County:	Kaua‘i	Solid Waste Issue:	Lithium-ion Batteries Rechargeable Lithium-Ion (Li-ion) batteries including consumer, automotive and home power storage uses.
Population (2020 Census):	73,300		
Last Update to SWMP:	2021		
Waste Characterization Data:	There is no County waste characterization data specific to Li-ion batteries available, though the County’s ISWMP notes there are challenges to household battery collection and recycling for all battery types, including Li-ion batteries[1], making disposal at the Kekaha Landfill a possibility.		
Waste Diversion Data:	There is no waste diversion data on Li-ion batteries recycling available in regard to how many batteries are disposed of versus recycled, but the County regularly recycles approximately 55 – 110 gallons (400 lbs. – 800 lbs) of batteries annually (pending confirmation on whether this includes all batteries or just Li-ion batteries).[3]		
County Ordinances:	The County of Kaua‘i does not have any ordinances regarding the management of waste Li-ion batteries. Li-ion batteries are subject to state regulations (HAR 11-273.1; see State fact sheet for additional information).		
Overview:	 The County accepts Li-ion as well as other household batteries during its semiannual household hazardous waste collection events. Residents can also drop off their household batteries at the Kaua‘i Resource Center (KRC) all year round. However, as a self-service program, cross-contamination of batteries from residents as well as illegal dumping by non-residential sources presents problems for the KRC. Residents have also left large Li-ion batteries for solar panels or motorized vehicles like e-bikes and surfboards at the collection center, which is difficult to process and may not be allowed per the County’s permit. More research is being done by the County to see what might be allowed for collection. There are County-contracted facilities permitted by the hazardous waste program to collect Li-ion batteries for recycling (see “Permitted Collectors and Recyclers/Processors” section). Home Depot in Līhu‘e has a drop off for rechargeable batteries. This program is not coordinated with the County and the County does not get reports or input.		
County Programs & Funding:	Consumer electronic batteries (alkaline, lithium, and NiCad batteries only):[2] • Kaua‘i Resource Center battery collection recycling program • Semi-annual HHW collection events		
Estimated Annual Material Type Generation:	**Estimated Number of Registered Vehicles for Kaua‘i (2022)[4]:** • Total Passenger and Freight Vehicles: 81,623 o Total Electric Vehicles: 684 **Estimated Number of EV Li-ion Batteries to be Managed Yearly**: Predicted to steadily increase from an estimated total of 60 EV Li-ion batteries a year in 2022 to approximately 2,000 EV Li-ion batteries by 2039. **Estimated Number of Commercial Businesses and Residential Households with Photovoltaic (PV) System in Kaua‘i (2021):** In contrast to the other counties, Kaua‘i is serviced by Kaua‘i Island Utilities Cooperative and information on PV system users was not found for that entity. There is limited data available on the number of commercial businesses and residential households with PV systems that utilize Li-ion battery storage, but residents		

	and businesses have reached out to the County regarding disposal options for these large Li-ion batteries that range from car battery size to much larger units such as wall mounted battery storage options available for home use. **Estimated Number of Homes with Li-ion Battery Storage Systems (2021)[5]:** 483 **Estimated Number of Home Li-ion Battery Storage Systems to be Managed Yearly[5]:** Predicted to reach approximately 394 by 2034
Permitted Collectors and Recyclers/Processors:	There are hazardous waste haulers on O'ahu that can collect Li-ion batteries throughout the state for shipment to the mainland for recycling. Home Depot accepts rechargeable Li-ion batteries for recycling.
News Articles:	*Kauai Now:* "County to host additional household hazardous waste collection events Sunday"
State Solid Waste Stream Issue Statement:	Li-ion batteries from consumer electronics, PV systems, and electric and hybrid vehicles comprise a small but increasing proportion of the state's total solid waste stream. Li-ion batteries contain varying chemistries, which require different recycling processes. Furthermore, the chemistry of Li-ion batteries is expected to continue evolving, which could further complicate the recycling process. Li-ion batteries pose potentially adverse public health and environmental impacts if disposed improperly due to their flammability and toxic chemicals in their composition. Li-ion batteries can contain toxic materials such as compounds from lithium, nickel, and arsenic as well as carcinogenic materials from nickel, arsenic, and occasionally cobalt, copper, and polypropylene. Improper disposal of Li-ion batteries may lead to these chemicals leaching into the soil to contaminate both surface and groundwater, negatively impacting human health. They may also combust, causing fires in collection trucks, processing facilities, and at the landfill. Presently, the Li-ion battery recycling industry is underdeveloped.
County Solid Waste Stream Issue Statement and Potential Solutions: (County to provide issue statement and potential solutions regarding the management of this material category.)	**Issue Statement –** **Limited disposal options and illegal dumping:** Li-ion battery collection for residents is limited on Kaua'i leading to possible disposal at the Kekaha landfill and limited or expensive options for commercial disposal that cause some businesses to illegally dump their batteries at County collection points and or with their refuse. As these batteries enter the waste stream there is the potential for fire or hazardous material exposure by staff as well as eventual leaching of harmful chemicals into the environment. **Potential Solutions** – Partner with retailers to provide proper disposal of Li-ion batteries and provide feedback on their programs. Lithium metal is required by many products. The recycling and capturing of this metal is not only beneficial for the environment but can be a cost saving process for manufacturers. Work with other County's and the State Legislature to push for extended producer responsibility laws to reduce the environmental and economic impacts these batteries have on each island. Educate the public on the dangers of disposing of Li-ion batteries with refuse and the impacts it can have on the environment.

[1] County of Kaua'i 2021 ISWMP
[3] County of Kaua'i Public Works Solid Waste – HHW Collection Data
[4] Energy_Trend.pdf (hawaii.gov)
[5] 2023 HNEI Act92 Final Report Clean Energy Products Waste Management (hawaii.edu)