

From: Vercessi, Lorraine J (DFG)
To: seafa@gci.net
Subject: FW: Yakutat chum
Date: Monday, April 3, 2017 2:35:35 PM
Attachments: [MDSAdegenetNei198Pop93locilabeled.png](#)

Kathy.

Attached is a plot portraying the current regional relationship of chum salmon; by number, the 2014 Akwe collection (99), the 2000 fall chum Alsek collection (101), and the 2014 East Alsek collection (100).

The Gene Conservation Lab (GCL) staff characterize the Yakutat area chum stocks that have been sampled as "intermediate" between the SE and PWS chum stocks that they are comparing them to. I don't have the details about which stocks they are comparing, but we can get those details. Now that we have some results, we can take a look at the details.

There are some additional samples that haven't been run, and you can see the cost-benefit explanation below. We won't gain much by running the additional samples, at this time.

I know this doesn't precisely answer your question about what is the more appropriate brood source, DIPAC or PWS. But this is the big picture of chum stocks based on genetics sampling that was meant to answer the question of how "related" Yakutat stocks are to the other regions. We need to look further at spatial segregation (run timing) if the interest is in a summer run, and population estimates if the interest is in using local broodstock.

Hopefully this small component helps with your discussion today. My recommendation is to continue to proceed with program planning and permitting. Using the information that we have available, the department will need to determine the most appropriate broodstock for any proposed Yakutat fisheries enhancement.

Best,
LV

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From: Shedd, Kyle R (DFG)
Sent: Monday, April 03, 2017 1:46 PM
To: Vercessi, Lorraine J (DFG)
Cc: Gilk-Baumer, Sara E (DFG); Olive, Serena (DFG); Habicht, Chris (DFG); Templin, Bill D (DFG)
Subject: RE: Yakutat chum

Hi Lorraine,

Thanks. I took a look through the attached e-mail and the status of our chum baseline for the Yakutat area remains largely the same as this past June. The 2015 Akwe collection has not been genotyped, and while we received 13 samples from the Italo this past fall, that is not enough to properly estimate allele frequencies. While we do not think relationships would change, we will plan on genotyping the 2015 Akwe collection next time we have a chum project go through the lab. There just are not enough samples to economically justify a stand-alone project for the 2015 Akwe collection.

Location	Year	Samples	Genotyped	comments	Population #
Akwe River	2014	48	48	commercial	99
Akwe River	2015	55	0	commercial	
Alsek River	2000	97	97	Lower slough fall run	101
East Alsek River	2014	93	93	commercial	100
Situk River	2014	11	11	sampled at "buying barge" at mouth of Situk, could be a mixture	
Italo River	2016	13	0		

That being said, I've attached a multi-dimensional scaling plot showing how the 2014 Akwe collection (99), the 2000 fall chum Alsek collection (101), and the 2014 East Alsek collection (100) compare to other Gulf of Alaska chum populations. In short, as Sara said before, Yakutat populations appear intermediate between PWS and SEAK populations. Our recommendation remains the same, to use the largest local stock as broodstock.

Please let me know if you have any questions.

Cheers,
Kyle

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