

YAKUTAT REGIONAL AQUACULTURE ASSOCIATION

PROJECT DEVELOPMENT

FEBRUARY 2014

BOARD MEETING

WHICH SPECIES?

■ PINK

- 3 TO 5 YEARS TO FULLY DEVELOP
- SINGLE BROODYEAR RETURNS
- HIGHLY VARIABLE MARINE SURVIVAL AND RETURNS (1% - 5%)
- DEMANDS GREAT NUMBERS TO BE ECONOMICALLY VIABLE

PROS

QUICK RESULTS

CAN TEST HATCHERY VIABILITY/CULTURE PRACTICES

USE FOR COST RECOVERY

BUT, WOULD THERE BE PROCESSOR INTEREST FROM STEADY SUPPLY?

LOCAL BROODSTOCK POSSIBILITIES (MFA – HUMPBACK CREEK OR SITUK)

CONS

LIMITED COMMUNITY INTEREST

PROCESSOR INTEREST IN BUYING FROM

FISHERMEN

WHICH SPECIES?

■ CHUM

- 3 TO 5 YEARS TO FULLY DEVELOP
- MULTIPLE BROODYEAR RETURNS
- RETURNS LESS VARIABLE & MORE PREDICTABLE THAN PINK OR COHO
- GOOD TO EXCELLENT COST TO BENEFIT

PROS:

POSSIBLE BROODSTOCK SOURCE — DIPAC 10 MILLION EGGS
PROCESSOR INTEREST ACROSS STATE HIGH IN SPECIES
COMMUNITY INTEREST

CONS:

NO LOCAL BROODSTOCK SOURCE SO ? / SURVIVABILITY OF DIPAC BROODSTOCK — MIGHT TAKE 2 GENERATIONS TO
ESTABLISH THEMSELVES OR NOT AT ALL

WHICH SPECIES?

■ COHO

- MINIMUM 5 YEARS TO FULLY DEVELOP
- SINGLE BROODYEAR RETURNS
- HIGHLY VARIABLE MARINE SURVIVAL AND RETURNS
- LARGER, HIGHER VALUE ADULTS – MORE COMMUNITY INTEREST
- SMOLT SPECIES ≥ REQUIRES MORE AND LONGER REARING
- MORE COSTLY TO RAISE
- HARD TO MAKE COHO PROJECT SELF-SUSTAINING EVEN WITH COST RECOVERY
- DIFFERENT RELEASE STRATEGIES AVAILABLE
- HIGH WATER USE/DEMAND 10CFS TO RAISE 2 MILLION SMOLT

WHICH SPECIES?

■ SOCKEYE

- MINIMUM 5 YEARS TO FULLY DEVELOP
- MULTIPLE BROODYEAR RETURNS
- VARIABLE MARINE SURVIVAL AND RETURNS
- HIGHER VALUE ADULTS – MORE COMMUNITY INTEREST
- SMOLT SPECIES ≥ REQUIRES MORE AND LONGER REARING
- MORE COSTLY TO RAISE (STILL COSTLY BUT LESS IS UNFED FRY INTO LAKE)
- HARD TO MAKE PROJECT SELF-SUSTAINING EVEN WITH COST RECOVERY
- RISKY TO CULTURE DUE TO INH VIRUS
- ONLY TWO HATCHERIES SUCCESSFUL – MAIN BAY & GULKANA
- NEED TO HAVE SEPARATED FROM OTHER SPECIES IN ALL REARING STAGES
(ANOTHER BUILDING PREFERABLE AND AT MINIMUM SEPARATE ROOMS)

WHICH SPECIES?

■ CHINOOK

- MINIMUM 6 TO 8 YEARS TO FULLY DEVELOP
- MULTIPLE BROODYEAR RETURNS
- VARIABLE AND GENERALLY LOW MARINE SURVIVAL AND RETURNS
- LARGE, HIGHER VALUE ADULTS
- SMOLT SPECIES ≥ REQUIRES MORE AND LONGER REARING
- MUCH MORE COSTLY TO RAISE (MOST EXPENSIVE TO RAISE)
- HARD TO MAKE PROJECT SELF-SUSTAINING EVEN WITH COST RECOVERY
- HIGHLY SUSCEPTIBLE TO NATURALLY OCCURRING PATHOGENS

LOCATION – WHAT TO LOOK FOR & BEWARE OF

- **FRESHWATER FOR IMPRINTING**
- **TERMINAL AREA THAT LENDS ITSELF TO A “CLEAN UP” FISHERY**
- **PROXIMITY TO OTHER WILD STOCKS THAT COULD BE IMPACTED (BY STRAYING, OVER HARVEST OR ISSUES WITH WILD STOCKS)**
- **AFFECT ON REGIONAL FISHERIES, ESPECIALLY MIXED STOCK AREAS**
- **PROXIMITY TO A BROODSTOCK/INCUBATION FACILITY**
- **DISTANCE FROM ORIGINAL BROODSTOCK**
- **WATERSOURCE INTO HATCHERY THAT HAS NATURALLY OCCURRING SOCKEYE – WOULD NEED TO HAVE UV OR OZONE DISINFECTION FOR WATER SYSTEM – COST PROHIBITIVE IN YAKUTAT WITH ELECTRICITY COSTS (IHNV DISEASE ISSUES)**
- **PROXIMITY TO SALTWATER RELEASE SITE**

FACILITIES AND EQUIPMENT NECESSARY

- **HATCHERY CONSTRUCTION/MODIFICATION OF EXISTING BUILDING FOR INCUBATION AND REARING (EST. \$570,000.)**
- **INCUBATORS & RACEWAY (EST \$210,000.)**
- **HEAT PUMP FOR THERMAL MARKING (EST \$50,000.)**
- **NET PEN COMPLEX (EST \$110,000.)**
- **FISH FOOD STORAGE AND HOUSING FOR REMOTE RELEASE SITE (EST \$75,000.)**
- **ANCHORING SYSTEM (ABOVE IN NET PEN COMPLEX)**
- **TRANSPORT VESSEL**
- **REMOTE REARING SUPPORT (SKIFF, RADIOS, FEEDERS ETC.)**
- **FISH FOOD (9 MILLION CHUM FRY APPROX. \$40,000.)**

CONTAINER VAN INCUBATION FACILITY

- **A CONTAINER VAN COULD BE USED AS AN INCUBATION FACILITY**
IF ALL YOU ARE DOING IS HANDLING THE EYED EGGS TO RELEASE
 - **NEED WATER SOURCE, DON'T REALLY NEED ELECTRICITY**
 - **LIKELY WON'T MEET REQUIREMENTS THAT DIPAC LAID OUT**
- AS WANTING TO SEE FOR INFRASTRUCTURE** (a completed hatchery design that includes incubation, thermal marking capabilities, fish ladder, and broodstock and eggtake facilities sufficient to support a self-sustaining program.)
- **POSSIBLE TEMPORARY SITUATION WHILE FACILITY IS BEING BUILT AT LOCATION**

YKI BUILDING AS HATCHERY FACILITY

➤ WHAT DO WE KNOW

- ✓ YAK-TAT-KWAAN LAND OWNERS - SUB-LEASED TO YAKUTAT SEAFOODS
- ✓ AWC STREAMS IDENTIFIED IN IMMEDIATE AREA – UN-NAMED STREAM OFF MALLOT AVE & BAYVIEW FOR COHO AND ANKAU SALTCHUCKS FOR COHO AND SOCKEYE AND HARDY LAKE FOR SOCKEYE

➤ WHAT DO WE NEED TO KNOW

- ✓ WATER FLOW
- ✓ CAN WE NEGOTIATE A LONG-TERM LEASE
- ✓ WHAT IS THE CONDITION OF THE BUILDING AND WHAT WOULD IT TAKE TO MODIFY FOR OUR NEEDS
- ✓ WHERE WOULD YOU WANT THE REMOTE RELEASE SITE LOCATED AT?
- ✓ WHERE WOULD BROODSTOCK RELEASE BE? ARE THEY THE SAME?

➤ STEVE'S SITE VISIT COMMENTS FOR YKI:

- ✓ NEED PUMP TEST FOR WATER FLOW IN JAN/FEB WHEN FLOW WOULD BE LOWEST
- ✓ LOCATION CLOSE TO INFRASTRUCTURE,
- ✓ TWO POSSIBLE WATER SOURCES - WATER TOWER OR SMALL LAKES UPSLOPE
- ✓ LARGE WATER HOLDING TANK COULD BE USED TO BUFFER WATER DEFICITS

BROKEN OAR COVE – LOG TRANSFER FACILITY

HATCHERY SITE

- POTENTIAL WATER SOURCE
 - GRAVITY FEED LIKELY NOT ENOUGH FOR FULL STACK OF INCUBATORS (5)
 - HYDRO ENGINEERING NEEDED TO DETERMINE WATER VOLUME AT DIFFERENT

TIMES OF YEAR

- WOULD NEED TO BUILD A FACILITY FOR LONG TERM – WHO OWNS THE LAND? WATER

RIGHTS?

- ROAD ACCESS
- AWC – NO LISTED STREAM ENDING IN BROKEN OAR COVE OR LOG TRANSFER FACILITY
(<http://extra.sf.adfg.state.ak.us/FishResourceMonitor/?mode=awc>)

- MFA looked at Broken Oar Cove as a release site only – had concern about size of THA that could be developed and would it be large enough for expected effort and provide separation between wild and enhanced salmon. There is more concern of increased interception of wild sockeye stocks with a “summer chum”.

REDFIELD

- MFA looked at Redfield as a release site only – had concern about size of THA that could be developed and would it be large enough for expected effort and provide separation between wild and enhanced salmon. There is more concern of increased interception of wild sockeye stocks with a “summer chum”.



WEST HYDRANT

LITTLE DOCK SITE

look as alternate - cheaper if pumping water ^{to veg} - fill

city land
concrete ~~to~~

Where Bill Lucy ~~going~~ kept looking at