

STATE WATER RESOURCES CONTROL BOARD

RESOLUTION NO. 93-62

(As Amended on July 21, 2005)

POLICY FOR REGULATION OF DISCHARGES OF MUNICIPAL SOLID WASTE

WHEREAS:

1. **Water quality protection** — The State Water Resources Control Board (State Water Board) and each Regional Water Quality Control Board (Regional Water Board) are the state agencies with primary responsibility for the coordination and control of water quality (California Water Code Section 13001, “CWC §13001”);
2. **State Policy for Water Quality Control** — The State Water Board is authorized to adopt State Policy For Water Quality Control which may consist of or contain “...principles and guidelines deemed essential by the state board for water quality control” (Authority: CWC §§1058, 13140, 13142);
3. **State agency compliance** — All State agencies shall comply with State Policy For Water Quality Control regarding any activities that could affect water quality (CWC §13146);
4. **Waste Discharge Requirements** — Regional Water Boards regulate discharges of waste that could affect the quality of waters of the state, including discharges of solid waste to land, through the issuance of waste discharge requirements (CWC §13263);
5. **Solid waste disposal** — The State Water Board is directed to classify wastes according to threat to water quality and to classify waste disposal sites according to ability to protect water quality (CWC §13172);
6. **Title 27** — The State Water Board promulgated regulations applicable to the discharge of solid waste to land in Division 2 of Title 27 (27 CCR §§20005-23014, [Title 27]). These regulations:
 - a. Contain classification criteria for wastes and for disposal sites;
 - b. Prescribe minimum standards for the siting, design, construction, monitoring, and closure of waste management units;
7. **Federal authority** — The federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (42 USC §6901, *et seq.*, “SWDA”), authorizes development of nationwide standards for disposal sites for municipal solid waste [MSW], including criteria for sanitary landfills (SWDA §§1007, 4004, 42 USC §§6907, 6944);
8. **Federal MSW regulations** — On October 9, 1991, the United States Environmental Protection Agency (USEPA) promulgated regulations that apply, in California, to dischargers who own or operate landfills that accept, or have accepted, municipal solid waste and that receive waste on or after October 9, 1991, (MSW landfills), regardless of whether or not a permit is issued (Title 40, Code of Federal Regulations [CFR], Parts 257 and 258, “federal MSW regulations”). The federal MSW regulations became effective on what is hereinafter referred to as the “Federal Deadline” [see 40 CFR §258.1(e) for three possible dates, depending upon various landfill-specific factors, with the earliest date being October 9, 1993]. On March 22, 2004, the USEPA added §258.4 to its federal MSW regulations, to allow approved states to issue Research, Development, and Demonstration (RD&D) permits. These permits allow temporary variances from certain otherwise-applicable federal MSW regulation requirements, for the purpose of developing and demonstrating advanced landfill operation methods, if specified conditions are met;
9. **States required to apply federal MSW regulations** — Each state must “...adopt and implement a permit program or other system of prior approval and conditions to assure that each...[MSW landfill]...within such state...will comply with

the...[federal MSW landfill regulations].” State regulations promulgated to satisfy this requirement are subject to approval by USEPA. (SWDA §§4003, 4005, 42 USC §§6943, 6945);

10. **Approved state's authority** — The permitting authority in an “approved state” may approve engineered alternatives to certain prescriptive standards contained in the federal MSW regulations, provided that the alternative meets specified conditions and performance standards (40 CFR §256.21 and, as applicable, §258.4);
11. **State application** — The State Water Board and the Integrated Waste Management Board applied for, and received, program approval to the USEPA in 1993, following the adoption of the original version of this Resolution;
12. **Title 27 deficiencies** — The State Water Board's landfill regulations, under Title 27, are comparable to the federal MSW regulations. Nevertheless, the USEPA identified several areas of those regulations that were not adequate to ensure compliance with certain provisions of the federal MSW regulations, as summarized in Attachment I. Attachment I has been revised to include 40 CFR §258.4, the first new section in the federal MSW landfill regulations since their initial promulgation on October 9, 1991;
13. **Rulemaking to amend landfill regulations** — There was insufficient time, prior to October 9, 1993, for the State Water Board to amend its landfill regulations to ensure complete consistency with the federal MSW regulations and, subsequently, for the USEPA to carry out a review of the revised chapter and render a decision approving California's permit program. The State Water Board chose to apply the necessary changes through adoption of this resolution as State Policy for Water Quality Control. As such, this resolution must be revised if California is to incorporate the USEPA's new regulation section;
14. **Composite liner(s) needed** — Solid Waste Assessment Test Reports, submitted to Regional Water Boards pursuant to CWC §13273, have shown that releases of leachate and gas from MSW landfills that are unlined are likely to degrade the quality of underlying groundwater. Research on liner systems for landfills indicates that (a) single clay liners will only delay, rather than preclude, the onset of leachate leakage, (b) the use of composite liners represents the most effective approach for reliably containing leachate and landfill gas;

15. **Lack of compliance with landfill regulations** — WDRs for many MSW landfills had not been revised to meet the State Water Board's landfill regulations;
16. **CEQA** — Adoption and revision of this policy is categorically exempt from the provisions of the California Environmental Quality Act (Division 13, commencing with §21000, of the Public Resources Code, “**CEQA**”) because it is an action by a regulatory agency for the protection of natural resources, within the meaning of §15307 of the *Guidelines For Implementation of California Environmental Quality Act* in Title 14 of the California Code of Regulations;
17. **Public notice** — Notice of the State Water Board's proposal to adopt a State Policy for Water Quality Control regarding Regulation of Discharges of Municipal Solid Waste was published on March 31, 1993, and a public hearing on the matter was held on June 1, 1993. Notice of the proposal to revise this policy to make nonsubstantive changes and to incorporate by reference the USEPA's RD&D rule (40 CFR §258.4) was published on May 6, 2005, and a public hearing on the matter was held on July 6, 2005; and
18. **Reference** — This Policy implements, interprets, or makes specific the following Water Code Sections: §13142, §13160, §13163, and §13172.

THEREFORE BE IT RESOLVED:

I. Implementation of the Title 27 and federal MSW regulations:

- A. **WDR revision** — In order to insure compliance with SWDA §§4003, 4005 (42 USC §§6943, 6945), each Regional Water Board shall henceforth implement in waste discharge requirements for discharges at MSW landfills, both the Title 27 regulations and those applicable provisions of the federal MSW regulations that are necessary to protect water quality, particularly the containment provisions stipulated in Section III of this Policy and the provisions identified in Attachment I to this Policy, and shall revise existing waste discharge requirements to accomplish this pursuant to Section II of this Policy;
- B. **Alternatives limited** — The Regional Water Board shall rely upon an exemption or alternative allowed by Title 27 only if such an exemption or alternative is not prohibited under the federal MSW regulations. The Regional Water Board shall not

waive waste discharge requirements for the discharge of municipal solid waste at landfills;

C. Applicability in the absence of useable waters —

Although all other provisions of this Policy would continue to apply, the Regional Water Board shall have the discretion to prescribe requirements for containment systems and water quality monitoring systems that are less stringent than the design and construction standards in this Policy, in the federal MSW regulations, and in Title 27 if the Regional Water Board finds that the containment systems satisfy the performance standard for liners in the federal MSW regulations [40 CFR §§258.40(a)(1) and (c)], that the prerequisite for an exemption from ground water monitoring in the federal MSW regulations is satisfied [40 CFR §258.50(b)], and that either of the following two conditions is satisfied:

1. A hydrogeologic investigation shows that:
 - a. There is no aquifer (i.e., a geological formation, group of formations, or portion of a formation capable of yielding significant quantities of ground water to wells or springs) underlying the facility property; and
 - b. It is not reasonably foreseeable that fluids—including leachate and landfill gas—migrating from the landfill could reach any aquifer or surface water body in the ground water basin within which the landfill is located; or
2. The ground water in the basin underlying the facility has no beneficial uses and a hydrogeologic investigation shows that it is not reasonably foreseeable that fluids—including leachate and landfill gas—migrating from the landfill could reach any aquifer or surface water body having beneficial uses.

II. Implementation:

A. MSW landfills — Regional Water Board waste discharge requirements for discharges of waste at all MSW landfills in its region (including discharges to any area outside the actual waste boundaries of an MSW landfill as they exist on that date [“federal lateral expansion” hereinafter]), shall require persons who own or operate such landfills to:

1. Comply with all applicable portions of the federal MSW regulations by the Federal Deadline; and

2. Achieve full compliance with Title 27;

B. Proposed MSW landfills — As of the date of the Federal Deadline, waste discharge requirements for the discharge of waste at all MSW landfills, including any “federal lateral expansion,” as herein defined, that have not accepted waste as of that date shall ensure full compliance both with Title 27 and with the federal MSW regulations prior to the discharge of waste to that landfill;

C. RD&D Landfills — Upon California’s receiving approved state status to implement 40 CFR §258.4, the Regional Water Board shall have the option to implement that section, through the issuance or revision of waste discharge requirements, as appropriate, for the protection of water quality. The Regional Water Board shall implement that federal section only at portions of a landfill that comply with §III of this Policy.

III. Containment — As of the Federal Deadline, discharges of waste to either an MSW landfill that has not received waste as of that date or to a federal lateral expansion of an MSW landfill unit are prohibited unless the discharge is to an area equipped with a containment system that is constructed in accordance with the standard of the industry and that meets the following additional requirements for both liners and leachate collection systems:

A. Standards for liners

1. Post-Federal Deadline construction — Except as provided in either §III.A.3. (for steep sideslopes) or §III.A.2. (for new discharges to pre-existing liners), after the Federal Deadline, all containment systems shall include a composite liner that consists of an upper synthetic flexible membrane component (Synthetic Liner) and a lower component of soil, and that either:

a. Prescriptive Design:

- i. **Upper component —** Has a Synthetic Liner at least 40-mils thick (or at least 60-mils thick if of high density polyethylene) that is installed in direct and uniform contact with the underlying compacted soil component described in paragraph III.A.1.a.ii.; and
- ii. **Lower component —** Has a layer of compacted soil that is at least two feet

thick and that has an hydraulic conductivity of no more than 1×10^{-7} cm/sec (0.1 feet/year); or

least 80-mils if of high density polyethylene) that is installed in direct and uniform contact with the underlying materials; and

- b. **Alternative design** — Satisfies the performance criteria contained in 40 CFR §§258.40(a)(1) and (c), and satisfies the criteria for an engineered alternative to the above Prescriptive Design [as provided by 27 CCR §20080(b)], where the performance of the alternative composite liner's components, in combination, equal or exceed the waste containment capability of the Prescriptive Design;
2. **New discharges to liners constructed prior to the Federal Deadline** — Except as provided in §III.A.3. (for steep sideslopes), containment systems that will begin to accept municipal solid waste after the Federal Deadline, but that have been constructed prior to the Federal Deadline, are not required to meet the provisions of §III.A.1. if the containment system includes a composite liner that:
- a. **Prescriptive Design** — Features as its uppermost component a Synthetic Liner at least 40-mils thick (or at least 60-mils if high density polyethylene) that is installed in direct and uniform contact with the underlying materials; and
 - b. **Performance** — Meets the performance criteria contained in 40 CFR §§258.40(a)(1) and (c);
3. **Steep sideslopes** — Containment systems installed in those portions of an MSW landfill where an engineering analysis shows, and the Regional Water Board finds, that sideslopes are too steep to permit construction of a stable composite liner that meets the prescriptive standards contained in §§III.A.1 or 2. shall include an alternative liner that meets the performance criteria contained in 40 CFR §§258.40(a)(1) and (c) and that either:
- a. Is a composite system and includes as its uppermost component a Synthetic Liner at least 40-mils thick (or at least 60-mils if high density polyethylene) that is installed in direct and uniform contact with the underlying materials; or
 - b. Is not a composite system, but includes a Synthetic Liner at least 60-mils thick (or at

CERTIFICATION

The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Resources Control Board held on July 21, 2005.

A handwritten signature in cursive script that reads "Debbie Irvin".

Debbie Irvin
Clerk to the Board

ATTACHMENT I
To Resolution No. 93-62

Pursuant to §I.A., in writing or revising the waste discharge requirements for MSW landfills, Regional Water Boards shall implement those portions of the following sections of the federal MSW regulations that either are more stringent than, or do not exist within, the SWRCB's Title 27 regulations.

- o **RD&D Landfills** — 40 CFR §258.4
- o **Floodplains** — 40 CFR §§258.11 and 258.16
- o **Wetlands** — 40 CFR §258.12
- o **Unstable areas** — 40 CFR §§258.15 and 258.16
- o **Run-on/Run-off control systems** — 40 CFR §258.26
- o **Liquids acceptance** — 40 CFR §§258.28 [esp. ¶(a)(2)]
- o **Design Criteria** — 40 CFR §258.40, according to the provisions of Section III
- o **Well/piezometer performance** — 40 CFR §258.51
- o **Ground-water sampling/analysis** — 40 CFR §258.53
- o **Monitoring Parameters** — 40 CFR §258.54 and Appendix I to Part 258
- o **Constituents of Concern** — 40 CFR §258.55 and Appendix II to Part 258
- o **Response to a release** — 40 CFR §§258.55 [esp. §(g)(1)(ii, iii)]
- o **Establishing corrective action measures** — 40 CFR §§258.56 [esp. ¶¶(c and d)] and 258.57
- o **Ending corrective action program** — 40 CFR §258.58 [esp. ¶(e)]
- o **Closure/post-closure** — 40 CFR §§258.60-258.61 [esp. ¶¶258.60(a-g)]
- o **Deed notation** — 40 CFR §258.60(i)
- o **Ending post-closure** — 40 CFR §258.61 [esp. ¶¶(a and b)]
- o **Corrective action financial assurance** — 40 CFR §258.73