# Get a glimpse of the 2006 Upper Yukon salmon run by reading:

### All 2006 Daily E Mail Update Comments

6/16/06 and 6/17/06

Most camps at Rapids open and ready for kings. 2 king nets in and some subsistence fishwheel effort as of 16th.

Video fish wheel project operational as of 16th.

Lots of Sheefish, Humpies, Broads and some Pike hanging around and being caught in whitefish nets in small eddies but none in wheels. Bering cisco migrating through and being caught in wheels.

Will have Lower River CPUE and Pilot count run timing comparisons as soon as those projects numbers are released.

Shutting down for 24 hrs for final tune up and repairs- resume Sunday using normal monitoring hours (9 am - 9 pm).



Stan Zuray

Picture - One of many in stream egg incubation box used on Tozitna River in 1970's and early 1980's. Used for 2000 - 8000 eggs at a time and taken out before ice breakup but after eggs hatched. Did not need upwelling gravel water to incubate eggs as it produced its own when faced into

#### current.

#### 6/18/06

- -Most camps at Rapids open and ready for kings. 3 king nets in and some subsistence fishwheel effort as of 16th.
- Will have Lower River CPUE and Pilot count run timing comparisons as soon as those projects numbers are released.
  - -Should be on 9-10 am to 9-10 pm video project schedule from now on.
  - -Water finally going up and some small drift coming.
- -Taking in season water temps this year (on ShortSum Worksheet). They are accurate only for the moment taken and the C and F don't always match as they are taken at different moments. The more accurate post season temp data loggers are also running.

Stan Zuray



Picture - Where we should be waiting for the kings to come.

6/19/06

-Water up a good bit with some drift. A couple of wheel killers (big green spruce trees) went by.

-Will be on day run only from now on. The big wheels used for kings at Rapids do not like being stopped by trees and each time much damage can happen. Smaller wheels handle that much easier and often can sustain no damage. This is why during king season wheel hours are daytime only. It is actually more work as the wheels must be raised out of the water each night and lowered the next morning.

Stan Zuray

Picture - Three wheels at Rapids so far in 20

#### 6/21/06

-Water up more but drift not increasing and even less. So all 3 wheels here ran all night - plus a few nets

All gear had king last night. 12 caught that I know of. Video wheel ran and had 2. All gear slowed a lot today with only 1 wheel catching 1 king. This is normal as kings are very pulsey. I hear all the time they are not but most fishers here think otherwise. What will be not normal is if we go a week before they start up again and we shall see.

Some years they build up fast like 2000 (ultimately a disaster year).

Some years they come on slower like 2003.

(1st couple of weeks - approx. / 24 hr CPUE): Stan Zuray

#### 2000 2003



Picture: fish going back in river after getting video recorded.

#### 6/22/06

- -Water up more but slowing and drift not to bad. So all 3 wheels here ran all night again plus a few nets
  - -All gear had king no king last night except video wheel had one 15 lb.
- -about mid afternoon a few started getting caught again in 1 net and 2 wheels but then everyone shut off for closure at 6 pm. Video wheel will run tonight to watch for fish but catch will not be included in CPUE as is the procedure. So pretty slow first week so far.
- -Students started data collection today. Stan Zuray

Picture: Tsood and Joe have 5 summers of data collection behind them and Joe has worked for USFWS Tagging project one year. Normal student data collection camp will not be happening this year but YRDFA has funded a small collection project with 2 students working at a time. These two and a few others will work. They make up to \$80 a day and supply their own boats, gas and supplies and work all day. Data includes Chinook weight, length, girth, sex, ICH disease rate, fin clip (genetics), scales, and a small amount of heart samples for ICH lab confirmation to test the students sampling. Summer / Fall chum arrival flesh sampling will finish off their season. Numerous special requests for small samplings are also being handled. All data work is done on subsistence fish.





6/23/06

-Water up slightly. So all 3 wheels here ran all night again - plus a few nets. Video wheel got hit and damaged at night some, but okay.

- had 2 video king at night. When numbers this low the 0 CPUE numbers in daytime don't show anything - like someone said 0 is not a number. Anyway until CPUE gets higher the best I can do is to report a couple caught here and there and general Rapids fishers

catch which is still REAL SLOW. Probably will not run tonight as to chancy with drift.
-thanks to whoever sent me the lower river data in the anonymous email - have graphs with run timing done for tomorrow.

Stan Zuray

Picture: Mouthwatering, fattening, king edibles



6/24/06

- -Water steady. Most gear picking up a little but still very slow. Should start picking up soon according to Preliminary Lower River Set Net CPUE given to me by the good little fairy. (see ChinLY06)
  - -More wheels and nets being put in water lately.
- -King size averaging large as it does each year for the first week to 10 days of the run. (see 2005 web site student reports for graphs of this).

Stan Zuray

Picture: 49.5 lb female taken in subsistence wheel today. Largest fish taken at Rapids in many years.

Note: I do this stuff in a hurry often and late and I know mistakes get made. Appreciate corrections or questions - thanks.

6/25/06

-All gear is up, somewhat similar to video wheel. First fish numbers over 1 or 2 a day and according to lower river data this should be increasing substantially in near future. Overall still slow for this far into run but then how far are we really into run. Fish look normal and size again is large which always is so at this part of the run. May get indication of where in run we are by when the average size starts to drop. Normally it seems the larger average size lasts a week to 10 days. Sort of similar to how we gauge the size of the "bright chum" run that usually lasts 1-2 weeks in fall time (only using flesh color instead of size).

-Student data projects weight, length, sex, etc info below in DataCollect. This worksheet will probably not be kept up with daily but as often as when students find time to transfer data.

-ChinPilot06 added for Pilot to Rapids run timing Stan Zuray

Picture: Happy is the Woman with lots of king.

6/26/06

-Closure now but increasing numbers of king look large and good on the video. Actually caught the first "jack", properly called

small Chinook, today. First real fish cutting should start Wednesday in Rapids. Most fishers are more than ready this year.

-Not an important thing too many persons but there is a hell of a bering cisco run going on also. Got data back to 2000 and these last 5 days got the past largest CPUE beat by a good margin.

Picture: Chum chasing cisco down video chute at 4 am, Sept 3, 2000



#### 6/27/06

-Getting questions about project numbers and efficiency:
So the high water level is very good for Chinook at video fishwheel site. Ten years of Tagging data shows it is for chum and I've messed with this spot since the late 70's and it clearly is for King also. Doing good discharge adjustments on king as we do with chum

are harder. I get enough complaints about the chum adjustments. Lets just say at this high water if I don't catch them they aren't here. We're starting to get them though. Some of the other wheels have problems at this water however as they actually lose some current and fish catching ability.

-cleaned up and changed some graphs - again sorry for little mistakes as I found some. Stan Zuray

Picture: Big wheel killer getting pulled out of way - Greenies like this will easily take out a wheel.

### EXTRA EXTRA just in: First two chums caught in a subsistence wheel tonight.



#### 6/28/06

- -Catches up. Enough fish to keep people busy now.
- -Water high but is often this way at this time of year. Small drift not to bad but big ones keep coming down.

-CC wheel, which is second wheel above video wheel, got hit by green spruce tree and the half inch main cable broke (hard to believe) and tree and wheel almost went into next wheel. Video wheel okay. Everyone getting some chum now (except CC).

Stan Zuray

Picture: Rapids canyon - narrow, island in mid river with relatively shallow water on both sides. No whitewater but current increases. Can canoe upstream on edges however which is why fish come out of channel and get caught in wheels and nets good here. Along edges it is no faster than many other places on Yukon. Rumors that fish have difficulty moving through Rapids I believe are false. In 1997 numbers of radio tagged fish were tracked in Rapids, some crossing and traveling in the fastest water and not using the edges of the river (hand held antennae used).



### 6/29/06

More "jacks" and quality down for last two days. This is normally one sign of the end of the first, larger fish "pulse" that comes every year. Another fisherman noticed the same and mentioned it too. In a few days we'll know for sure. Plenty of good quality (but averaging smaller) fish to come of course if this is so. If above is happening it would seem the 1st pulse, larger fish part of the run was weak through Rapids and that the early start date when we were getting just a few king a day was probably real just weak. Sounds like the rest of the run more than makes up for it numbers wise.

-new ChumPilot06 started and updated DataCollect Stan Zuray

Picture: YRDFA student data techs in rain today 6/30. After this camp it's off to others in their boat. Not much ICH data yet as many fishers still getting freezer fish while ICH disease low.



6/30/06

Because of rain and bad drying weather most people aren't cutting at all or as much. Lots of small fish now but numbers up as we approach the first big pulse. With weak first week and bad timing on weather / openings seems like fishers are behind on putting up fish. This

will probably change. Stan Zuray

Picture: Local fishers on commercial day lining up to sell catch (2005)





7/1/06

-Most Rapids gear has gone to running only part of day due to run buildup. King are very uniform in size. Just a little larger than a "jack". One after another all about the same size. Very few big king anymore - like 20-25 lb and larger say.

- Also kings are nice looking now but rather lean. This should show up on girth/weight measures the student techs are taking. Also have video files available. Last year we had a period past the half way point that had consistently thin ones also, but more so. This is all probably normal, I'm just pointing out characteristics of this part of the run.

-One of our Yukon Managers pointed out that this year may be similar to 2001 when we had a weak front on the run but extremely high daily catches and high subsistence take in river after that - if high CPUE at lower river keeps materializing upriver as it has begun to.

Stan Zuray

Picture: Torpedo Kings



7/2/06

-Except for 2001 largest king CPUE day since project start in 2000. Other fishers very impressed with amounts/hr in their gear. Some comments on thinner but nice looking fish as I reported yesterday. Also more comments on size uniformity. Very little fishing

going on as people are getting their king in short periods and pulling nets or stopping wheels. Closures are meaningless during times like this except they make persons deal with less fresh fish.

- -Cisco run has slowed but normally will come back strong again later.
- -More king measures in DataCollect and have a lot of ICH sampling that is done but not entered coming. ICH running low as normal this time of year but showing up.

Stan Zuray Picture: YRDFA 2006, Ruby. I like this picture



#### 7/3/06

- -Except for 2001 another large king CPUE day since project start in 2000.
- -Wait one more day or so but run timing on ChinLY06 and ChinPilot06 may indicate kings traveling slightly faster than the 18 days from mouth that graphs set for.
- -Into "jacks" or small Chinook (65.5 eye to tail) now. At around 25% it's not like some years where we get 50 70% days (like 2004). We shall see however lots of season left.
  - -Chum increasing little by little.

Stan Zuray

Picture: Pretty Athabascan woman cutting Chinook strips – 2006





### 7/4/06

- -Another large king CPUE day since project start in 2000.
- -8 hrs. of nighttime video run on July 5 show counts continuing at about 10/hr. No

firm evidence of going over peak of 1st pulse yet so travel time guesses on hold.

- -At 6 pm subsistence opening, wheel above video wheel (which usually has a catch rate well above video wheel) caught 35 kings in 1 hr by ADF&G count. All Rapids gear again is shut off after a few hours of fishing.
- -Apparently this first pulse was missed by many downriver fishers due to numbers of river and schedule conditions.
- -note on Rapids efficiency: while we are blessed with good fishing conditions the idea that this is a unique area for catching large amounts of fish is highly overrated. Much of that impression of recent years comes from the fact that this is one of the few sections of the river that has numbers of full time fishers left and the reporting that comes out of this area due to projects here. I know of numbers of wheel and net spots around Tanana, above Rapids, Rampart area and the Yukon bridge area that are equal to and some better than these. Point is, I think upriver should see some good fishing.

Stan Zuray

Picture: 1. the better halves on Fourth of July

2. Kevin and Adam with ADF&G explaining the value of TEK to management on a fourth of July visit to Rapids.



7/5/06

-King pulse 1 shows signs of the backside of the pulse - rising "jack" #s, some color. Still nice fish though.

-Chum numbers building and will start to be a factor in fishing in that if enough of them come it can shut down commercial

as it has done a number of times in the past. It has done the same to subsistence. last year was the first year in a long time that it happened but it was so late when it happened that the ICH in the kings made it almost time to stop anyways. With the large chum run things may get interesting in this regard but we should be able to handle the #'s of unwanted bum flesh summer chum we get in this 1st commercial opening however (dry dog food).

Stan Zuray

Picture: Rare two king in one basket going down video chute



7/6/06

-Cumulative and large/small Chinook graph started ChinSizing06.

-Commercial tonight at 6 PM. King still running heavy so fishers are coming up with a quota per license as otherwise just a couple of top fishers would swamp buyer.

-Nets are going to be hard to fish during

commercial because of chum. They have teeth up here and

so even large mesh nets get them easily. Fishwheel fishers are busy getting their kids or hired persons to stay on wheels with Rubbermaid totes to catch incoming chum and toss them back.

-Hard to say just what's happening with run timing on ChinLY06. Maybe close to 39 - 40 miles per day?

Stan Zuray

Picture: Why we don't like summer chum (left). Both put on drying rack same day and one month dry. Fall chum on right. 2005



7/7/06

All gear in Rapids took a dive. One wheel even shut off fishing was so poor. According to video files it happened just hours before commercial started. "Jack" numbers way up and few king of any size. That's fishing for you. Happens all the time. Hopefully it'll pick up if not it should by next opening. So much for needing a fisher's

quota. Look on the bright side - it's raining now. Poor kids on the wheels. Stan Zuray

Picture: Shawn and Amile before the night, fog, and rain, throwing back unwanted chum.



#### 7/8/06

- All gear in Rapids still down for 2nd commercial. Even the two big producing net eddies came up short so this must be the low between the two big pulses (1+2).
- Buyer got some fish though and they were good quality.
  - Water still high but dropping.
  - Because of most fishers catches being

unsuitable for the size, sex and weight sampling due to the throwing back of large numbers of small king, or being from large mesh nets the sample size was very small (60 king). Average weight was 10.4 pounds with the largest being 22 and 23 lbs.. Another upriver fisher doing all his fish had 10.8. This small sampling was still valuable as it is the only random fishwheel data that will be available on this commercial.

- Looks like the next openings may hit the start and front side of the 2nd pulse.

Stan Zuray

Picture: 6 pm this morning - commercial - few less boats than normal as some fishers pulled gear again.



better for now.

#### 7/9/06

- All gear in Rapids still down and slower at 6 pm closure.
- Still looks like the next pair of commercials may hit the start and front side of the 2nd pulse but need to start seeing some sign of fish today.
  - Adjusted ChinLY06 for 38 miles per day seems

Stan Zuray

Picture: untouched and as taken, honest - video wheel.

-SPECIAL REPORT: This morning's video showed rates up at over 6/hr (from 2) and some larger fish so things look on schedule for increasing for commercial. Hopefully



#### much easier.

#### 7/10/06

- Looks like we turned around and King are increasing. Should be a good commercial if it continues.
- Dave Daum (USFWS) here to work on a new light beam curtain to sense fish coming down chute. Will replace mechanical door and many moving parts if it works. Has been shop tested and will make installation on other wheels

Stan Zuray

Picture: New fish counting trainee for Rapids video camp.

7/11/06



- Pulse 2 little slow at building for most fishers. Also most reporting lower chum numbers and "jacks" during 7/12 commercial. Video counts tracking Pilot for beginning of pulse 2 - ChinPilot06 - stay tuned and we'll see what happens!
  - Buyer got some okay quality fish.
  - Installed light beam curtain on video chute and

initial testing looks very promising. Stan Zuray

Picture: Load of King, 2001



#### 7/12/06

- Last night's 2nd Pulse commercial very weak with buyer leaving area half full. Every fisher reporting very weak catches. Significant is range of gear and sites all reporting low catch rates. 3 fishwheels turned off deciding not even worth fishing daytime subsistence even though closure coming at 6 PM tonight. ChinLY06
- Temperature graph going again with water temp raising fast. DayTemp
- Water min/max discharge graph added. DayWater

Stan Zuray

Picture: Virgil, our fish buyer and Bill, his lawyer.



#### 7/13/06

- Getting lots of questions about king run. What is being called pulse two by Yukon managers is assessed by the Lower Yukon set net project at the mouth as an approx. 6 day very strong pulse - see ChinLY06. It is again assessed 100 plus miles upriver by Pilot Sonar after considerable commercial and subsistence fishing as a much weaker and narrower pulse with chopped off / out sections- see ChinPilot06. After 600 more

miles and more fishing pressure it is looked at by this video fishwheel project. Pulse 2, by this date, should be showing it's strength at Rapids, but has not materialized as yet. Normally on a strong pulse, like pulse 2 is suppose to be, we would be seeing a buildup in numbers, quality and lack of "jacks" in advance of the pulse. Presently we are about 5 days beyond the point just described with low catches; poor quality and high jack to large king ratios.

- Again the present water levels are good for fishing for most fishers gear and very good for the video fishwheel. All area gear nets and wheels are showing weak numbers.
- Upriver fishers should however see a strong run of medium sized king from pulse 1 as did Rapids.
  - "Jack" rates are very high last two days.
  - Morning king rates for today, 7/14, still running low.

Stan Zuray

Picture: 12 hour subsistence catch, 7/13/06

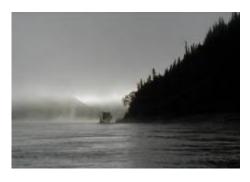


#### 7/14/06

- Small increase in king but most happened before commercial. This bump and one on July 10th (Chin Pilot06) could be what's left of pulse 2 after fishing pressure below or maybe it was never that big to start with. Possibly it has not come yet, but unlikely that pulse 2 is just late at this point as that would mean those kings traveling at about 30 miles a day if they come today.
- Anyway this last commercial had buyer hauling all fish caught. Total fish caught by net and wheel fishers was 210 and weighed 2606 lbs. That's a 12.4 lb king salmon average.
- YRDFA student data sampling of random sub sample (load bought by buyers included some sorted catches that left out small king) showed an 11.8 lb average with 12 % being females.
  - More summer chum was seen by all.

Stan Zuray

Picture: Last king commercial, This Morning - July 15, 2006



#### 7/15/06

- King bump of 7/10 apparently seen in Tanana also but little fishing there to get day to day view of things.
- Down from little bump of 7/14 and seems another little bump happening now on 7/16 but have whole day to go yet. As said before Chinook are off and on normally. At this point I'd say pulse 2 must have past Rapids as this series of weak mini pulses.
- On to pulse 3. Looks like a good one.
- No chum in spawning creeks around here yet but soon there should be many. Most of these going by now are headed more upriver.
- Subsistence is a little slow. Not at camps that have the big wheels like mine but the ones that rely on smaller, weaker net eddies and such. Usually we all share but lately been unable to take care of all the families. Things will work out I'm sure. Commercial is very important to buy gas etc. but now that it is over there will be more fish to cut.

Stan Zuray

Picture: Sorry, another fishwheel picture - heading up for morning turn on.







7/16/06

- King are starting to look like run has been here a while with more color and worn spots etc. Still some nice ones coming in. Third pulse should be here or soon or who knows I give up.
- Getting some increasing reports from fishers and student data showing ICH on rise. This is of course normal and will eventually make everyone stop fishing king when approximately half are not fit for putting up for people food.

Stan Zuray

Picture: 1. Told kids to cut 10 biggest king for cutting tomorrow. Four on right had ICH hearts so cut corners off tails to mark those fish to be put on special part of fish racks to be watched if flesh is not full of spores.

Picture: 2. Three had spores all through flesh so can not be used and will be dried for dog food.

Picture: 3. Spores in flesh.

Of note is that as usual (data each year also confirms this) the larger king (on right) always are the most likely to have the most advanced disease conditions.



#### 7/17/06

- Water steady, water temperature going down again cause of rain etc. New run of cisco starting up. No pulse 2 guesses today.

### Stan Zuray

Picture: This is one of two light beam arrays installed temporarily for testing on the present video wheel fish chute. We are running the current magnetic door switch system side by side with it. So far it has not missed a single fish in 6 days. If it proves itself in testing it will be used to "sense" the fish coming down the chute and relay a signal to a computer to "capture" fish pictures which are then converted into a movie format for counting at days end. This will simplify installing video on fishwheels greatly if it works.



#### 7/18/06

- Summer chums coming on strong, which nobody likes. Cisco run building more. Kings are poor quality must be in between pulses or something although this time of year because of all the slower injured, ICH, and weak fish from previous pulses it's impossible to get all good fish.
- Fishers thing I always hear "When lots of salmon in river cisco go away". Well over the years I got lots of data showing otherwise. Mentioned it to some and get the reply "well not in my wheel". Oh well.
- Best guess on king peaks at Rapids ChinPilot06
- Sorry on no update to King measures, ICH etc. Got tons of raw data and been able to do all special requests pretty much but no time at days end with the limited help project budget allows.

Stan Zuray

Picture: Nets almost impossible to run He's helping stay at wheel for kings, she owns spot and another fisher owns wheel. All working together. Happy days.



7/19/06

- Summer chums still coming on stronger. All gear showing declining king numbers. Many fishers saying run seems over with many lacking on subsistence needs being meet.
- Best guess on king peaks at Rapids ChinPilot06

Stan Zuray

Picture: Pups tearing down chum salmon dog food I put up for a quick meal. Rack will grow in size soon as fall chum come.



#### 7/20/06

- A lot of gear not running as king numbers so low and quality poor. Fishers continue saying run seems over and how short run was

this year. According to Pilot however may get one more small shot of fresh fish tomorrow or next day.

- Fish talk turns to fall chum more and more. Percent of red fleshed chum still show no sign of fall chum arrival. (Still early)
- Fall Chum arrival dates using traditional method (TEK) of observing flesh color changes done at Rapids project:

2000 - July 25

2001 - Aug 3

2002 - July 26

2003 - July 30

2004 - July 27

2005 - July 31

### Stan Zuray

Picture: Sam Eaton from National Public Radio (marketplace.org) visits Rapids Research Center for latest sounds from the fishwheel. Interested in some non controversial subjects like declining king size and Ichthyophonus. You know me, I didn't have anything to say.



#### 7/21/06

- Three wheels have stopped fishing king. Only two wheels left doing anything with one being mine and running anyway. Got holes to allow chum to escape - however rate of unusable king due to ICH and white flesh getting close to 50% (guess).

-YRDFA Student data project getting close to out of money but made it to end of king run. No more random samples anyway due to fishers releasing jacks and bum king as they sit on wheels releasing chum. Use last of budget for fall chum flesh study and raw data entry into excel. Feel bad we were not able to report accurate size, weight and ICH in season but had a full plate of data requests and our own yearly data needs and a fraction of the past resources.

#### Stan Zuray

Picture: Chum salmon steak (rotten crib fish) hung for marten bait. Dogs fueled by chum salmon day after day. About 20 miles north of Tanana heading to cabin 40 miles out. Just another season in my subsistence cycle of illegal activities. Oh I almost forgot, our boats are all illegal now too.

#### 7/22/06

- Will be looking regularly at chum flesh from now on for the unmistakable rise in the percent with red flesh. We use a color chart to help keep things somewhat consistent year to year. When the red rises to about 50% we start counting chum as fall chum.

1+2 = red

3+4 = pale

- Now that king season seems over (about a week early it seems) some fishers have mentioned the lower amount of Ichthyophonus except for this last part of the run. While we don't have a percent and male/female breakdown prepared yet I believe the data project will show low amounts also. Last year was lower also. Both last and this year had lower water temperatures also which is said to maybe go hand in hand with low ICH.

Stan Zuray

Picture: How'd that get there? Thought my counts were a little low that week. Need to check the wheel more often. Maybe that's why we didn't get much of pulse two. (Just joking)





#### 7/23/06

- Got fall chum graphs and discharge formula graphs set up. ChumPilot06. Using new formula which really does not change anything except allows it to be used in a broader discharge range. Changes to graphs such as ZRMC06 will be not detectable to the eye when I get around to updating past years with new formula.





Picture: Kids birthday and general get together which happens every year at Rapids between king and fall chum.



#### 7/24/06

-King season is basically over in Rapids. Talked to 8 camps that say they only got 1/3 to 1/2 the amount put up they normally do. Most describe reason being the poor start, early end and bulk of king hitting all at once in big first pulse.

-Fish wheel video project has a cumulative CPUE of 2700 Chinook which is good compared to the past 2000 to 2005 projects. The 1st pulse made up 67% of project cumulative. Separation of small and large king using video shows the largest percent of small king making up run since sizing started in 2002.

-YRDFA student data collection project has dissected 406 Chinook for Ichthyophonus disease and many more for length, weight, girth, sex, etc. The preliminary disease rate for the whole

season is just under 10% which is very low compared to similar 1999 to 2005 data which ranged from about 17% to 30%.

### Stan Zuray

Picture: Rampart Rapids Fall Chum Tagging Project ran from 1996 to 2005. Tevis Underwood (USFWS) with his crew in 2004 at one of two tagging wheels in Rapids. Project provided an abundance estimate of fall chum moving into the upper Yukon and good jobs for local residents.



7/25/06

- Sounds like fall chum may be awhile from listening to teleconference. Sometimes they sneak up the river however. Last year on one teleconference Kaltag, Tanana and Rampart all reported they

were waiting for fall chum to arrive and fishers around here had been in the thick of them for 2 weeks at that point with quality decreasing and the first bright fall run declining. Sneaky devils they are.

- Teleconferences like today and comments about all the fish the Canadians are maybe going to take make me embarrassed to be an American. Check your U.S. harvest numbers fishers! Stan Zuray

Picture: Probably not a summer chum - R1 chum salmon. Better than the average king salmon in my book. R1's are few in number however with most of the first fall chum more like # 2.





#### 7/26/06

- Getting a high percent of Pilot Sonars king from this last of the run. Much like pulse 1. In Tanana yesterday and saw some nice fish and numbers also.
  - Had fishers known about a small pulse

like yesterday some would have fished it but hard to predict and after this year and my reports of big pulses coming my fellow fishers will never believe me again anyway (kinda joking).

#### Stan Zuray

Picture: Each year after the run has pretty much ended some nice kings will continue to move through in lesser amounts each day. The size and condition of them is often surprising with the size often averaging much larger than the main run (ICH is the one thing however that is always worse in the late ones). Even in early August we'll see a few of these on certain days. Here are the nicer looking ones from yesterday's mini pulse. (Guess: 16 - 22 lbs as not fishing with video only running).



7/27/06

- Chums decreasing - be best for fishers if they did as the fall chums, when they come, will make up a larger % of the catch and people will have less poor quality fish to deal with as they put up the red fleshed ones for eating. Right now fishers would still probably

have to stay on their wheels and throw back the summer chum which is very wasteful of their time.

#### Stan Zuray

Picture: Remember the smoke last year - or should we even try. Fishwheel video lights would be on even into the daytime hours it got so dark.



7/28/06

- Fishers getting restless for cutting fish so three camps turned on one wheel and got enough dog food for days and a few nicer summer chum (probably) to try and cut. Consensus was no fall chum yet which is what red flesh rates say also.
  - Water level at mean level for first time this year.

### Stan Zuray

Picture: Old photo of heading over Ray Mountains to a hot springs with the fish burners. Kids are now some of the YRDFA techs working this summer at Rapids.



7/29/06

- Some years, I've been told, there were periods when the king and summer chum run went away (end of season) and the falls were not here yet and day to day dog food would actually be scarce. Not that

way yet but not much happening either.

Stan Zuray

Picture: When they get old we cut them up and send them off down river (the wheel, not Steve).

- Got this link by e mail and if I don't pass it on I'll go someplace bad when I die. So here goes:

http://www.TheDashMovie.com



7/30/06

- Be going to straight 24 hr counts - August 1st or when fall chum arrive. Right now still on 12-14 hr days. During king season we try to minimize the amount of king we put through the wheel and spring drift does not allow for unattended nightime wheel operation anyway

without courting disaster. Will get generator set up by wheel, and floodlights over video chute controlled by daylight sensors.

### Stan Zuray

Picture: I called it a beacon of hope in the night one time and my friends said it was more like, "a big mess of a perfectly good fishwheel". (Not 2006)



7/31/06

- 24 hour counts from now on. No more CPUE unless wheel needs to shut down for repairs etc. Night lights running.
- In a few days the pulse that went past Pilot Sonar from July 16th 20th will show itself at Rapids (ChumPilot06). Be interesting to see if it is composed of fall chum. People are waiting for them.

### Stan Zuray

Picture: My wife wanted to see a photo of Rock Island in Rapids. So I climbed a mountain through wet brush, stinging bees, and bears with my bad knee. Then hung on a cliff by one hand and took this picture - cause that's the kind of husband I am. The rainbow's for you babe.

Water is about average for this time of year. Between island and each bank water is very shallow (blue lines) except for a 100' deep hole by red arrow. Channel on right was only 23' deep this day. Video wheel below me - other wheels to right of island (by blue line).



8/1/06

- Getting questions about fall chum at Rapids now. Often a fisher will say there are a few nice ones or "it sure looks like a few falls to me". The fact is since the first time the summers showed up there were a few nice ones and after living 60 miles up a summer chum spawning stream for 11 years I can say there were a few nice ones even there also (red flesh and no tooth development). Until

the percent of red flesh chum rises beyond the 5-10% it has been at all summer I think the falls are still to come. Don't know where rumors otherwise came from.

- Check out Kocan and Hershberger's new report: Differences in Ichthyophonus prevalence and infection severity between upper Yukon River and Tanana River Chinook salmon, Journal of Fish Diseases 2006, 29, 497-503

PDF can be found at (first report on page):

http://www.rapidsresearch.com/html/ichthyophonus\_disease.html

### Stan Zuray

Picture: Tuesday night / Wednesday morning catch. Will cut for red flesh rate but look pretty much like summers still.

#### 8/2/06

- Red fleshed chum were 13.1% of 38 chum caught today which is higher but small sample sizes make % jump up and down slightly anyway (bum confidence). See tomorrow and beyond but today - no fall chum run yet.

- Testing of infrared light curtain, which hopefully will replace mechanical door assembly as a means of detecting fish passing down video chute, has been very positive with 100% of fish passing through beams detected so far. This will eliminate the present 5-8% error rate for small fish like cisco. Presently the error rate for larger fish is above 99% so no change will be seen there. As mentioned before this system will greatly simplify video installation on other wheels if it works out.

### Stan Zuray

Picture: New fish friendly video wheel baskets. Blue in chutes is 5/16" foam padding. Bed is small mesh vinyl coated wire. Sides will have seine webbing put on when wheel in water. About \$1500 in special materials alone. Old wheel will get cut up for firewood at seasons end and new one will get pulled out at Rapids, ready for next season.

#### 8/3/06

- Chum numbers up and red fleshed chum up to 32.4%. One more day about and it'll be official (when chum get to 50% red) and start counting all chum as fall chum. Right on schedule pretty much with the small pulse passing Pilot sonar on July 16 20.
- About noon today hourly chum catch rates went right up and have stayed up till end of day. Prior to that hourly catch rates were showing lower rates than yesterday. This first bunch of fall chum are always the best, they last about 1 2 weeks depending on strength of them and catch rates are usually not as strong as later fall chum pulses.
- Fishers in Rapids be cutting and large number of family from Tanana coming to cut also tomorrow.

#### Stan Zuray

Picture 1: 6 of the nice ones today.

Picture 2: Range of chum salmon flesh - although seen some whiter and some more red, but not in this sampling. Top two called reds and bottom two called pale.







8/4/06

- Chum numbers up more and red fleshed chum up to 55.6% so today is official fall chum arrival day at Rapids video. Fall chum counts start today.
- Fishers cutting chum now for people food. Next pulse will probably see dog food being put up in good amounts.
- AllYearsCum and ZRMC2 graphs set up which will track fall chum counts with other years and escapement projects
- Setting up discharge adjustments using last years formula. Will switch all years to new one that can be used at lower discharges later.
  - Bering cisco been increasing also.

Stan Zuray

Picture: Cliffs above video wheel spot. Just a cool picture. Don't slip.

#### 8/5/06

- More nice chum and fishers cutting, although at a much smaller scale than during king season. Just the die hard fishers now.



- Over 400 chum for the first bright chum pulse is a good number and it looks like it'll get higher. A real rough traditional index at my wheel spot (before all this insane counting and graphs started) is you like to see some 500/day days on the brights and for the larger later pulses some 1000/day days.

Stan Zuray

Picture: Just realized some people, probably more than I think, can't see ICH unless the spores are large. This one king was infected beyond whatever,

but today saw how some people are not be able to see it. That's why the students do so well - they got good eyes for in close. I can read good close also. Click on and drag in photo corner to reduce and you can see how the ICH disappears.



8/6/06

- Fall chum and cisco numbers up. This year the summer chum have dropped off nicely as the fall chum have taken over. This means fishers can cut nice fall fish for people food without having to take care of (cut for dog food) all these poorer quality summer chum as has

been the case the prior two years. Never expected it to be like it is this year with the huge run of summer chum, but then when is fishing ever predictable.

Stan Zuray

Picture: In memory of Susan Bucher - a dog picture



8/7/06

- Fall chum steady and cisco numbers up more.
- Got more data entered from the YRDFA student project here see KingData. Have almost 400 king entered up to July 5th which is roughly half the data. That takes us about half way through the 1st pulse. As you can see often there is one type of data or another that has to be not taken as all of it is done while fishers are cutting fish. We tried getting

everything one time and it took two separate pairs of workers that day.

Stan Zuray

Picture: With money we buy gas to fish and catch chum to feed dogs to run trap line and catch marten to sell for money. Smart huh!



8/8/06

- Upper subsistence wheel ran about 1hr and got 100 chum. Same hour video got 33. This is normal as upper does 2 1/2 to 3 times video usually, in this water. Otherwise not much gear in as all fishers are getting fish out of video wheel or upper wheel out of convenience.
- Infrared light curtain has not missed a fish that has gone through it in testing (over 8000 fish). While this is normal with present system for all

fish larger than cisco it is about a 5 - 8% improvement for the cisco.

Stan Zuray

Picture: It's a small world this narrow minded me lives in at present so you get another fish wheel picture. Video fish wheel at end of rainbow.



### 8/9/06

- Cisco numbers up more. These are good numbers compared with the past years.
- Chum getting a little more skin color to them but flesh is real nice on most. This is normal as we go to the backside of first pulse.
- Probably is enough fish for needs even during 10 day dead period coming up. However after this king season predicting has been shown to be a risky business.

Stan Zuray

Picture: Wolf trapping with fish burners.



### 8/10/06

- Cisco numbers up more. 285 in 24 hrs is the record since 2000 project start (set last year) today was 259. World renowned whitefish expert, Randy Brown, with Fairbanks USFWS will be coming out here to radio tag some of them for a study he's doing. He'll have lots to choose from.
- Probably another week or so putting up chum for people and it'll switch to a few real die hards putting up dry dog food.

Stan Zuray

Picture: Early trail breaking, except no snow to break. Coming from Ray Mountains on horizon back to Tanana. 2004



8/11/06

- Chum up a little. Same thing happening that does each year: During first pulse project was getting about 10 20% of Pilot passage. Now that we go into low period before 2nd pulse, project is getting 30 40%. I guess it's just the summer chum slowly going away as a % of the catch but have wondered if something else is in play also.
  - Cumulative starting to rise to about average.

Stan Zuray

Picture: Being a good son in law on a spring picnic to the Tozitna River.



#### 8/12/06

- Chum steady as she goes and cisco down a little . Cutting has slowed because of weather, with fishers saying they need sun or people edibles will become dry fish for dogs. I'm in same boat.
- Been kinda average lately no run failures or missing pulses and stuff like that.

Oh well, this too will pass.

Stan Zuray

Picture: Randy and Bill, Fairbanks USFWS doing surgical implants of radio tags on sleeping humpback. An amazing amount of info can be found out doing this to minimal amounts of fish.

Fish will live for years after this. Like I said Randy will be out here doing it to cisco soon. I believe this was Bill's project.

#### 8/13/06

- Chum steady and cisco down a more.
- Chum numbers seem to be tracking good now next pulse will probably see some pretty high numbers up here. Cumulative will climb up to be with the better runs then maybe.
  - Seem, probably and maybe important words when discussing fish. Stan Zuray



Picture: YRDFA poster boy Steve O'Brien being first to put together his DEC approved fish processing plant. There are 5 of them going to be built in the Tanana/Rapids area courtesy of YRDFA. Currently fishers are waiting for \$200 permit fee and complicated paperwork to go away before they figure it will be profitable or worth the effort to fish commercially. This is the third season the sale of chum roe (which is basically the entire fall chum

commercial in this area) will not happen due to unreasonable state DEC regulation. Isn't it good we didn't cut Steve up and send him down river!

#### 8/14/06

- Front runners of pulse 2 Chum may be arriving already. Some stand out fish as far as silver color, and numbers up noticeably. Larger pulses such as 2 will normally have enough stronger swimmers that it effects the catch rates days in advance here 700 miles upriver. Last years big record pulse (ChumPilot05) had so many front runners they completely eliminated the very low days between it and the pulse before it, at Rapids.

- 2006 USGS water data (which I use for chum passage guess) has been revised a bit and estimate has gone up because of it (just barely noticeable).

Stan Zuray

Note: not kidding

Picture: Now that we have our DEC approved fish shacks we are thinking of a new market for Chinook salmon. It's a think ahead project with the Kings getting smaller and all in mind. The two on crackers had Ichthyophonus.

Note: only kidding



#### 8/15/06

- 2nd pulse continuing to build from all the faster moving chum arriving early. Aug. 16th chum increasing more so far. Stan Zuray

Picture: Paul bringing my north bank fall chum tagging wheel to live in Tanana with Pat. No more tag project so no need for wheel.

Although pretty new it's built for north side so can not take the place of the new wheel I'm building for south bank video project. Pat really owes me a lot for this one.





#### 8/16/06

- 2nd chum pulse is fully here. Numbers way up and increasing hourly as day goes on.
  - Cisco numbers down.
- Bill and Adam here from ADF&G spying on I mean checking out the inner

workings of Rapids Research Center. Stan Zuray

Picture: New homemade winch pulling fishwheel up river bank. 12 HP engine and much gear reduction and up it comes. 1/2" cable so tight you can walk on it. (today)

#### 8/17/06

- Chum numbers must be thinking of peaking. Should be a fair number of high days left to pulse however according to Pilot Sonar.
- Fall Chum Cumulative getting ready to break away from the poorer runs and show itself for what it is (AllYearsCum06). All sorts of exciting things going on here.
- Bad weather is definitely putting a pinch on dry people fish being made and even now fishers ready but not wanting to put up dry dog food. Stan Zuray

Picture: YRDFA data project, (clockwise):

- 1. Tsood and his PCR sample kit.
- 2. Joe, Kathleen, Tsood and "record" 49.5 lb king.
- 3. Kate keeping out of rain.









4. Who needs rain gear when you're young?



#### 8/18/06

- Chum numbers not peaking yet as still going up.
- Rain is making ground unstable above fishwheel site. When it's like this slides can happen. A large one came down behind wheel one year. Before my days here an entire dog yard was covered just up from my camp 1/4 mile (with dogs).

### Stan Zuray

Picture: About 35 miles north of Tanana heading out to shut down trapline. Some places we run out of snow and have to go off trail from patch to snow patch. Dogs do it on their own kind of, as they recognize it's harder pulling on the bare ground.



#### 8/19/06

- Chum numbers still going up. So much for pulse peaking predicted a few days ago.
- Dry dog food starting to be put up. Only 4 fishers actively cutting fish left in Rapids. Some more camps still open but no cutting.
- Added about 275 lines of king data to YRDFA project spreadsheet (KingData). Complete to mid July now and have some more to go

when time permits.

Stan Zuray

Picture: One of 14 pictures taken of these chum going down video chute. Get lots of triples in the wheel baskets but it's not easy to get them all in the video chute at same time.



#### 8/20/06

- Water temp going down, Water level up every day now (as long as drift does not hit wheel only effect is wheel gets more efficient)
- While some chum are beautiful red flesh etc. for cutting, they are getting to be a smaller % of the catch. Fishers are putting up dry dog food despite the rain now.
- Added about 275 lines of king data to YRDFA project spreadsheet (KingData).

#### Stan Zuray

Picture: Kathleen (my better half) netting chum for the last of our people fish with the lower quality ones to be cut for dog food. See chum coming through video door at same time. After we got these fish the rear of the livebox was opened and all the rest of the day's fish go right out and back to the river



#### 8/21/06

- Chum pulse 2 numbers are declining but still high.
- Sheefish may be starting to run it's about that time of year.
- Water on the rise each day.

### Stan Zuray

Picture: Dogs breaking new trail. Team tired enough don't even need to put in the snow hook with a 15 dog team. Front dogs have it the hardest and need to lay down the first tracks, sometimes up to their chests in snow, and often don't do much pulling. Towards the rear dogs got a packed high trail and better pull hard or else I'll say nasty things to them.

Project Jukebox (Univ. of Alaska project): Below is a great website with interviews etc, of interesting Tanana elders. Go to homepage for similar projects all over Alaska.

(copy and paste below in address bar:)

http://uaf-db.uaf.edu/jukebox/PJWeb/progusetan.htm



#### 8/22/06

- Okay water can stop rising and rain stop falling.
- Spent all day moving stuff up bank and wheel in twice and drift out of wheel and removed all paddle boards from wheel to slow it down. And fell in river. And it's raining now.
- On the bright side Fred is going to 7 days a week (only kidding on last thing there, but he might).
- Check out DayWater graph.

Stan Zuray

Picture: Where we all should be waiting out the rain. Hell lets just say the heck with all this fishy wet crap and move there. (Hawaii)

#### 8/23/06

- Water up again, see (DayWater)
- High water definitely causing higher catches but to what extent? Rapids not matching Pilot at moment even when ZRMC2 water adjuster applied. Will not be first time, but could be the result of so many high count days in a row at Pilot (see similar on backside of big 2005 pulse (ChumPilot05). Things will settle down when water does at least we're running.

Stan Zuray

Pictures: starting to and whitefish soon. 11/2 (G





Sheefish are run, Broad Humpback

#### Clockwise:

- 1. Sheefish
- 2. Sucker and Chum
- 3. Sheefish
- 4. Humpback whitefish



#### 8/24/06

- Water up again, highest it's ever been (this time of year) since from 1996 to present, see (DayWater)
- Adjusted chum numbers going down and will probably continue down as the effects of all the big count days at Pilot 18 days ago go away.

Unadjusted numbers still climbing as water gets faster and higher and pushes chum closer to bank and wheel.

- Fishwheel spare pole starting to climb hillside - today it got chainsawed shorter to move wheel in (8/25).

Stan Zuray

#### Pictures:

- Fish racks going up to top bank little by little. Before water rise started I was saying to myself I should move racks closer to water so I wouldn't have to walk so far to hang fish. It's raining now again.



#### 8/25/06

- Correction yesterday should have said and same applies today:
- Water up again, highest it's ever been (at this time of year) from 1996 to present, see (DayWater)
- Few big trees going down but for all the rise in water there is actually little drift. Instead of some main creeks flooding and dumping lots of drift in Yukon it must be more like all the creeks

just high and putting in lots of water without flooding. That's a guess and I'm not kidding.

- Chum down lots and sheefish and cisco up. Got two old king playing catch up.

### Stan Zuray

#### Pictures:

Special request from my love - a picture of her flower garden. If I wait any longer for the sun to make the flowers better it will have snow on it.



#### 8/26/06

- Water up again, but slowing now the water will drop fast and wheel will have to be pushed out constantly. Fishers are never satisfied we're always complaining.
- Only three camps (all wheels) in Rapids cutting now. They will be here awhile till crib fish put up time (mid Sept.)

Stan Zuray

#### Pictures:

Charlie and Ruth's camp last night. Their fish rack will probably make it without moving now that water is cresting. Cooking late supper chum on campfire up top.



### 8/27/06

- Water steady and some real sun today. Poor dogs are finally drying out. They are just basking in the sun and quiet today they don't sleep well when soaking wet at night. I wouldn't either.
- Getting requests from the elders for whitefish. Before Randy Brown (USFWS Fairbanks) used radio tags to find where the sheefish were

going local TEK had it that they were moving from their summer hangouts to spawn downriver. Now we know they are coming all the way from the mouth area to spawn around Fort Yukon area and will return to mouth in early winter. Some go without eating from May to November.

Stan Zuray

Pictures: Charlie C. side hilling with his dogs in the Ray Mountains





#### 8/29/06

- Water dropping, drift going away, got sun.
- Whitefish expert Randy Brown and electronics genius Dave Daum here at Rapids Research Center to radio tag cisco to

determine migration patterns etc. plus assess present infra red capture system on fishwheel. Will have some good radio tag surgery pictures tomorrow. While some persons question studies on fish as playing with fish unnecessarily, it was the radio tag studies here in the late 90's that had much to do with the present fish friendly wheels and many hundreds of thousands of later fish (and at present) being treated much better.

Stan Zuray

#### Pictures:

- 1. Chum, bering cisco and sheefish in chute.
- 2. Looking down stream of Rapids.





### 8/30/06

- Chum numbers continue to drop but soon the front runners of the third pulse should start arriving.
  - Biggest Sheefish day this year (80).
  - Water continuing down rapidly.

Stan Zuray

#### Pictures:

- 1. Randy inserting radio tag and Dave applying sleepy time juice to gills (clove oil mixture). At a point in the operation Dave switches to water to start to wake fish up.
- 2. These incredibly dedicated employees worked all night to get their quota, using extra light run off the video wheel generator. Lots of coffee was the order of the night.



#### 8/31/06

- Randy and Dave got all their cisco radio tag samples done and left today (9/1). We'll see where they spawn now.
- Chum numbers continue to drop but soon the front runners of the third pulse should start arriving.

Stan Zuray

Pictures: Smallest wheel I ever saw. Built out of woven willow by a USFWS tagging employee in his spare time with the local kids. Actually caught a few whitefish.



#### 9/1/06

- Down to two active Rapids camps and a third part time. It's a colder quiet place this time of year and even though it will empty out, fishing in Tanana below will pick up. About 6 wheels there now and they'll be pretty active fishing for dogs now that weather is cooler. Each year lately the local boats and even outside fall moose hunters

get less and less. Most people attribute it to gas prices.

- Got updated USFWS escapement/harvest/border passage data which changed ZRMC2 graph numbers slightly (visually the same however).
  - Pulse three starting. Stan Zuray

# Picture:

Looking downriver at fall chum pulse three, from Rock Island in Rapids. Here comes the rain at end of today.

#### 9/2/06

- Chums still rising, cisco down to a trickle, sheefish strong, broads and humpback yet to make their push upriver.
  - Temperature steady and river dropping like oil off of a king strip.







Stan Zuray

#### Picture:

Tanana potlatch this past weekend honoring a number of past family members. First the food with the meat and fish given special respect. Then the massive giveaway with also 30 or so guns given to the hunters. Then the final singing/dancing lasting to 4 am Sunday morning. (Why your important update is late)



9/3/06

- Chums still rising - thought it would hit harder than this but then this pulse isn't like last one with lots of high days. Sure can't complain about 67 chum per hour however.

- Temperature still steady and river dropping like flies off a malationed dry dog fish.

### Stan Zuray

#### Picture:

This is a very small old wheel. It's in shallow water and only catches chum and whitefish but does so at very high rates for a wheel this size (very good spot). It's one of three Rapids wheels still operating. This is the type of wheel and spot we don't use for the king data collection project.



#### 9/4/06

- Upper subsistence wheel ran today for long while getting first of crib fish. Had over 100/hour. Get better number later but with Tagging project gone and fishers all cleared out, I'm hard up for indicators of how fishwheel is doing.
- Added more important graphs that everyone will want to study thoroughly. Chandalar and Eagle Sonar to Rapids run timing comparisons (RapChan06 and RapEagle06). Threw them together fast so may have errors.

### Stan Zuray

Picture: This is one way to get crib fish to town. Make a simple raft - put nails all around perimeter - hang seine webbing off nails - lay old tarp on top seine web - park by cold water creek and run hose into it creating a cold clear water swim pool in middle of Yukon. Throw in fish till full then cut loose and barge to town. Cheap on gas. Put in pile, let sour and feed frozen to dogs all winter.



#### 9/5/06

- Chum numbers down as pulse three starts to decline. Cumulative passage, at present, very similar to 1997 which was the last good year before the chum crash.
  - Water height almost normal (at Mean)

#### Stan Zuray

#### Picture:

New video wheel ready for next year. Basket width, height, and dip will all be the same. Project specifications are all written down and require that no changes be made from year to year. Lead fence same thing.

Wheel has no nailed joints - all predrilled holes and pins cut to length then tied or wired. Allows pieces to be replaced easily and withstands constant use that a test wheel gets better. Takes much longer to make however.



#### 9/6/06

- Fishers continuing to crib here. Not much news from Tanana lately but imagine lots are cutting and splitting dog fish there.
  - Broad whitefish starting to increase with some nice large ones present.
  - Water clearing more and temperature real steady for awhile now.

Stan Zuray

#### Picture:

I know everyone wants more fishwheel pictures but these exposed willow roots had so much color I had to put it in update.



#### 9/7/06

- Chums down and looks like third pulse traveled a little slower than the 34 miles a day used in the ChumPilot05 chart. Oh well, this to is normal.
- On to pulse four which will be small and last chance for easy crib fish. I'll crib around then.

Stan Zuray



#### Picture:

- 1. Mike, Adam and Laurie (ADF&G) stopped by on their way to Tanana where they will sample fish. (I be nice today no jokes)
- 2. Check out how small a fish the new infrared sensors detects. One night I was getting concerned as I thought I was getting false captures and then I realized there was a large fly or bee going back and forth in the light beam. Human error is the last frontier to tame I think we got a good

system here. (Hope)





#### 9/8/06

- Over 1000 sheefish so far, that makes it a good year for them so far, with more to go.
- Report on ICH related stamina finally published: Ichthyophonus-induced cardiac damage: a mechanism for reduced

swimming stamina in salmonids, Journal of Fish Diseases 2006, 29, 521-527. Can be downloaded within the hour at: (copy and paste in address bar) http://www.rapidsresearch.com/html/ichthyophonus\_disease.html

#### Stan Zuray

#### Picture:

This is what the new infrared sensors can do - captured moth and in second photo captured tiny stick. Nothing gets by, yet heavy rain, up to 7 days of fish slime splatter, wind, direct sun has no effect.



#### 9/9/06

- Not much more chum predicted to be coming so cumulative will probably get only slightly higher. Although okay run, seems it fell short of the million fish estimated as far as this project goes (unless they all went up the Tanana). Been way off before however, see ZRMC2 - year 2003

### Stan Zuray

#### Picture:

Ray Mountains, north of Tanana in back. Heading to small river at base of mountains called Tozitna.



#### 9/10/06

- Possible pulse 4 as chum numbers turned and up slightly.
- Been making up discharge figures as USGS site has been out last 5 days or so (they always do this, fix it and have the numbers later). Anyway discharge adjusted passage guesstimates will get changed ever so slightly later.
- Heard numbers of times now how fishers appreciate the 7 day a week fishing. In this area many are getting high enough hourly catches that you would think it wouldn't matter but not having to adjust one's life around the

openings and closures is a burden removed - thank you Fred and all.

### Stan Zuray

Picture: Monty Millard (USFWS) started the Rampart Rapids Tagging project. He would often joke about my lifestyle and I'd joke about his job and position. He was a friend and good guy. Sent him this doctored up - poster added - picture after he retired and went south.



#### 9/11/06

- YRDFA student Chinook data at Rapids all entered in KingData worksheet below. I haven't run or graphed much of the numbers and all needs to be rechecked later. Be interesting. Shipping out all the samples now that data and samples are checked for matched labeling etc.
- Added unadjusted Rapids CPUE data to ZRMC2 graph. This year both unadjusted and adjusted are fairly similar.
- Yesterday and today is probably pulse four but few more days to make sure as its very small like at Pilot if this is it.

Stan Zuray

Picture: Cold creek water run into holding area of crib fish raft allows fish to stay fresher longer. Once moved to final resting place they can sour all they want. This one raft will hold the majority of a winter's dog team food. Got one fish so far – he's real fresh.



#### 9/12/06

- Chum numbers still staying up, from pulse 4 probably.
- Wheel above mine got one coho but that was out of almost 4000 chum. Coho are very few in numbers above Tanana River now. In October and up to when the ice comes there is a fair run of them but few are fishing then up here. Same with least cisco, none till real late after fishers are cleared out of Rapids.
- Video wheel only now in immediate Rapids area. One down river about 5 miles. getting empty but Tanana fishers will continue for a while. Stan Zuray

Picture: Back before global warming (kidding), 15 years ago about, had some bad breakups. Two wheels and a smokehouse and one lead fence in picture. This is where we store video wheel but higher now.



#### 9/13/06

- Little guy Pulse 4 is not giving up yet, and wants to be up with the big boys. The percent being caught of Pilot estimate is pretty high especially for the last pulse which typically sends alot of it's fish up the Tanana River. Last 2 pulses especially are running slow this year it seems, at 20-21 days instead of the more normal 18.
- Correction for anyone already using data: In KingData 6 fish numbers for 6/28 should have had a decimal in them and are in blue now so easy to find/fix. Stan Zuray

Picture: Pups raised on Rock Island in Rapids. Safe from bears and wolves and gets cleaned annually



#### 9/14/06

- That it for pulse 4 dropping like a Rock Island rock.
- Water clearing last week or so. Secchi (water clarity) readings at 30 cm now.
- Water temperature real steady for long time around 52 F
- Added RapCan06 and changed timing on RapEagle06. Not to sure on mileage for some of these graphs.

Stan Zuray

Picture: How's that for untouched for many years. Friend found this stuff other day - he left it as is. That's an old style lantern - BC maybe. Said the bark looked like an old note but couldn't read the worn hieroglyphics.



9/15/06

- It's all over here run for a while and pick up some more chum numbers for a few days. Pulse 4 was not that bad in the end. Looks like we'll beat 1997 for run size by a little.
- Been packing anything spare or not critical to operation up and make first of many hauls to Tanana. Normally get done by Oct 1 or sooner with it all.

Stan Zuray

Picture: Then it's time to drive dogs. Nice picture of someone on Iditarod going over Rainy Pass.



9/17/06

- Eagle (RapEagle06) maybe doing same thing it did during king season - by time fish get there it's all one smoother pulse of fish instead of pulse spikes - or maybe something else going on?

Stan Zuray

Picture: 1400 chum, sheefish, broad and humpback whitefish in cold creek water waiting to go to town to be used as a winter's supply of non traveling dog food. Dry fish is used to travel. One reason I explain about types of food for dogs is people seem interested in different methods. Another is to educate outside persons. Years back I was ticketed by a state trooper for wanton waste (later dropped) and almost "arrested" when I refused to clean up my crib fish which were souring and had the normal flies around. Actually crib fish is very efficient as the entire fish is used unlike the more recognized dry fish. It is very good for the dogs also as their short canine intestines need the partly rotted flesh to digest it properly. Fresh salmon will actually give dogs a vitamin B deficiency and fresh salmon cooked does not provide the enzymes necessary to dogs digestive track and require mushers to add commercial supplements of these.



9/17/06

- Water level been running right at mean for 2 weeks about.
- -Many chum very dark and have loose eggs how do they make it upriver of here like that I'll never know?

  Stan Zuray

Picture:

2006 YRDFA data collection project Chinook weights and below some past comparisons.

	2004	2005	2006
Chinook samples -	1113	927	737
ave. weight - all -	na	11.4 lbs	11.9 lbs
ave. length -all male	s - 67.1	68.9	69.0
30 + lbs.	na	7	6
25 - 29.9 lbs.	na	14	16

\* So much for fishermen's impressions of this years Chinook - they may not have been much bigger but they were not smaller. Nothing like having numbers when it comes to size questions, etc.

#### 9/18/06

- Water is rising slightly.
- One more coho
- Good year for sheefish at about 1650 so far. In 2001 we had 2084 and had as low as 580 one year.
- The plan is to pull wheel on Wed. the 20th unless a mystery pulse shows up. Have quit before between 16th and 22nd.

### Stan Zuray

#### Picture:

- King Billy Sheefish in his glory. Friend from back east.

## \_\_\_\_\_

#### 9/19/06

- To all faithful update readers hope you liked the pictures and we'll be back next year hopefully. The updates give an idea of the season, from ground zero, through the eyes of a biased fisherman. They are often with some sarcasm, always with an agenda and sometimes trying to be professional. Hopefully the data and graphs do some good also.
- When computer gets together in Tanana I'll send the last day of the video numbers and update all the graphs to latest #s. During winter all these graphs and all the years reports will be on the project web site along with tons of pictures you're free to do whatever with. (except get me put in jail)

### Stan Zuray

### Picture:

- This is one of the most important things about the river and fish - it's a healthy place for kids. This is our future (oh my God).



#### 9/24/06

- Rapids video fall chum passage guess is 455,262. 1996 and 2005 were considerably higher but otherwise it was the next highest since CPUE was first taken at this site in 1996.
- Interesting how fall chum stocks passing Eagle and Canadian border wheels were peaking when the runs corresponding time at Rapids and Chandalar Sonar was in a low. My thinking is the projects are counting

okay it's just an example of specific stocks being strong at certain points in the run. Or those chum went very fast and are really pulse 3 fish.

- May update the upriver graphs one more time in about two weeks and have some news from Tanana which is now in the midst of heavy subsistence crib fishing. Stan Zuray

#### Picture:

- Winters dog food and wheel going to Tanana on same day video counting shut down. Nicest day I ever broke camp on. Sometimes it's been a snowstorm on this day.

#### 9/28/06

- Got a few requests to continue updating Chandalar, Eagle and DFO to my Rapids estimate graphs. So I will do this every 3-4 days till the last pulse passes Border wheels. Apparently I was not the only person interested in this year's chum run timing at the projects upriver of Rapids.
- 6 subsistence wheels continue to turn out of the Tanana area with north bank (upper Yukon bound) wheels starting to pick up more coho and catches heavy on the broad and other whitefish. No least cisco run as of last report I got. Stan Zuray

Picture: Bringing dogs to town from fish camp. I let them all loose for the first time all summer and take off in boat and they follow me for a few miles and get tired. I then call them and put them in boat. This year I let them all loose and there was a female in heat so they all got in a big fight. You can maybe see some of their war wounds and they're still crazy mad.

### 10/5/06

- Chandalar, Eagle and DFO border wheel graphs updated with latest numbers I have. Hard to make sense out of some parts of project comparison graphs this year.
- 5 subsistence wheels continue to turn out of the Tanana area on the north bank. Coho have increased but are reported as low numbers this year so far. Least cisco run has started. Chum are of the non fat version as is normal this time of year.



Stan Zuray

Picture: 1. Today's mixed bag catch. Takes about two days to fill dead box. 2. Four of the wheels presently running (today's pictures)









The End