TETRA TECH

MEMO

To:	Lane M Otsu; Michael Burke	**Date:**	July 20, 2023
cc:	Hawaii DOH/OSWM	**Memo No.:**	3
From:	Tetra Tech Team (TT Team)	**File:**	197-2022-0127
Subject:	Hawaii Integrated Solid Waste Management Plan (ISWMP) Update Tire Solid Waste Stream Potential Solutions		

1.0 INTRODUCTION

The Tetra Tech Team (TT Team) is providing herein the Hawaii State Department of Health, Office of Solid Waste Management (DOH/OSWM) with an issue statement and description of potential solutions evaluated for the Tire solid waste stream topic identified by the State for inclusion in an update to the Statewide Integrated Solid Waste Management Plan (ISWMP). According to Hawaii Revised Statutes (HRS) Chapter 342G Section 29, OSWM must convene a state integrated solid waste management task force (Task Force) and incorporate their comments to revise and update the material contained in the previous state ISWMP. A Task Force consisting of county representatives, industry, non-profits and members of the public was formed and a meeting held on May 25, 2023, to discuss and receive input on how to manage the tire waste stream.

Hawai'i has rules and regulations currently in place to manage tire waste on the various islands. However, more can be done to manage this specific waste stream, and the associated problems with illegal dumping, accurate reporting and data collection and the programs direct and indirect costs. This memorandum will present potential solutions relating to the management of tire waste across the state, including feedback from the Task Force and industry representatives on potential Extended Producer Responsibility (EPR) legislation, government programs and subsidies, free market solutions, and public education components.

2.0 ISSUE STATEMENT

2.1 Tires

More than one million (1,000,000) motor vehicle tires are imported into the State of Hawaii annually, and the disposal of used motor vehicle tires poses a waste management challenge for the State. Motor vehicle tires can create potential health risks when illegally dumped. They can harbor rodents and vectors (i.e., mosquitoes), or catch on fire. State law bans the landfill disposal or incineration of whole tires (HRS Section 342I-22) and requires dealers to accept old tires and recycle them (HRS Section 342I-25), however, illegal dumping is still occurring.

According to County representatives as well as the County of Kaua'i 2021 ISWMP, in Kaua'i, residential scrap tires are accepted at the County's four RTS and the Kekaha Landfill at no charge. The tires collected at the County's five

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sites are removed weekly by a private contractor for recycling. Because of the acceptance of residential tires free of charge at these five locations throughout the island, the County reports little to no illegal dumping of tires. Program cost has been approximately $155,000 per year. The County Anticipate higher costs in the future due to increased shipping costs and other costs of doing business. Funding for this program comes from the County's general fund.

3.0 POTENTIAL SOLUTION CATEGORIES

There are many strategies to more effectively manage waste. The United States Environmental Protection Agency (US EPA) has categorized and prioritized these strategies from the most effective option to the least effective option. According to HRS 342G-2, solid waste management practices to be considered by the DOH (in order of priority) are source reduction, recycling and bioconversion, and landfill and incineration. The differences between the US EPA's waste management hierarchy and solid waste management priorities identified in HRS 342G-2 are minimal. As seen in Figure 3-1, the US EPA's waste management hierarchy includes energy recovery (e.g., incineration, which is referenced in HRS 342-G) as a solid waste management approach to be considered. The US EPA Waste Management Hierarchy also identifies reuse as an option, which is not explicitly identified in HRS 342G-2.

Figure 3-1: US EPA Waste Management Hierarchy

The 3R's must be considered in order to effectively manage waste, starting with the most effective:

- Reducing waste means purchasing less and minimizing the amount of waste we produce therefore disposing of less. There are many ways to reduce consumption such as by better planning and preparation when we shop or by evaluating if we can go without the product(s).
- Reusing items slows the process of purchasing new and disposing. We can reuse materials that were meant to be disposed of, giving them a second life, or we can choose materials that were meant to be reused and make sure we take good care of them so they can be used many more times.
- Recycling keeps valuable materials in the materials economy and prevents the environmentally harmful extraction process of raw materials, which benefits the economy and the planet.

The potential solutions relating to the management of tire waste across the state were developed in consideration with potential EPR legislation, government programs and subsidies, free market solutions, and public education components which are described below, followed by any potential solutions identified for the State of Hawaii.

3.1 Extended Producer Responsibility (EPR)

EPR is a product-centered approach that relies on manufacturers and/or distributors to address the environmental impacts of their own products on the waste stream. EPR is defined as "an environmental protection strategy aimed at decreasing total environmental impact from a product and its packaging, by ensuring that the producers of the product take responsibility for the entire lifecycle of their products through the take-back, recycling, and final disposal

of their products, including its packaging."[1] According to the US EPA, EPR, or product stewardship, recognizes that product manufacturers must take responsibility to reduce both the short and long-term environmental footprint of their products. This product stewardship also extends to retailers, consumers, and a state or local government's existing solid waste infrastructure to find cost-effective solutions.[2]

3.2 Government Programs and Subsidies

Government programs, funding and subsidies include revisions to existing statutes as well as implementing new government regulations and/or programs. This also includes adjustments to pre-existing programs and resources. Government programs and subsidies are effective in engaging individuals to be a part of solutions by providing incentives, such as rebates or grants. Tax credits, grants, and loans provided by government agencies not only encourage the public to participate in environmental solutions, but also may fund the research and development of technologies to better manage waste.

3.3 Free Market Solutions

Free market solutions can be identified through the expansion of local market opportunities for recycling, or through the creation of new ones. For example, scrap tires are one of the most reused products in the U.S. because of their various end market uses, such as their use for tire-derived fuel (TDF), ground rubber (used in playgrounds), civil engineering (roadway fill), and other free-market opportunities. When implementing free market solutions, the remote geography of Hawai'i and its related logistics and infrastructure challenges must be taken into consideration.

3.4 Education and Outreach

Identifying potential education and outreach opportunities to increase public awareness and community engagement is a key component of Hawai'i's waste stream solutions. Environmental education allows both individuals and businesses to gain an understanding of environmental issues, engage in problem-solving, and take action to improve the environment.[3] Educational outreach helps provide resources and tools to educate local leaders and high-level decision-makers to implement programs. It is critical to have a dedicated education and outreach program that targets both retailers as well as customers, especially when implementing an EPR program for tires.

3.5 Less Wasteful Alternatives

The most effective way to reduce waste is to generate less to begin with. Therefore, identifying less wasteful alternatives, such as reducing and reusing materials, helps to keep materials out of landfills and incinerators while also providing savings to individuals. In certain states, for example, some retail stores offer a discount on the total purchase when a customer brings in a reusable bag. The benefits of reducing and reusing include a reduction of pollution caused by harvesting raw materials to manufacture new products, savings in energy, reducing greenhouse gas emissions, and decreasing the amount of waste sent to landfills, incinerators, or recycling centers.

[1] Extended Producer Responsibility - an overview | ScienceDirect Topics
[2] Basic Information | Product Stewardship | US EPA
[3] What is Environmental Education? | US EPA

4.0 POTENTIAL SOLUTION FOR TIRES

4.1 Potential Solutions to Consider

This section presents potential solutions that could be considered for the management of tires. These potential solutions were identified through benchmarking of other states with successful tire management programs and input from the Task Force and industry representatives taking into consideration the solution categories identified in Section 3. These include:

- **Status Quo** – Existing tire management conditions are adequate for each of the Counties and the State.
- **Outreach and Education -** The DOH, Environmental Management Division, Solid and Hazardous Waste Branch, is the primary state agency that provides educational and outreach materials as they relate to tires. The DOH provides a fact sheet on proper tire management (State of Hawai'i) that residential, commercial and industrial customers can all utilize as a reference document. In addition, the DOH provides the following two printable documents on its solid waste website (Solid & Hazardous Waste Branch | Hawai'i DOH Solid Waste section): Used Tire Recycling Signage for Retailers; and Illegal Dumping Poster. All Hawai'i counties currently provide educational programs and materials via their dedicated websites. Potential options include enhancing existing websites or creating dedicated sites, fact sheets and other existing outreach materials. The promotion of tire clean up events could be considered. Working with non-governmental organizations to arrange for annual clean up events of illegally disposed tires, should also be considered.
- **Extended Producer Responsibility (EPR)** – EPR legislation is a driving force behind the adoption of remanufacturing initiatives, typically in the form of a dedicated state law or statute. EPR legislation could require tire manufacturers to finance, operate, and report on the post-consumer management of their products. The legislative bill would decrease illegal dumping, better protect consumers, and boost tire recycling in the state. A House or Senate Representative(s) would need to champion the legislative bill. The State of Connecticut is due to sign into law the first EPR for tires bill (Connecticut Passes First-in-the-Nation Tire EPR - Waste Advantage Magazine).
- **Motor Vehicle Tire Surcharge –** A $1.00 motor vehicle tire surcharge on all imported tires was implemented by the State in 2000 with the purpose of preventing and removing illegal tire dump sites while providing a dedicated funding source for monitoring and enforcement efforts. The department's authority to collect the surcharge sun-setted on January 1, 2006. Since the uses of the previous surcharge are still in statute, any proposal to re-establish the surcharge could provide for the establishment of an enforcement position within DOH and the associated financial support to promote activities the previous surcharge intended.
- **County Funded and Managed Program** – The County of Kaua'i contracts hauling and tire recycling with those that have a permitted tire solid waste facility in Hawai'i or on the mainland. The acceptance of tires at the County's four refuse transfer stations and one convenience center at the landfill location at no cost to residential self-haulers has been effective. The County currently bans disposal of tires at the landfill. Within the County, Unitek, and PS&D Tires are responsible for marketing scrap tires. Tires are either barged to Unitek's facility in O'ahu or shipped to processors on the mainland, with some limited markets in the state. The County of Kaua'i reports that their County funded and managed program has been successful in preventing illegal dumping or disposal of tires. A county funded and managed program has proven to be a viable option to better manage waste tires.

- **Tire Derived Fuel (TDF) and Tire Incineration** – While HRS Section 342I-22 prohibits the disposal of whole tires at any landfill or municipal solid waste incinerator, the statute also allows the DOH to issue variances based on written requests submitted by a permitted disposal facility. The DOH has issued the City and County of Honolulu a variance to burn tires at the H-POWER waste-to-energy (WtE) facility. For example, in 2014, the DOH issued the City and County of Honolulu a conditional variance to burn tires delivered from community groups conducting neighborhood clean-ups, and from convenience centers and bulky waste collection at H-POWER. This variance allows H-POWER to receive and incinerate up to 400 tires per day (or 65,000 tires annually)[i] at the WtE facility. The variance was subsequently extended until February 28, 2026. The use of tire derived fuel or the incineration of tires at the waste-to-energy facility may be a viable option warranting further consideration, however if pursued, statutory changes should made in the case of incineration.

[i] Fourth Annual Report (hawaii.gov)