

HAWAII EXPLOSIVES & PYROTECHNICS, INC.

2023-2024 SUSTAINABILITY REPORT

INFORMATION AND UPDATES
APRIL 2024





2023 IN PERSPECTIVE

We recognize climate change to be a critical threat to our planet and our business, and we've made combating it a top business priority. We are working diligently to meet the high expectations of both regulatory agencies and the public at large. 2023 was the first full year of implementation of our sustainability programs.

To address our impact and offset our carbon footprint, Hawaii Explosives & Pyrotechnics implemented a series of initiatives focused on emissions and waste reduction, improved recycling practices, and decreased energy consumption across all our operations.

By establishing clear goals and fostering a culture of environmental responsibility, we've demonstrably lessened our impact on the planet. This report highlights the successes of these initiatives and outlines our ongoing commitment to environmental sustainability for the future.

Looking ahead, we plan to build upon this foundation. We are committed to continuous improvement and will explore new strategies to further reduce our impact. This report serves as a testament to our dedication to a sustainable future for our company, our employees, and the communities we serve.





OUR 30 BY 30 INITIATIVE

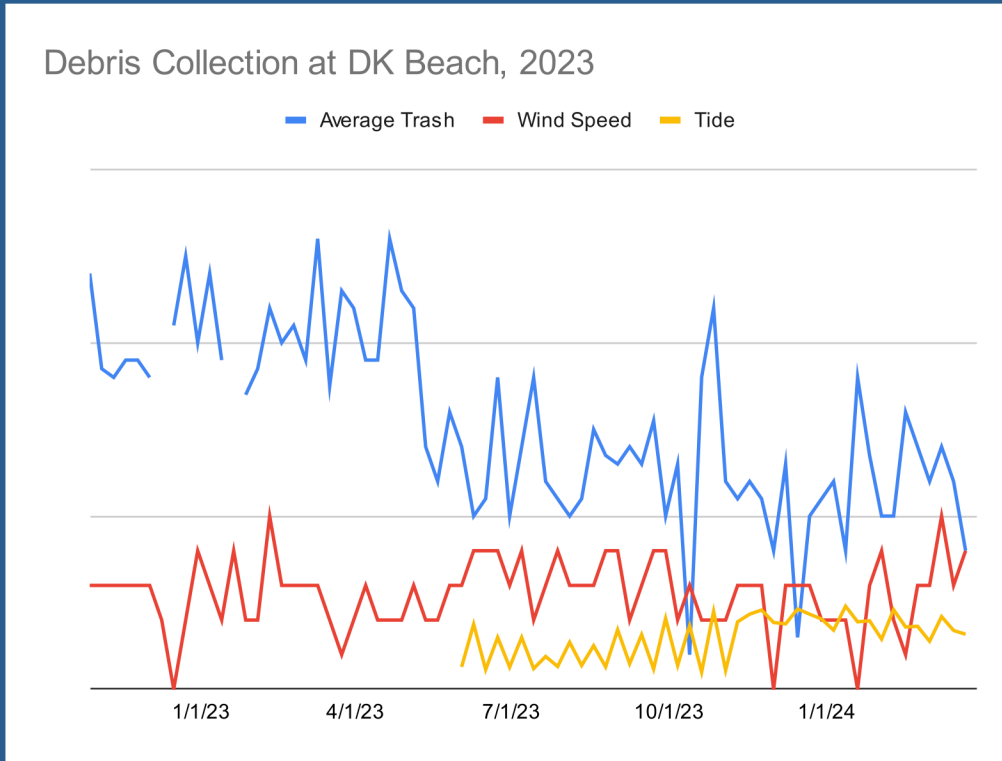
By 2030:

- A 30% reduction in the emissions and combustion by-products produced through product selection and innovations in chemistry
- A 30% reduction in the inert debris generated by the aerial fireworks we use
- A 30% reduction in the subsidiary waste generated by our operations such as packing materials and production supplies
- A 30% increase in our recycling and waste diversion initiatives
- A 30% decrease in energy use at our baseyard and office locations
- A 30% decrease in emissions related to transportation of equipment and crew

SUMMARY OF PROGRESS

- Since implementing our tracking system, we have documented a significant decrease in the amount of post-display debris produced by each Friday Night Display in Waikiki.
- The Fireworks Best Practices program documents our waste reduction and cleanup efforts for all of our work sites statewide through the implementation of pre-display assessments and post-display reports.
- Our noise reduction initiative on the Friday Night Display has eliminated the use of salute shells and has reduced the overall amount of noise generated in the urban corridor.
- We continue to work with our suppliers to manufacture devices that produce less emissions and reduce the amount of debris generated by display fireworks.
- We have implemented a new waste diversion program to reduce the amount of trash heading to the landfill.
- We have engaged with several community organizations to promote a healthier environment through volunteer cleanups and tree-planting initiatives.
- We have upgraded our office computer equipment and replaced it with models that use over 60% less electricity on average. ¹





WASTE REDUCTION

- Through design and product changes, and by adhering to our Best Practices, we have reduced our debris footprint by 35%.₂
- Routine dive studies indicate a greater than 95% success rate in post-display retrieval.₃

168

Gallons of beachgoer (non-fireworks) trash removed from the area.



35%

Reduction in fireworks debris collected as a result of product changes.

WASTE DIVERSION EFFORTS

This year, we partnered with our disposal provider, Hawaiian Steam, to implement a program to divert our commercial waste away from the landfill.

By segregating cardboard, wood and metal waste, we anticipate reducing the volume of rubbish heading to the landfill by at least 25% over the coming year. ⁴

Our initiative to eliminate single-use plastic water bottles on our displays has eliminated the disposal of approximately 1,000 bottles. ⁵



FIREWORKS AND DRONES

In October 2023, we partnered with Verge Aero, a leading drone lightshow provider, to produce the first hybrid Fireworks and Drone show in the State of Hawaii.

While it is our belief that drones won't replace fireworks completely, we believe that hybrid displays offer a viable method to reduce the quantity of debris and emissions produced by aerial fireworks displays as the technology matures.



COMMUNITY INVOLVEMENT



In addition to supporting numerous community-based organizations by offering discounted displays, our staff has been volunteering in several community environmental projects.

We've partnered with the Hawaiian Legacy Reforestation Initiative and assisted with tree-planting projects.

We have been volunteering with the Travel With Purpose Organization to participate in beach cleaning events in Waikiki.

On Hawai'i Island, we've volunteered with Hilo Ocean Adventures on cleanup projects on the Hilo Bay shoreline.

Other entities we've worked with include the Genki Ala Wai Project and the Surfrider Foundation.

To further support our efforts, we've implemented an impact fee on our for-profit customers to help fund sustainability initiatives.

INDUSTRY-LEVEL UPDATES

In 2023, the American Pyrotechnic Association, the primary trade association for the fireworks industry, commissioned a nationwide study to better understand the impacts of fireworks emissions on the surrounding communities during holiday seasons.⁶ The independent agency collected data from multiple air quality monitors in various urban regions throughout the United States. Their report demonstrates that the PM2.5 emissions from fireworks did not exceed EPA clean air standards in any of the 49 areas studied.

One of the key findings of the study was that while sales of fireworks have increased over 200% in the past 2 decades, the EPA has documented a 42% decrease in overall fine PM emissions in the same period. This finding underscores the lack of a direct correlation between increased fireworks usage and deteriorating air quality outcomes.

In late March 2024, the Canadian Pyrotechnic Council released a study on air quality impacts during a large annual fireworks competition held each August in Montreal.⁷ The data collected demonstrated that the impact on air quality is “very localized in space and time” according to the study’s authors.

This of course does not mean that emissions from fireworks do not have adverse impacts. Our industry continues to pursue innovative methods to lower the impacts of fireworks on the community, particularly in the consumer fireworks sector.

Earlier this year, Hawaii Explosives & Pyrotechnics joined the American Pyrotechnic Association’s environmental committee. We are looking forward to contributing our experience and expertise towards implementing standards and best practices for all member companies for displays produced over bodies of water throughout the United States.



2024 AND BEYOND

As 2024 progresses, we will continue making progress on our 30 by 30 initiative.

By-Products

- Manufacturers continue investigating alternative chemistry for pyrotechnics. For example, researchers are experimenting with nitrogen-based oxidizers as a substitute for perchlorates.
- Our company continues researching alternative device types and formulations that produce lower emissions and less debris, with a particular focus on eliminating plastic components.
- We continue to refine our production design to reduce the quantity of debris generated.
- Our Best Practices program identifies methods of retrieval that can improve the amount of debris collected post-display.
- Using the methodology of the recent Trinity Consultants study, we intend to analyze PM data available from Hawaii air quality monitor sites to report on local impacts, particularly around the New Year's holiday.

Subsidiary Waste

- Our company will monitor and quantify the amount of trash segregated into categories to optimize recycling and diversion efforts.
- We continue to work with our suppliers to reduce the amount of plastic used in packaging.
- We continue to monitor operational methods to determine methods to improve material reuse, increase efficiency, and reduce waste.

Conservation Initiatives

- Through partnerships with community organizations, our company will continue to pursue opportunities to offset our carbon footprint and meaningfully contribute to the mitigation of climate change.
- By participating in industry-level environmental initiatives, we hope to participate in environmental initiatives, promote change, and encourage the adoption of our best practices.
- We continue to monitor operational methods to determine methods to improve material reuse, increase efficiency, and reduce waste.
- We continue to monitor market innovations and will invest in equipment that provides greater energy efficiency as it becomes viable.



NOTES

1. Reduction based on power supply size and rating.
2. Much of the debris reduction occurred as a result of changes made to the production design in June 2023. Our next order, expected in Q2 2024, should allow us to make additional modifications that impact debris generation.
3. Results are based on 3 independent dive assessments performed in the study period.
4. Projection is based upon an assessment of the amount and categories of waste typically generated in a given quarter and the likelihood that we will produce similar quantities over a given year.
5. Estimate based upon average consumption of 20oz bottles per person per production in 2023.
6. The study, which analyzed air quality data across 49 US metro areas over a five-year period, was performed by Trinity Consultants for the American Pyrotechnics Association. The full study will be released later this year.
7. <https://ici-radio--canada-ca.translate.google.com/nouvelle/2061077/etude-pyrotechnie-aqme-qualite-air-sante>



