



# 2025

## Draft Hazardous Waste Management Plan

A Modern Approach to a  
Circular Economy



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## Executive Summary

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In July 2021, Senate Bill 158 (SB 158) was approved and introduced numerous programmatic reforms to the Department of Toxic Substances Control (DTSC). One of the changes requires DTSC to develop Hazardous Waste Management Reports and Plans every three years in accordance with Health and Safety Code (HSC) § 25135. The first Hazardous Waste Management Report (Report) was published in 2023 and provided available information regarding hazardous waste generation, disposal, and transportation, as well as other related topics as required by HSC § 25135. The [Report](#) is available on DTSC's website.

California's Hazardous Waste Management Plan (Plan) is a comprehensive planning guide to protect California communities from environmental harm through ongoing advancement of the state's complex hazardous waste management system. This is the first Plan and was developed based on the Report, public workshops, and additional research conducted after publication of the Report. The purpose of the Plan is to serve as:

- A comprehensive planning document for the management of hazardous waste in the state.
- A source of useful information to guide state and local hazardous waste management efforts.
- A guide for implementing DTSC's Hazardous Waste Management Program.

Hazardous waste management planning provides a foundation for DTSC to achieve broader visionary goals and continue an effective program. Planning efforts allow DTSC to be forward-thinking, while relying on proven methodologies and scientific practices to remain an innovative leader in hazardous waste management at a national level. DTSC will utilize this first Plan to identify the steps needed to realize its visionary goals. The recommendations of this first iteration of the Plan are steppingstones to a broader vision which includes three parts: supporting a circular economy, fostering sustainable management practices, and investing in research and innovation. Through these parts, the Department aims to drive forward hazardous waste management practices that are protective of the environment and all Californians, especially those most vulnerable.

## Hazardous Waste Management in California

California led the nation in environmental protection when the state first introduced hazardous waste control laws in the 1970s, prior to the U.S. Environmental Protection Agency's (U.S. EPA) Resource Conservation and Recovery Act (RCRA). California developed hazardous waste regulations that were more stringent and broader in scope than the federal program. As a result, many more wastes are identified and managed as hazardous in California than by U.S. EPA and most other states. In fact, the majority (81%) of hazardous waste generated since 2010 is identified as non-RCRA, meaning that it meets California's criteria for hazardous waste but is not identified as hazardous under the U.S. EPA's criteria (RCRA waste).

Though more waste is identified as hazardous in California than under the federal program, hazardous waste generation trends show that overall generation in California has decreased by more than 40% since 2000. However, some hazardous waste streams are expected to grow, such as lithium-ion batteries. California does not currently have the capacity to manage these new waste streams.

Over the past 40 years, the number of operating hazardous waste facilities in California that have a full RCRA equivalent permit or standardized permit has decreased from more than 400 in 1983 to fewer than 100 in 2021. While this doesn't directly quantify the capacity for some waste streams, it signals that capacity is not growing. Without new facilities that provide the capacity to manage emerging or growing hazardous waste streams like lithium-ion batteries, California will be dependent upon out-of-state facilities to manage them. Recommendations included in this Plan are meant to promote facilities that address these issues.

Additional ways to ensure California has adequate capacity to safely manage hazardous waste is through hazardous waste reduction. The most direct method of waste reduction is to prevent waste from being generated in the first place through source reduction by the generator. Though less preferred than source reduction, hazardous waste recycling and treatment are methods that can be used to reduce the amount of hazardous waste that is disposed of to land. Some types of waste, like lithium-ion batteries, are unlikely to be reduced at the source so recycling them is critical to recover valuable resources. Legitimate recycling of specific hazardous waste streams is especially important to support the transition to a circular economy. Hazardous waste treatment is also an important aspect of hazardous waste management because it reduces the hazardous properties of the waste.

There are currently no applications for new hazardous waste management facilities, therefore in-state hazardous waste management capacity is unlikely to increase in the foreseeable future. In addition, DTSC does not have a waste reduction program to support continued reductions or help to transition to a circular economy. The recommendations of this Plan are designed to support hazardous waste reduction, promote recycling, and identify additional opportunities for treatment. These recommendations will help solidify California's ability to continue to manage hazardous waste through protective means and address future hazardous waste management needs.

## Hazardous Waste Management Plan Goals and Recommendations

The Plan is organized into 10 goals, each with specific recommendations intended to address the challenges of California's hazardous waste management system and strive towards the development of a circular economy.

The 10 goals and a summary of the recommendations of the Plan are:

**Goal 1:** Reduce environmental health impacts by promoting environmental justice initiatives.

- Recommendations include incorporating the Community Considerate Cleanups (C3) Initiative, continuing the Cleanup in Vulnerable Communities Initiative, implementing DTSC's Enforcement Strategic Plan, and conducting an analysis of generators and surrounding areas.

**Goal 2:** Improve access to information.

- Recommendations focus on providing technical and informational content and enhancing public participation by providing tools to diverse audiences.

**Goal 3:** Identify opportunities for reduction by analyzing current waste generation and utilizing the waste management hierarchy.

- Recommendations include prioritizing reduction of negative impacts to communities when evaluating options to remediate sites and analysis of incinerable and lithium-ion battery waste streams.

**Goal 4:** Establish a modern waste reduction program.

- Recommendations include establishing a hazardous waste reduction program administered by DTSC, researching a potential waste reduction grant program, and considering a pollution prevention program administered by CalEPA.

**Goal 5:** Apply financial instruments to encourage reduction in hazardous waste generation.

- Recommendations support studying the possible impact of fee increases and exploring other sustainable funding frameworks for DTSC.

**Goal 6:** Remain at forefront of environmental and public health protection by ensuring proper identification of hazardous waste.

- Recommendations relate to adopting updated standards and evaluating existing test methods as well as evaluating non-RCRA metals and contaminants of emerging concern.

**Goal 7:** Identify alternative management standards for certain non-RCRA hazardous wastes while ensuring protection of public health and the environment.

- Recommendations center on evaluating non-RCRA waste streams, including evaluation and identification of alternative management standards for specific non-RCRA soil, and preparing for waste streams from lithium brine extraction.

**Goal 8:** Expand research for future Hazardous Waste Management Reports and recommend ways to improve data reporting of hazardous waste.

- Recommendations include revisions to waste identification and reporting requirements, plus a study of household hazardous waste.

**Goal 9:** Ensure California's generators are able to utilize all aspects of the hazardous waste management hierarchy in support of a circular economy.

- Recommendations are to develop a capacity workgroup, to analyze ways to progress towards a circular economy, to review extended producer responsibility statutes, and to consider amending California's lower tier permits for onsite treatment.

**Goal 10:** Expand forecast capabilities to better anticipate the state's capacity needs.

- Recommendations include evaluating California's ability to forecast capacity and developing solutions to any insufficiency.

## Future Opportunities

The next Report is due in March 2026 and the next Plan is due in March 2028 as required by California Health and Safety Code 25135. Future Reports and Plans will build off this first iteration and incorporate new challenges and ideas as they arise to best prioritize strategies that reduce health impacts and environmental harm. This focus on continuous hazardous waste management planning provides opportunities to explore new ways to incentivize hazardous waste reduction, identify innovative ways to encourage recycling, assess whether current hazardous waste criteria should

be updated to reflect advances in science, technology or analytical methods, and evaluate emerging contaminants. DTSC will continue to engage with interested parties such as environmental justice groups, regulated businesses, Tribal governments, and other local governmental agencies to gather community input as implementation of the Plan moves forward.

# Contents

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Contents .....	8
Appendices.....	10
Introduction and Background.....	11
Purpose .....	12
Vision .....	13
Key Findings from the 2023 Hazardous Waste Management Report.....	14
Planning Outreach and Engagement.....	16
Focus Areas.....	17
Environmental Justice .....	18
Waste and Disposal Reduction.....	19
Waste Criteria.....	20
Capacity Planning.....	21
How to Read this Plan .....	22
Goals and Recommendations.....	24
Goal 1: Reduce environmental health impacts by promoting environmental justice initiatives.....	25
Goal 2: Improve access to information.....	28
Goal 3: Identify opportunities for reduction by analyzing current waste generation and utilizing the waste management hierarchy.....	30
Goal 4: Establish a modern waste reduction program.....	33
Goal 5: Apply financial instruments to encourage reduction in hazardous waste generation.....	35
Goal 6: Remain at forefront of environmental and public health protection by ensuring proper identification of hazardous waste.....	37
Goal 7: Identify alternative management standards for certain non-RCRA hazardous wastes while ensuring protection of public health and the environment.....	42



Goal 8: Expand research for future Hazardous Waste Management Reports and recommend ways to improve data reporting of hazardous waste..... 44

Goal 9: Ensure California’s generators are able to utilize all aspects of the hazardous waste management hierarchy in support of a circular economy. .... 47

Goal 10: Expand forecast capabilities to better anticipate the state’s capacity needs. .... 50

Conclusion ..... 51

# Appendices

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- ◆ [Appendix A: Conduct an Analysis of Hazardous Waste Generators and Surrounding Areas](#)
- ◆ [Appendix B: Contaminated Soil Reduction](#)
- ◆ [Appendix C: Incinerable Waste](#)
- ◆ [Appendix D: Lithium-Ion Batteries](#)
- ◆ [Appendix E: Establishment of a Waste Reduction Program](#)
- ◆ [Appendix F: Source Reduction and SB 14](#)
- ◆ [Appendix G: Proposed Modernization of Ignitability Rule of Liquids](#)
- ◆ [Appendix H: Proposed Modernization of Ignitability Rule of Compressed Gases and Oxidizers](#)
- ◆ [Appendix I: The Fish Bioassay in California's Hazardous Waste Criteria](#)
- ◆ [Appendix J: Evaluation of the Waste Extraction Test \(WET\)](#)
- ◆ [Appendix K: California's Regulation of Non-RCRA Metals in Hazardous Waste Management Program](#)
- ◆ [Appendix L: Regulatory Thresholds for Lead](#)
- ◆ [Appendix M: Alternative Management Standards for Non-RCRA Soil](#)
- ◆ [Appendix N: Generation of Hazardous Waste from Geothermal Lithium Extraction](#)
- ◆ [Appendix O: Potential Waste Code Modifications for Contaminated Soils and Other Inorganic Solid Waste](#)
- ◆ [Appendix P: Opportunities for Improving Hazardous Waste Quantification](#)
- ◆ [Appendix Q: Management Capacity, CERCLA, and Superfund](#)
- ◆ [Appendix R: Evaluating Opportunities to Support Circular Economy Capacity](#)
- ◆ [Appendix S: Baseline Demand on Hazardous Waste Management System](#)
- ◆ [Appendix T: Hazardous Waste Management Plan - Acronym List](#)

# Introduction and Background

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In July 2021, [Senate Bill 158](#) (SB 158, Ch. 73, St. 2021) was approved and introduced numerous reforms to the Department of Toxic Substances Control (DTSC) and formed the Board of Environmental Safety (BES). One of the changes was to [California Health and Safety Code \(HSC\)](#) section (§) 25135 which requires DTSC to develop Hazardous Waste Management Plans (Plan) every three years to present the BES for approval. These Plans are based on Hazardous Waste Management Reports (Report) also to be completed every three years.

## Purpose

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The purpose of the Hazardous Waste Management Plan (Plan) is to serve as:

- A comprehensive planning document for the management of hazardous waste in the state.
- A source of useful information to guide state and local hazardous waste management efforts.
- A guide for implementation of DTSC's Hazardous Waste Management Program.

A state Plan will be drafted every three years. Hazardous waste management planning is an ongoing process and not every issue related to hazardous waste management will be included in each Plan. The Plan is structured by goals and recommendations that reflect current research to meet the requirements of Health and Safety Code (HSC) section (§) 25135 and serve as a roadmap for DTSC's hazardous waste management program. Each iteration of the Plan will build upon the last and may add or update the goals and recommendations outlined in prior iterations. Additionally, the Plans are meant to serve as documents for state and local agencies to use for future hazardous waste management efforts. Any recommendations that include other governmental entities should be viewed as proposals for those agencies to consider.

Iterative planning is necessary for DTSC to effectively plan for current and future waste generation. The Plan includes short-term goals and recommendations with immediate impacts as well as long-term initiatives to guide the direction of the Department. All goals and recommendations will be reevaluated in subsequent plans as information and resources become available to determine how best to achieve them. Recommendations included in this first Plan are intended to guide the Department towards feasible solutions for waste reduction and other means of impact reduction that enhance the health and safety of residents and the environment.

## Vision

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The Department aims to drive forward modern hazardous waste management practices that are protective of the environment and all Californians, especially those most vulnerable. The recommendations laid out here are stepping stones to this broader vision. This vision has three parts which the Plan's goals and recommendations need to reflect to be successful:

1. **Support the circular economy** by investing in the upper levels of the hazardous management hierarchy (i.e. source reduction, reuse, recycling, and treatment) to reduce the amount of hazardous waste requiring land disposal.
2. **Foster sustainable practices** in industry and impacted communities to mitigate harm from generation and management of hazardous waste.
3. **Invest in research and innovation** so the Department can implement the goals and recommendations of this Plan.

Key to achieving this vision is understanding all facets of hazardous waste management; particularly, areas where the Department is lacking information or resources to adequately tackle. Many recommendations provided within this Plan are to specifically address this underlying problem: resources and information are essential to implementation. Each rendition of the Report and Plan is a building block toward supporting the circular economy, fostering sustainable practices, and investing resources to implement the goals and recommendations of the Plan.

# Key Findings from the 2023 Hazardous Waste Management Report

In November 2023, DTSC published the first Hazardous Waste Management Report. This Report and feedback from interested parties form the foundation of the 2025 Hazardous Waste Management Plan. One aspect of the Report provided a history of the state's hazardous waste management program, highlighting that in the past, DTSC had a greater focus on hazardous waste generation and waste reduction. However, resources for hazardous waste reduction have been reallocated over time. This shift created a gap in the Hazardous Waste Management Program because it removed the resources DTSC had to support waste reduction efforts. More significantly, institutional knowledge and expertise regarding hazardous waste generation processes has been lost as staff have been reassigned to other programs or left DTSC.

Click the link below to read the full Report online.

[2023 Hazardous Waste Management Report](#)

The Report also summarized information about the types and quantities of hazardous wastes generated in the state as well as the destinations and ultimate dispositions of these wastes as required by HSC § 25135. Data from roughly the last decade (January 2010 to May 2022) was summarized and interpreted for trends in hazardous waste management. Future iterations of the Report will provide updated information on a rolling basis and work towards filling data gaps that have been identified.

## **Key findings regarding hazardous waste generation, disposal, and other notable findings are included below:**

- The number of generators increased from 2010 to 2021. Hazardous waste generators with active identifications (IDs) in California increased from about 55,000 to 94,500.
- California's hazardous waste criteria are more stringent and broader in scope than the federal Resource Conservation and Recovery Act (RCRA).
- The majority (81%) of hazardous waste generated since 2010 is identified as non-RCRA, meaning that it meets California's criteria for hazardous waste but is not identified as hazardous under the United States Environmental

Protection Agency's (U.S. EPA) federal criteria (RCRA waste).

- Overall, the amount of hazardous waste being generated in California is decreasing over time (decreased by 40% from 2000 to 2021).
- Contaminated soil, waste oil and mixed oil, and other inorganic solid waste are the top three hazardous waste streams consistently generated year over year and comprise about 65% of the hazardous waste generated since 2010.

### **Waste Capacity Findings**

- The number of permitted hazardous waste management facilities decreased from over 400 in 1983 to fewer than 100 in 2021.
- Since 2010, just over half (53%) of hazardous waste generated in California was managed in California and the remainder was shipped out-of-state.
- California's two hazardous waste landfills (Clean Harbors Buttonwillow LLC and Chemical Waste Management, Inc. - Kettleman Hills Facility) will reach capacity in approximately 2039 if current in-state disposal rates remain the same and no additional capacity is constructed.

## Planning Outreach and Engagement

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Following the release of the 2023 Report, DTSC held numerous workshops and other opportunities for public engagement during development of the Plan. This outreach and engagement began with a workshop in April 2024 that provided background on the project, shared an update on planning activities, discussed next steps, and received public feedback. DTSC has also received additional feedback, questions, and recommendations during participation in symposiums, conferences, meetings with interested parties, and updates given at Board of Environmental Safety meetings.

The most significant amount of engagement occurred from August 2024 to November 2024 when DTSC hosted and presented 10 virtual workshops. The topics of these workshops ranged across four focus areas used to guide hazardous waste management planning: Environmental Justice, Waste and Disposal Reduction, Waste Criteria, and Capacity Planning. The workshop series was developed to provide on-going public education and encourage continued discussions during development of the Plan. The topics discussed were based on public feedback and requests for additional information received through the reporting and planning process. Each workshop was recorded and can be viewed on the [Hazardous Waste Management Plan website](#).

Participation from audiences during these virtual workshops facilitated direct discussion between DTSC and numerous interested parties. With DTSC's overarching goal of collaboration, this participation was used to further inform the direction and vision of the Plan. Feedback from interested parties will continue to be a prioritized consideration as DTSC explores further opportunities for public outreach and engagement during the rollout and publication of the Plan.



# Focus Areas

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## **1** Environmental Justice

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## **2** Waste and Disposal Reduction

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## **3** Waste Criteria

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## **4** Capacity Planning

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*Planning efforts were focused in four areas based on feedback from interested parties and information included in the November 2023 Hazardous Waste Management Report. Across these four areas, the Plan highlights opportunities to carry the state forward into a new era of hazardous waste management that reduces industrial impacts on communities and our environment.*

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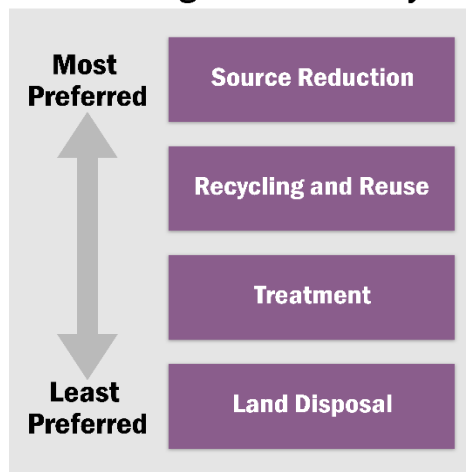
## Environmental Justice

Environmental Justice is foundational to the Hazardous Waste Management Plan. The Department must establish attainable goals and a clear path to achieve them to ensure effective environmental justice in hazardous waste management planning. To do this, the Plan includes recommendations to rebuild certain core functions such as a waste reduction program. A focused approach with achievable goals can reduce environmental or health impacts from the generation and management of hazardous waste in all communities, especially those who are most vulnerable. Planning recommendations also leverage current environmental justice initiatives, improve access to information, and develop more accessible tools and resources for all communities.



## Waste and Disposal Reduction

### Waste Management Hierarchy



In the context of the Report and Plan, Waste and Disposal Reduction refers to utilization of every level of the waste management hierarchy. This means, in order of most preferred to least preferred: source reduction, recycling and reuse, treatment, and land disposal. Hazardous waste generation has decreased since the year 2000, but it's unclear which parts of the waste management hierarchy are responsible for the decrease. Because hazardous waste is generated from a multitude of industries and processes, detailed information and data is needed to understand

which aspects of the management hierarchy are best suited for each waste stream.

Goals and recommendations from this focus area are based on the utilization of the management hierarchy to reduce the amount of hazardous waste that is managed with the least preferred method: land disposal. However, limited resources have hindered DTSC's ability to support these waste reduction efforts. Over a decade ago, the budget and personnel once dedicated to the support of hazardous waste reduction were redirected to fulfill other statutory mandates. Time and resources are needed to rebuild an informed waste reduction program that is focused on specific waste streams, industries, and constituents.



## Waste Criteria

DTSC is required by HSC § 25135 (d)(11) to assess California's current hazardous waste criteria. California's waste criteria are the backbone of the hazardous waste management program because they are used to identify and define hazardous waste. Assessment of these criteria is to ensure consistency with current science, technology, and analytical methods as well as to continually identify and manage any additional hazardous wastes. Recommendations for updates to hazardous waste criteria and testing procedures are not intended to reduce the wastes identified but rather to ensure that they are properly identified and managed in a protective manner.

An ongoing evaluation process will ensure the hazardous waste management program is able to identify additional wastes that may require management. Additionally, this ongoing research will ensure the hazardous waste management program remains adaptable to advancements in science and technology while continuing to provide protective measures. Currently, resources dedicated to conduct continuous evaluation of California's hazardous waste criteria are insufficient for such an endeavor. As such, goals and recommendations related to waste criteria are to identify the specific evaluations and resources needed to complete the required assessments.



## Capacity Planning

California has historically stated the intention, such as in the 1989 Capacity Assurance Plan, to responsibly manage its own hazardous waste within its own borders rather than depend on out-of-state facilities.<sup>1</sup> Without access to protective capacity, improper management of hazardous waste harms California’s communities, especially those most vulnerable. Capacity planning utilizes a holistic approach that incorporates all aspects of the hazardous waste management hierarchy and environmental justice principles. The basis for a holistic approach to capacity planning is access to and evaluation of data related to hazardous waste generation. The goals and recommendations guided by the Capacity Planning focus area aim to improve data precision, align with the priorities of the hazardous waste management hierarchy, and encourage the transition to a circular economy.

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<sup>1</sup> This is stated on page IX within the Introduction of California’s 1989 Capacity Assurance Plan for Hazardous Waste Management.

# How to Read this Plan

The Plan is organized into 10 goals, each with specific recommendations. These recommendations include timelines that are categorized by the year when each goal is anticipated to be fulfilled or listed as ongoing, and specify associated focus areas of Environmental Justice, Waste and Disposal Reduction, Waste Criteria, or Capacity Planning.

**Goal**

**Goal Summary**

**Goal 1: Reduce environmental health impacts by promoting environmental justice initiatives.**

DTSC aims to support and enhance existing environmental justice initiatives. This is a crucial step in integrating environmental justice principles into hazardous waste management policies and guides more equitable and effective environmental governance. By supporting similar initiatives, DTSC can foster broader community engagement.

**Recommendations:**

<b>1.1</b>	Incorporate the Community Considerate Cleanups (C3) Initiative into the voluntary agreement process. <ul style="list-style-type: none"> <li>a) Increase community engagement in the cleanup plan development process.</li> <li>b) Provide best practice guidance to others outside the authority of DTSC.</li> </ul>
<b>Timeline</b>	2025
<b>Focus Areas</b>	Environmental Justice, Waste and Disposal Reduction
<b>Partners</b>	DTSC Office of Brownfields, Local Agencies, Communities
<b>Workshop Link</b>	<a href="#">Community Considerate Cleanups – A Perspective on Hazardous Waste Generation</a>

Each recommendation includes:

- Recommendation number
- Recommendation summary
- Timeline
- Focus Areas

If applicable, may include:

- Symbol for additional resources needed
- List of partners
- Link to appendices or related workshop

**1.2**

Continue the [Cleanup in Vulnerable Communities Initiative \(CVCI\)](#).

- a) Continue to evaluate CVCI and modify where appropriate based on findings.
- b) Build partnerships to promote core CVCI programs: Equitable Community Revitalization Grant (ECRG), Discovery and Enforcement (D&E), Workforce Development (WFD), Technical Assistance Grants (TAG), Community Benefit Agreements (CBA), and Orphan Sites catalyst funding.

<b>Timeline</b>	Ongoing
<b>Focus Areas</b>	Environmental Justice, Waste and Disposal Reduction
<b>Partners</b>	DTSC Office of Brownfields

Figure 1: How to read goals and recommendations.

Some recommendations include additional information such as a list of partners working with DTSC, links to appendices that provide more detailed explanations, or links to previous workshop recordings and presentation materials.

The recommendations selected for this Plan are rooted in data, supported by interested parties, and representative of DTSC's areas of authority. They are not the only tools, programs, or policies that can be developed to accomplish the goals.

*Note: The list of partners included in recommendations will focus on integral government agencies and do not account for all necessary partners.*

## Plan Symbols



This symbol marks recommendations that will require additional resources. Resources can encompass anything from tools, materials, personnel, or funding to implement.

*Note: Items not marked for additional resources are based on DTSC's understanding at the time of planning. The need for additional resources to fund recommendations may be possible in the future and is subject to change.*

## Acronyms

The Plan includes several acronyms listed in [Appendix T](#).

## Plan Summary Table

For a summary of the goals and recommendations described in this plan, please refer to the [2025 Draft Hazardous Waste Management Plan - Summary Table](#).

## Goals and Recommendations

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**Goal 1:** Reduce environmental health impacts by promoting environmental justice initiatives.

**Goal 2:** Improve access to information.

**Goal 3:** Identify opportunities for reduction by analyzing current waste generation and utilizing the waste management hierarchy.

**Goal 4:** Establish a modern waste reduction program.

**Goal 5:** Apply financial instruments to encourage reduction in hazardous waste generation.

**Goal 6:** Remain at forefront of environmental and public health protection by ensuring proper identification of hazardous waste.

**Goal 7:** Identify alternative management standards for certain non-RCRA hazardous wastes while ensuring protection of public health and the environment.

**Goal 8:** Expand research for future Hazardous Waste Management Reports and recommend ways to improve data reporting of hazardous waste.

**Goal 9:** Ensure California's generators are able to utilize all aspects of the hazardous waste management hierarchy in support of a circular economy.


**Goal 10:** Expand forecast capabilities to better anticipate the state's capacity needs.



## Goal 1: Reduce environmental health impacts by promoting environmental justice initiatives.

DTSC aims to support and enhance existing environmental justice initiatives. This is a crucial step in integrating environmental justice principles into hazardous waste management policies and guides more equitable and effective environmental governance. By supporting similar initiatives, DTSC can foster broader community engagement.

### Recommendations:

<p><b>1.1</b></p>	<p>Incorporate the Community Considerate Cleanups (C3) Initiative into the voluntary agreement process.</p> <ul style="list-style-type: none"> <li>a) Increase community engagement in the cleanup plan development process.</li> <li>b) Provide best practice guidance to others outside the authority of DTSC.</li> </ul>
<p><b>Timeline</b></p>	<p>2025</p>
<p><b>Focus Areas</b></p>	<p>Environmental Justice, Waste and Disposal Reduction</p>
<p><b>Partners</b></p>	<p>DTSC Office of Brownfields, Local Agencies, Communities</p>
<p><b>Workshop Link</b></p>	<p><a href="#">Community Considerate Cleanups – A Perspective on Hazardous Waste Generation</a></p>
<p><b>1.2</b></p> 	<p>Continue the <a href="#">Cleanup in Vulnerable Communities Initiative</a> (CVCI).</p> <ul style="list-style-type: none"> <li>a) Continue to evaluate CVCI and modify where appropriate based on findings.</li> <li>b) Build partnerships to promote core CVCI programs: Equitable Community Revitalization Grant (ECRG), Discovery and Enforcement (D&amp;E), Workforce Development (WFD), Technical Assistance Grants (TAG), Community Benefit Agreements (CBA), and Orphan Sites catalyst funding.</li> </ul>
<p><b>Timeline</b></p>	<p>Ongoing</p>
<p><b>Focus Areas</b></p>	<p>Environmental Justice, Waste and Disposal Reduction</p>
<p><b>Partners</b></p>	<p>DTSC Office of Brownfields</p>


<p><b>1.3</b></p>	<p>Achieve a unified, comprehensive, effective, and equitable enforcement approach by implementation of the <a href="#">DTSC Enforcement Strategic Plan Goals</a> throughout DTSC.</p> <ul style="list-style-type: none"> <li>a) Advance environmental equity by enforcing hazardous waste and hazardous substances laws.             <ul style="list-style-type: none"> <li>i. Elevate awareness of environmental justice principles in DTSC’s enforcement process to address the environmental harm impacting disadvantaged communities.</li> <li>ii. Build trusting relationships with federal, state, and local agencies, communities, advocacy groups, and the regulated industries to achieve a cleaner environment.</li> <li>iii. Prioritize environmental equity so that communities feel supported by DTSC’s enforcement activities.</li> </ul> </li> <li>b) Partner with Californians to reduce pollution and harmful effects of toxic substances in all communities.             <ul style="list-style-type: none"> <li>i. Transfer knowledge, provide tools, and work with the people of California and Tribal Nations to help protect communities and cultural resources from environmental harm.</li> </ul> </li> </ul>
<p><b>Timeline</b></p>	<p>Ongoing</p>
<p><b>Focus Areas</b></p>	<p>Environmental Justice</p>
<p><b>Partners</b></p>	<p>DTSC Office of Legislation and Regulatory Review, DTSC Office of Environmental Equity, DTSC Office of Communications, DTSC Office of Legal Counsel, Certified Unified Program Agencies (CUPAs)</p>

<b>1.4</b>	Conduct an analysis of hazardous waste generators and surrounding areas. a) Evaluate recurring waste streams of generators operating in California.
<b>Timeline</b>	2026
<b>Focus Areas</b>	Environmental Justice
<b>Partners</b>	DTSC Office of Brownfields
<b>Appendix</b>	<a href="#"><u>Draft Appendix A: Conduct an Analysis of Hazardous Waste Generators and Surrounding Areas</u></a>

## Goal 2: Improve access to information.

Public participation is vital as it empowers communities to actively engage with and influence the policies that impact their local environments. Outreach and guidance information presented in plain language will make technical issues more accessible.

### Recommendations:

<p><b>2.1</b></p> 	<p>Provide wide ranging technical and informational content regarding hazardous waste management with consideration of diverse audiences.</p> <ul style="list-style-type: none"> <li>a) Develop educational short-form videos that focus on core concepts and DTSC responsibilities accessible to the general public, waste generators, and waste management facilities.</li> <li>b) Develop hazardous waste management training for internal and external interested parties.</li> <li>c) Expand the <a href="#">Toxic Crusaders program</a> to additional high schools throughout the state and help to strengthen analytical chemistry programs at universities.</li> <li>d) Improve access to information and data sharing on DTSC’s website such as through dashboards and other tools.</li> </ul>
<p><b>Timeline</b></p>	<p>Ongoing</p>
<p><b>Focus Areas</b></p>	<p>Environmental Justice</p>
<p><b>Partners</b></p>	<p>DTSC Office of Communications, Office of Environmental Equity, Safer Consumer Products, Enforcement and Emergency Response, Environmental Chemistry Laboratory</p>

**2.2**



Expand and enhance public participation by providing technical assistance, tools, and resources for specific Hazardous Waste Management Plan topics.

- a) Participate in symposiums and conferences that allow interested parties to engage in the development of hazardous waste management plans.
- b) Develop quick reference guides and other documents that include technical assistance and resources for recycling, source reduction, and treatment opportunities for specific waste streams.
- c) Expand use of social media channels.

<b>Timeline</b>	Ongoing
<b>Focus Areas</b>	Environmental Justice
<b>Partners</b>	DTSC Office of Communications, Office of Environmental Equity, Office of Legislation and Regulatory Review, Program Implementation unit

### **Goal 3: Identify opportunities for reduction by analyzing current waste generation and utilizing the waste management hierarchy.**

DTSC will employ the hazardous waste management hierarchy to encourage source reduction and other options for recycling and treatment if source reduction is not viable. The breadth of opportunities to encourage waste reduction are vast and diverse. DTSC selected the recommendations below based on the following considerations: degree of hazard of the waste, the difficulty in management of that waste, and potential community impacts. Regulatory and technical barriers to source reduction, recycling, and treatment should also be understood and considered. These considerations may be adjusted over time as future iterations of hazardous waste management plans are developed.


DTSC does not currently have a waste and disposal reduction program. Therefore, the Department lacks the data to determine realistic goals with a specific quantity of waste reduction. Setting a specific goal of that type without sufficient knowledge can be disadvantageous. Specialized knowledge is needed to understand the potential for reduction of different waste streams and to establish achievable reduction goals. DTSC intends to provide waste reduction goals for specific waste streams as that information is obtained, though these goals may not always be numeric. For example, goals may include adoption of specific recycling or treatment technologies rather than the reduction of a specified amount of waste.

Two waste streams have been identified for immediate analysis: incinerable waste and lithium-ion batteries. Incinerable waste is all wastes grouped by a management method (incineration), while lithium-ion batteries are a specific product type. Future waste streams targeted for reduction might be categorized by management method, product type, industry, or chemical depending on what is determined to be most appropriate.

## Recommendations:

<b>3.1</b>	<p>Prioritize reduction of negative impacts to communities when evaluating options to remediate sites.</p> <ul style="list-style-type: none"> <li>a) Pursue initiatives such as Community Considerate Cleanups (C3), as referenced in Goal 1.1, to encourage treatment of soil whenever possible and to focus on the reduction of community impacts of a cleanup even where excavation is necessary.</li> <li>b) Evaluate feasibility of soil treatment studies at orphan sites, though excavation may still be the most appropriate cleanup method for a particular site.</li> </ul>
<b>Timeline</b>	2025
<b>Focus Areas</b>	Environmental Justice, Waste and Disposal Reduction
<b>Partners</b>	DTSC Office of Brownfields, Local Agencies, Communities
<b>Appendix</b>	<a href="#">Draft Appendix B: Contaminated Soil Reduction</a>

<b>3.2</b>	<p>Analyze incinerable waste streams to identify opportunities for source reduction, recycling, and alternative treatment.</p> <ul style="list-style-type: none"> <li>a) Research the generation of incinerable waste to determine the reduction potential of this waste stream; establish reduction goals.</li> <li>b) In collaboration with industry partners, promote more legal and safe on-site recycling by California’s hazardous waste generators, starting with on-site solvent recycling.</li> <li>c) Explore whether alternative management technologies, such as super critical water oxidation, (SCWO), have potential while remaining compliant with federal regulations that require certain wastes be incinerated.</li> </ul>
<b>Timeline</b>	2028
<b>Focus Areas</b>	Waste and Disposal Reduction
<b>Appendix</b>	<a href="#">Draft Appendix C: Incinerable Waste</a>

<p><b>3.3</b></p> 	<p>Ensure lithium-ion batteries are recovered and, when possible, reused, repaired, repurposed or remanufactured, and recycled at the end of their useful life.</p> <ul style="list-style-type: none"> <li>a) Create an interdisciplinary workgroup within DTSC that compiles information on lithium-ion batteries, such as safety considerations and designing with end of life management in mind.</li> <li>b) Determine how the waste management hierarchy can be applied to this rapidly growing waste stream and how DTSC can support development of needed infrastructure statewide.</li> <li>c) Utilize the expertise of non-governmental experts, such as manufacturers, members of the recycling industry, academia, and producer-responsibility organizations, to develop management strategies for these waste streams.</li> </ul>
<p><b>Timeline</b></p>	<p>2031</p>
<p><b>Focus Areas</b></p>	<p>Waste and Disposal Reduction</p>
<p><b>Partners</b></p>	<p>HHWCFs, Recycling Facilities, Manufacturers, CalRecycle, Academia</p>
<p><b>Appendix</b></p>	<p><a href="#">Draft Appendix D: Lithium-Ion Batteries</a></p>




## Goal 4: Establish a modern waste reduction program.


For over 25 years DTSC had a waste reduction program referred to as the Pollution Prevention (P2) Program. It was robust, including over 50 positions. In 2013, the P2 program ended with the formation of the Department’s first Green Chemistry program, Safer Consumer Products (SCP). The mission of SCP is to advance the design, development, and use of products that are chemically safer for people and the environment, not to reduce hazardous waste generation.


While there is some overlap in these goals, the establishment of a new, more focused, waste reduction program will help DTSC support hazardous waste reduction in targeted waste streams. In addition, a new waste reduction program would re-establish the expertise the Department gained while investigating waste streams generated by the numerous industries in California. A waste reduction program could also potentially improve compliance through greater collaboration with generators and technical support for the Certified Unified Program Agencies (CUPAs).

### Recommendations:

<p><b>4.1</b></p> 	<p>Establish a DTSC hazardous waste reduction program that emphasizes source reduction and other P2 tools like alternative technologies. Once established, the responsibilities of this waste reduction program could include the following:</p> <ol style="list-style-type: none"> <li>a) Evaluate and assess source reduction data compiled from SB 14 reports and stored in a public facing database.</li> <li>b) Promote legitimate recycling and treatment as additional options within the P2 framework.</li> <li>c) Every three years, identify two specific hazardous waste streams, hazardous waste constituent types, or industry type to review for source reduction, recycling, or treatment opportunities.</li> <li>d) Pursue pilot studies in collaboration with applicable programs on source reduction technologies and activities to better understand and improve these tools.</li> </ol>
<p><b>Timeline</b></p>	<p>2028</p>
<p><b>Focus Areas</b></p>	<p>Waste and Disposal Reduction, Capacity Planning, Environmental Justice</p>

<b>Partners</b>	CalEPA, Hazardous Waste Generators, Hazardous Waste Management Facilities
<b>Appendix</b>	<a href="#">Draft Appendix E: Establishment of a Waste Reduction Program</a> and <a href="#">Draft Appendix F: Source Reduction and SB 14</a>

<p><b>4.2</b></p> 	<p>Research the potential for a waste reduction grant program.</p> <ol style="list-style-type: none"> <li>a) Determine whether a grant should be only for new technology demonstrations or also for updating old equipment to more environmentally friendly options.</li> <li>b) Decide on criteria to select between grant applications.</li> <li>c) Evaluate successes and limitations of DTSC’s original P2 program, which required developers of successful technologies to both repay the original grant and allowed DTSC to receive a share of any profits from the technology.</li> <li>d) Research how grants are administered by other states and by the U.S. EPA to guide the design of a grant program.</li> </ol>
<b>Timeline</b>	2031
<b>Focus Areas</b>	Waste and Disposal Reduction
<b>Partners</b>	CalEPA
<b>Appendix</b>	<a href="#">Draft Appendix E: Establishment of a Waste Reduction Program</a>

<p><b>4.3</b></p> 	<p>Create a holistic P2 program administered by CalEPA to address shared environmental goals such as greenhouse gas emission reduction, energy use reduction, and hazardous waste reduction to leverage lessons learned from programs in other states.</p> <ol style="list-style-type: none"> <li>a) Coordinate with the six Boards, Departments, and Organizations under the CalEPA to redevelop a modernized and holistic P2 program.</li> </ol>
<b>Timeline</b>	2031
<b>Focus Areas</b>	Waste and Disposal Reduction
<b>Partners</b>	CalEPA, CalRecycle, Water Board, OEHHA, CARB, DPR, DTSC
<b>Appendix</b>	<a href="#">Draft Appendix E: Establishment of a Waste Reduction Program</a>

## Goal 5: Apply financial instruments to encourage reduction in hazardous waste generation.

The application of financial instruments (e.g. taxes and fees) on hazardous waste generation has been identified as a potential method by which hazardous waste generation can be discouraged. The structures of different financial instruments will be studied continuously to determine how they may encourage hazardous waste reduction. Furthermore, fees based on the generation of hazardous waste fund significant portions of the Hazardous Waste Management Program which is critical to oversight, enforcement, and proper management of hazardous waste.

### Recommendations:

<b>5.1</b>	<p>DTSC should determine if increasing fees on certain waste streams could result in a negative overall impact on human health and the environment.</p> <p>a) Research to what extent fees for contaminated soil generation could discourage site cleanups, or other construction-type projects, which could increase risk to nearby communities.</p>
<b>Timeline</b>	2026
<b>Focus Areas</b>	Waste and Disposal Reduction
<b>Partners</b>	DTSC Office of Financial Planning and Site Mitigation and Restoration Program, Board of Environmental Safety, Legislature, and fee payers

<p><b>5.2</b></p>	<p>Continue to work with University of Massachusetts Lowell Center for Sustainable Production to explore and evaluate funding frameworks that provide a more sustainable and long-term funding solution while also encouraging reduction of hazardous waste generation.</p> <ul style="list-style-type: none"> <li>a) Consider that some waste streams may not be reduced by a fee increase because demand for the products that generate these waste streams is not strongly influenced by the cost of hazardous waste generation (e.g. pharmaceutical products).</li> <li>b) Consider how waste reduction would impact operational costs and fee rates.</li> </ul>
<p><b>Timeline</b></p>	<p>2028</p>
<p><b>Focus Areas</b></p>	<p>Waste and Disposal Reduction</p>
<p><b>Partners</b></p>	<p>DTSC Office of Financial Planning and Office of Legislation and Regulatory Review, Board of Environmental Safety, Legislature, academic institutions, and fee payers</p>


## Goal 6: Remain at forefront of environmental and public health protection by ensuring proper identification of hazardous waste.


Hazardous waste identification criteria are the standards and test methods used to identify whether a waste is hazardous. These criteria ensure that hazardous wastes are correctly identified and managed to protect public health and the environment. Proper identification is crucial for applying the appropriate treatment, storage, and disposal methods, thereby minimizing improper management. DTSC currently has limited resources to assess the protectiveness of existing criteria and evaluate additional potential wastes. To maintain the highest standards of environmental and public health protection, DTSC requires consistent resource allocation to ensure that California's hazardous waste criteria remain up to date through continuous research, analysis, and considerations of the latest scientific advancements. Some resources were allocated in SB 158 to begin this process, but additional resources are necessary to expand research and deepen analyses.

### Recommendations:


<b>6.1</b>	Adopt the two updated American Society for Testing and Materials (ASTM) standards for flashpoint determination of the ignitability characteristic to be consistent with U.S. EPA regulations.
<b>Timeline</b>	2028
<b>Focus Areas</b>	Waste Criteria
<b>Appendix</b>	<a href="#">Draft Appendix G: Proposed Modernization of Ignitability Rule of Liquids</a>


<p><b>6.2</b></p>	<p>Update outdated information in regulatory sections to reflect current regulatory cross-references. For instance, the ignitability characteristics of compressed gases and oxidizers should be updated to stay consistent with current United States Department of Transportation (DOT) references.</p> <p>a) Modification could include the following:</p> <ul style="list-style-type: none"> <li>i. Removal of outdated references from the Bureau of Explosives (BOE) and the Office of Hazardous Materials Technology (OHMT)</li> <li>ii. Replace references of obsolete test methods for the ignitability determination of compressed gases (accepted by BOE) with ASTM E681-85 Standard</li> <li>iii. Replace the old classification system of oxidizers with the new DOT classification system</li> <li>iv. Remove additional notes carrying obsolete information.</li> </ul> <p>b) Update the regulatory cross-references of DOT in the reactivity characteristic to be consistent with RCRA.</p>
<p><b>Timeline</b></p>	<p>2028</p>
<p><b>Focus Areas</b></p>	<p>Waste Criteria</p>
<p><b>Appendix</b></p>	<p><a href="#"><u>Draft Appendix H: Proposed Modernization of Ignitability Rule of Compressed Gases and Oxidizers</u></a></p>

<p><b>6.3</b></p> 	<p>Conduct an evaluation of the aquatic toxicity test method in accordance with the requirements of HSC 25141.1 to remain current and protective.</p> <ul style="list-style-type: none"> <li>a) Determine whether there is a current necessity of the aquatic toxicity criterion, given the history of why it was established and whether those identified risks continue to exist with today’s updated waste management methods.</li> <li>b) Consider whether waste identified as hazardous, solely based on the aquatic toxicity, are candidates for alternative management standards.</li> </ul>
<p><b>Timeline</b></p>	<p>2028</p>
<p><b>Focus Areas</b></p>	<p>Waste Criteria</p>
<p><b>Appendix</b></p>	<p><a href="#">Draft Appendix I: The Fish Bioassay in California’s Hazardous Waste Criteria</a></p>

<p><b>6.4</b></p> 	<p>Evaluate the Waste Extraction Test (WET) to ensure the relevance of WET to modern landfills.</p> <ul style="list-style-type: none"> <li>a) Review prior studies and conduct a new study to determine whether the WET provides an appropriate simulation of modern landfill conditions, if appropriate.</li> <li>b) Determine whether the stringency that the WET provides continues to be scientifically valid).</li> </ul>
<p><b>Timeline</b></p>	<p>2028</p>
<p><b>Focus Areas</b></p>	<p>Waste Criteria</p>
<p><b>Appendix</b></p>	<p><a href="#">Draft Appendix J: Evaluation of the Waste Extraction Test (WET)</a></p>

<b>6.5</b> 	<p>Conduct an evaluation of non-RCRA metals to ensure comprehensive management of non-RCRA metals for environmental safety.</p> <p>a) Analyze whether the reasons California identified non-RCRA metals as posing a potential threat still exist.</p>
<b>Timeline</b>	2031
<b>Focus Areas</b>	Waste Criteria
<b>Appendix</b>	<a href="#">Draft Appendix K: California’s Regulation of Non-RCRA Metals in Hazardous Waste Management Program</a>

<b>6.6</b> 	<p>Evaluate hazardous waste total threshold limit concentration (TTL) and soluble threshold limit concentration (STLC) level for lead to reflect current scientific understanding.</p>
<b>Timeline</b>	2031
<b>Focus Areas</b>	Waste Criteria
<b>Appendix</b>	<a href="#">Draft Appendix L: Regulatory Thresholds for Lead</a>

<b>6.7</b> 	<p>Evaluate Contaminants of Emerging Concern (CEC).</p> <p>a) Track U.S. EPA's progress and planned actions concerning the classification of emerging contaminants.</p> <p>b) Evaluate US EPA’s regulation of per- and polyfluoroalkyl substances (PFAS), to remain consistent with federal rules, including RCRA and CERCLA.</p>
<b>Timeline</b>	Ongoing
<b>Focus Areas</b>	Waste Criteria
<b>Partners</b>	U.S. EPA, CalEPA, Colleges and Universities
<b>Appendix</b>	<a href="#">2023 Hazardous Waste Management Report - Appendix E</a>



**6.8**



Continue evaluating existing and new test methods and standards for the identification of hazardous waste.

- a) Ongoing evaluations should include the following:
  - i. Comprehensive review of existing test methods to identify those that require updates to be consistent with the most current scientific analytical methods where appropriate.
  - ii. Research and analysis of scientific advancements and regulatory changes.
  - iii. Analyze emerging technologies to ensure the hazardous waste identification criteria is precise, reliable, and reflective of current scientific knowledge.

<b>Timeline</b>	Ongoing
<b>Focus Areas</b>	Waste Criteria
<b>Partners</b>	U.S. EPA, Colleges and Universities

## **Goal 7: Identify alternative management standards for certain non-RCRA hazardous wastes while ensuring protection of public health and the environment.**

Alternative management standards allow for the handling of certain non-RCRA hazardous wastes under different requirements than those typically mandated for hazardous waste management. For example, California allows treated wood waste (TWW) to be disposed of at certain authorized municipal landfills in addition to Class I hazardous waste landfills. These standards can provide a protective and more sustainable approach to managing certain other wastes.

In accordance with Health and Safety Code (HSC) Section 25135 (d)(11)(A), DTSC will assess and make recommendations for non-RCRA wastes currently identified as hazardous in California that can be managed under alternative standards that differ from the traditional hazardous waste management requirements, while still ensuring the protection of public health and the environment. Implementation of alternative management can result in more waste being managed safely within the state.

### **Recommendations:**

<b>7.1</b>	Evaluate non-RCRA waste streams to determine what constituents or properties are causing these wastes to be identified as hazardous.
<b>Timeline</b>	Ongoing
<b>Focus Areas</b>	Waste Criteria
<b>Partners</b>	Hazardous Waste Generators, CUPAs, Colleges and Universities

<b>7.2</b>	Evaluate and identify protective alternative management standards for non-RCRA soil identified as hazardous due to the solubility of inorganic constituents to be disposed of in non-hazardous waste landfills.
<b>Timeline</b>	2027
<b>Focus Areas</b>	Waste Criteria
<b>Partners</b>	CalRecycle, Water Board
<b>Appendix</b>	<a href="#">Draft Appendix M: Alternative Management Standards for Non-RCRA Soil</a>

<b>7.3</b>	Determine whether additional reporting methods would be required to obtain information for waste streams currently subject to alternative tracking standards.
<b>Timeline</b>	2028
<b>Focus Areas</b>	Waste Criteria

<b>7.4</b>	<p>Collaborate with the geothermal energy industry to prepare for generation of hazardous waste from lithium brine extraction and ensure proper management.</p> <ol style="list-style-type: none"> <li>a) Clarify how the generation of brine pond solids and filter cakes will differ from historical geothermal energy facility operation in terms of chemical composition and tonnage.</li> <li>b) Identify the approach used to sample waste from direct lithium extraction and that is used to inform the characterization of the waste.</li> </ol>
<b>Timeline</b>	2026
<b>Focus Areas</b>	Capacity Planning
<b>Partners</b>	Geothermal Energy Industry, Salton Sea Communities
<b>Appendix</b>	<a href="#">Draft Appendix N: Generation of Hazardous Waste from Geothermal Lithium Extraction</a>

## Goal 8: Expand research for future Hazardous Waste Management Reports and recommend ways to improve data reporting of hazardous waste.

DTSC’s current reporting requirements and databases for hazardous waste were instrumental for the Report as they provided metrics needed to analyze California’s various waste streams. Consistent data across databases supports accurate metrics that are needed for capacity planning. The data collection process conducted for the Report brought to light potential improvements to the current reporting systems. Additionally, public comments and internal review highlighted additional research opportunities and databases to cross reference for future Reports and Plans.

### Recommendations:

<b>8.1</b>	Revise DTSC’s hazardous waste code identification system pursuant to provisions of Health and Safety Code § 25160.1. a) Modify California Waste Codes 611 (Contaminated soil from site clean-ups) and 181 (Other inorganic solid waste) to be more descriptive.
<b>Timeline</b>	2026
<b>Focus Areas</b>	Capacity Planning
<b>Partners</b>	U.S. EPA
<b>Appendix</b>	<a href="#">Draft Appendix O: Potential Waste Code Modifications for Contaminated Soils and Other Inorganic Solid Waste</a>

<b>8.2</b>	<p>Provide input to CalEPA on revisions to the California Environmental Reporting System (CERS) that can provide useful information for Hazardous Waste Reporting efforts.</p> <p>a) Determine the measures needed to easily quantify and make accessible generator on-site treatment and recycling information that is housed in CERS.</p>
<b>Timeline</b>	2028
<b>Focus Areas</b>	Capacity Planning
<b>Partners</b>	CalEPA
<b>Appendix</b>	<a href="#">Draft Appendix P: Opportunities for Improving Hazardous Waste Quantification</a>

<b>8.3</b>	<p>Modify reporting requirements for universal waste electronic devices and photovoltaic modules (PVs) to require reporting in weight only instead of count or weight.</p>
<b>Timeline</b>	2028
<b>Focus Areas</b>	Capacity Planning


<b>8.4</b>	<p>Amend California Code of Regulation (CCR), title 22, chapter 31, article 1 (commencing with section 67001.1) to explicitly require generators to also submit SB 14 reports or select information from SB 14 reports to a public facing database.</p>
<b>Timeline</b>	2028
<b>Focus Areas</b>	Capacity Planning, Waste Reduction
<b>Partners</b>	Generators
<b>Appendix</b>	<a href="#">Draft Appendix F: Source Reduction and SB 14</a>


<b>8.5</b>	Conduct a study on the types and amounts of household hazardous waste that arrive at non-hazardous waste management facilities (e.g. material recovery facilities, non-hazardous waste landfills, and transfer stations).
<b>Timeline</b>	2028
<b>Focus Areas</b>	Capacity Planning
<b>Partners</b>	CUPAs, CalRecycle

## Goal 9: Ensure California’s generators are able to utilize all aspects of the hazardous waste management hierarchy in support of a circular economy.

One of DTSC’s goals for capacity planning is to ensure that generators have opportunities to utilize all aspects of the hazardous waste management hierarchy. DTSC can take proactive measures so that California’s generators have access to these opportunities. Examples include maintaining federal funding through compliance with CERCLA, providing educational materials to stakeholders, incentivizing facilities to manage their wastes according to the principles of a circular economy, and ensuring protective hazardous waste landfills are safe and accessible.

### Recommendations:

<p><b>9.1</b></p> 	<p>Develop a team or workgroup to ensure California remains in compliance with section 104(c)(9) of CERCLA, which requires states to provide assurance that there is capacity to treat or securely dispose of the waste that is generated for 20 years. Compliance with this provision will help ensure California remains eligible for new Superfund Cleanup funding through CERCLA.</p>
<p><b>Timeline</b></p>	<p>2028</p>
<p><b>Focus Areas</b></p>	<p>Capacity Planning</p>
<p><b>Appendix</b></p>	<p><a href="#">Draft Appendix Q: Management Capacity, CERCLA, and Superfund</a></p>

<p><b>9.2</b></p> 	<p>Evaluate how to incentivize protective hazardous waste management facilities in California to progress towards the state’s goal of a circular economy.</p> <p>DTSC will consider:</p> <ol style="list-style-type: none"> <li>If any recycling exemptions or exclusions implemented by the U.S. EPA should be adopted including but not limited to Generator-Controlled Exclusion, Transfer-Based Recycling Exclusion, and Remanufacturing Exclusion.</li> <li>Development of a grant program or other incentives for permitting and operating new hazardous waste management facilities within the state.</li> <li>An evaluation of HSC § 25199 through 25199.14, also known as The Tanner Act, to determine if it should be updated or if it should be discontinued.</li> <li>Continuation of the ongoing improvement of DTSC’s permitting process for hazardous waste management facilities.</li> </ol>
<p><b>Timeline</b></p>	<p>2028</p>
<p><b>Focus Areas</b></p>	<p>Capacity Planning</p>
<p><b>Appendix</b></p>	<p><a href="#">Draft Appendix R: Evaluating Opportunities to Support Circular Economy Capacity</a></p>

<p><b>9.3</b></p>	<p>DTSC should review any statutory provisions related to Extended Producer Responsibility (EPR) that may have been in consideration or have passed during the next reporting period. In addition, DTSC should evaluate the effectiveness of EPR programs regarding the management of hazardous waste that are implemented in other states.</p>
<p><b>Timeline</b></p>	<p>2026</p>
<p><b>Focus Areas</b></p>	<p>Waste and Disposal Reduction</p>
<p><b>Partners</b></p>	<p>DTSC Office of Financial Planning and Office of Legislation and Regulatory Review, Board of Environmental Safety, Legislature, and fee payers</p>



<b>9.4</b>	Amend, as appropriate, California’s lower tier permits (permit by rule, conditional authorization, and conditionally exempt) for onsite treatment to treat additional wastes or utilize treatment technologies that are currently not allowed.
<b>Timeline</b>	2028
<b>Focus Areas</b>	Waste and Disposal Reduction
<b>Partners</b>	DTSC Office of Legislation and Regulatory Review, CUPAs, HHWCFs

## Goal 10: Expand forecast capabilities to better anticipate the state’s capacity needs.

Capacity planning requires an in-depth understanding of hazardous waste generation trends to predict the state’s future needs. This is so that as waste generation rises and falls, sufficient capacity is available. The ability to forecast these capabilities come from robust data systems that track the amount of waste generated and managed from cradle-to-grave. DTSC should evaluate all waste streams through relevant databases, reports, and notifications to accurately forecast the impacts of trending waste streams.

### Recommendations:

<b>10.1</b>	Evaluate DTSC’s hazardous waste forecasting capabilities for hazardous waste generation and management capacity a) Determine how SB 14 source reduction reports may be used to forecast waste generation in certain industries.
<b>Timeline</b>	2027
<b>Focus Areas</b>	Capacity Planning
<b>Appendix</b>	<a href="#">Draft Appendix F: Source Reduction and SB 14</a>

<b>10.2</b>	Research California's readiness to manage alternative energy waste streams and develop solutions if management capacity is insufficient. a) Forecast for the generation end of life (EOL) lithium-ion batteries accounting for differing amounts of EOL reuse and repurposing. b) Forecast the generation of EOL PVs/solar panels while accounting for advancements in technology that might reduce how much is classified as hazardous waste.
<b>Timeline</b>	Ongoing
<b>Focus Areas</b>	Capacity Planning
<b>Appendix</b>	<a href="#">Draft Appendix D: Lithium-Ion Batteries</a>

## Conclusion

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This Plan was informed by the November 2023 Hazardous Waste Management Report and robust feedback received from interested parties across the state. Goals and recommendations outlined in this Plan are a starting point from which to advance California’s hazardous waste management practices to be more sustainable, supportive of a circular economy, and protective of all Californians, especially those most vulnerable. To restate, the Plan is designed to serve as:

- A comprehensive planning document for the management of hazardous waste in the state
- A source of useful information to guide state and local hazardous waste management efforts.
- A guide for implementation of DTSC’s Hazardous Waste Management Program.

Hazardous waste management planning is an ongoing and iterative process that must be completed through collaboration with local and state agencies and other interested parties. This iteration of the Plan lays the groundwork to identify resource needs and information needed to facilitate hazardous waste management that follows the principles of the hazardous waste management hierarchy.

DTSC will begin implementation of recommendations that the Department is sufficiently resourced to do and coordinate with both internal and external interested parties. Additional resource needs have been identified in this Plan and DTSC is

working to obtain them. DTSC has also begun the next stages of research for the upcoming Reports and Plans based on recommendations for further research. The next Report is due in March 2026 and the next Plan is due in March 2028. Future Reports and Plans will build off this first iteration and incorporate new issues as they arise to prioritize strategies that reduce health impacts and environmental harm.

Hazardous waste management has improved significantly over the past few decades and these Plans will likewise continue to evolve to maintain pace with California's progress towards a circular economy.