



Ma'alaea Wastewater Reclamation System

Maui County Council CARE Committee

January 5, 2022

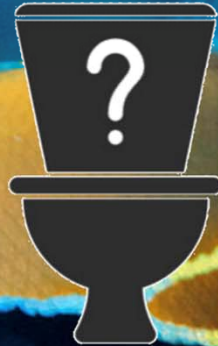
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FlushAware

Do you know what happens to the water that goes down the toilet?

[Learn about Water Waste in your area](#)

MA'ALAEA CONDO RESIDENT POLLUTION LOADING DATA

Percent reuse disposal	0
Percent injection disposal	100
Estimated average daily injection flow per resident (gal/day)	102
Estimated average yearly injection flow per resident (gal/year)	37,379
Average all condo total injection flow per day (gal/day)	88,685
Yearly injected Total Nitrogen and Phosphorus nutrient mass (lbs/year)	7,596
Yearly injected wastewater fecal <i>coliform</i> cell counts (MPN/year)	27,257,403,612

Ma'alaea Condo Residences	Average injected flow/day	injected TN concentration	injected TP concentration	Total injected nutrients / year
	(gallons/day)	(mg/L)	(mg/L)	lbs/year
Hono Kai	7,500	24.4	2.95	624
Island Sands	11,000	12.9	4.9	596
Ka Nai A Nalu	18,000	24.6	4.58	1,599
Lauloa	10,000	21.6	3.98	779
Ma'alaea Banyans	7,485	25.5	5.28	701
Ma'alaea Kai	6,500	11.9	1.82	271
Ma'alaea Mermaid	4,200	26.9	3.7	391
Ma'alaea Yacht	9,500	34.5	3.78	1,107
Makani A Kai	6,000	10.59	1.4	219
Milowai	8,500	40.8	9.75	1,308
TOTAL:	88,685			7,596

Ma'alaea Condo Residences		<i>injected coliform</i> cell counts (MPN/100mL)		<i>total inj. coliform</i> cell counts / resident (MPN/year)
Hono Kai	>=	1600	>=	2,263,903,954
Island Sands		2		2,829,880
Ka Nai A Nalu	<	2	<	2,829,880
Lauloa		17		24,053,980
Ma'alaea Banyans	<	20	<	28,298,799
Ma'alaea Kai		16000		22,639,039,544
Ma'alaea Mermaid	<	2	<	2,829,880
Ma'alaea Yacht		4		5,659,760
Makani A Kai	≧	1600	≧	2,263,903,954
Milowai		17		24,053,980
		TOTAL:		27,257,403,612



Maalaea
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Maalaea Small Boat Harbor

Maui Golf & Sports Park

Maui Ocean Center, The Aquarium of Hawaii

Calypso

Kanaio

Maalaea Banyans

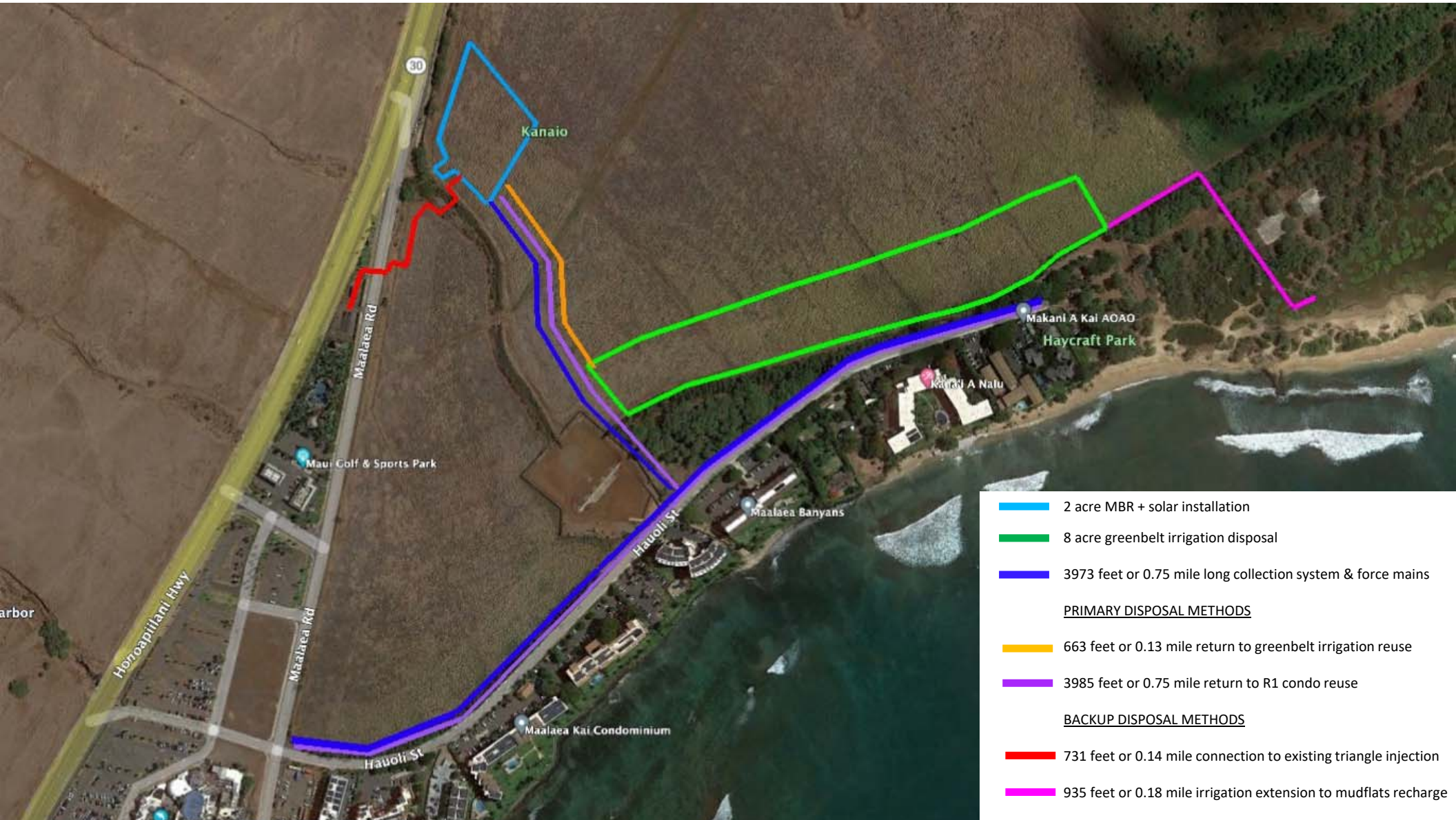
Kana'i A Nalu

Haycraft Park

MECO - Maalaea Generating Station

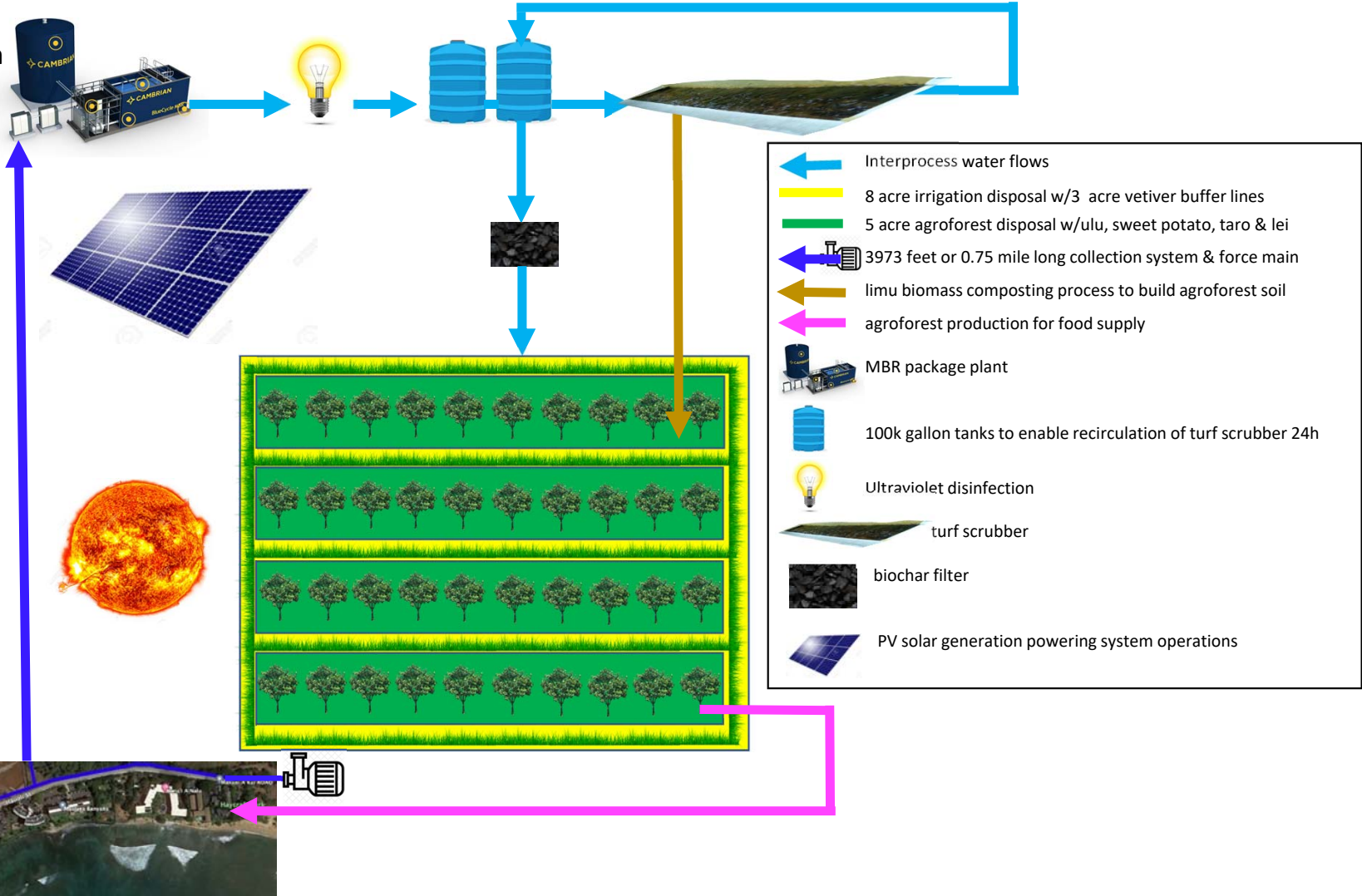
Palalau





- 2 acre MBR + solar installation
 - 8 acre greenbelt irrigation disposal
 - 3973 feet or 0.75 mile long collection system & force mains
- PRIMARY DISPOSAL METHODS
- 663 feet or 0.13 mile return to greenbelt irrigation reuse
 - 3985 feet or 0.75 mile return to R1 condo reuse
- BACKUP DISPOSAL METHODS
- 731 feet or 0.14 mile connection to existing triangle injection
 - 935 feet or 0.18 mile irrigation extension to mudflats recharge

Ma'alaea Reclamation System Flow Diagram



- Interprocess water flows
- 8 acre irrigation disposal w/3 acre vetiver buffer lines
- 5 acre agroforest disposal w/ulu, sweet potato, taro & lei
- 3973 feet or 0.75 mile long collection system & force main
- limu biomass composting process to build agroforest soil
- agroforestry production for food supply
- MBR package plant
- 100k gallon tanks to enable recirculation of turf scrubber 24h
- Ultraviolet disinfection
- turf scrubber
- biochar filter
- PV solar generation powering system operations





Ma'alaea Regional Wastewater Reclamation System
Pre-Preliminary Project Proposal Draft v23.0

January 4, 2022



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