of soil and groundwater which presents an imminent and substantial endangerment to human health and the environment.

RCRA requires that any notice regarding an alleged violation of an effluent standard or limitation, or of an order with respect thereto, shall include sufficient information to permit the recipient to identify:

1. The specific standard, limitation, or order alleged to have been violated.

River Watch has noticed Redwood of the fact it has no RCRA permit allowing it to dispose of hazardous waste. Furthermore, Redwood's acts, as described in detail below, exceed Regional Water Quality Control Board ("RWQCB") Plans and Environmental Protection Agency ("EPA") benchmarks for constituents known to present an imminent and substantial endangerment to human health and the environment.

2. The activity alleged to constitute a violation.

Under RCRA the term "solid waste" means any refuse or sludge from a waste treatment plant, solid or dissolved material in domestic or industrial sewage, or solid or dissolved materials and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, agricultural, or community activities.

River Watch has set forth narratives below describing with particularity the activities leading to violations.

3. The discharger responsible for the alleged violation.

The dischargers responsible for the alleged violations set forth in this **Notice** are Waste Management, Inc. and Redwood Landfill, Inc. referred to as "Redwood" throughout this **Notice**.

4. The location of the alleged violation.

The location or locations of the various violations are identified in the narrative section of this **Notice** and in records either created or maintained by or for Redwood which relate to Redwood's activities, including the locations of its storm water discharge points, Class III landfill, composting facility, sludge storage, disposal and processing facility and leachate pond.

5. The date or dates of violation or a reasonable range of dates during which the alleged activities occurred.

River Watch contends the Redwood facilities described in this **Notice** have been in continuous operation since the 1950s and have been in violation of RCRA ever since the Act was passed and landfills were required to come into compliance with its restrictions. This **Notice** covers the period from when Redwood knew or should have known it was violating RCRA. Therefore, the range of dates covered by this **Notice** is December 1, 1972 through September 20, 2007. River Watch will from time to time update and supplement its **Notice** to include all violations which occur after the date of this **Notice**.

The majority of the violations alleged, such as discharging, depositing, disposing etc., of hazardous waste without a hazardous waste disposal permit pursuant to RCRA § 3005(a), 42 U.S.C. § 6925(a), failure to implement the requirements of RCRA, failure to meet water quality objectives, and contaminating groundwater, are continuous. Therefore each day is a violation. River Watch believes most violations set forth in this **Notice**, including migration of leachate into groundwater through sand lenses, leakage from the leachate pond, discharge of leachate off-site which is not captured by the leachate collection and removal system, are continuing in nature and will likely continue after the filing of a lawsuit. Specific dates of violations for non-continuous events such as the discharge of polluted storm water and non storm water, are evidenced in Redwood's own records (or lack thereof) or files and records of other regulatory agencies including the RWQCB and Marin County Environmental Health Services.

6. The full name, address, and telephone number of the person giving notice.

The entity giving this **Notice** is Northern California River Watch. River Watch is a non-profit corporation dedicated to the protection and enhancement of waters of the State of California, including all rivers, creeks, streams and ground water in Northern California. River Watch is organized under the laws of the State of California. Its address is Its 6741 Sebastopol Avenue Ste. 140 Sebastopol, CA 95472. Phone/Fax: (707) 824-4372. Email US@ncriverwatch.org.

## BACKGROUND

Redwood consists of three separate and distinct operations:

- 1) Class III landfill (SIC 4953);
- 2) Composting facility (SIC 5093 and 4226); and,
- 3) Class II temporary sludge storage, disposal, and processing facility (SIC 4953).

All of these operations are located on approximately 600 acres in northern Marin County, California. The physical address is 8950 Redwood Highway North, Novato, California. The site is further described in Waste Discharge Requirement ("WDR") Order # 95-110 issued from the RWQCB, San Francisco Region. The site and operations on site are also discussed in greater detail in *Redwood Landfill Solid Waste Facilities Permit Revision Draft Subsequent Environmental Impact Report* (July 2003).("Redwood DEIR")

Redwood is the last, bay-front landfill remaining in operation in the Bay Area. All others, including the Contra Costa landfill have closed due to persistent pollution problems.

Currently, Redwood receives most of Marin County's waste and sludge as well as waste from numerous sites outside of Marin County. Redwood is on Bay mud, situated adjacent to San Antonio Creek which feeds into the Petaluma River. Groundwater in and around the landfill is hydrologically connected to adjacent surface waters such as the wetlands, San Antonio Creek and Petaluma River. The water table is often above the bottom of the landfill allowing toxic materials from the mass of waste to leak into adjacent surface waters.

Preferential pathways within the Bay mud under the landfill allow accelerated release of waste into groundwater and the adjacent waters of the United States. Redwood's Final EIR issued in July of 2005 (page 3.4-30) acknowledges the likelihood of migration of leachate into the sand lenses in the Bay mud beneath the landfill. WDR Order 95-110 (pages 5-6) identifies sand and silty sand channels within Bay mud beneath the landfill as areas of increased permeability and likely preferential groundwater flow pathways to the hydrologically connected surface waters adjacent to the Novato operations site.

The facility is located in flat, low-lying, drained marshlands along the western margin of the Petaluma Valley and adjacent to hills of the Coast Ranges west of the site. The site contains and is surrounded by a complex network of natural and manmade surface water bodies including ditches, ponds, creeks, and sloughs. The tidally influenced San Antonio Creek, Mud Slough, West Slough, and South Slough surround the site. These surface waters, sloughs are tributaries of San Antonio Creek which flows to the Petaluma River and eventually into San Pablo Bay.

San Antonio Creek, which forms the northern and eastern boundary of the site, drains an area of approximately 33 square miles northwest of the site. The Creek is approximately 120 to 230 feet wide near the landfill levees. The bottom elevation of the Creek varies from 5 to 12 feet below mean sea level ("msl"). The elevation of the tidal mud flats through which the Creek flows east of the site, ranges from approximately 2 to 3 feet above msl. The estimated 100-year flow for San Antonio Creek is 5,900 cubic feet per second. The West Slough, on the site's western border, is approximately 10 to 15 feet wide and has a bottom elevation of 2 to 15 feet below msl. The South Slough, on the site's southern border, is approximately 10 feet wide. Its bottom elevation has not been surveyed.

The Petaluma River, San Antonio Creek, adjacent wetlands, sloughs and mudflats east of the site are subject to tidal influence. Occasionally the sloughs overflow due to heavy rains or tidal peaks resulting in widespread, shallow flooding of the marshlands located east of the site. The Oxbow area and southern third of the site, where sludge processing takes place and the new administrative facilities are planned, are within the 100-year flood plain of the Petaluma River and San Antonio Creek. As shown on Federal Emergency Management Agency Flood Insurance Rate Maps (1982 and 1991), the base flood elevation associated with the 100-year event is 6 to 7 feet. According to Redwood's Report of Waste Discharge (1994), the highest tide recorded at the confluence of the Petaluma River and San Antonio Creek was 6.25 feet above msl; however, this elevation was likely exceeded during storm events in 1995, 1998, 2003 and 2004.

Local residents once harvested and consumed fish from the Petaluma River such as salmon, bass, and anchovies. Shellfish such as crabs in addition to numerous birds species including the great blue heron and ducks continue to rely upon the Petaluma River, San Antonio Creek and adjacent wetlands for migration and foraging purposes. The Petaluma River is now listed as impaired for sediment, nutrients and pathogens under Clean Water Act § 303(d). Redwood's landfill activities create discharges of nutrients to the Petaluma River. Beneficial uses of San Antonio Creek and Mud Slough bordering Redwood are estuarine and wildlife habitat.

There are 32 identified storm water outlets on the perimeter of the site. According to WDR Order # 95-110, Redwood's leachate pond is lined. However, there is no indication of the liner material. Many lined ponds still experience significant leakage. There is no indication in the records of water balance data for the leachate pond.

As a condition for approval of WDR Order # 95-110, Redwood agreed to construct a leachate collection and removal system ("LCRS") along the entire perimeter of the landfill site as a necessary means of containing contaminated groundwater on site. In an email from Alan Friedman of the RWQCB, San Francisco Bay Region, dated July 01, 2004, Mr. Friedman expressed concern regarding the ability of Redwood's LCRS to capture all the leachate generated. Mr. Friedman called for specific measures to demonstrate the effectiveness of the LCRS, including updated leachate level data in the landfill and updated water balance data for the landfill. River Watch would add updated water balance data for the leachate pond. In response to concerns raised in Mr. Friedman's email, Redwood committed to continue evaluating hydraulic characteristics of leachate at the site and to collect water balance data (September 1, 2004 letter from Mark Verweil). However, data from leachate monitoring wells was not used in preparing a groundwater contour map for the site based on several factors including the alleged degree of separation between Bay mud groundwater and leachate (First Semiannual 2006 Monitoring Report, p.4). This separation is alleged despite the fact there are areas in the landfill where refuse is below groundwater level.

Further doubts are raised regarding the effectiveness of the LCRS by Redwood's failure to integrate the LCRS trench with the perimeter levee, as originally proposed; and, by the failure of Redwood to key the trench into Bay mud along the entire perimeter of the site. The trench bordering Area E is not keyed into Bay mud because waste fill in the area is deeper than the trench's design depth of -5.5 feet msl, again raising doubts about the separation of leachate from groundwater. Master Response 13 of the Final EIR responds to these doubts with the dubious claim that as long as a maximum fluid level of -1foot msl is maintained in the LCRS trench, a gravity based hydraulic barrier would be maintained preventing off-site leachate migration. Violations detailed below clearly show that Redwood's LCRS is not succeeding in preventing releases of leachate from the site. Redwood has no NPDES permit allowing it to discharge pollutants from a point source to any waters of the United States.

Discharges by Redwood from its sites to adjacent wetlands and San Antonio Creek occur both directly and indirectly. Direct and unpermitted discharges of polluted storm water occur to intermittent drainages, wetlands, sloughs, and San Antonio Creek - all tributaries of the Petaluma River, all waters of the United States. Discharges also occur due to the fact that the site is hydrologically connected to the adjacent wetlands and San Antonio Creek. Drainages and pollutants move subsurface to the surface waters via tributary groundwater acknowledged above as being hydrologically connected to surface waters.

Redwood's own self monitoring reports filed with the RWQCB, San Francisco Region show that the groundwater in the area of these sites is contaminated by Redwood's activities. Present in amounts that exceed State of California's Maximum Contaminant Levels as well as historic background limits are ammonia (Annual Reports 2005 and 2006), iron (Annual Report

2005, issued May 23, 2006), acetone and carbon disulfide (First Semiannual Groundwater Monitoring Report of 2006). Some of these substances are known to be toxic to humans and the environment in very small amounts – parts per billion. Acetone and carbon disulfide are listed as hazardous wastes by the EPA (acetone- hazardous waste No. F003, carbon disulfide - No. F005). Arsenic, barium, benzene, MtBE, chlorobenzene, 1,4 dichlorobenzene, acetone, carbon disulfide, ammonia and cyanide have been detected in Redwood's leachate at hazardous levels. Recurrent ammonia detections in groundwater raise concerns by regulators regarding the ability of Redwood's leachate management system to control leachate migration (Friedman email, July 1, 2004).

Under Redwood's Discharge Monitoring Program, Part A, Section F., Reports To Be Filed With The Board - when an initial sample showing a statistically significant difference between the sample result and a WQPS is confirmed by a resampling, the discharger must submit to the RWQCB an amended Report of Waste Discharge to establish an Evaluation Monitoring Program. Although there are a number of confirmed, statistically significant exceedances of a WQPS in Redwood's groundwater monitoring reports, Redwood has always opted to offer some excuse rather than complying with the protocol for reporting a violation.

In the 2005 Annual Report, (pages 12) an Optional Demonstration Report ("ODR") is quoted, explaining an apparent violation as a natural background occurrence: "the presence of ammonia (TKN) in groundwater samples is not unusual from the standpoint of its natural formation and accumulation within organic rich, fine-grained reducing sediments".

In a Resampling Result for Volatile Organic Compound Detection, First Semiannual 2006 Groundwater Monitoring Report, detections of acetone and carbon disulfide were explained as the result of a laboratory contaminant and possible matrix interference. There was also a reference to an ODR completed in 2003 which determined that earlier detections of carbon disulfide were from a natural source, i.e. "Bio-slime" observed within the well bore, and not related to a release from the landfill. This is questionable since volatile organic compounds are strictly man-made. There are numerous other examples in Redwood's Monitoring Reports of confirmed exceedances explained away as the result of sampling contamination or bias, or natural background levels, begging the question — when would Redwood recognize a resampling result confirming a statistically significant exceedance of a WQPS as an indication of a leachate release from the landfill?

## FEDERAL LAW AND REGULATION

Provisions of RCRA govern the use and operation of landfills such as Redwood's facility in Novato, California as identified herein. RCRA requires compliance with the Clean Water Act, 40 CFR § 258.270, state and regional water quality control plans. The statutory mission of RCRA is to assure that all waste management posing a threat to human health and the environment is regulated from "cradle to grave".

## ALLEGATIONS OF VIOLATIONS

A. Redwood's Municipal Solid Waste Landfill Facility (all contiguous land and structures, other appurtenances, and improvements on the land used for disposal of solid waste) Operations Violate Permits, Standards and Regulations, 42 U.S.C. §6972(a)(1)(a)

Redwood's disposal, handling and storage of hazardous products at its facilities as identified in this **Notice** has allowed significant quantities of hazardous constituents to be released or discharged into soil and groundwater in violation of the provisions of RCRA, including, but not limited to provisions regarding general operating requirements for landfills, release detection and prevention requirements, and release response and corrective action requirements (RCRA including implementing regulations 40 CFR § 117; 40 CFR § 257; 40 CFR § 258; 40 CFR § 141.61 and 40 CFR § 141.62).

1. Redwood's Municipal Solid Waste Landfill Facility Violates Location Restrictions.

Redwood landfill is located in a flood plain. Redwood is required to demonstrate that its facility does not washout solid waste during floods, does not restrict the flow of a 100-year flood and does not reduce the temporary water storage capacity of the flood plain (40 CFR § 258.11). Although Redwood has constructed many berms, levees and dikes around and in this wetland area, it has not made the required demonstration. All of these man-made structures including the buried garbage, impervious pads, buildings and compacted soils, permanently destroy the water storage capacity of the flow and flood plain.

Redwood landfill is located in a sensitive wetland comprising the northern most waters of San Francisco Bay, playing an important function in the storage of fresh water and filtration of water going into the Bay. The weight of refuse makes the Bay mud under the site sink, compact and contact groundwater, contaminating the aquifer underlying surrounding wetlands. Redwood nevertheless intends to laterally expand its operations, bringing more refuse in contact with groundwater. Activities in and proposed for wetlands require a permit from the U.S. Army Corps of Engineers for the dredge and fill of wetlands (CWA § 404). Redwood does not have approval from the U.S. Army Corps of Engineers for the proposed expansion, nor has Redwood clearly rebutted the presumption that practicable non-wetland alternatives exist, as required under 40 CFR § 258.12.

Redwood landfill is located in a seismic impact zone. The 1997 Uniform Building Code locates the entire Bay Area within Seismic Risk Zone 4. Areas within Zone 4 are expected to experience maximum magnitudes and damage in the event of an earthquake. According to the U.S. Geological Survey Working Group, there is a 62% likelihood that the Bay Area will experience an earthquake of Richter magnitude 6.7 or higher between 2003 and 2033 (Final EIR, 2005, p. 3.4-5). Under 40 CFR § 258.14 solid waste landfill lateral expansions shall not be located in seismic impact zones unless the owner or operator demonstrates that all containment structures, including liners, leachate collection systems and surface water control systems are

designed to resist the maximum horizontal acceleration in lithified earth material for the site. The Final EIR, 2005, p 3.4-18 identifies as a potential significant impact that constructing a LCRS without reconstructing the perimeter levee could increase the potential for landfill or levee slope failure and damage to the LCRS, which would allow discharge of leachate from the landfill into surrounding waters. Nevertheless, Redwood has constructed the LCRS without reconstructing the perimeter levee. As a mitigation measure, Redwood has prepared a Post Earthquake Inspection and Corrective Action Plan. If monitoring performed as part of the Plan detects leachate outside the perimeter levee, the containment Plan shall be implemented. This measure does not demonstrate that containment structures will resist a major earthquake, it merely provides for deferred corrective action after the damage is done.

## 2. Redwood Does Not Comply With Required Operating Criteria

Proper monitoring is the cornerstone and single most important tool available to properly manage hazardous waste. Incoming waste at Redwood is not adequately inspected or otherwise monitored. Hazardous waste and/or infectious wastes are dumped at the site. Sludge is a large potential source of heavy metals. Sludge haulers have access to the Redwood site around the clock/seven days a week. Although Redwood claims it does not accept hazardous waste, hazardous substances have been detected in water samples including 1,4-dichlorobenzene and 1,2-dibromoethane. As listed above, hazardous substances detected at the site include benzene, chlorobenzene, acetone, chromium, carbon disulfide and MtBe. Under RCRA § 3005, 42 U.S.C. § 6925, Redwood is required to have a Permit for the treatment, storage or disposal of hazardous waste. Redwood has no such Permit.

Many constituents at the facilities are not properly monitored, including ammonia, acetone and carbon disulfide. Matrix interference, improper holding times and temperature are problems which occur on a regular basis in samples which Redwood sends to its laboratory in Colorado. For example, a groundwater monitoring report dated May 23, 2006 showed levels of ammonia as high as 11 mg/l. The occurrences were explained as field contamination. The groundwater analytical results for the first semiannual monitoring event of 2006 showed detections of acetone and carbon disulfide were explained away as the possible presence of laboratory or field contamination.

Redwood does not maintain adequate cover at the site. Litter and a large bird population are strong indicators of exposed garbage. Inspections of the site demonstrate and document that Redwood does not always maintain the six inches of earthen cover required, and seagulls congregate around the site. Redwood attracts a large number of birds. Birds are disease vectors. Redwood does not adequately control for disease as a result of birds attracted to exposed refuse.

Strong landfill gas and odors are chronic problem for Redwood. Landfill gases can be explosive. Proper landfill management minimizes the release and concentration of explosive gases. Proper monitoring leads to the proper control of gases. Redwood has inadequate control and monitoring of landfill gases.

Inspections conducted by the lead enforcement agency and Redwood personnel document standing water as a persistent problem at the site. Standing water is a result of inadequate run-off/run-on systems. Storm water that is not properly managed eventually percolates through the soil and refuse to contaminate the ground and surface waters. Redwood does not manage its run-off/run-on system as required.

## B. Redwood's Operations Present an Imminent and Substantial Endangerment to Human Health and the Environment (42 U.S.C. § 6972(a)(1)(B)).

Redwood disposes of, handles, treats and stores hazardous products at its facilities in a manner which has allowed significant quantities of hazardous constituents, including petroleum products, heavy metals, carcinogenic substances and volatile organic compounds to be discharged to soil and groundwater beneath the site, to surface waters and to adjacent properties. These pose an imminent and substantial endangerment to public health, employees and the environment.

Redwood's own self monitoring reports demonstrate and document that the groundwater in the area of the landfill site contains hazardous constituents. Present in amounts that exceed background or allowable limits are benzene, arsenic, chlorobenzene, 1,4 dichlorobenzene, acetone, toluene, chromium, MtBE, ammonia and chloride. These substances are known to be toxic to humans and the environment in very small amounts-parts per billion, and pose an imminent and substantial endangerment to public health, employees and the environment.

Redwood's Class II site accepts large amounts of sewer sludge – approximately 34,7000 tons per year – from all over the Bay Area. Redwood does not, however, have an adequate LCRS that adequately protects groundwater from the impacts associated with sewer sludge. Hazardous substances associated with sewer sludge, such as heavy metals and organic chemicals (benzene, arsenic, chlorobenzene, 1,4 dichlorobenzene, acetone, toluene, chromium, MtBE, ammonia and chloride) are leaching into soil and groundwater.

The pollutants identified above are specifically regulated under RCRA (40 CFR § 261) and are known to cause cancer and birth defects. In California, these chemicals have been listed under California's Safe Drinking Water & Toxic Enforcement Act of 1982 (Health & Safety Code § 25249.5 et seq., or Proposition 65).

Mismanagement and acceptance of hazardous or otherwise regulated waste at this largely unlined Class III landfill, including hospital waste, poses an imminent and substantial endangerment to public health, employees and the environment. Redwood improperly disposes of landfill generated leachate containing hazardous substances into groundwater, onto roads, fields and into surface waters.

## **PENALTIES**

Under RCRA § 3008(g) 42 U.S.C. § 6928(g), each of the above-described violations subjects the violator to civil penalties per day per violation. Civil penalties may be assessed for

violations occurring within five (5) years prior to the initiation of a citizen enforcement action. In addition to civil penalties, River Watch will seek injunctive relief preventing further violations of RCRA and such other relief as is permitted by law, including but not limited to the recovery of attorney costs and fees.

#### CONTACT INFORMATION

River Watch has retained legal counsel to represent them in this matter. All communications should be addressed to:

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## **CONCLUSION**

River Watch believes this **Notice** sufficiently states grounds for filing suit under the provisions of RCRA or amending the current Complaint as stated previously herein. River Watch intends to do so at the close of the 90-day notice period or shortly thereafter.

During the notice period, River Watch is willing to discuss effective remedies for the violations set forth in this **Notice** and encourages Redwood to do so.

Sincerely,

Jerry Bernhaut

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cc:

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