

SCENARIO #1

Objective One: Hatchery (Forest Service Land) August 2014

Objective Two: 10 Million eyed egg Chum Eggs

Objective Three: Pens in Place February 2015.

TOP PRIORTIES:

- Forest Service Land Permit (1-5 Years)
- Water Studies (6 months)
- Comprehensive Plan
- DNR water rights Stream collection sites, water pen sites (Temporary 30-60 days)
- DNR/Division of Land and Water (Not sure Yet)
- Hatchery Permit Site (Not Sure Yet)
- Startup Money
- Temporary Shelter, Incubation, gravity fed water distribution system (Middle Summer 2014)

SECONDARY PRIORTIES:

- Equipment: Truck, Boat and Feed.
- Personnel: Hatchery/Incubator employees

THIRD PRIORTIES:

- Fish Pens Construction: Fall 2014.
- Permanent Building no later than 2017

SCENARIO #2

Objective One: Hatchery Log Dump Site (Forest Service Land) August 2014

Objective Two: 3 Million eyed egg Chum Eggs (Source: SE or Prince William Sound)

Objective Three: Pens in Place Fall/Winter 2014.

TOP PRIORTIES:

- Land (Forest Service Permit) (1-5 years)
- Water Studies (6 months)
- Comprehensive Plan ()
- DNR Water Rights (Temporary Permit 30-60 days)
- DNR/Division of Land and Water ()
- Hatchery Permit Site (1-? Years)
- Startup Money
- Temporary Shelter, Incubators, Gravity fed water distribution system (middle of summer 2014)

SECONDARY PRIORTIES:

- Equipment: Truck, Boat and Feed.
- Personnel: Hatchery/Incubator employees,

THIRD PRIORTIES:

- Fish Pens Construction: Fall 2014.
- Permanent Building no later than summer of 2017.

SCENARIO #3

Objective One: Hatchery (Kwaan land) August 2014

Objective Two: 10-15 Million Chum eyed eggs (Possibility, DIPAC considering)

Objective Three: Pens in Place February 2015.

TOP PRIORTIES:

- Kwaan land (shorter process if they are interested 6 months to a year)
- Water Studies (6 months)
- Comprehensive Plan ()
- DNR water rights Stream collection sites, water pen sites (Temp 30-60)
- DNR/Division of Land and Water –Land and subsurface permit ()
- Hatchery Permit Site (1-? Years)
- Startup Money
- Retrofit existing structure (YKI cold storage) Incubators, gravity fed water distribution system (middle of summer 2014)

SECONDARY PRIORTIES:

- Equipment: Truck, Boat and Feed.
- Personnel: Hatchery/Incubator employees,

THIRD PRIORTIES:

- Fish Pens Construction: Fall 2014

SCENARIO 3
10,000,000 Million Eyed Egg SE Hatchery

Yakutat EYED EGG CHUM SE Hatchery	
Production & Value	
Eggs	43,500,000
ERR to Fry Survival	52.0%
Fry	40,000,000
Survival	2.5%
Adults	1,000,000
Brood	58,000
Harvest (after brood)	942,000
Age Wt	8.0
Price (CR or COM)	0.55
Value (CR or COM)	\$ 4,144,800
Cost	
# Fry	40,000,000
Rearing	\$ 0.007
Rest of Operations	\$ 0.007
Total Cost/Fry	\$ 0.014
Total Operations Cost	\$ 555,000
Benefit:Cost (Value : Operations Cost)	7.5
Start-up Cost Estimate	\$ 1,754,000

Adult Returns	
Brood required	58,000
Females required	19,773
Fecundity	2,200
Adult weight	8.0
Age	
Age Class	Percent
3	3.0%
4	60.0%
5	35.0%
6	1.0%
First BY	
	2014

Startup - SE Hatchery				
BY	Females	Fecundity	Eggs	Fry
2014	4,545	2,200	9,999,000	9,199,080
2015	4,545	2,200	9,999,000	9,199,080
2016	4,545	2,200	9,999,000	9,199,080
2017	4,545	2,200	9,999,000	9,199,080

YRAA
Broken Oar Performance

Release/ Return Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Release Site	Broken Oar	Broken Oar	Broken Oar	Broken Oar	Broken Oar	Broken Oar	Broken Oar	Broken Oar	Broken Oar	Broken Oar	Broken Oar	Broken Oar	Broken Oar
Green Eggs (Total)	9,999,000	9,999,000	9,999,000	9,999,000	9,999,000	9,999,000	9,999,000	9,999,000	9,999,000	9,999,000	9,999,000	9,999,000	9,999,000
# Fry	9,200,000	9,200,000	9,200,000	9,200,000	9,200,000	9,200,000	9,200,000	9,200,000	9,200,000	9,200,000	9,200,000	9,200,000	9,200,000
# Adults	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000
Broodstock Females	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Percent of return	29%	40%	25%	7%	5%	6%	6%	6%	6%	6%	6%	6%	6%

Harvest Value	Weight	Price	Value
Adult Harvest	5,000	87.000	435,000
Broodstock Females	2,000	19.773	39,546
Percent of return	29%	40%	25%

Project Cost - Operations	
Bearing	\$ 64,400
Other Operations	\$ 50,000
Total Operations	\$ 114,400

Project Cost - Start Up / Capital

Building	\$	30,000	\$	150,000
Incubators	\$	130,000	\$	920,000
Eyed Eggs	\$	180,000	\$	225,000
Net Pens	\$	45,000	\$	
Nets	\$	20,000	\$	
Boat	\$	50,000	\$	
Other	\$	459,000	\$	1,295,000
Total Capital	\$	459,000	\$	1,295,000

Benefit/Cost Analysis

Value - Oper-Cap	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Annual	\$ (573,400)	\$ (114,400)	\$ (92,400)	\$ (1,356,600)	\$ 348,000	\$ 458,000	\$ 2,943,000	\$ 3,919,800	\$ 3,588,600	\$ 3,589,800	\$ 3,589,800	\$ 3,589,800	\$ 3,589,800
Cumulative	\$ (573,400)	\$ (687,800)	\$ (780,200)	\$ (2,136,800)	\$ (1,788,800)	\$ (1,330,800)	\$ 1,613,000	\$ 5,532,800	\$ 9,131,400	\$ 12,721,200	\$ 16,311,000	\$ 19,900,800	\$ 23,490,600
Value - Oper Annual	\$ (114,400)	\$ (114,400)	\$ (92,400)	\$ (61,600)	\$ 348,000	\$ 458,000	\$ 2,943,000	\$ 3,919,800	\$ 3,588,600	\$ 3,589,800	\$ 3,589,800	\$ 3,589,800	\$ 3,589,800
Value - Oper Cumulative	\$ (114,400)	\$ (228,800)	\$ (321,200)	\$ (382,800)	\$ (34,800)	\$ 424,000	\$ 3,367,000	\$ 7,286,800	\$ 10,875,400	\$ 14,475,200	\$ 18,065,000	\$ 21,654,800	\$ 25,244,600
	1	2	3	4	5	6	7	8	9	10	11	12	13

SCENARIO #4

Objective One: Hatchery (Kwaan Land) YKI Cold Storage August 2014

Objective Two: 3 Million eyed egg Chum Eggs (Source: SE or Prince William Sound)

Objective Three: Pens in Place Fall 2014.

TOP PRIORTIES:

- Land (Yak-Tat Kwaan, Inc.) (Shorter process if they are interested)
- Water Studies (6 months)
- Comprehensive Plan ()
- DNR Water Rights (Temporary Permit 30-60 days)
- DNR/Division of Land and Water ()
- Hatchery Permit Site (1-? Years)
- Startup Money
- Retrofit existing structure (YKI Cold Storage), Incubators, gravity fed water distribution system (middle of summer 2014)

SECONDARY PRIORTIES:

- Equipment: Truck, Boat and Feed.
- Personnel: Hatchery/Incubator employees,

THIRD PRIORTIES:

- Fish Pens Construction: Fall 2014.

Project Cost - Start Up / Capital

Building	\$	22,000		\$	286,000
Incubators	\$	45,000			
Eyed Eggs	\$	30,000			
Net Pens	\$	4,000		\$	390,000
Nets	\$	20,000			52,000
Heat	\$	50,000			
Other	\$	173,000			
Total Capital	\$	173,000	\$	728,000	

Benefit/Cost Analysis

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Value - Oper-CIP													
Annual	\$ (240,600)	\$ (69,600)	\$ (65,200)	\$ (906,200)	\$ (218,200)	\$ (240,800)	\$ 1,079,000	\$ 2,657,600	\$ 3,391,800	\$ 3,585,400	\$ 3,589,800	\$ 3,589,800	\$ 3,589,800
Cumulative	\$ (240,600)	\$ (310,200)	\$ (375,400)	\$ (1,281,600)	\$ (1,499,800)	\$ (1,740,600)	\$ (667,600)	\$ 1,985,000	\$ 5,376,800	\$ 8,962,200	\$ 12,552,000	\$ 16,141,800	\$ 19,731,600
Value - Other													
Annual	\$ (69,600)	\$ (69,600)	\$ (65,200)	\$ (178,200)	\$ (218,200)	\$ (240,800)	\$ 1,079,000	\$ 2,657,600	\$ 3,391,800	\$ 3,585,400	\$ 3,589,800	\$ 3,589,800	\$ 3,589,800
Cumulative	\$ (69,600)	\$ (139,200)	\$ (204,400)	\$ (382,600)	\$ (600,800)	\$ (841,600)	\$ 231,400	\$ 2,884,000	\$ 6,275,800	\$ 9,861,200	\$ 13,451,000	\$ 17,040,800	\$ 20,630,600
	1	2	3	4	5	6	7	8	9	10	11	12	13

SCENARIO #6

Objective One: Hatchery (Kwaan Land) YKI Cold Storage Summer 2015

Objective Two: 3 Million eyed egg Chum Eggs (Source: SE or Prince William Sound)

Objective Three: Pens in Place February 2016.

TOP PRIORTIES:

- Land (Yak-Tat Kwaan, Inc.) (Shorter process if they are interested)
- Water Studies (6 months)
- Comprehensive Plan ()
- DNR Water Rights (Temporary Permit 30-60 days)
- DNR/Division of Land and Water ()
- Hatchery Permit Site (1-? Years)
- Startup Money

SECONDARY PRIORTIES:

- Equipment: Retrofit Existing Shelter, Incubators, Gravity fed water distribution system, Truck, Boat and Feed.
- Personnel: Hatchery/Incubator employees,

THIRD PRIORTIES:

- Fish Pens Construction: Fall 2016

SCENARIO 6 (start up 2015)
3,000,000 EYED EGG FROM SE HATCHERY

Yakutat EYED EGG CHUM SE Hatchery	
Production & Value	
Eggs	43,500,000
Eggs to fry Survival	92.0%
Fry	40,000,000
Survival	2.5%
Adults	1,000,000
Brood	58,000
Harvest (after brood)	942,000
Avg WT	8.0
Price (CR or CDM)	0.55
Value (CR or CDM)	\$ 4,144,800
Cost	
# Fry	40,000,000
Rearing	\$ 0.007
Rest of Operations	\$ 0.007
Total Cost/ Fry	\$ 0.014
Total Operations Cost	\$ 555,000
Benefit:Cost (Value : Operations Cost)	7.5
Start-up Cost Estimate	\$ 859,000

Adult Returns	
Brood required	58,000
Females required	19,773
Fecundity	2,200
Adult weight	8.0
Age	
Age Class:	Percent
3	3.0%
4	60.0%
5	36.0%
6	1.0%
First BY	2015

BY	Females		Fecundity		Eggs		Fry	
	2015	2016	2016	2017	2017	2018	2018	2019
2015	1,365	1,365	2,200	2,200	3,003,000	2,762,760		
2016	1,365	2,200	2,200	3,003,000	2,762,760			
2017	1,365	2,200	2,200	3,003,000	2,762,760			
2018	1,365	2,200	2,200	3,003,000	2,762,760			

Startup - SE Hatchery

YRAA
Broken Oar Performa

Release/ Return Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Release Site	Broken Oar	Broken Oar	Broken Oar	Broken Oar	Broken Oar	Broken Oar	Broken Oar	Broken Oar	Broken Oar	Broken Oar	Broken Oar	Broken Oar	Broken Oar
Green Eggs (Total)	3,003,000	3,003,000	3,003,000	27,203,000	38,500,000	43,500,000	43,500,000	43,500,000	43,500,000	43,500,000	43,500,000	43,500,000	43,500,000
# Fry	2,800,000	2,800,000	2,800,000	25,000,000	35,400,000	40,000,000	40,000,000	40,000,000	40,000,000	40,000,000	40,000,000	40,000,000	40,000,000
# Adults	2,000	2,000	2,000	44,000	69,000	87,000	428,000	787,000	955,000	999,000	1,000,000	1,000,000	1,000,000
Broodstock	1,000	1,000	1,000	22,000	35,000	44,000	58,000	58,000	58,000	58,000	58,000	58,000	58,000
Females	500	500	500	11,000	17,500	19,773	19,773	19,773	19,773	19,773	19,773	19,773	19,773
Percent of return	50%	50%	50%	50%	51%	51%	14%	7%	6%	6%	6%	6%	6%
Adult Harvest	1,000	1,000	1,000	22,000	34,000	43,000	370,000	739,000	897,000	941,000	942,000	942,000	942,000

Harvest Value

Project Cost - Operators

Weight	Price	Value	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
8.0	0.55	\$	19,600	19,600	19,600	175,000	247,800	280,000	280,000	280,000	280,000	280,000	280,000	280,000	280,000
8.0	0.55	\$	50,000	50,000	50,000	100,000	120,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000
8.0	4.400	\$	69,600	69,600	69,600	96,800	149,600	189,200	1,628,000	3,201,600	3,945,800	4,144,800	4,144,800	4,144,800	4,144,800
8.0	0.55	\$	19,600	19,600	19,600	175,000	247,800	280,000	280,000	280,000	280,000	280,000	280,000	280,000	280,000
8.0	0.55	\$	50,000	50,000	50,000	100,000	120,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000
8.0	4.400	\$	69,600	69,600	69,600	96,800	149,600	189,200	1,628,000	3,201,600	3,945,800	4,144,800	4,144,800	4,144,800	4,144,800
8.0	0.55	\$	19,600	19,600	19,600	175,000	247,800	280,000	280,000	280,000	280,000	280,000	280,000	280,000	280,000
8.0	0.55	\$	50,000	50,000	50,000	100,000	120,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000
8.0	4.400	\$	69,600	69,600	69,600	96,800	149,600	189,200	1,628,000	3,201,600	3,945,800	4,144,800	4,144,800	4,144,800	4,144,800
8.0	0.55	\$	19,600	19,600	19,600	175,000	247,800	280,000	280,000	280,000	280,000	280,000	280,000	280,000	280,000
8.0	0.55	\$	50,000	50,000	50,000	100,000	120,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000
8.0	4.400	\$	69,600	69,600	69,600	96,800	149,600	189,200	1,628,000	3,201,600	3,945,800	4,144,800	4,144,800	4,144,800	4,144,800

Project Cost - Start Up / Capital

Buildings	\$ 22,000	\$	\$ 286,000
Incubators	\$ 45,000		
Eyed Eggs	\$ 30,000	\$	\$ 390,000
Net Pens	\$ 4,000		\$ 52,000
Heat	\$ 20,000		
Other	\$ 50,000		
Total Capital	\$ 171,000	\$	\$ 728,000

Benefit/Cost Analysis

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Value - Oper-CIP	\$ (240,600)	\$ (69,600)	\$ (65,200)	\$ (906,200)	\$ (218,200)	\$ (240,800)	\$ 1,073,000	\$ 2,667,600	\$ 3,391,800	\$ 3,545,400	\$ 3,589,800	\$ 3,589,800	\$ 3,589,800
Annual	\$ (240,600)	\$ (310,200)	\$ (375,400)	\$ (1,281,600)	\$ (1,499,800)	\$ (1,700,000)	\$ (667,600)	\$ 1,985,000	\$ 3,376,800	\$ 6,952,200	\$ 12,557,000	\$ 16,141,800	\$ 19,731,600
Cumulative													
Value - Oper	\$ (69,600)	\$ (69,600)	\$ (65,200)	\$ (179,200)	\$ (218,200)	\$ (240,800)	\$ 1,073,000	\$ 2,651,600	\$ 3,391,800	\$ 3,545,400	\$ 3,589,800	\$ 3,589,800	\$ 3,589,800
Annual	\$ (69,600)	\$ (139,200)	\$ (204,400)	\$ (382,600)	\$ (600,800)	\$ (841,600)	\$ 231,400	\$ 2,084,000	\$ 6,275,800	\$ 9,861,200	\$ 13,451,000	\$ 17,040,800	\$ 20,630,600
Cumulative	1	2	3	4	5	6	7	8	9	10	11	12	13

SCENARIO #7

Objective One: Hatchery (Forest Service Land/YKI land at Log Dump Site) August 2015

Objective Two: 10 Million eyed egg Chum Eggs

Objective Three: Pens in Place Fall 2015.

TOP PRIORTIES:

- Forest Service Land Permit (1-5 Years) or Kwaan Land (Shorter process if they are interested)
- Water Studies (6 months)
- Comprehensive Plan
- DNR water rights Stream collection sites, water pen sites (Temporary 30-60 days)
- DNR/Division of Land and Water (Not sure Yet)
- Hatchery Permit Site (Very doable for 2015)
- Startup Money

SECONDARY PRIORTIES:

- Building, Incubators, gravity fed water distribution system (Middle Summer 2015)
- Equipment: Truck, Boat and Feed.
- Personnel: Hatchery/Incubator employees

THIRD PRIORTIES:

- Fish Pens Construction: Fall 2015.

Project Cost - Start Up / Capital

Building	\$ 1,000,000
Incubators	\$ 30,000
Eyed Eggs	\$ 130,000
Net Pens	\$ 184,000
Netts	\$ 45,000
Roost	\$ 20,000
Other	\$ 50,000
Total Capital	\$ 1,459,000

Benefit/Cost Analysis

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Value - Oper-CIP													
Annual	\$ (1,573,400)	\$ (114,400)	\$ (92,400)	\$ (1,356,600)	\$ 346,000	\$ 488,800	\$ 2,843,000	\$ 3,919,800	\$ 3,598,000	\$ 3,599,800	\$ 3,589,800	\$ 3,589,800	\$ 3,589,800
Cumulative	\$ (1,573,400)	\$ (1,687,800)	\$ (1,780,200)	\$ (3,136,800)	\$ (2,790,800)	\$ (2,302,000)	\$ (463,000)	\$ 4,532,800	\$ 8,131,400	\$ 11,731,200	\$ 15,311,000	\$ 18,900,800	\$ 22,490,600
Value - Oper													
Annual	\$ (114,400)	\$ (114,400)	\$ (92,400)	\$ (61,600)	\$ 348,000	\$ 488,800	\$ 2,843,000	\$ 3,919,800	\$ 3,598,000	\$ 3,599,800	\$ 3,589,800	\$ 3,589,800	\$ 3,589,800
Cumulative	\$ (114,400)	\$ (228,800)	\$ (321,200)	\$ (382,800)	\$ (34,800)	\$ 402,000	\$ 3,307,000	\$ 7,286,800	\$ 10,884,800	\$ 14,475,200	\$ 18,065,000	\$ 21,654,800	\$ 25,244,600
	1	2	3	4	5	6	7	8	9	10	11	12	13