

Liquid Waste Hauler Meeting: Pearl City Septage Receiving Evaluation

Thank you for joining us!
The meeting will begin shortly.

Before we begin, please note:

- The audience will automatically be placed on mute.
- A period for questions will occur after the presentation.
- If you have a question, please line up at the microphone or raise your hand on Webex during the question period and reference the slide number if applicable

Pearl City Septage Receiving Evaluation

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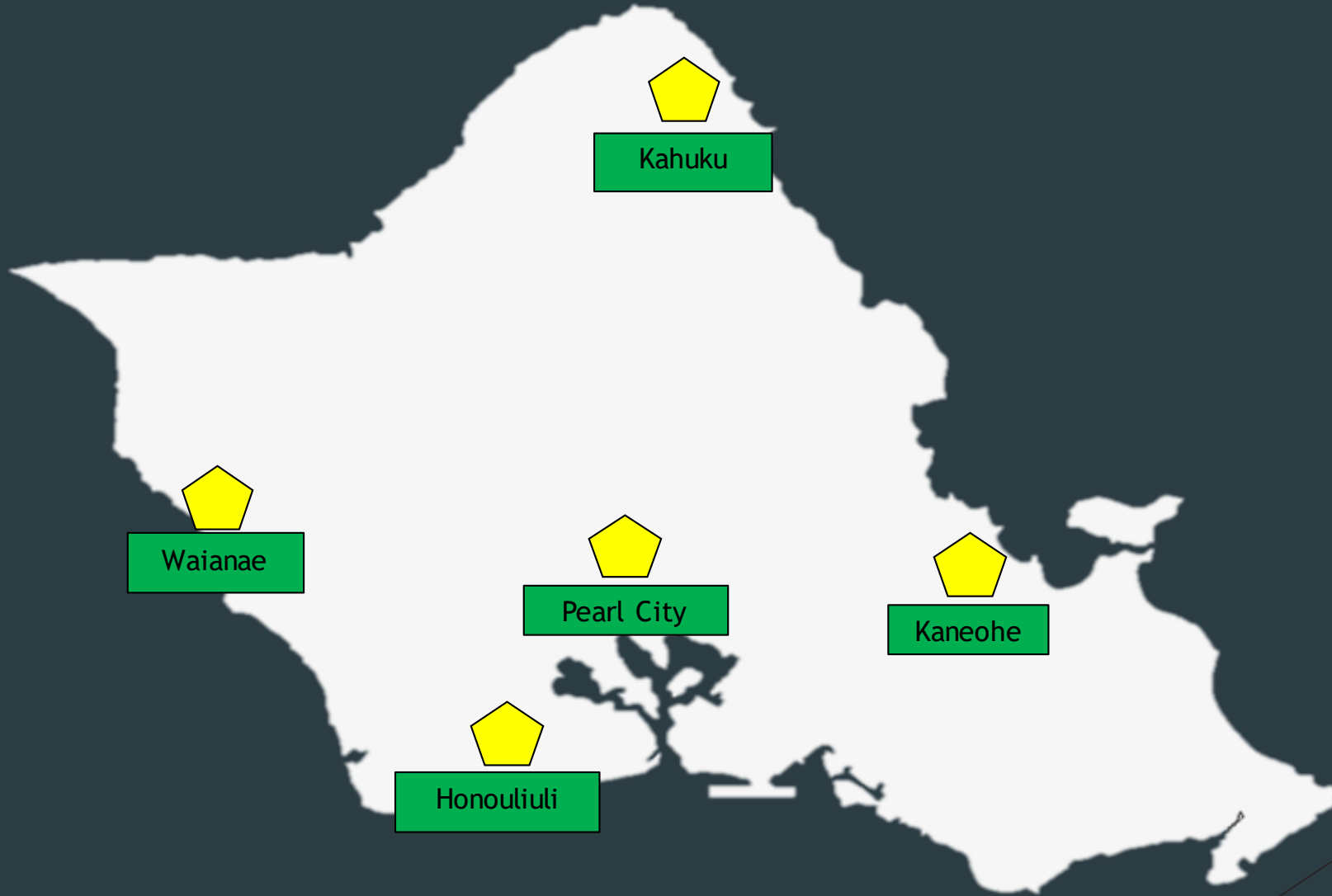
Agenda

- ▶ Purpose
- ▶ Site Availability
- ▶ Site Event Capacity
 - ▶ 2022 Discharge Capacity
 - ▶ 2022 Remaining Capacity
- ▶ Mileage Impact Evaluation
- ▶ Evaluation Results
- ▶ Adjusted Discharge Sites
- ▶ Conclusion
- ▶ Accommodations and Future Actions

Purpose

- ▶ The City announced closure of Pearl City Septage Receiving Station due to residential complaints and regulatory pressures, but received negative feedback from haulers
- ▶ The City performed a more in-depth analysis of its septage receiving program, considering the closure of Pearl City Septage Receiving Station
- ▶ Factors considered:
 - ▶ Hours of Operation
 - ▶ Discharge Duration
 - ▶ Event Capacity
 - ▶ Mileage Impact

Current Discharge Sites in Operation

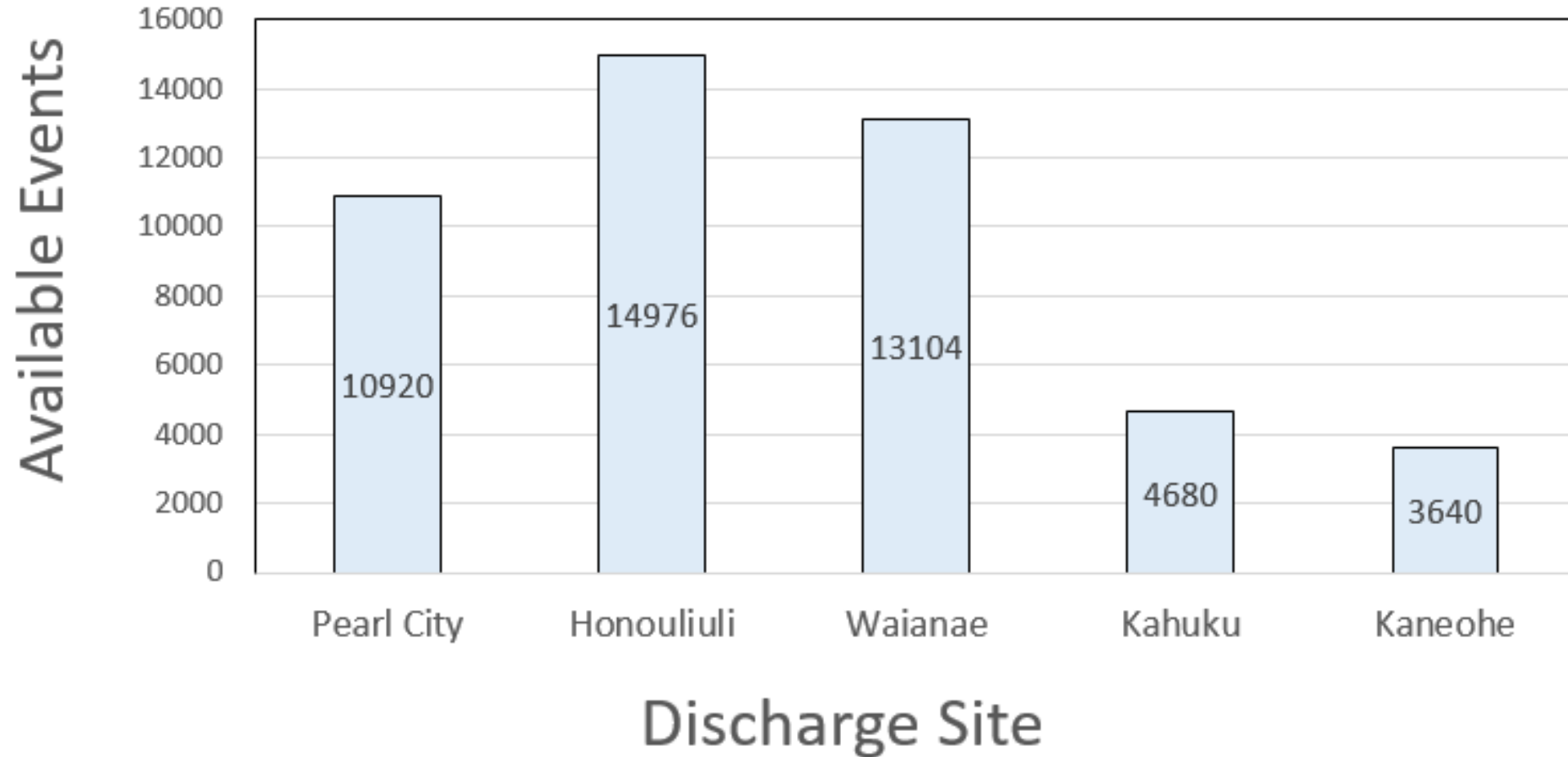


Site Availability

Discharge Site Hours of Operation								
Discharge Site	M	T	W	Th	F	Sa	Su	Total Hours (per day)
Pearl City	7am - 5pm	7am - 5pm	7am - 5pm	7am - 5pm	7am - 5pm	7am - 5pm	7am - 5pm	10
Honouliuli	Old	7am - 3pm	7am - 3pm	7am - 3pm	7am - 3pm	7am - 3pm	7am - 3pm	8
	New	7am - 7pm	7am - 7pm	7am - 7pm	7am - 7pm	7am - 7pm	7am - 7pm	12
Waianae	7am - 7pm	7am - 7pm	7am - 7pm	7am - 7pm	7am - 7pm	7am - 7pm	7am - 7pm	12
Kahuku	8am - 2pm	8am - 2pm	8am - 2pm	8am - 2pm	8am - 2pm	8am - 2pm	8am - 2pm	6
Kaneohe	8am - 4pm	8am - 4pm	8am - 4pm	8am - 4pm	8am - 4pm	8am - 4pm	8am - 4pm	8

Extended Honouliuli Hours of Operation effective: 12/26/23

Yearly Event Capacity



20 min
Discharge

x

Hours of
Operation

x

Days Open
per Week

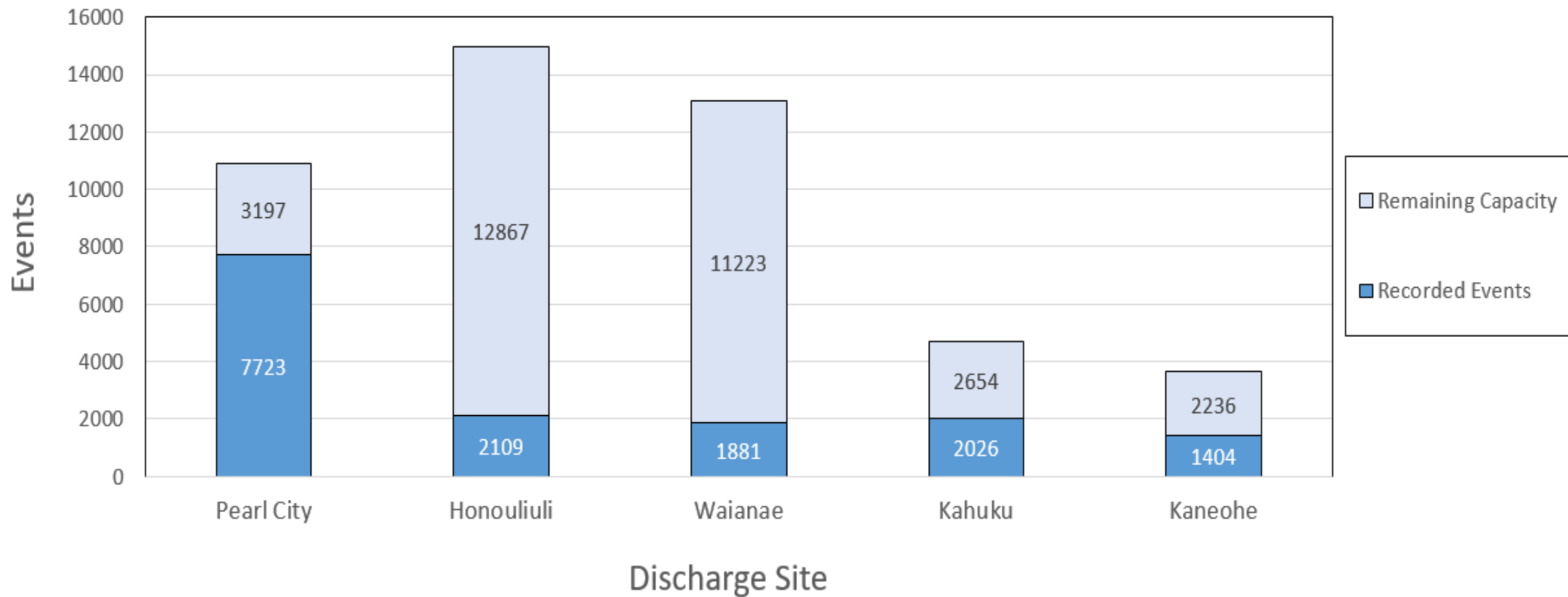
x

52 Weeks
per Year

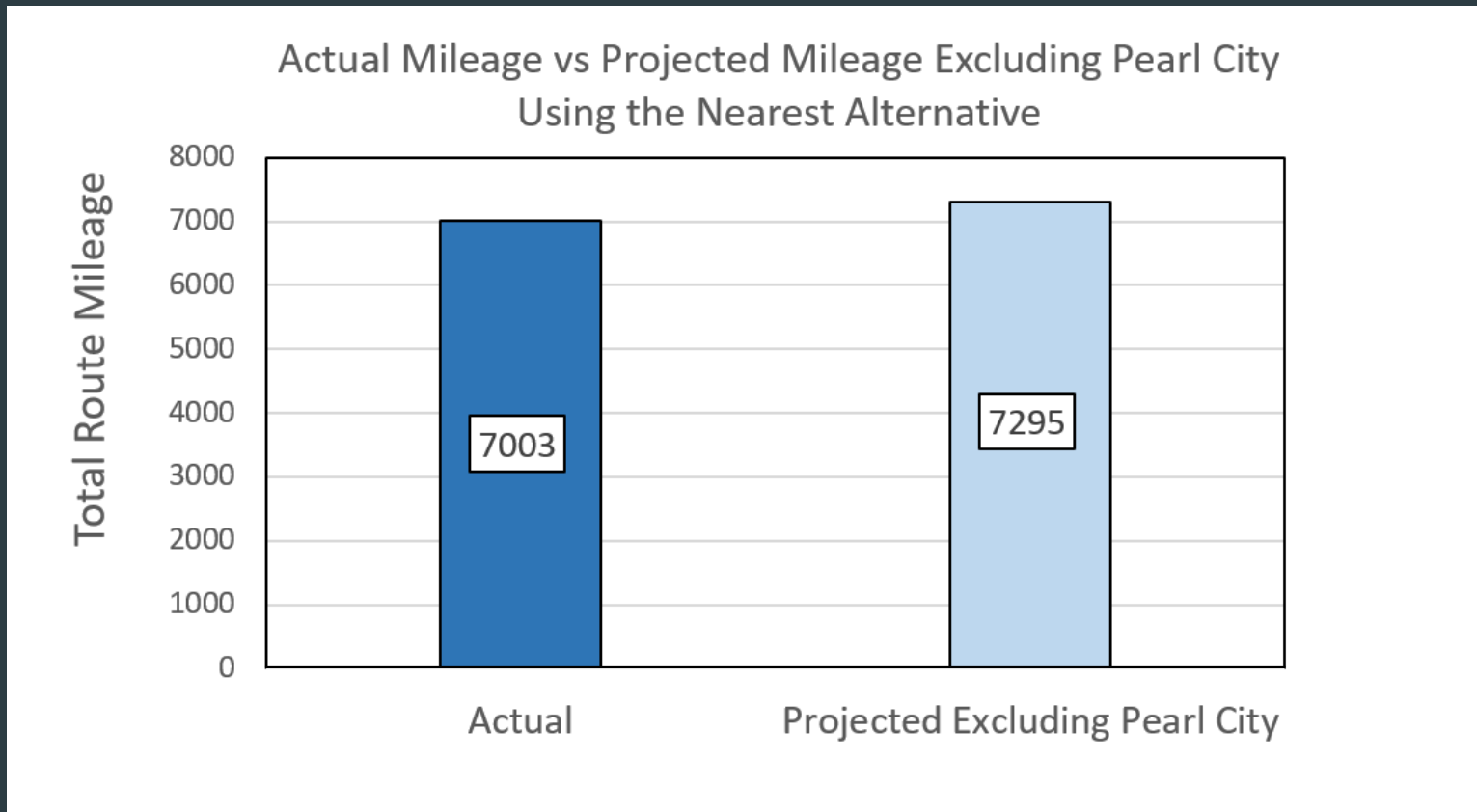
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Yearly Available
Discharge Events

2022 Events and Remaining Capacity



Mileage Impact Evaluation

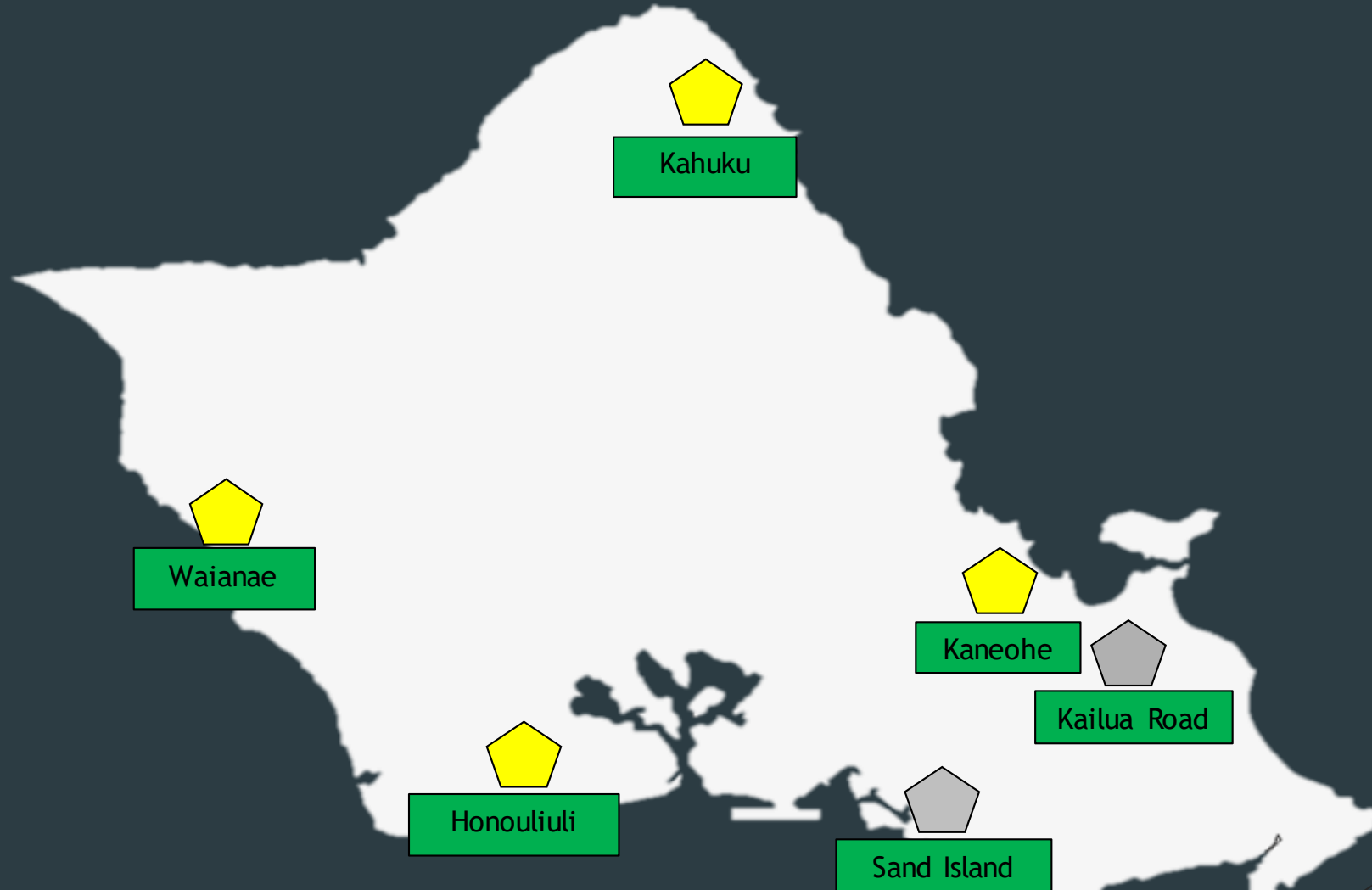


- Data obtained from two weeks of manifests
- Projected per trip mileage may increase from 0 to 48%.
- Overall mileage traveled is projected to increase by 4%

Evaluation Results

- ▶ Other discharge sites have a remaining capacity of to handle events diverted from Pearl City with additional remaining capacity
- ▶ Mileage effects vary per route, but overall mileage is projected to increase by a small percentage.
- ▶ Porta potty haulers have one less option if Pearl City closes, down to three.
- ▶ Two more options, Kailua Road and Sand Island, will reopen.

Adjusted Discharge Sites



- Kailua Road site anticipated to reopen by 08/01/2024
- New Sand Island site anticipated to reopen as soon as 12/31/2024

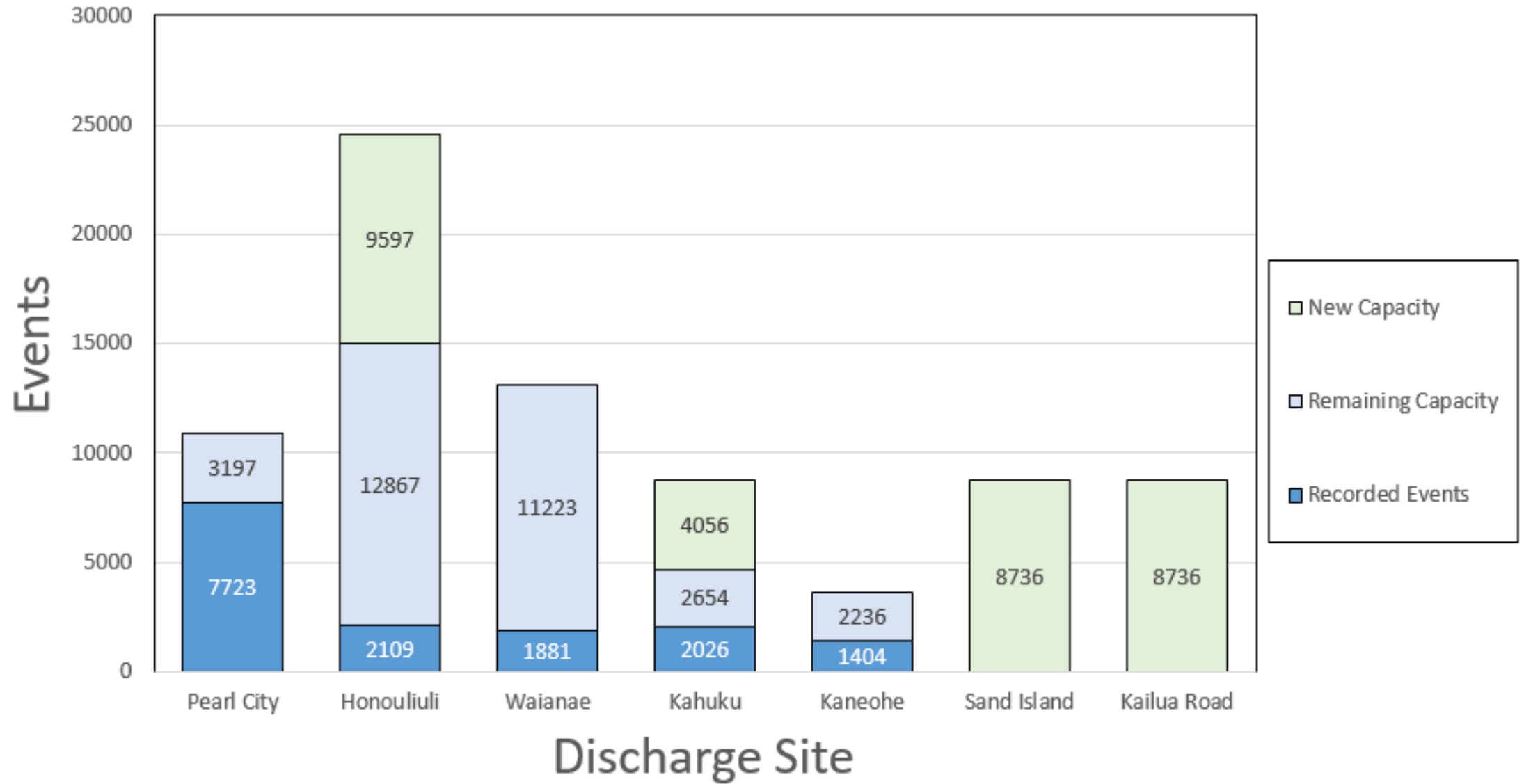
Discharge Site Options without PC

Discharge Sites	Type 1 Haulers (Without Porta Waste)	Type 1 Haulers (With Porta Waste)	Type 3 Haulers
Sand Island	X	X	X
Honouliuli	Y	Y	Y
Waianae	Y	Y	N
Kahuku	Y	N	N
Kaneohe	Y	Y	N
Kailua	X	X	X

Improved Discharge Site Options without PC

Discharge Sites	Type 1 Haulers (Without Porta Waste)	Type 1 Haulers (With Porta Waste)	Type 3 Haulers
Sand Island	Y	Y	Y
Honouliuli	Y	Y	Y
Waianae	Y	Y	N
Kahuku	Y	N	N
Kaneohe	Y	Y	N
Kailua	Y	Y	N

2022 Events and Adjusted Remaining Capacity



Conclusion

- ▶ The City's goal is to maintain the sewer system and the environment.
- ▶ The Pearl City discharge site has historically received odor and litter complaints from nearby residents.
- ▶ An unmonitored site is vulnerable to pollutants that could upset and interfere with the sewer system's integrity.
- ▶ Department of Health (DOH) is increasing oversight on septage receiving programs as well as unsupervised septage receiving facilities.
- ▶ The evaluation findings show that other discharge sites have the capacity to accommodate when Pearl City is closed.

Future Actions and Accommodations

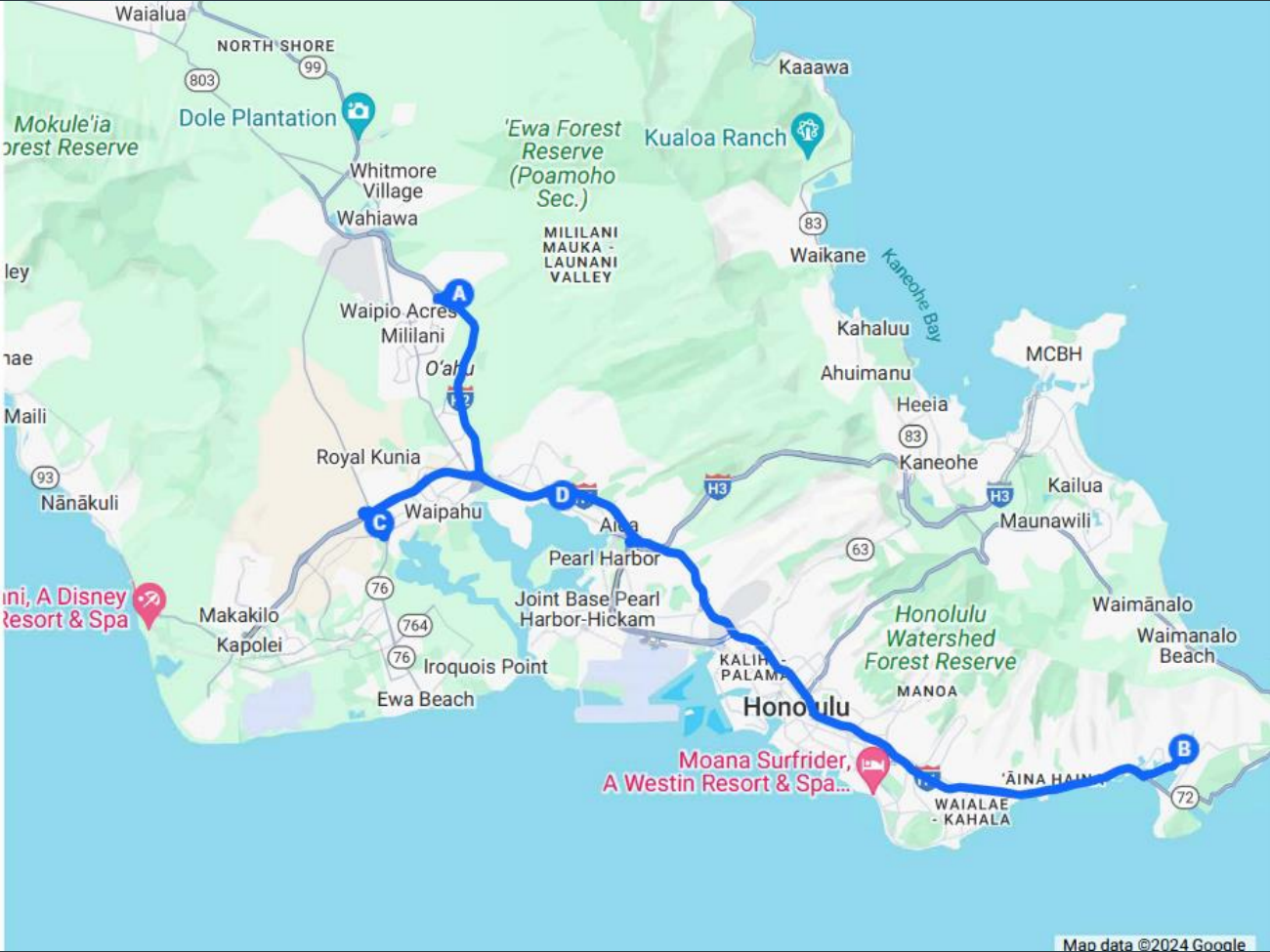
- ▶ The City anticipates closing the Pearl City septage receiving site by 8/1/2024.
- ▶ The City has extended hours, increased availability (including evening, weekends, and holidays), and acceptance of porta potty waste at the Honouliuli WWTP septage receiving station.
- ▶ The City is examining extending days/hours at Kahuku Septage Receiving Station
- ▶ Kailua Road Septage Receiving Station will reopen by 8/1/2024.
- ▶ Sand Island Septage Receiving Station will reopen as soon as 12/31/2024.
- ▶ The City will gather data and solicit feedback with a survey 90 days after closure of Pearl City Septage Receiving Station.

Questions?

Supplemental Slides

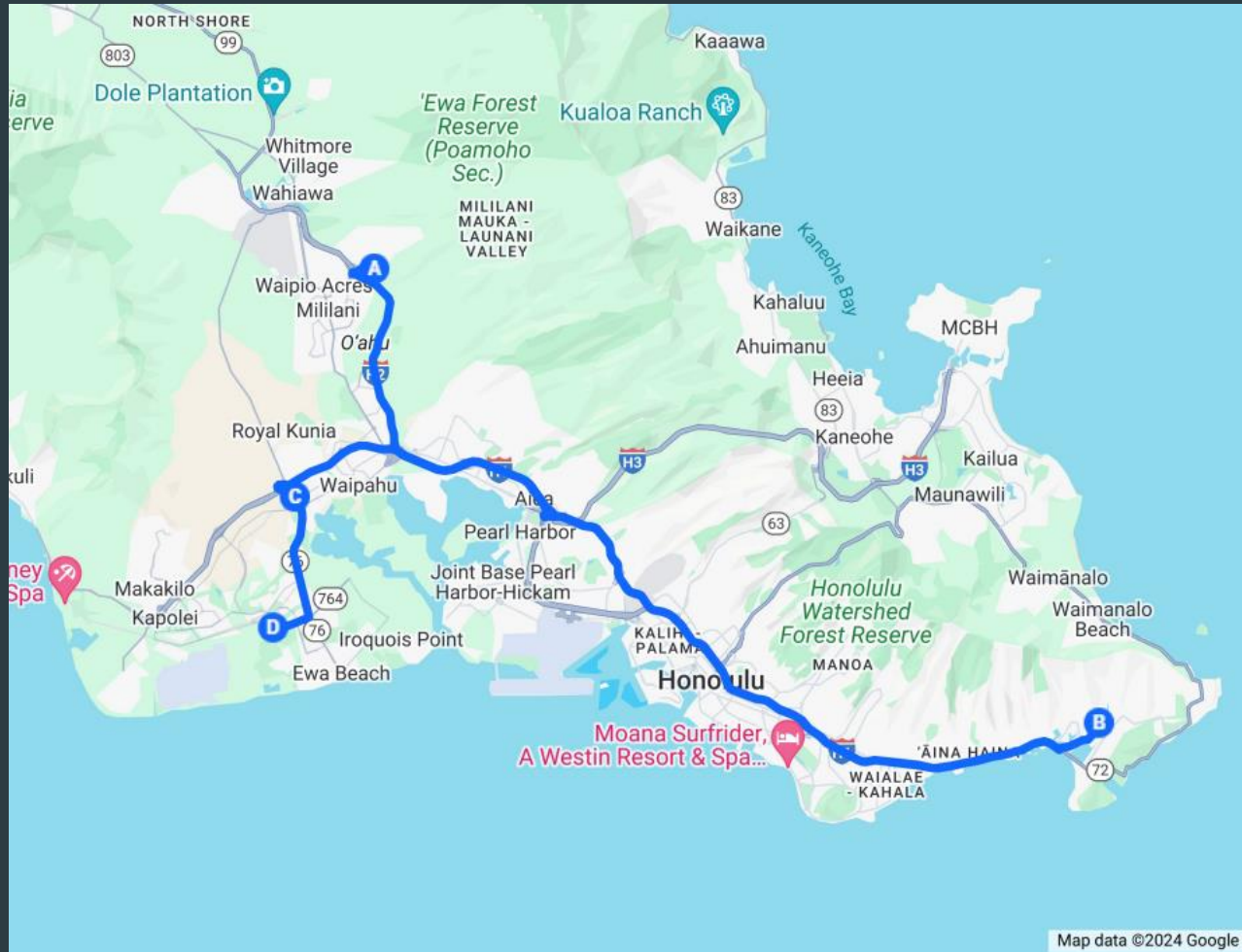
Pearl City Route

- Total miles = 63.2



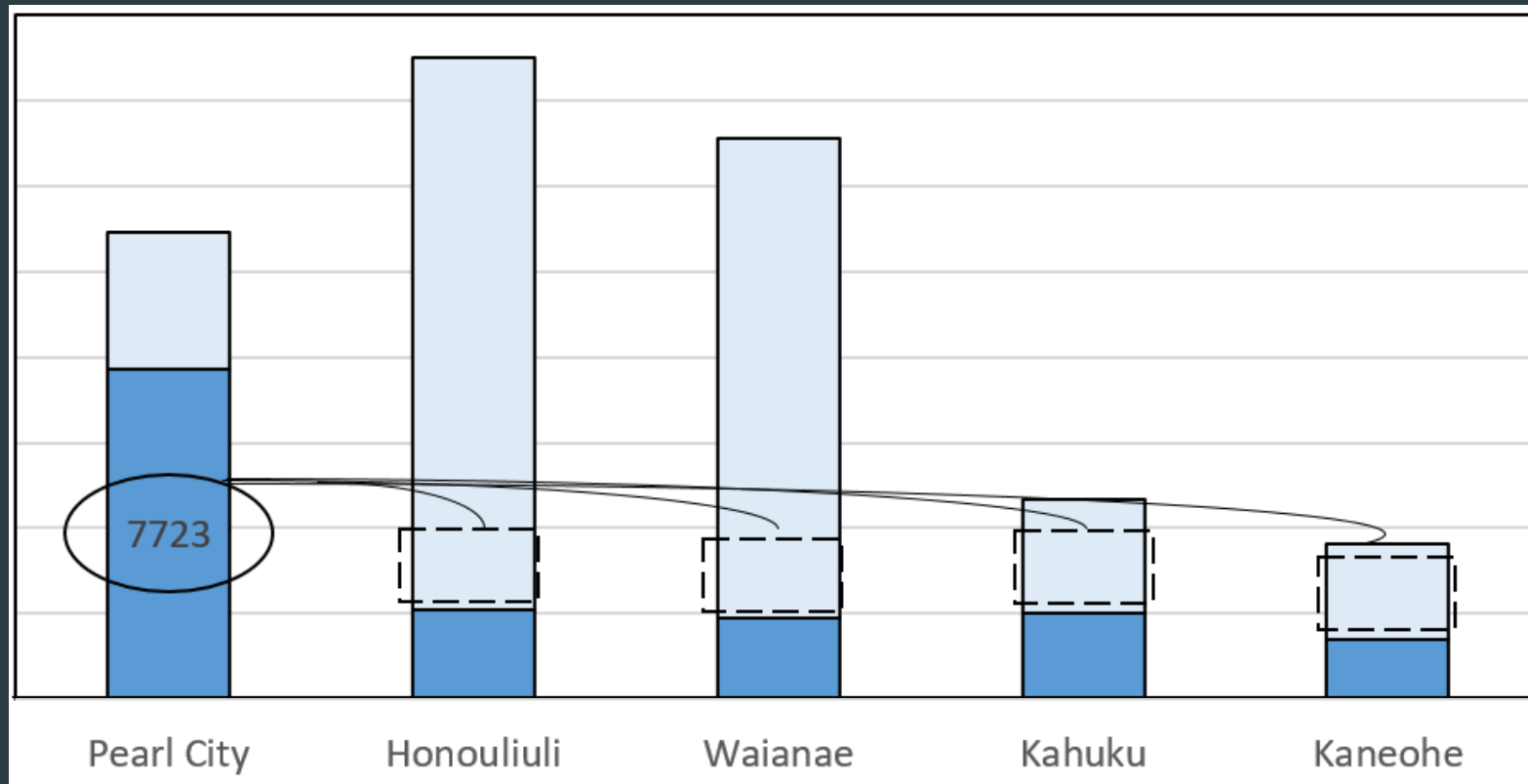
Nearest Alternative Route

- Total miles = 60.8



Direct Calculation

- ▶ Redistribution of 7,723 PC events is based on % contribution of 4 remaining sites
- ▶ % contribution calculation determined from each scenario variable



Make 7723,
circle, lines,
boxes all red

Direct Calculation Example: Hours of Operation

Scenario Variable

% distribution

PC loads

Redistributed events

Hours opened during the week	
Honouliuli	8
Waianae	12
Kahuku	6
Kaneohe	8
total	34



$$8/34 \approx 24\%$$



$$12/34 \approx 35\%$$



$$6/34 \approx 18\%$$



$$8/34 \approx 24\%$$

X

7,723



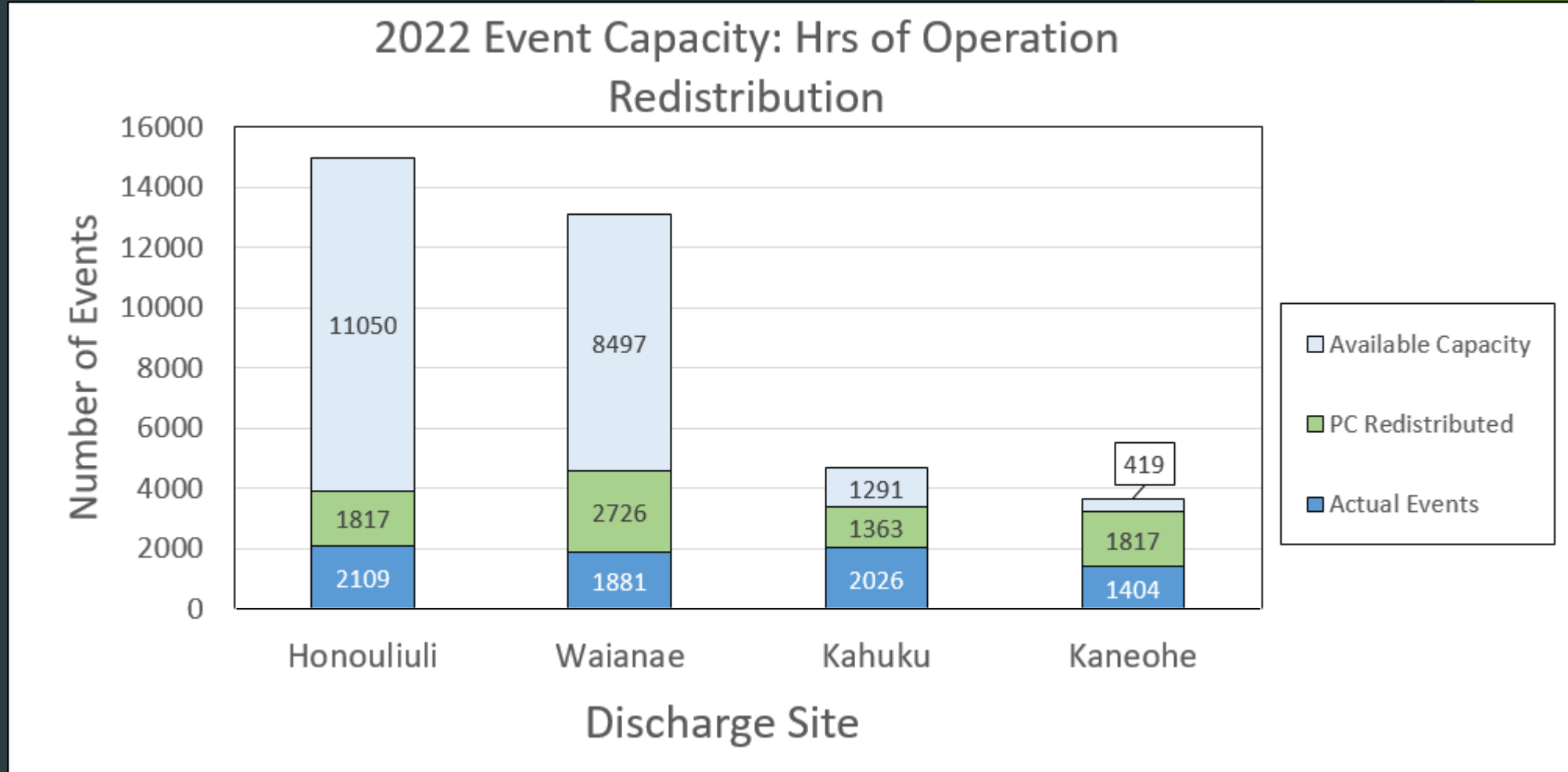
1817

2726

1363

1817

Direct Calculation Example: Redistribution Plot



Inverse Calculation

- ▶ Rank and distance are inversely proportional to expected events to be received per site
- ▶ Lower rank and lower distance = higher load yield
- ▶ Needed to create ratios for re-evaluating percent redistribution

Inverse Calculation: Example distance

Discharging Sites	Miles from PC Q
Pearl City Discharging Site (PC Q) 98 Kuleana Rd	0
Honouliuli 91-1000 Geiger Rd, Ewa beach	11.4
Waianae 86-100 Farrington Hwy	21.4
Kahuku 56-701 Kamehameha Hwy	34.4
Kaneohe 45-230 Kulauli st, Kaneohe	15.7

*Assuming closer distance means more discharges

*Take largest value (Kahuku), use ratio equation:

Ratio = $\frac{\text{max distance}}{\text{actual distance}}$, where max distance = 34.4 miles

$$\text{Honouliuli} = \frac{34.4}{11.4} \approx 3.0$$

$$\text{Waianae} = \frac{34.4}{21.4} \approx 1.6$$

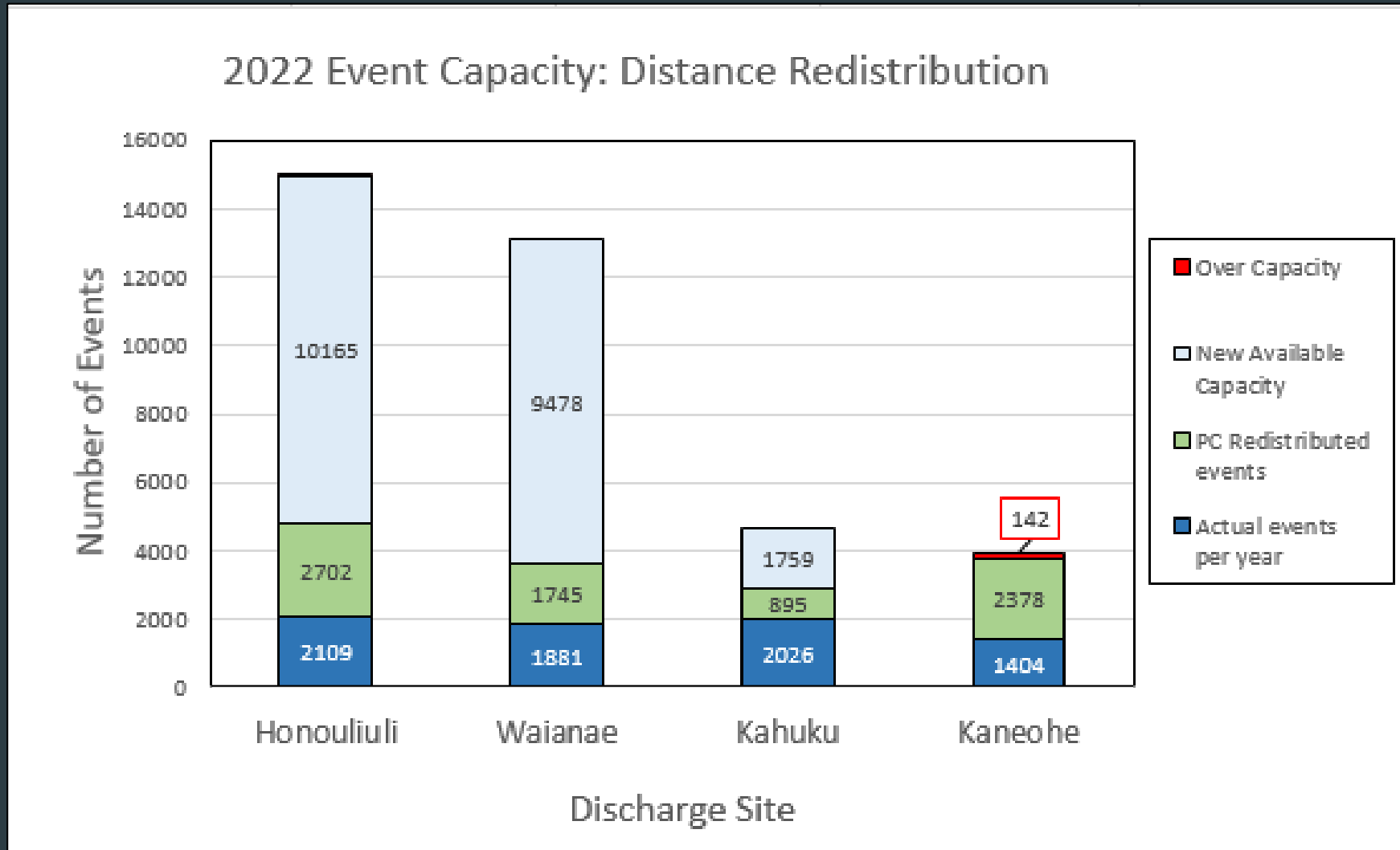
$$\text{Kahuku} = \frac{34.4}{34.4} = 1.0$$

$$\text{Kaneohe} = \frac{34.4}{15.7} \approx 2.2$$

- Kahuku, largest distance, now becomes smallest ratio.

- New Ratios are combined and divided into each site's ratio for % distribution

Inverse Calculation Example: Redistribution Plot



2022 Event Capacity: Distance Redistribution Using April Manifests

