



**\*ASSUMPTIONS:**

OCEAN VIEW WELL

2" water meters for water haulers  
5 water haulers

**WATER RATES**

Initial - 2" meter	360.00	2" meter
Monthly Installation	24.00	
Monthly Standby	65.00	
General Use/1,000 gals	\$	gallons
1	0.75	5000
2	1.55	5001-900,000
3	2.75	900,001-2,000,000
4	3.65	
Power cost/1,000 gals	1.41	

**WATER USE & REVENUES**

**SCENARIOS:**

**1) Current hauling from Naalehu**

Yearly use **31,000,000** gallons/year (Based on 2003 DWS Reports)  
 Month use 2,600,000 gallons/month  
 5 haulers each **520,000** gallons/month/hauler OR

**2) OV Population**

(Based on WMP Report, 2004)  
 Daily water use 3000 pn. X 40 GPD 120,000 GPD  
 Yearly water use 120,000 GPD X 365 days **43,800,000** gallons/year  
 Monthly water use 43,800,000/12 mo 3,650,000 gallons/month/hauler  
 5 haulers 3,650,000/5 monthly each @ **730,000** gallons/month/hauler

**SCENARIO 1**

**SCENARIO 2**

520,000 gals		730,000 gals	
<b>Monthly standby</b>	65.00	<b>Monthly standby</b>	65.00
5 haulers x 65.00	<b>325.00</b>	5 haulers x 65.00	<b>325.00</b>
<b>Monthly Installation</b>	24.00	<b>Monthly Installation</b>	24.00
5 haulers x 24.00	<b>120.00</b>	5 haulers x 24.00	<b>120.00</b>
<b>General Use (monthly)</b>		<b>General Use (monthly)</b>	
5,000 x 0.75	3.75	5,000 x 0.75	3.75
515,000 x 1.55	798.25	715,000 x 1.55	1,108.25
Total General Use	802.00	Total General Use	1,112.00
5 haulers x 771	<b>4,010.00</b>	5 haulers x 1,666	<b>5,560.00</b>
<b>Power</b>		<b>Power</b>	
520,000 x 1.41	733.20	720,000 x 1.41	1,015.20
5 haulers x 705	<b>3,666.00</b>	5 haulers x 1410	<b>5,076.00</b>
<b>Total Monthly Revenue</b>	<b>8,121.00</b>	<b>Total Monthly Revenue</b>	<b>11,081.00</b>
<b>Total Yearly Revenue</b>	<b>97,452.00</b>	<b>Total Yearly Revenue</b>	<b>132,972.00</b>
avab for OV O&M		avab for OV O&M	

1) \$98,000  
2) \$133,000  
**REVENUES**

**OPERATIONS & MAINTENANCE COST (YEARLY)**

Estimated O&M Rate (Based on WWS, Water Report for OV)  
 Power (JM-Rate - 20 hrs/1000gals)

	1.35
Operations	1.78
<b>Total O&amp;M Rate</b>	<b>3.13</b>

<b>Estimated O&amp;M Cost/Year</b>		
31,000,000 gals @ 3.13	<b>\$97,030.00</b>	43,800,000 gals @ 3.13 <b>\$137,094.00</b>

Estimated O&M Rate (Based DWS Water Rate Study, 2001) operations  
 Av. Power Cost 0.91 /1,000 gals 45%  
 Av. Operating Cost 1.11 /1,000 gals 55% operations  
 Total O&M 2.02 /1,000 gals

<b>Estimated O&amp;M Cost/Year</b>		
31,000,000 gals @ 2.02	<b>\$62,620.00</b>	43,800,000 gals @ 2.02 <b>\$88,476.00</b>

**COMPARE**

<b>SCENARIO 1</b>	\$98,000
	\$63-97,000
<b>SCENARIO 2</b>	\$133,000
	\$88-137,000

**COSTS**

OR

1) 63,000-97,000  
2) \$88,000-137,000

**Hookena Extension**

**HOOKENA EXTENSION**

**ASSUMPTIONS:**

capital cost \$5.1 mil  
 5/8" water meters for customers  
 20 year loan @ 5.5% interest  
 Water use =400 gpd/household  
 Scenario A - 100 customers (lots w/ hwy. frontage and exist. Buildings)  
 Scenario B - A + all 335 Kona Paradise lots  
 Average Household Size - 2.84

**WATER RATE**

5/8" meter			
1x Facility Charge		1,190.00	
Monthly Standby		12.00	
General Use/1,000 gals	\$		gallons
1		0.75	5000
2		1.55	5,001-15,000
3		2.75	15,001-40,000
4		3.65	>40,000
Power cost/1,000 gals		1.41	

**DAILY WATER USE**

<b>400 GPD/HSHLD</b>			
Gal/Hshld			
400	x 30 days	<b>12,000</b>	gal/mo/hshld

**MONTHLY HOUSEHOLD BILL**

<b>Household use = 12,000 gals</b>	
Monthly standby	12.00
<b>General Use (monthly)</b>	
5,000 x 0.75	3.75
7,000 x 1.55	10.85
<b>Power</b>	
12,000 x 1.41	16.92
<b>Household Monthly Bill</b>	<b>\$43.52</b>

**YEARLY WATER DEMAND**

<b>Scenario A: 100 hshlds</b>		<b>Scenario B: 435 hshlds</b>	
400 gpd x 100 hshlds	40,000	400 gpd x 435 hshlds	174,000
40,000 gpd x 365 days	<b>14,600,000</b>	174,000 gpd x 365 days	<b>63,510,000.00</b>

**WATER REVENUES**

**HOOKENA EXTENSION**

Scenario A: 100 hshlds			Scenario B: 435 hshlds		
Total Monthly Revenue			Total Monthly Revenue		
43.52 x 100 hshlds	4,352.00		43.52 x 435 hshlds	18,931.20	
Total Yearly Revenue			Total Yearly Revenue		
4,352.00 x 12 months	<b>\$52,224.00</b>		18,931.20 x 12 months	<b>\$227,174.40</b>	

**\$52,000**  
**\$227,000**  
REVENUES

**DEBT SERVICE**

Debt Service @ 5.5% on	\$100,000	\$688.00 /month	
		x 12 month	
		<b>\$8,256.00 /year</b>	
Capital Cost	\$5,100,000	\$8,256.00 /year	
		x 51.3 \$	
<b>YEARLY COST</b>		<b>\$423,532.80</b>	
		\$423,532.80 /year	
<b>TOTAL COST</b>		<b>\$8,470,656.00</b>	

**DEBT SERVICE**  
**\$424,000**

SCENARIO A  
\$52,000  
\$454,000  
SCENARIO B  
\$227,000  
\$552,000

COMPARE

**OPERATIONS & MAINTENANCE COST (YEARLY)**

Estimated O&M Rate (Based DWS Water Rate Study, 2001)			
Av. Power C	0.91 /1,000 gals	45%	12000000
Av. Operati	1.11 /1,000 gals	55%	144000000
<b>Total O&amp;M</b>	<b>2.02 /1,000 gals</b>		<b>\$290,880</b>

ADD

**\$454,000**  
**\$552,000**

\$714,880

Scenario 1-A: 100 hshlds			Scenario 1-B: 435 hshlds		
Yearly gal	x Cost/1,000 g	O & M	Yearly gal	x Cost/1,000 g	O & M
<b>14,600,000</b>	<b>2.02</b>	<b>29,492</b>	<b>63,510,000</b>	<b>2.02</b>	<b>128,290</b>

**\$30,000-**  
**\$128,000**  
O&M COSTS

**EITHER NEED MORE PEOPLE OR HIGHER RATES**

12,000 gal/mo/hshld	\$43.52 /month
Revenue/year/hshld	\$522.24 /year

**HOUSEHOLDS NEEDED TO COVER COSTS: 1057**

Undeveloped parcels =

**WATER RATE NEEDED TO COVER COSTS (W/ EXISTING CUSTOMERS)**

Scenario A: 100 hshlds			Scenario B: 435 hshlds		
Yearly Cost/Gallons Used=	Rate/1,000 gals		Yearly Cost/Gallons Used=	Rate/1,000 gals	
\$454,000	14,600,000	<b>\$31.53</b>	\$454,000	14,600,000	<b>\$7.25</b>
\$552,000	63,510,000	<b>\$38.33</b>	\$552,000	63,510,000	<b>\$8.81</b>