2013 Arctic-Yukon-Kuskokwim Sustainable Salmon Initiative
Project Final Product[1]

AYK: Rapids Student Monitoring Program 2011-2013

by:

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I. ABSTRACT:

Project was started due to a lack of consistent, random, and full season sex, length, weight, girth and *Ichthyophonus* disease information on Yukon River Chinook salmon bound for the Upper River and Canada. These types of data are essential for the effective management of the many salmon species that migrate upstream each year.

Student technicians were trained to collect fisheries data since 2001 in the Rampart Rapids area located at river mile 731, approximately 40 miles upstream of the village of Tanana, Alaska. Along with creating a large, long range database this project gives students an opportunity to participate in data collection for numerous biological studies and to develop their interest in future fisheries work.

The collected data are comprised of Chinook salmon sex, length, weight and girth during the Chinook salmon season and visual inspection of changing flesh color and fat content in chum salmon. Species are inspected for disease conditions with a special emphasis on Ichthyophonus disease prevalence in Chinook salmon. The data from these studies provide valuable information for the management of Chinook and chum salmon and migratory whitefish. This information has been identified as a priority at many Federal Regional Advisory Council, State Advisory Council, and Yukon River Drainage Fisheries Association meetings.

Each year the project also takes on a number of requests for data collection or assistance by other researchers and agencies wanting help on their projects.

Key Words: Chinook, chum, data, Ichthyophonus, Rapids, salmon, students, Yukon,

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III. INTRODUCTION:

The project data collection areas were chosen to address a lack of information in the middle Yukon River identified by the various management agencies. Data from this project have been used by the United States Fish and Wildlife Service (USFWS) projects (Apodaca, 2004) and by the Canadian Department of Fisheries and Oceans (CDFO) and Alaska Department of Fish and Game (ADF&G) to determine run-timing of the various salmon species. Genetic tissue sampling by the project has also helped managers reconstruct the Canadian component of the run.

This data collection is also of expressed importance to fishermen and addresses concerns voiced at Federal Regional Advisory Council meetings, annual and special Yukon River Drainage Fisheries Association (YRDFA) meetings for more than a decade, the fall 2004 YRDFA sponsored Ichthyophonus meeting, numerous State Advisory Committee meetings and every Board of Fish meeting since 2001.

All the Chinook salmon data are a high priority because of the recent questions of declining size and possible loss of the older age classes of Chinook salmon and the need to have continuing baseline studies in place to monitor future positive or negative changes in this fishery.

The Rapids Ichthyophonus data have been the only main stem, random and full season disease prevalence data taken in the last 6 years. Rapids sex, length, weight, and girth (SLWG) and Ichthyophonus data have been widely used and distributed in recent years and are available online at a separate and independently run Rapids Research Center web site (RapidsResearch.com).

For chum salmon, Rapids fall chum salmon arrival data are the most accurate method at present for partitioning summer-run and fall-run chum salmon in this location, until genetic testing is refined. It presently is the way the Yukon River Panel funded video fishwheel assessment project determines the start date for counting fall chum (Zuray. 2013)

IV. OBJECTIVES:

Objective 1:

1. Continue building a database of full season SLWG and genetic tissue data on Chinook salmon

With oversight from the project manager, student technicians traveled to fish camps in the project area and sampled Chinook salmon. Only fish caught in the subsistence fishery or sold during commercial openings were utilized for data collection. Data collection occurred at whatever time necessary to fit local fishers' subsistence schedules. Only complete catches were sampled, and technicians followed established fisheries collection procedures, sampling 2,701 Chinook. Data collected included sex, length, weight, and girth. Older students working for the project had up to 13 years' experience and were responsible for training the younger students in the field, with supervision. The project used a number of training methods including visual tests for students who determine the visible presence of disease. Area fishermen often helped students get samples by coming to the main camp to coordinate sampling times or by putting up flags to signal sampling opportunities. Fishermen have stated that the help the students provided in handling the fish actually made their job easier and they were more than happy to work with them. This support was key to obtaining a large number of samples. No single fish camp could normally provide consistent sampling of the run throughout the season. Entry of raw data into Microsoft Excel worksheets by the students occurred whenever time allowed and with the assistance of the project investigator.

Objective 2:

2. Determine the arrival of the fall chum salmon run

During each of the three project years, chum salmon were examined for color of flesh and given a rating of red or pale. This started before the fall chum run arrived and thereby documented the change of the summer to fall chum run with the object being to establish a more accurate fall chum arrival date each year than currently provided by resource managers. During this project, the use of standard color charts and other consistent sampling practices helped to strengthen a traditional method of determining fall chum arrival that has been used for generations. With the numerous camps in the area preserving chum salmon for dog food, the need for samples was easily met. Early in the summer chum run, small numbers of samples were taken each day. This minimum sampling happened when the chum were few in numbers as they normally are prior to the start of the fall run. Later, when the students were able to work with subsistence fisherman as they harvested chum for dog food, the sample numbers were considerably larger. The chum sampling aspect of the overall project required minimal travel and effort and was accomplished as the students were breaking camp at the end of their sampling season. While it is an important part of the overall project, it consumes far less technician time and labor than does the Chinook sampling.

Objective 3:

3. Continue building a database of full season Ichthyophonus disease prevalence data on Chinook salmon

Using protocols similar to Chinook salmon SLWG data sampling, visible Ichthyophonus disease prevalence was recorded for sampled fish. Genetic fin clips and heart samples for post-season laboratory workup were also taken. Samples were analyzed by the Washington State University Disease Diagnostic Laboratory and showed very close comparisons between laboratory results and results from field visual testing for disease positives. This project produced one of the largest Ichthyophonus samplings ever done on Chinook salmon. Results were compiled in a report submitted to the American Fisheries Society and published in 2012:

V. METHODS:

Stan Zuray was project manager and oversaw student technician selection, training and the in season work of the data collection. His time was on a volunteer basis and project did operate with no administrative costs. The data collection project was conducted at the Rampart Rapids, the same location as the previous 2001-2010 projects (Peters Zuray, 2003) (Zuray, 2011.

Technicians were mostly drawn from a group of older or recently graduated Tanana High School students selected for leadership and data collection abilities. Some have USFWS project training. All have years of work in this specific area. Each day the students assembled and collected data from fish caught in the local subsistence fishery. Trips were made to multiple camps for enough samples. Data collection started at whatever time necessary to fit local fishers' subsistence schedules. Technicians were given an hourly pay for supplying their boat, motor, fuel, camp supplies, and their labor.

As in the past, area fishers and fish buyers helped students get samples by coming to the main camp to coordinate sampling times or by putting up signs at their camps to signal sampling opportunities. Fishermen have expressed that the help the students have provided in handling the fish actually made their job easier and they were more than happy to work with the students. This type of support was key to obtaining a large number of samples as no one fish camp could normally provide consistent sampling of the run throughout the season. Electronic data entry, from raw paper forms (Appendix 3, Figure 1), using donated computers and equipment occurred whenever time allowed.

The 20011 to 2013 fisheries data collection project was conducted at the Rampart Rapids. The particular area of approximately 10 river miles contains a relatively large number of fishing sites and fishermen allowing for good numbers of samples to be taken from the subsistence and commercial fishing there.

Main technicians were drawn mostly from a group of older Tanana High School students who excelled in data collection efforts and were good at teaching younger students. Some have received USFWS training and worked for the USFWS Fall Chum Tagging Project run out of the Rampart Rapids area. Older students collecting data in 2011 – 2013 have had considerable collection experience. A minimum of two worked at any one time for safety as well as necessity. Occasionally at times, such as commercial openings when time is an important factor, 3 to 4 were employed. Considerable flexibility was employed to meet the changing conditions throughout the sampling period.

Each day the students assembled and collected data from fish caught by subsistence fishers. Trips were made to a number of camps for enough samples especially during periods of low run strength. Data collection started at whatever time necessary to fit local fishers' subsistence schedules and often extended into the evening to get samples from other fish camps. This depended on the amount of subsistence fish activity occurring at a camp. If a large extended family and many friends were using one camp during prime Chinook salmon season, many samples are available. Samples are difficult to obtain during bad weather and if it is very early or late in the season. Only fish caught in the subsistence fishery or sold during commercial openings are utilized for data collection. Most importantly, no WSLG samples are allowed from catches if some fish were missing from a day's catch as in some were given away or already processed (not random). Also no WSLG samples are ever taken from a lot of fish being sold if the fisher has withheld any of his catch for reasons of small size or subsistence cutting unless those fish can also be sampled. This was adhered to 100 percent with whole sample sessions of data being discarded if any mistakes were made in this area.

Area fishers and fish buyers often made great efforts to help students get samples by coming to the main camp to coordinate sampling times or by putting up flags to signal sampling opportunities. Fishermen have expressed that the help the students provided in handling the fish actually made their job easier and they were more than happy to work with the students. This support was key to obtaining a large number of samples. No one fish camp could normally provide consistent sampling of the run throughout the season. Entry of raw paper data into excel worksheets by the students occurred whenever time allowed. However often with only two students working at a time, days were filled with just getting samples and raw data. Transfer of raw data always included the main technician and project supervisor and was redone 2 more times before camp closed for each season. Project manager Stan Zuray oversaw this work and provided these data in season in as timely a manner as possible to those wanting it.

Chinook Salmon Sampling

Targeted Chinook salmon sample size each season is 1000 SLWG taken and 500 dissected for Ichthyophonus disease rates. Fall chum arrival study looks at about 500 chums fully dissected. Amount of scale samples for

aging and any genetic samples are determined in spring prior to project start by the requesting agency or researcher.

Length, weight, girth and sex data are collected during the entire run each year consistent with established ADF&G sample collection protocols. Some early season sample sizes are smaller due to the run strength and some late season sample sizes are smaller due to low subsistence fishing effort that results each year from a higher prevalence of Ichthyophonus disease in late season fish. Fish are taken from a variety of subsistence fishermen in the Rapids area. Sampling only take place from well-known Chinook salmon fish wheel sites. These are established sites traditionally known for their ability to catch Chinook salmon and wheels designed to hold the larger sized fish.

No sampling for sex, weight, length, or girth occurs when students arrive at a camp if fish are missing from a day's catch (i.e. fish were given away or already processed). This is the first question students ask when arriving at a camp to sample, and often students were unable to sample because fishers had already started processing fish. Chinook salmon are measured from mid eye to fork in tail and weighed. The sex of each fish is determined either by full dissection or by inserting a finger into a slit in the belly to feel for eggs or sperm sac. The second method is necessary because many of the Chinook salmon are not advanced enough in spawning characteristics to visually determine sex accurately, yet it is necessary to keep the fish whole for freezing or transporting out of the area by subsistence fishers. Informal testing and conversations with fishers suggest that visual inspection of sex is not accurate, especially early in the run and on smaller fish. Based on our data, 1 out of every 5 Chinook salmon cannot be sexed accurately by external characteristics, even by long-time fishers. Chum salmon, however, can be accurately sexed visually.

Chinook Salmon Ichthyophonus Sampling

Fish are taken from several subsistence fishers in the Rapids area and fish harvested with both nets and fish wheel are sampled. The heart is visually inspected twice after being washed in water each time (note: while liver, spleen and flesh are often looked at and prior to 2006 notes taken on these, because of time constraints on keeping up with subsistence fishers cutting, this has been dropped from the program). A Chinook positive for Ichthyophonus disease has always been and was again defined as having 3 or more cysts visible in the heart. Number of visible spots up to 10 are accurately counted and to 100 accurately estimated and after that students are instructed to roughly estimate a number which can be in the thousands. Visible spores under 3 are noted in data but do not constitute a positive. These guidelines were developed from the students work with Dr. Richard Kocan in the projects earlier years (Kocan, 2002).

Each day all hearts from Chinook salmon sampled at other camps and brought back to the project manager with data reporting the number positive for Ichthyophonus infection. This number would then be checked against the number of positive samples after the project manager rechecked the hearts. Rechecking samples in this manner has in the past years resulted in blocks of data being discarded. It should be noted however that in 2007 a USFWS biologist and myself did discover that visible spores on heart samples that had deteriorated to a relatively small degree become very hard to almost impossible to see. Since this discovery we have taken extra care to keep heart samples cold during sampling periods to eliminate loss of precious data collection. Technicians are now sent out with ice and coolers each morning.

Chum Salmon Data Collection

The chum salmon study starts up in mid-July each year as this date insured some of the sampling took place before the fall run arrived on years the fall chum came early. Chum salmon were examined for color of flesh

and a rating of red or pale given to each. All this started before the fall chum run had arrived and it documented the change of the summer to fall chum run with the object being to establish a more accurate fall chum arrival date each year than management currently can provide (Appendix 1, Report 2 and Table 1). While other factors enter into this traditional determination such as condition of the fishes' exterior color, tooth and jaw development and overall body robustness the most important and final is the flesh color and its corresponding fat content. During this project the use of standard color charts (Appendix 3, Figure 2) by the students and other consistent sampling practices helps to strengthen a traditional method of determining fall chum arrival that has been used probably long before contact. With the numerous camps in the area starting to put chum up for dog food any need for samples are able to be taken care of. Early on during the summer chum run small numbers of samples per day are taken. This minimum happens when the chum are few in numbers as they can be prior to the start of the fall run. At times when the students were able to work with subsistence fisherman as they put up dog food the sample numbers was considerably larger. This chum sampling part of the overall project required minimal labor and effort and is accomplished as the students are breaking camp and finishing up on the last of the small numbers of Chinook migrating through the area.

Study Location: Yukon River. Site of Sampling: Rampart Rapids, 40 miles upriver of Tanana.

VI. RESULTS:

Student technicians have successfully collected fisheries data for three years in the Rampart Rapids area (Yukon River mile 731) in Alaska. This project adds data to a 2004 - 2013 database and contributes to a continuing effort with similar objectives for those years. The collected data are comprised of Chinook salmon sex, length, weight, and girth information, as well as visible Ichthyophonus disease prevalence during the entire Chinook salmon season. Chum salmon were also visually inspected for flesh color and related fat content, and an accurate fall chum arrival date determined, aiding fishermen and fall chum run assessment projects in the area. Local students had an opportunity to participate in the project and learn meaningful data collection techniques, with older students teaching the younger. During the three-year project, 2,701 Chinook were sampled, providing a wealth of size, sex and disease information. Fall chum arrival dates were determined for each of the three project years. Voluntary salmon and whitefish samplings for a number of agencies and researchers were also accomplished each year. This amounted to important genetic, size, and lifecycle information on thousands of fish in addition to those covered directly in this project. Project efforts to provide laboratory confirmation of Ichthyophonus disease positives led to a number of separately-funded studies during the course of the project and partnerships with many of the top pathology researchers in this field. The paper below including these results was been written and published in a major journal with the project manager as lead author (see Appendix 1, Report 1).

Transactions of the American Fisheries Society 141:615–623, 2012. American Fisheries Society 2012

Synchronous Cycling of Ichthyophoniasis with Chinook Salmon Density Revealed during the Annual Yukon River Spawning Migration

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AK SSF research suggestions at the start of project, to get laboratory confirmation of project Ichthyophonus disease positives, led to a number of studies in the 3 years and partnerships with many of the top researchers in this field.

Another positive result of the project was the laboratory confirmation by ADF&G of the accuracy of the projects fall chum arrival date study. This is explained in the Appendix 1, Report 2.

Statistical analysis of collected data is not part of the projects objectives, however a number of researchers and agencies look at the data in numbers of ways for their own purposes. More on this can be found in the discussion section and appendices. This project is simply in the important business of providing a long term quality data set. All the project years 2011 to 2013 Chinook SLWG and Ichthyophonus disease data can be found in Appendix 4, Table 1.

VII. DISCUSSION:

This project is the continuation of an effort started in 2001 to address problems with the fishery that were directly important to fishermen actively engaged in that occupation. Areas of concern were chosen because of expressed concerns by fishermen at numerous meetings, year after year, that these particular issues were being neglected or studied improperly. Broadly these areas are the reported dramatic decline in average weight or size of Chinook due to the loss of the larger fish in approximately the last 20 years, the extent of visible Ichthyophonus disease in Chinook and its reported tendency by fishermen to be found more concentrated in the larger and female fish and finally the need to have a better way of determining the arrival of fall chum salmon, especially in the upper river, so more accurate counting can take place.

This continuing multi-focused project has been undertaken with the priority objective being to influence and enhance management decision-making using information learned from data obtained using sound collection practices. Project proponents felt that once that collection effort had resulted in a usable database with enough years behind it that the data could then be used by fishermen and researchers to help get to the heart of the problems.

The objectives of this project did not include analysis and graphing, etc. of the information. Effort was instead put out to record it and release it in a format understandable to the widest audience possible with special pains taken to keep the forms specifically easy for fishermen to understand and the format (excel) one that common people have available to them and can use to run the data for themselves. The project manager spends much time going over electronic data sheets each year with interested fishermen to arrive at what is currently used. The data was released in season often days after taking (marked preliminary) or as soon as possible, to allow it to have as much impact as possible. A number of methods of in season data release have been tried and are being used currently, including putting it on 2 separate independent websites and email correspondence with a number of researchers. By far the most successful and one that is in current use is having it sent out on a fisheries update run by Rapids Research Center called Rapids Update. This goes out daily and is sent to approximately 1000 persons (see Appendix 2, Figure 4 for breakdown)

Another reason for the lack of analysis directed by the objectives is that much of the subject matter under study was highly controversial at the start of the project and it was recognized that to do an acceptable scientific analysis of the collected data would require funding well beyond the budget of the project. On the other hand much results and analysis of this data has been highly visible and reported on at numerous meetings over the past decade by independent researchers. This was the intended and initial purpose of this project that the data be useful to proper management of the fishery by being used by researchers and fishermen in dealing with the issues at hand Appendix 2, Figures 1-4 and Table1-3).

While it may not be proper to include analysis, graphs or papers by independent researchers or fishermen who have used this collection of data, in the main part of this report I have included some of that in Appendix 2. Here you will see examples of how it was used to show how small the Chinook have gotten and the poor quality of the escapement being sent to Canada, and high prevalence of Ichthyophonus disease in its earlier years. Also there is a table in Appendix 2, table 2 showing the effects of managing the fishery to allow for better quality escapement. Again this project cannot speak to the scientific validity or statistical confidence of any of these, they are simply being presented as appendices that illustrate and support the conclusion that the data have been found, and continue to be, useful to numbers of researchers and fishermen.

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Zuray, S. 2014. Rampart Rapids Full Season Video Monitoring, 2013 - Using a Fish Wheel on the Yukon River, Alaska. Annual report to the Yukon River Panel, Anchorage, Alaska

IX. DELIVERABLES:

Presently this project has two successful methods of getting our collected data out. First there are numbers of daily in season email update efforts sent out to large audiences by agency and independent organizations and we get our raw data put on some of those. One of these is able to send out all the projects data to about 1000 persons each day. This listing includes fishermen, biologists, researchers and almost all major Yukon River salmon managers. An example of one of these updates can be found on the web at: http://rapidsresearch.com/RAPIDS_SHORT_2013_Worksheet_for_email.xlsx

The second method is websites and the project has been able to get partial data on 2 sites and the complete database on another. This availability is expected to continue even after the project ends:

http://rapidsresearch.com/King_Data_Raw_2004_to_Present.xlsx

Archived data for this project will consist of: 1. Data worksheets on Chinook sex, length, weight, girth and disease condition (Ichthyophonus) for the complete 3 seasons. 2. Yearly fall chum arrival dates.

Custodian(s) - Reports and student work data are maintained by Stan Zuray

Myself and a number of fish disease researchers were successful in getting the results from 7 years of Ichthyophonus disease sampling published in a journal. These 3 years of data and a previous 3 year AYK SSI project's data are included in the papers findings. Journal, paper and authors below:

Transactions of the American Fisheries Society 141:615–623, 2012. American Fisheries Society 2012
Synchronous Cycling of Ichthyophoniasis with Chinook Salmon Density Revealed during the Annual Yukon River Spawning Migration
Stanley Zuray, Rapids Research Center, Box 172, Tanana, Alaska 99777, USA
Richard Kocan, School of Aquatic and Fishery Sciences, University of Washington, Seattle, Washington 98195, USA
Paul Hershberger, U.S. Geological Survey, Western Fisheries Research Center, Marrowstone Marine Field Station, 616 Marrowstone Point Road, Nordland, Washington 98338, USA

X. PROJECT DATA:

Custodian(s) - Reports and student work data are maintained by Stan Zuray

Availability – All the above is available upon request and also available on an ADF&G website:
http://www.adfg.alaska.gov/CommFishR3/WebSite/AYKDBMSWebsite/Default.aspx
and the RapidsResearch.com web site:
http://rapidsresearch.com/King_Data_Raw_2004_to_Present.xlsx
Each year data were available as they were electronically recorded in season with the late season sampling available usually no later than November 1st of that year.

Project data includes Chinook weight, length, girth, sex and visible Ichthyophonus disease data and also fall chum arrival date determination. This is held in excel files . Inquiries for data should be directed to Stan Zuray, Box 172, Tanana, Alaska, 99777. E-mail stanzuray@gmail.com, phone 907-366 -7114. Appendix 4 have all data collected in 3 years and I am presently working with AYK SSI to see if we can have the complete database (a single 3 MB excel file) stored by them also .

XI. ACKNOWLEDGEMENTS:

This project was funded by the Arctic-Yukon-Kuskokwim Sustainable Salmon Initiative.

Tanana Tribal Council support in the present 2011 – 2013 project and as lead proponent in the earlier years has been invaluable.

I would like to thanks the Yukon River Panel for again supporting the project through the partnership this project has developed with its Rampart Rapids Fishwheel Video Monitoring project. Computers and communication equipment and much more from the video project has allowed for so much of this projects success.

Many thanks go out to all the fishermen who worked daily with the student technicians. They would go out of their way to coordinate sampling times and always supported their efforts.

Finally thanks to all the hard working technicians who have been here over the years. I believe they have learned some valuable things through this project.

XII. PRESS RELEASE:

Since 2001 a data collection project has run in the middle Yukon River area using local students as its labor force. Operating out of a place known historically as the Rampart Rapids (mile 763), between the villages of Tanana and Rampart, this project was started to collect data specifically on areas of concern by fishermen such as the loss of the larger sized Chinook salmon, a disease called Ichthyophonus, and a more accurate date to begin counting the fall chum salmon run.

Presently operating under funding by the Alaska Sustainable Salmon Fund and the Arctic-Yukon-Kuskokwim Sustainable Salmon Initiative the project has been funded in the past by the USFWS Office of Subsistence Management, Yukon River Drainage Fishermen's Association (YRDFA), Alaska Department of Fish and Game, and Rapids Research Center.

This effort has produced a significant database of size and disease information, sampling about 1000 Chinook each year since 2004. Most of the data is taken from subsistence or commercial caught fish except for some special live sampling from fishwheels which are then immediately released.

Stan Zuray has been project manager since its start in 2001. He says he feels the project has had a strong contributing influence on showing the decline in Chinook salmon size and getting that message out to the fishermen and managers. "When we started this effort the executive board of the YRDFA executive board was one vote shy of 100% agreement that there was not a problem with our king salmon getting smaller in the Yukon. Presently the board is 100% in agreement that the problem exists".

Stan also credits the project with providing one of the few consistent Ichthyophonus disease monitoring programs since Dr. Richard Kocan, a renowned expert on the disease, finished his last project in the Yukon River in 2003. Dr. Kocan who has worked with the Rapids student projects says "the work it does with the kids is a fantastic contribution to the community and will ensure that future generations know the value of real work and good science". Dr. Kocan holds a PhD in microbiology with over forty years' experience in parasitology and has published ninety-four scientific papers, including seven with the word Ichthyophonus in the title.

Along with the important data produced come the benefits to the youth and communities in the area from having students involved so closely with the project. While funding has varied over the years (and that drives the numbers of students able to be hired) around 15 to 30 younger kids are hired for 1 week jobs and a couple of older students (last year of high school or college) for 8 week seasonal jobs each year. BillyAnn White, age 17 and one of the older technicians at the present project said she has learned a lot more about life on the river even though she has lived her life in the village of Tanana. She says, "People don't often know what's happening with their own fish in the river, especially with things like Ichthyophonus".

XIII. APPENDICES:

Appendix 1

Report 1: AFS published report included 2008 – 2013 AYK SSI funded project data.

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ARTICLE

Synchronous Cycling of Ichthyophoniasis with Chinook Salmon Density Revealed during the Annual Yukon River Spawning Migration

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Abstract

Populations of Chinook salmon *Oncorhynchus tshawytscha* in the Yukon River declined by more than 57% between 2003 and 2010, probably the result of a combination of anthropogenic and environmental factors. One possible contributor to this decline is *Ichthyophonus*, a mesomycetozoan parasite that has previously been implicated in significant losses of fish, including Chinook salmon. A multiyear epidemiological study of ichthyophoniasis in the Yukon River revealed that disease prevalence and Chinook salmon population abundance increased and decreased simultaneously (i.e., were concordant) from 1999 to 2010. The two values rose and fell synchronously 91% of the time for female Chinook salmon and 82% of the time for males; however, there was no significant correlation between *Ichthyophonus* prevalence and population abundance. This synchronicitymight be explained by a single factor, such as a prey item that is critical to Chinook salmon survival as well as a source of *Ichthyophonus* infection. The host–parasite relationship between *Ichthyophonus* and migrating Chinook salmon from 2004 to 2010 was similar to that reported for the previous 5 years. During 2004–2010, overall disease prevalence was significantly higher among females (21%) than among males (8%), increased linearly with fish length for both males and females, and increased in both sexes as the fish progressed upriver. These regularly occurring features of host–parasite dynamics confirm a stable base of transmission for *Ichthyophonus*. However, from 2003 to 2010, disease prevalence decreased from 30% to just 8% in males and from 45% to 9% in females, paralleling a similar decline in Chinook salmon abundance during the same period. These findingsmay help clarify questions regarding the complex host–parasite dynamics that occur inmarine species such as herrings *Clupea* spp., which have less well-defined population structures.

Report 2: Comparison of traditional ecological knowledge and genetic methods for estimating seasonal race of Yukon River chum salmon

Note: Below short report was written by Bonnie Borba, research biologist with ADF&G Fairbanks. Study was conducted by her after chum salmon samples were collected and analyzed by the Rapids Student Monitoring Project 2011-2013 and then later genetically tested through her office for comparison.

Comparison of traditional ecological knowledge and genetic methods for estimating seasonal race of Yukon River chum salmon

Local traditional ecological knowledge (TEK) classifies chum salmon to either the summer or fall seasonal race based on the flesh color of fish in the Rampart-Rapids area at river mile 731 on the mainstem Yukon River (Figure 1). It is assumed that the arrival of red fleshed chum salmon indicates the start of the fall run whereas the decline of white fleshed fish indicates the end of the summer run. The intent of this study was to test the validity of the TEK classification method by comparing it to the genetic method. The results of the testing may help ADF&G with using TEK in management strategies.

Based on the historical TEK transition time period, chum salmon that represented the summer and fall flesh types were captured in Stan Zuray's fish wheel located in the Rampart-Rapids area between 8 July and 12 August, 2010 (n=450). The chum salmon were classified as summer or fall by the TEK and genetic methods. The genetic analysis consisted of genotyping the samples at 13 microsatellite markers currently used for genetic mixed-stock analysis (MSA). The genetic data were tested for differences between the red and white fleshed samples. In addition, the genetic data were compared to the established chum salmon baseline, and the composition of summer and fall chum salmon was estimated by MSA.

The genetic data between the red and white fleshed samples were significantly different ($P<0.00001$). The magnitude of differentiation ($F_{ST} = 0.0065$) between the red and white fleshed samples was similar to that observed between summer and fall chum salmon in the genetic baseline. The composition of summer and fall chum salmon as estimated by the TEK and genetic methods was quite similar as well (Figure 2), and the overlapping confidence intervals indicate that the estimates are not statistically different.

The concordant results suggest that the TEK method is a valid approach for estimating the seasonal race of Yukon River chum salmon in the Rampart-Rapids area.

Figure 1. Grades of chum salmon by flesh color at river mile 731 of mainstem Yukon River.

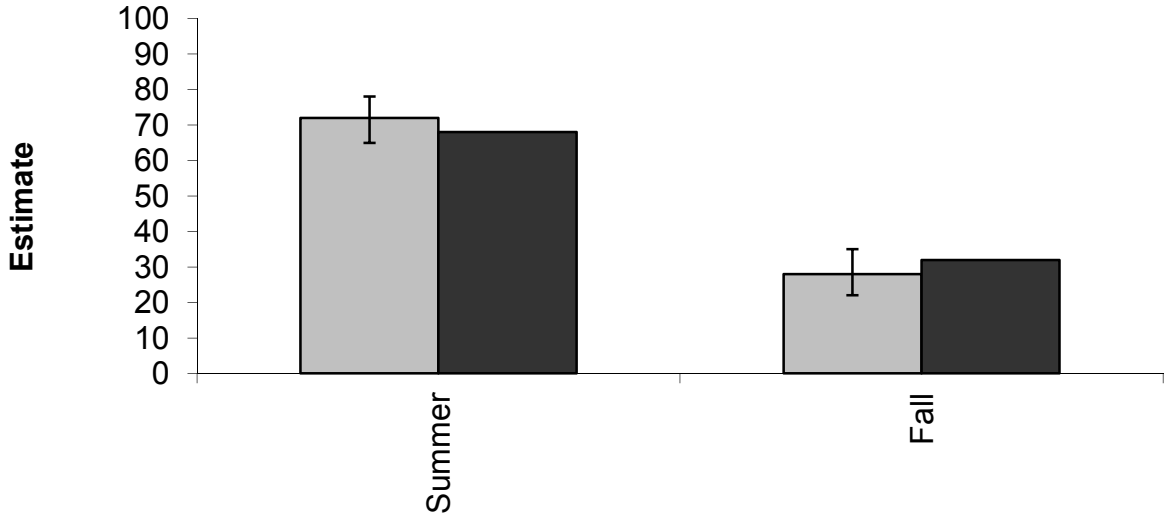

Figure 2. Composition of summer and fall chum salmon from samples collected from Stan Zuray's fish wheel in the Rampart-Rapids area. Grey bars are genetic estimates and black bars are TEK estimates. Error bars represent 95% confidence intervals for the genetic estimates.

Table 1: 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
2006 - Aug 4
2007 - Aug 5
2008 - Aug 3
2009 - Aug 8
2010 - Aug 4
2011 - July 31
2012 - Aug 6
2013 - July 30

Appendix 2

Note: Appendix 2 is some selected figures and tables prepared by independent researchers using Rapids Student Monitoring Program information from 2008 to 2013. They are examples of how the data have been used over the years.

Figure 1

12-year summary of clinical *Ichthyophoniasis* in Yukon River Chinook salmon collected during two consecutive studies. Infection prevalence peaked in 1999, 2003 and 2006, followed by a steady decrease through 2010. This decrease in disease prevalence corresponded to a similar decline in Chinook run size from 2003 through 2010. This graph was produced under mutual agreement by the two entities listed in graph and includes data from the 2008 – 2010 project.

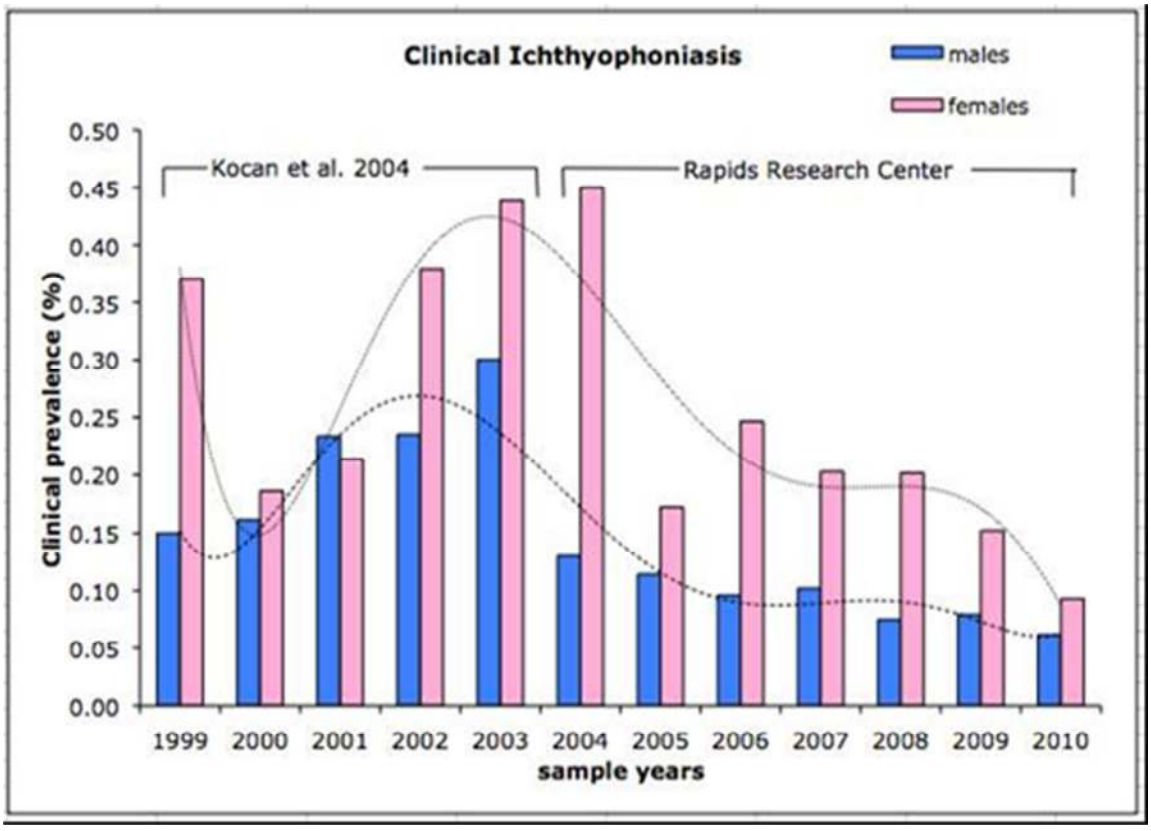

Figure 2: Graphs used to show the effects of Ichthyophonus disease on the most important part of the spawning population. (Figures 2, 3, and 4) by Rapids Research Center. 2008 – 2010 AYK SSI project data was used along with similar data from the earlier 2006 and 2007 projects collecting the same type information.

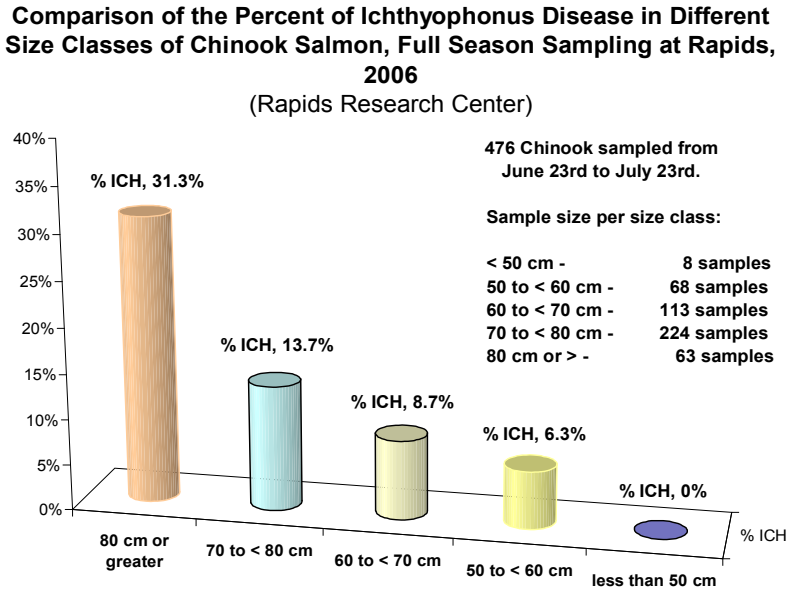

Figure 3

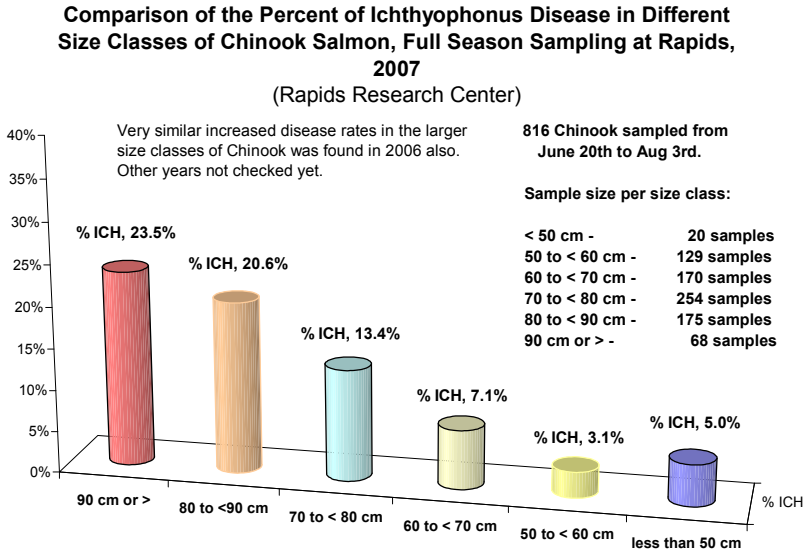

Figure 4

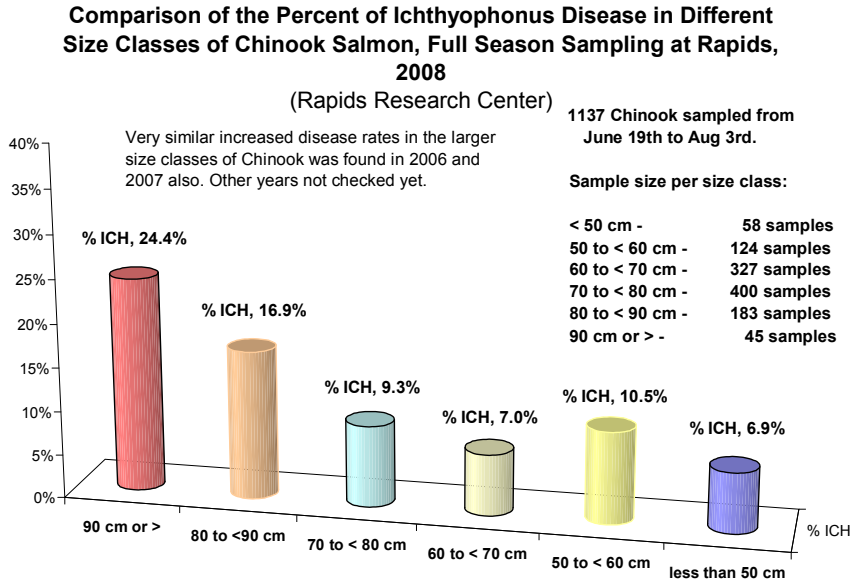

Table 1: Below table used to show low average pound of Chinook and lack of the larger size classes in fishwheels in Rampart Rapids area catches by Rapids Research Center.

Selected 2004 - 2013 Chinook Size/Weight Figures (Rapids Data Collection Project): (2013 data collection complete)

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Total samples	1113	927	737	1230	1137	773	1002	1538	734	429
Average weight for all king	N/A	11.4 lbs	11.9 lbs	12.1 lbs	11.7 lbs	14.4 lbs	10.8 lbs	13.4 lbs	14.1 lbs	13.5 lbs.
Average length - all	67.1 cm	68.9 cm	69.0 cm	71.7 cm	70.5 cm	75.2 cm	68.2 cm	73.3 cm	75.8 cm	
% of king 30 lbs. and over	N/A	.7%	.8%	.8%	.5%	3.1%	.5%	1.4%	1%	1.2%
% of king 25 lbs. and over	N/A	2.3%	3.0%	3.4%	2.1%	9.4%	1.5%	5.8%	5.6%	2.8%
% of Females - all	17.2%	26.4%	13.2%	23.9%	19.6%	28%	14.1%	20.9%	31.7%	40%
Largest king	N/A	37 lbs	49.5 lbs	36.5 lbs	38 lbs	40.3 lbs	39.5 lbs	54.1 lbs	37.2 lbs	36.9 lbs.
ICH Disease 65.5 cm + >	40.2%	20.3%	16.7%	18.2%	12.1%	14.2%	3.6%	6.9%	4.6%	5.8%
ICH Disease Females	50%	21%	32.7%	26.7%	22.4%	20.1%	8.5%	3.9 %	7.1%	2.2%

Note: Taken from established Chinook **fishwheel** sites near Rampart Rapids, mile 731, Yukon River. Only full season and randomly taken data used each year. (note: some 2012 data was compromised due to closure of most of the season. This caused large gaps in Ichthyophonus and sex sampling which is dependant on subsistence fishermen fishing.

Note: 2009, 2011, and 2012 data probably highly influenced by whole pulse closures plus other restrictions that took place. 2013 was almost a whole season closure. These protected years make for higher average size of king making it to Rapids.

Note: When looking at inseason data consider that average size has always dropped as season progresses and Ichthyophonus prevalence has always increased.

Note: Much of the 2011 to 2013 weight data was obtained by sampling at fishwheel where fish were immediately released. These fish were only weighed and this should be considered when running columns of data.

Table 2: Below table was made using data collected during the years severe restrictions were placed on Chinook fishing. Complete pulse closures particularly of the first pulse were instituted in years 2009, 2011, 2012 and 2013. Table below made from data collected during this present 2011 – 2013 project. Students were stationed on the fish friendly Rapids video fishwheel run by the Yukon River Panel under special permit and allowed to weigh and then immediately release the Chinook. Researcher here is trying to show that even some of the poorest runs on record when assessed coming in the mouth of the river can be made to respond favorably when managed properly.

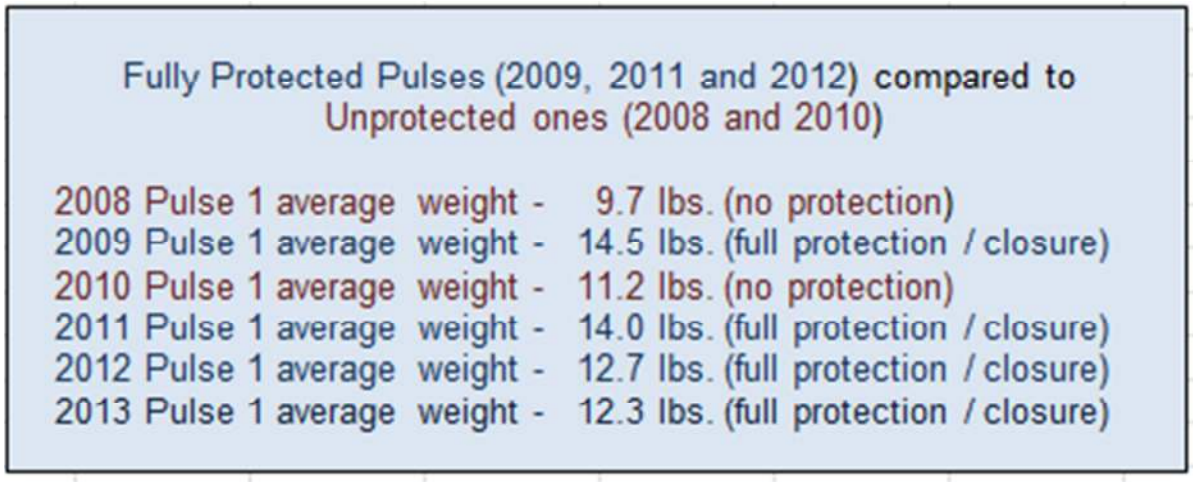

Table 3: Break down of the persons who have requested Rapids Daily Update (Rapids Research Center) goes out to them each day during the 4 month fishing season. Piggybacked on this update is this project's Chinook size and Ichthyophonus data to that date. This took place during the 2011 to 2013 project. Rapids Update and this project are independent of each other as to funding and support. Rapids Update is a private, non-funded effort but has been a great way to get the AYK SSI data out.

8/14/13 update - Last count was over 1000 persons and now is uncountable because of multiple persons handling mailings themselves even from outside of the US. As of 2013 about half are persons from outside of the U.S. (UK, Australia, Italy, Germany, Netherlands, Africa all come to mind). Most of the outside U.S. persons are non researchers interested in the lifestyle and Salmon Run.

Persons Receiving Update (as of 7/5/2012)

Category	Number	Percent
Local Fishermen	72	25%
State Gov. Fisheries	56	20%
Alaska Researchers	35	12%
Federal Gov. Fisheries	33	12%
Non Local persons	30	12%
Non Alaska Researchers	26	9%
DFO / Canadian Researchers	28	10%

Appendix 3:

Appendix 3 shows some of the tools used by project

Figure 1: Typical project data sheet for sampling Chinook salmon

2011 Rapids Student Data Collection Project - Main Raw Data Sheet													
										ICHTHYOPHONUS			
Data collection by:									ADF&G	3 spots or more = pos.			AYK SSI
Day	Date	Fisher	Fish	Weight	Length	Girth	Adipose	Sex	Fin Clip	Heart	# spots	Flesh	Culture
			#	(tenths)	(.5 cm)	(.5 cm)	y - n	m - f	y - n	(p - Pos),(n - Neg),(nc - No Check)			AYK + Vial #

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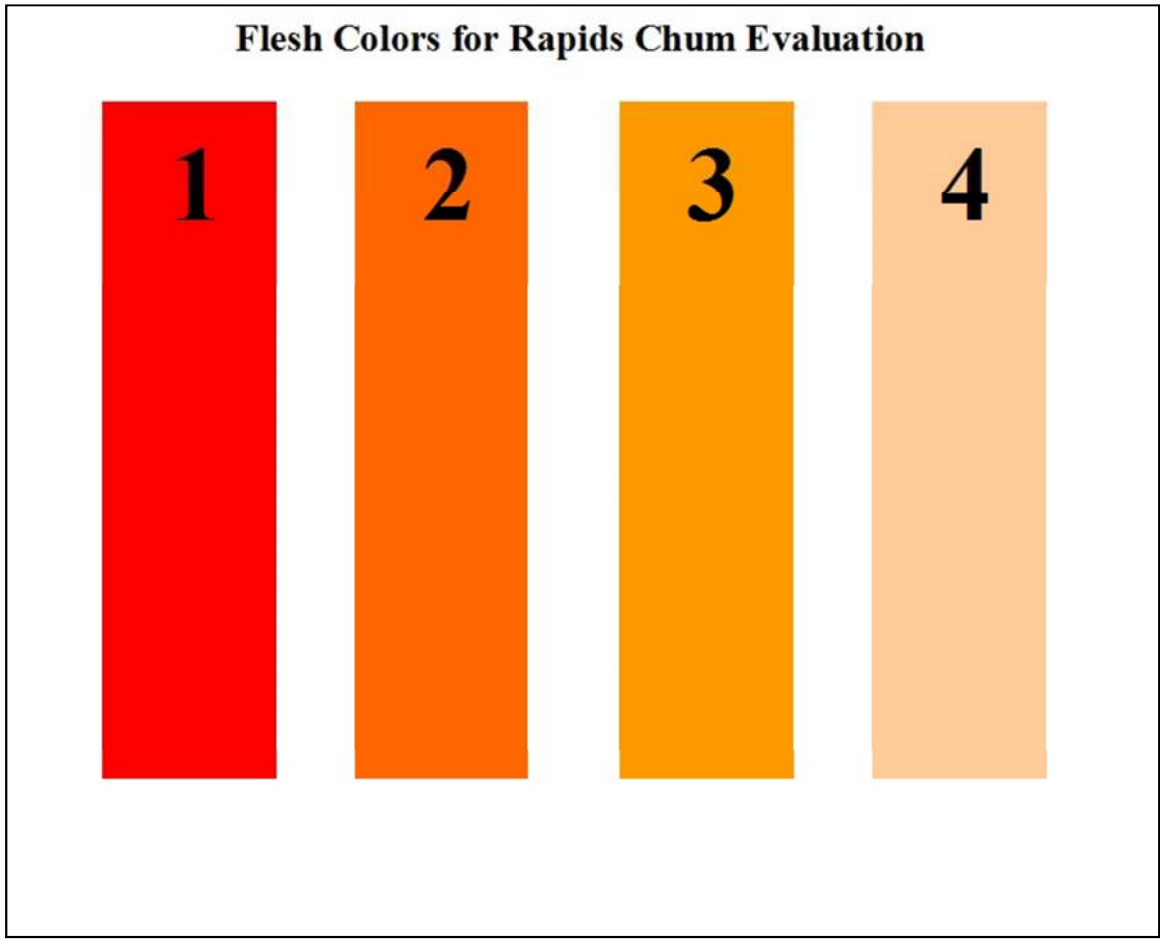
Figure 2: Color chart used to standardize fall chum flesh evaluation for this project.



Appendix 4

Table 1: 2011 to 2013 Rapids Student Data Collection Project - Main Raw Data Sheets

Notes on data:

- Fish numbers may not in equal increments due to both techs sometimes working at different camps at same time and the need to keep data in order by date.

- Be careful when doing averages, etc. as not all data may be taken on any given day due to time constraints.

- Persons wishing to run data please contact for excel file – see section X (Data) for contact info.

2011 Rapids Student Data Collection Project - Main Raw Wheel Data Sheet

Previous years student data reports and info available at www.RapidsResearch.com (Student Project Data page)

(AK SSF + AYK SSI Funded - Tanana Tribal Council, R&E Rapids Fishwheel Project + Rapids Research Supported)

Different colors are separate days

									ADF&G	ICHTHYOPHONUS			AYK SSI
										3 spots or more = pos.			
Day	**Date**	**Fisher**	**Fish**	**Weight**	**Length**	**Girth**	**Adipose**	**Sex**	**Fin Clip**	**Heart**	**# spots**	**Flesh**	**Culture**
			#	(tenths)	(.5 cm)	(.5 cm)	y / n	m / f	y / n	(p - Pos),(n - Neg),(nc - No Check)			AYK + Vial # + R / P
Wed	6/15	wheel	1	16.6	80	45.5	y	m	y	n	0	nc	no
Thu	6/16	wheel	2	17.3	79	48.5	y	m	y	n	0	nc	no
Fri	6/17	wheel	3	28.6	93	56	y	f	y	n	0	nc	no
Fri	6/17	wheel	4	16.8	82.5	45	y	m	y	n	0	nc	no
Fri	6/17	wheel	5	23.9	86.5	54.5	y	m	y	n	0	nc	no
Fri	6/17	wheel	6	14.3	74	45	y	m	y	n	0	nc	no
Fri	6/17	wheel	7	10.5	69.5	39	y	m	y	n	0	nc	no
Fri	6/17	wheel	8	14.6	74.5	45	y	m	y	n	0	nc	no
Sat	6/18	wheel	9	33.7	95.0	59.5	y	m	y	n	0	nc	no
Sun	6/19	wheel	10	11.2	68.0	41.5	y	m	y	n	0	nc	no
Sun	6/19	wheel	11	14.3	75.5	44.0	y	m	y	n	0	nc	no
Sun	6/19	wheel	12	28.9	91.0	57.0	y	m	y	n	0	nc	no
Sun	6/19	wheel	13	12.4	72.5	41.5	y	m	y	**n**	**1**	**nc**	no
Sun	6/19	wheel	14	11.6	70.5	42.0	y	m	y	n	0	nc	no
Sun	6/19	wheel	15	26.0	91.5	54.5	y	f	y	n	0	nc	no

Sun	6/19	wheel	16	23.1	86.0	53.0	y	m	y		n	0	nc		no
Sun	6/19	wheel	17	19.3	84.0	49.5	y	f	y		n	0	nc		no
Sun	6/19	wheel	18	15.2	75.5	47.0	y	m	y		n	0	nc		no
Sun	6/19	wheel	19	38.1	101.5	64.0	y	m	y		n	0	nc		no
Sun	6/19	wheel	20	20.8	85.0	49.5	y	m	y		n	0	nc		no
Sun	6/19	wheel	21	8.2	64.5	34.5	y	m	y		n	0	nc		no
Sun	6/19	wheel	22	11.0	71.0	38.5	y	m	y		n	0	nc		no
Sun	6/19	wheel	23	24.1	91.5	53.0	y	f	n		n	0	nc		no
Sun	6/19	wheel	24	19.0	85.0	48.5	y	f	n		**p**	**3**	**nc**		no
Sun	6/19	wheel	25	14.6	77.0	43.0	y	m	n		n	0	nc		no
Mon	6/20	wheel	26	8.5	67.0	36.5	y	m	y		n	0	nc		no
Mon	6/20	wheel	27	15.4	79.5	44.5	y	m	y		n	0	nc		no
Mon	6/20	wheel	28	12.8	73.0	44.0	y	m	y		n	0	nc		no
Mon	6/20	wheel	29	17.4	81.0	47.0	y	m	y		n	0	nc		no
Mon	6/20	wheel	30	16.6	78.0	47.0	y	m	n		n	0	nc		no
Mon	6/20	wheel	31	29.5	96.0	57.0	y	f	n		n	0	nc		no
Mon	6/20	wheel	32	9.5	66.0	38.0	y	m	n		**p**	**6**	**nc**		no
Mon	6/20	wheel	33	16.4	79.0	46.0	y	m	n		n	0	nc		no
Mon	6/20	wheel	34	10.7	70.0	39.5	y	m	n		**p**	**18**	**nc**		no
Mon	6/20	wheel	35	7.4	64.0	33.0	y	m	n		n	0	nc		no
Mon	6/20	wheel	36	23.2	90.0	51.5	y	f	n		n	0	nc		no
Mon	6/20	wheel	37	17.5	81.0	46.5	y	m	n		n	0	nc		no

Mon	6/20	wheel	38	17.7	83.0	46.0	y	m	n		n	0	nc		no
Mon	6/20	wheel	39	13.1	75.0	42.5	y	m	n		n	0	nc		no
Mon	6/20	wheel	40	11.3	70.5	40.5	y	m	n		n	0	nc		no
Mon	6/20	wheel	41	12.1	71.0	41.5	y	m	n		**p**	**48**	**nc**		no
Tues	6/21	wheel	42	22.3	87.5	52.5	y	f	y		n	0	nc		no
Tues	6/21	wheel	43	25.2	90.5	53.0	y	m	y		**p**	**30**	**nc**		no
Tues	6/21	wheel	44	30.6	98.0	56.0	y	f	y		n	0	nc		no
Tues	6/21	wheel	45	17.8	80.0	48.0	y	m	y		n	0	nc		no
Tues	6/21	wheel	46	23.5	90.0	51.5	y	m	y		n	0	nc		no
Tues	6/21	wheel	47	23.0	87.5	52.5	y	f	y		n	0	nc		no
Tues	6/21	wheel	48	15.1	78.0	44.5	y	m	y		n	0	nc		no
Tues	6/21	wheel	49	14.3	75.0	46.5	y	m	y		n	0	nc		no
Tues	6/21	wheel	50	10.5	66.0	40.0	y	m	y		n	0	nc		no
Tues	6/21	wheel	51	12.0	72.5	40.5	y	m	y		n	0	nc		no
Tues	6/21	wheel	52	14.0	76.0	44.0	y	m	y		n	0	nc		no
Tues	6/21	wheel	53	10.9	68.0	41.5	y	m	y		n	0	nc		no
Tues	6/21	wheel	54	13.0	73.5	43.0	y	m	y		n	0	nc		no
Tues	6/21	wheel	55	15.1	76.0	46.5	y	m	y		n	0	nc		no
Tues	6/21	wheel	56	17.9	81.5	47.5	y	m	y		n	0	nc		no
Tues	6/21	wheel	57	11.0	70.0	40.0	y	m	y		n	0	nc		no
Tues	6/21	wheel	58	11.6	71.5	40.5	y	m	y		n	0	nc		no
Tues	6/21	wheel	59	18.7	83.0	47.5	y	f	y		n	0	nc		no

Tues	6/21	wheel	60	6.2	58.5	33.0	y	m	y		n	0	nc		no
Tues	6/21	wheel	61	25.8	90.0	55.5	y	f	y		n	0	nc		no
Tues	6/21	wheel	62	14.1	74.5	44.0	y	m	y		n	0	nc		no
Tues	6/21	wheel	63	21.5	84.5	51.0	y	m	y		n	0	nc		no
Tues	6/21	wheel	64	16.3	80.5	45.5	y	m	y		**p**	**50**	**n**		**AYK 81**
Tues	6/21	wheel	65	13.8	75.0	42.5	y	m	y		n	0	nc		no
Tues	6/21	wheel	66	20.6	86.5	50.0	y	m	y		n	0	nc		no
Tues	6/21	wheel	67	15.7	76.5	46.5	y	m	y		n	0	nc		no
Tues	6/21	wheel	68	18.0	81.5	48.0	y	m	y		n	0	nc		no
Tues	6/21	wheel	69	14.5	77.5	44.0	y	m	y		n	0	nc		no
Tues	6/21	wheel	70	14.1	74.5	45.0	y	m	y		n	0	nc		no
Tues	6/21	wheel	71	14.4	79.0	43.0	y	m	y		n	0	nc		no
Tues	6/21	wheel	72	11.8	73.0	41.0	y	m	y		**p**	**6**	**n**		**AYK 82**
Tues	6/21	wheel	73	10.3	70.0	39.0	y	m	y		n	0	nc		no
Tues	6/21	wheel	74	11.1	70.5	40.0	y	m	y		n	0	nc		no
Tues	6/21	wheel	75	11.6	70.5	41.0	y	m	y		n	0	nc		no
Tues	6/21	wheel	76	13.9	74.0	45.0	y	m	y		n	0	nc		no
Tues	6/21	wheel	77	12.9	74.0	42.0	y	m	y		n	0	nc		no
Tues	6/21	wheel	78	11.8	72.0	41.0	y	m	y		n	0	nc		no
Tues	6/21	wheel	79	10.1	68.0	38.5	y	m	y		n	0	nc		no
Tues	6/21	wheel	80	12.9	73.0	42.0	y	m	y		n	0	nc		no
Tues	6/21	wheel	81	13.3	71.0	44.0	y	m	y		n	0	nc		no

Tues	6/21	wheel	82	16.4	79.5	46.0	y	m	y		n	0	nc		no
Tues	6/21	wheel	83	22.3	84.5	52.0	y	m	y		n	0	nc		no
Tues	6/21	wheel	84	27.1	92.5	54.0	y	m	y		n	0	nc		no
Tues	6/21	wheel	85	10.5	71.0	38.0	y	m	y		n	0	nc		no
Tues	6/21	wheel	86	20.0	84.0	50.0	y	m	y		n	0	nc		no
Tues	6/21	wheel	87	17.1	82.5	45.5	y	f	y		n	0	nc		no
Tues	6/21	wheel	88	13.5	72.5	44.0	y	m	y		**p**	**3**	**nc**		no
Tues	6/21	wheel	89	12.1	70.5	42.0	y	m	y		n	0	nc		no
Tues	6/21	wheel	90	15.2	78.0	44.0	y	m	y		n	0	nc		no
Tues	6/21	wheel	91	14.1	77.0	43.0	y	m	y		n	0	nc		no
Tues	6/21	wheel	92	27.5	90.0	56.0	y	m	y		n	0	nc		no
Tues	6/21	wheel	93	13.4	74.0	44.0	y	m	y		n	0	nc		no
Wed	6/22	wheel	94	7.8	62.0	35.0	y	m	y		n	0	nc		no
Wed	6/22	wheel	95	21.8	88.0	52.0	y	f	y		n	0	nc		no
Wed	6/22	wheel	96	13.8	78.0	43.0	y	m	y		n	0	nc		no
Wed	6/22	wheel	97	9.8	66.0	40.0	y	m	y		n	0	nc		no
Wed	6/22	wheel	98	12.6	74.0	41.5	y	m	y		n	0	nc		no
Wed	6/22	wheel	99	11.8	70.5	41.0	y	m	y		n	0	nc		no
Wed	6/22	wheel	100	12.4	69.0	43.0	y	m	y		n	0	nc		no
Wed	6/22	wheel	101	11.5	70.5	40.0	y	m	y		n	0	nc		no
Wed	6/22	wheel	102	10.2	75.0	41.0	y	m	y		n	0	nc		no
Wed	6/22	wheel	103	18.2	81.5	47.5	y	m	y		n	0	nc		no

Wed	6/22	wheel	104	13.5	73.0	43.0	y	m	y		**p**	**9**	**nc**	**AYK 83**
Wed	6/22	wheel	105	11.0	69.5	40.0	y	m	y		n	0	nc	no
Wed	6/22	wheel	106	14.0	73.0	45.0	y	m	y		n	0	nc	no
Wed	6/22	wheel	107	20.4	87.0	50.0	y	f	y		n	0	nc	no
Wed	6/22	wheel	108	10.8	70.5	39.0	y	m	y		n	0	nc	no
Wed	6/22	wheel	109	9.6	70.0	37.0	y	m	y		**p**	**30**	**nc**	no
Wed	6/22	wheel	110	28.4	93.0	55.0	y	f	y		n	0	nc	no
Wed	6/22	wheel	111	11.3	70.0	40.0	y	m	y		n	2	nc	no
Wed	6/22	wheel	112	19.0	87.5	46.0	y	f	y		n	0	nc	no
Wed	6/22	wheel	113	15.0	74.0	47.0	y	m	y		n	0	nc	no
Wed	6/22	wheel	114	5.6	58.0	31.0	y	m	y		n	0	nc	no
Wed	6/22	wheel	115	13.6	76.0	41.5	y	m	y		n	0	nc	no
Wed	6/22	wheel	116	14.8	76.5	45.5	y	m	y		n	0	nc	no
Wed	6/22	wheel	117	24.0	92.0	45.5	y	f	y		n	0	nc	no
Wed	6/22	wheel	118	16.4	77.5	47.0	y	m	y		n	0	nc	no
Wed	6/22	wheel	119	21.4	84.5	51.5	y	m	y		n	0	nc	no
Wed	6/22	wheel	120	27.1	90.0	57.0	y	f	y		n	0	nc	no
Wed	6/22	wheel	121	12.0	71.0	41.0	y	m	y		n	0	nc	no
Wed	6/22	wheel	122	8.6	66.0	36.0	y	m	y		n	0	nc	no
Wed	6/22	wheel	123	13.6	75.0	43.0	y	m	y		n	0	nc	no
Wed	6/22	wheel	124	21.9	89.5	48.5	y	f	y		n	0	nc	no
Wed	6/22	wheel	125	8.7	66.0	36.5	y	m	y		n	0	nc	no

Wed	6/22	wheel	126	12.0	71.5	42.0	y	m	y		n	0	nc		no
Wed	6/22	wheel	127	12.6	71.0	43.0	y	m	y		n	0	nc		no
Wed	6/22	wheel	128	31.0	95.0	60.0	y	m	y		n	0	nc		no
Wed	6/22	wheel	129	11.4	71.0	42.5	y	m	y		n	0	nc		no
Wed	6/22	wheel	130	11.1	72.0	39.5	y	m	y		n	0	nc		no
Wed	6/22	wheel	131	9.9	68.5	38.0	y	m	y		n	0	nc		no
Wed	6/22	wheel	132	19.2	82.0	50.0	y	m	y		n	0	nc		no
Wed	6/22	wheel	133	17.9	80.0	49.0	y	m	y		n	0	nc		no
Wed	6/22	wheel	134	21.1	86.5	50.0	y	f	y		n	0	nc		no
Wed	6/22	wheel	135	18.1	84.0	47.0	y	m	y		n	0	nc		no
Wed	6/22	wheel	136	17.3	81.0	46.0	y	m	y		n	0	nc		no
Wed	6/22	wheel	137	25.4	91.0	54.0	y	m	y		n	0	nc		no
Wed	6/22	wheel	138	8.2	63.0	37.0	y	m	y		n	0	nc		no
Wed	6/22	wheel	139	9.0	65.5	38.0	y	m	y		n	0	nc		no
Wed	6/22	wheel	140	29.9	93.0	58.0	y	m	y		n	0	nc		no
Thur	6/23	wheel	141	17.9	84.0	46.5	y	m	y		n	0	nc		no
Thur	6/23	wheel	142	27.6	90.5	57.0	y	f	y		n	0	nc		no
Thur	6/23	wheel	143	14.8	78.0	44.0	y	m	y		n	0	nc		no
Thur	6/23	wheel	144	13.2	74.0	42.0	y	m	y		n	0	nc		no
Thur	6/23	wheel	145	13.5	73.5	43.5	y	m	y		n	0	nc		no
Thur	6/23	wheel	146	11.0	69.0	40.5	y	m	y		n	0	nc		no
Thur	6/23	wheel	147	14.4	78.0	44.0	y	m	y		**p**	**50**	**nc**		no

Thur	6/23	wheel	148	25.2	90.0	54.5	y	f	y		n	0	nc		no
Thur	6/23	wheel	149	10.7	70.0	40.0	y	m	y		n	0	nc		no
Thur	6/23	wheel	150	11.3	69.5	39.5	y	m	y		n	0	nc		no
Thur	6/23	wheel	151	10.1	68.5	38.0	y	m	y		n	0	nc		no
Thur	6/23	wheel	152	6.0	58.5	32.0	y	m	y		n	0	nc		no
Thur	6/23	wheel	153	20.1	83.5	49.0	y	m	y		n	0	nc		no
Thur	6/23	wheel	154	19.5	86.0	48.0	y	m	y		n	0	nc		no
Thur	6/23	wheel	155	10.2	68.0	38.0	y	m	y		n	0	nc		no
Thur	6/23	wheel	156	15.8	75.5	47.0	y	f	y		n	0	nc		no
Thur	6/23	wheel	157	22.4	86.0	52.5	y	m	y		n	0	nc		no
Thur	6/23	wheel	158	7.0	60.5	32.5	y	m	y		**p**	**75**	**nc**		**AYK 86**
Thur	6/23	wheel	159	10.7	68.0	39.0	y	m	y		n	0	nc		no
Thur	6/23	wheel	160	20.2	84.5	50.0	y	f	y		n	0	nc		no
Thur	6/23	wheel	161	11.6	72.0	40.0	y	m	y		n	0	nc		no
Thur	6/23	wheel	162	15.8	75.0	47.0	y	m	y		n	0	nc		no
Thur	6/23	wheel	163	12.4	71.0	41.0	y	m	y		n	0	nc		no
Thur	6/23	wheel	164	13.6	74.5	43.0	y	m	y		**p**	**6**	**nc**		no
Thur	6/23	wheel	165	9.3	67.0	38.0	y	m	y		n	0	nc		no
Thur	6/23	wheel	166	12.6	73.0	40.5	y	m	y		n	0	nc		no
Thur	6/23	wheel	167	9.4	66.0	37.0	y	m	y		**n**	**1**	**nc**		no
Thur	6/23	wheel	168	6.4	56.0	34.0	y	m	y		n	0	nc		no
Thur	6/23	wheel	169	14.9	78.0	46.0	y	m	y		n	0	nc		no

Thur	6/23	wheel	170	34.7	98.5	60.0	y	m	y		n	0	nc		no
Thur	6/23	wheel	171	18.2	84.0	46.5	y	m	y		n	0	nc		no
Thur	6/23	wheel	172	10.0	69.0	38.0	y	m	y		n	0	nc		no
Thur	6/23	wheel	173	20.4	82.5	51.0	y	f	y		n	0	nc		no
Thur	6/23	wheel	174	11.8	70.5	41.0	y	m	y		n	0	nc		no
Thur	6/23	wheel	175	30.8	97.5	57.0	y	f	y		n	0	nc		no
Thur	6/23	wheel	176	21.5	88.0	50.5	y	f	y		n	0	nc		no
Thur	6/23	wheel	177	20.9	89.0	50.0	y	f	y		n	0	nc		no
Thur	6/23	wheel	178	13.5	74.5	43.0	y	m	y		n	0	nc		no
Thur	6/23	wheel	179	20.6	86.5	50.0	y	f	y		n	0	nc		no
Thur	6/23	wheel	180	9.4	67.0	37.5	y	m	y		n	0	nc		no
Thur	6/23	wheel	181	12.5	73.5	41.5	y	m	y		n	0	nc		no
Thur	6/23	wheel	182	15.3	76.0	45.0	y	m	y		n	0	nc		no
Thur	6/23	wheel	183	9.1	65.0	38.0	y	m	y		n	0	nc		no
Thur	6/23	wheel	184	20.0	84.5	48.0	y	f	y		n	0	nc		no
Thur	6/23	wheel	185	15.8	80.0	45.0	y	m	y		**p**	**4**	**nc**		no
Thur	6/23	wheel	186	26.8	93.0	54.5	y	f	y		n	0	nc		no
Thur	6/23	wheel	187	24.3	90.5	52.0	y	f	y		n	0	nc		no
Thur	6/23	wheel	188	9.8	67.0	38.5	y	m	y		n	0	nc		no
Thur	6/23	wheel	189	7.5	61.0	35.0	y	m	y		n	0	nc		no
Thur	6/23	wheel	190	6.4	57.5	34.0	y	m	y		n	0	nc		no
Thur	6/23	wheel	191	11.0	70.0	40.5	y	m	y		n	0	nc		no

Thur	6/23	wheel	192	17.1	83.5	45.0	y	f	y		n	0	nc		no
Thur	6/23	wheel	193	26.4	93.5	53.5	y	m	y		n	0	nc		no
Thur	6/23	wheel	194	10.4	69.0	39.5	y	m	y		**p**	**100**	**nc**		**AYK 85**
Thur	6/23	wheel	195	21.2	84.5	50.0	y	m	y		n	0	nc		no
Thur	6/23	wheel	196	16.3	82.0	45.5	y	f	y		n	0	nc		no
Thur	6/23	wheel	197	7.6	64.5	34.0	y	m	y		n	0	nc		no
Thur	6/23	wheel	198	20.4	87.5	49.5	y	f	y		n	0	nc		no
Thur	6/23	wheel	199	10.4	70.0	38.0	y	m	y		n	0	nc		no
Thur	6/23	wheel	200	9.1	66.5	36.0	y	m	y		n	0	nc		no
Thur	6/23	wheel	201	16.7	70.0	40.0	y	m	y		n	0	nc		no
Thur	6/23	wheel	202	20.0	86.0	48.0	y	f	y		n	0	nc		no
Fri	6/24	wheel	203	8.6	68.0	35.0	y	m	y		n	0	nc		no
Fri	6/24	wheel	204	5.7	55.5	32.0	y	m	y		n	0	nc		no
Fri	6/24	wheel	205	7.9	65.5	35.5	y	m	y		**p**	**50**	**nc**		no
Fri	6/24	wheel	206	8.4	67.0	35.0	y	m	y		**p**	**30**	**nc**		no
Fri	6/24	wheel	207	13.0	72.0	43.5	y	m	y		n	0	nc		no
Fri	6/24	wheel	208	10.6	71.5	38.5	y	m	y		n	0	nc		no
Fri	6/24	wheel	209	9.2	69.0	37.0	y	m	y		n	0	nc		no
Fri	6/24	wheel	210	11.0	73.5	39.0	y	m	y		**p**	**100**	**nc**		**AYK 87**
Fri	6/24	wheel	211	11.8	74.0	39.5	y	m	y		**p**	**15**	**nc**		no
Fri	6/24	wheel	212	12.2	73.0	41.5	y	m	y		n	0	nc		no
Fri	6/24	wheel	213	13.5	77.0	42.5	y	m	y		n	0	nc		no

Fri	6/24	wheel	214	23.3	91.0	51.0	y	f	y		n	0	nc		no
Fri	6/24	wheel	215	14.2	75.5	44.5	y	m	y		n	0	nc		no
Fri	6/24	wheel	216	23.6	89.0	52.5	y	f	y		n	0	nc		no
Fri	6/24	wheel	217	13.1	76.5	41.0	y	m	y		n	0	nc		no
Fri	6/24	wheel	218	9.1	66.5	38.0	y	m	y		**p**	**300**	**nc**		**AYK 88**
Fri	6/24	wheel	219	25.5	87.5	55.0	y	m	y		N	0	nc		no
Fri	6/24	wheel	220	19.1	85.0	47.5	y	m	y		n	0	nc		no
Fri	6/24	wheel	221	24.0	87.5	54.0	y	m	y		n	0	nc		no
Fri	6/24	wheel	222	8.6	67.0	36.0	y	m	y		n	0	nc		no
Fri	6/24	wheel	223	16.2	82.0	44.5	y	f	y		n	0	nc		no
Fri	6/24	wheel	224	16.4	79.5	46.5	y	m	y		n	0	nc		no
Fri	6/24	wheel	225	13.8	76.0	44.0	y	m	y		n	0	nc		no
Fri	6/24	wheel	226	11.2	70.0	40.5	y	m	y		n	0	nc		no
Fri	6/24	wheel	227	11.5	72.0	41.0	y	m	y		n	0	nc		no
Fri	6/24	wheel	228	11.7	73.5	40.5	y	m	y		n	0	nc		no
Fri	6/24	wheel	229	13.5	76.5	42.0	y	f	y		n	0	nc		no
Fri	6/24	wheel	230	10.7	70.0	39.5	y	m	y		n	0	nc		no
Fri	6/24	wheel	231	10.9	71.0	39.5	y	m	y		n	0	nc		no
Fri	6/24	wheel	232	9.0	66.0	38.5	y	m	y		n	0	nc		no
Fri	6/24	wheel	233	10.2	69.5	39.0	y	m	y		n	0	nc		no
Fri	6/24	wheel	234	12.2	73.0	41.5	y	m	y		n	0	nc		no
Fri	6/24	wheel	235	10.9	71.5	38.5	y	m	y		n	0	nc		no

Fri	6/24	wheel	236	7.4	61.0	35.5	y	m	y		n	0	nc		no
Fri	6/24	wheel	237	7.6	62.0	35.5	y	m	y		n	0	nc		no
Fri	6/24	wheel	238	9.7	67.0	38.5	y	m	y		n	0	nc		no
Fri	6/24	wheel	239	7.5	60.5	35.0	y	m	y		n	0	nc		no
Fri	6/24	wheel	240	5.4	56.5	30.5	y	m	y		n	0	nc		no
Sat	6/25	wheel	241	21.2	89.5	?	y	m	y		n	0	nc		no
Sat	6/25	wheel	242	18.6	84.0	47.5	y	f	y		n	0	nc		no
Sat	6/25	wheel	243	23.0	88.0	50.5	y	f	y		n	0	nc		no
Sat	6/25	wheel	244	22.7	84.5	53.5	y	f	y		n	0	nc		no
Sat	6/25	wheel	245	12.4	74.0	42.0	y	m	y		n	0	nc		no
Sat	6/25	wheel	246	14.6	78.0	44.0	y	m	y		n	0	nc		no
Sat	6/25	wheel	247	19.5	84.0	49.0	y	m	y		n	0	nc		no
Sat	6/25	wheel	248	24.9	92.0	53.5	y	f	y		n	0	nc		no
Sat	6/25	wheel	249	18.5	83.0	48.5	y	f	y		n	0	nc		no
Sat	6/25	wheel	250	18.7	82.0	47.5	y	m	y		n	0	nc		no
Sat	6/25	wheel	251	20.5	86.0	50.5	y	f	y		n	0	nc		no
Sat	6/25	wheel	252	15.0	76.5	46.0	y	m	y		n	0	nc		no
Sat	6/25	wheel	253	17.3	83.0	47.0	y	f	y		n	0	nc		no
Sat	6/25	wheel	254	14.5	77.0	44.0	y	m	y		n	0	nc		no
Sat	6/25	wheel	255	23.6	89.5	52.5	y	f	y		n	0	nc		no
Sat	6/25	wheel	256	15.2	78.0	44.5	y	m	y		**p**	**20**	**nc**		no
Sat	6/25	wheel	257	11.5	72.0	39.0	y	m	y		n	0	nc		no

Sat	6/25	wheel	258	16.0	80.5	46.0	y	m	y		n	0	nc		no
Sat	6/25	wheel	259	14.4	76.0	44.5	y	m	y		n	0	nc		no
Sat	6/25	wheel	260	11.3	72.0	41.0	y	m	y		n	0	nc		no
Sat	6/25	wheel	261	7.1	61.0	34.5	y	m	y		n	0	nc		no
Sat	6/25	wheel	262	10.1	67.5	39.0	y	m	y		n	0	nc		no
Sat	6/25	wheel	263	11.0	70.0	41.5	y	m	y		n	0	nc		no
Sat	6/25	wheel	264	13.1	76.5	43.0	y	m	y		n	0	nc		no
Sat	6/25	wheel	265	11.5	72.5	42.0	y	m	y		**p**	**100**	**nc**		**AYK 89**
Sat	6/25	wheel	266	8.2	63.0	38.0	y	m	y		n	0	nc		no
Sat	6/25	wheel	267	10.0	68.0	38.5	y	m	y		n	0	nc		no
Sat	6/25	wheel	268	10.4	71.0	38.0	y	m	y		n	0	nc		no
Sat	6/25	wheel	269	8.9	56.0	37.5	y	m	y		n	0	nc		no
Sat	6/25	wheel	270	8.6	65.5	36.5	y	m	y		n	0	nc		no
Sat	6/25	wheel	271	9.1	66.0	37.5	y	m	y		n	0	nc		no
Sat	6/25	wheel	272	6.4	58.0	33.0	y	m	y		n	0	nc		no
Sat	6/25	wheel	273	8.7	66.0	37.0	y	m	y		n	0	nc		no
Sat	6/25	wheel	274	4.4	53.0	30.0	y	m	y		n	0	nc		no
Sat	6/25	wheel	275	7.9	64.5	35.0	y	m	y		n	0	nc		no
Sat	6/25	wheel	276	17.4	80.5	47.5	y	m	y		n	0	nc		no
Sat	6/25	wheel	277	14.6	74.5	46.0	y	m	y		n	0	nc		no
Sat	6/25	wheel	278	14.4	76.0	44.0	y	m	y		n	0	nc		no
Sat	6/25	wheel	279	11.6	68.5	41.5	y	m	y		**p**	**30**	**nc**		no

Sat	6/25	wheel	280	4.8	55.0	29.0	y	m	y		n	0	nc		no
Sat	6/25	wheel	281	10.1	66.0	40.5	y	m	y		n	0	nc		no
Sat	6/25	wheel	282	6.0	59.5	32.5	y	m	y		n	0	nc		no
Sat	6/25	wheel	283	6.6	58.0	35.0	y	m	y		n	0	nc		no
Sat	6/25	wheel	284	9.9	70.0	38.0	y	m	y		n	0	nc		no
Sat	6/25	wheel	285	5.9	59.5	32.0	y	m	y		n	0	nc		no
Sat	6/25	wheel	286	12.4	77.0	41.5	y	m	y		n	0	nc		no
Sat	6/25	wheel	287	10.7	70.0	39.5	y	m	y		n	0	nc		no
Sun	6/26	wheel	288	22.3	88.5	51.5	y	f	y	n	n	0	nc		no
Sun	6/26	wheel	289	13.9	77.0	43.0	y	m	y		n	0	nc		no
Sun	6/26	wheel	290	18.8	82.0	50.5	y	f	y		n	0	nc		no
Sun	6/26	wheel	291	13.3	75.0	43.0	y	m	y		**p**	**30**	**n**		no
Sun	6/26	wheel	292	14.1	76.0	44.5	y	m	y		n	0	nc		no
Sun	6/26	wheel	293	14.6	77.5	45.0	y	m	y		n	0	nc		no
Sun	6/26	wheel	294	19.0	86.5	48.0	y	f	y		n	0	nc		no
Sun	6/26	wheel	295	15.8	80.0	47.0	y	f	y		n	0	nc		no
Sun	6/26	wheel	296	17.3	79.5	48.0	y	m	y		n	0	nc		no
Sun	6/26	wheel	297	18.6	83.0	50.0	y	f	y		n	0	nc		no
Sun	6/26	wheel	298	24.6	90.0	50.0	y	f	y		n	0	nc		no
Sun	6/26	wheel	299	17.1	83.0	45.5	y	f	y		n	0	nc		no
Sun	6/26	wheel	300	13.2	73.0	44.5	y	m	y		n	0	nc		no
Sun	6/26	wheel	301	22.4	94.5	51.5	y	f	y		n	0	nc		no

Sun	6/26	wheel	302	14.7	77.5	44.0	y	m	y		n	0	nc		no
Sun	6/26	wheel	303	11.9	72.0	42.5	y	m	y		**p**	**17**	**n**		no
Sun	6/26	wheel	304	25.9	90.5	57.0	y	f	y		n	0	nc		no
Sun	6/26	wheel	305	14.2	76.0	45.0	y	m	y		n	0	nc		no
Sun	6/26	wheel	306	12.4	73.0	42.0	y	m	y		n	0	nc		no
Sun	6/26	wheel	307	19.5	86.0	49.5	y	f	y		n	0	nc		no
Sun	6/26	wheel	308	16.9	81.0	46.5	y	m	y		n	0	nc		no
Sun	6/26	wheel	309	12.2	74.0	40.0	y	m	y		n	0	nc		no
Sun	6/26	wheel	310	5.0	53.0	30.5	y	m	y		n	0	nc		no
Sun	6/26	wheel	311	9.0	66.0	37.5	y	m	y		**p**	**50**	nc		no
Sun	6/26	wheel	312	7.1	60.5	34.5	y	m	y		n	0	nc		no
Sun	6/26	wheel	313	7.6	62.5	36.0	y	m	y		n	0	nc		no
Sun	6/26	wheel	314	7.0	62.0	34.0	y	m	y		n	0	nc		no
Sun	6/26	wheel	315	8.4	63.5	36.0	y	m	y		n	0	nc		no
Sun	6/26	wheel	316	11.1	71.5	40.0	y	m	y		n	0	nc		no
Sun	6/26	wheel	317	11.5	68.5	41.5	y	m	y		n	0	nc		no
Sun	6/26	wheel	318	11.2	72.5	39.5	y	m	y		n	0	nc		no
Sun	6/26	wheel	319	6.8	60.5	34.5	y	m	y		**p**	**100**	**nc**		no
Sun	6/26	wheel	320	11.0	72.0	39.5	y	m	y		n	0	nc		no
Sun	6/26	wheel	321	11.2	71.0	40.0	**n**	m	y		n	0	nc		no
Sun	6/26	wheel	322	10.0	68.0	39.0	y	m	y		n	0	nc		no
Sun	6/26	wheel	323	6.5	58.0	33.0	y	m	y		n	0	nc		no

Sun	6/26	wheel	324	11.5	71.0	41.0	y	m	y		n	0	nc		no
Sun	6/26	wheel	325	7.8	61.5	36.0	y	m	y		n	0	nc		no
Sun	6/26	wheel	326	6.7	61.0	33.0	y	m	y		n	0	nc		no
Sun	6/26	wheel	327	5.7	56.0	32.5	y	m	y		n	0	nc		no
Sun	6/26	wheel	328	5.8	56.5	31.0	y	m	y		n	0	nc		no
Sun	6/26	wheel	329	26.0	92.5	54.5	y	m	y		n	0	nc		no
Sun	6/26	wheel	330	16.1	80.5	nc	y	m	y		n	0	nc		no
Sun	6/26	wheel	331	16.4	77.0	47.0	y	m	y		n	0	nc		no
Sun	6/26	wheel	332	11.4	73.0	40.5	y	m	y		n	0	nc		no
Sun	6/26	wheel	333	11.1	72.0	40.5	y	m	y		n	0	nc		no
Sun	6/26	wheel	334	15.4	76.0	47.0	y	m	y		n	0	nc		no
Sun	6/26	wheel	335	10.2	68.0	39.0	y	m	y		n	0	nc		no
Sun	6/26	wheel	336	8.4	65.0	37.0	y	m	y		n	0	nc		no
Sun	6/26	wheel	337	22.0	88.0	52.0	y	f	y		n	0	nc		no
Sun	6/26	wheel	338	13.5	74.0	44.0	y	f	y		n	0	nc		no
Sun	6/26	wheel	339	13.4	74.0	42.0	y	m	y		n	0	nc		no
Sun	6/26	wheel	340	11.2	70.0	41.0	y	m	y		n	0	nc		no
Sun	6/26	wheel	341	11.4	70.5	41.0	y	m	y		n	0	nc		no
Sun	6/26	wheel	342	11.9	72.5	42.5	y	m	y		n	0	nc		no
Sun	6/26	wheel	343	9.3	67.0	37.0	y	m	y		n	0	nc		no
Sun	6/26	wheel	344	8.6	65.0	36.0	**n**	m	y		n	0	nc		no
Mon	6/27	wheel	345	27.8	91.5	56.5	y	m	y		n	0	nc		no

Mon	6/27	wheel	346	23.9	87.5	64.0	y	m	y		n	0	nc		no
Mon	6/27	wheel	347	18.2	82.5	48.0	y	f	y		n	0	nc		no
Mon	6/27	wheel	348	4.8	53.0	30.0	y	m	y		n	0	nc		no
Mon	6/27	wheel	349	11.9	73.5	41.0	y	m	y		n	0	nc		no
Mon	6/27	wheel	350	8.4	64.5	36.0	y	m	y		n	0	nc		no
Mon	6/27	wheel	351	14.9	77.0	44.5	y	m	y		n	0	nc		no
Mon	6/27	wheel	352	16.9	83.0	45.0	y	m	y		n	0	nc		no
Mon	6/27	wheel	353	10.7	69.5	38.0	y	m	y		n	0	nc		no
Mon	6/27	wheel	354	14.0	75.0	43.0	y	m	y		n	0	nc		no
Mon	6/27	wheel	355	12.3	73.0	41.0	y	m	y		n	0	nc		no
Mon	6/27	wheel	356	11.7	71.5	40.0	y	m	y		n	0	nc		no
Mon	6/27	wheel	357	9.9	69.5	37.5	y	m	y		n	0	nc		no
Mon	6/27	wheel	358	7.8	64.5	34.0	y	m	y		**p**	**19**	nc		no
Mon	6/27	wheel	359	9.1	67.0	36.0	y	m	y		**p**	**35**	nc		no
Mon	6/27	wheel	360	8.2	62.5	34.5	y	m	y		n	0	nc		no
Mon	6/27	wheel	361	6.6	57.5	33.5	y	m	y		n	0	nc		no
Mon	6/27	wheel	362	5.9	55.0	32.5	y	m	y		n	0	nc		no
Mon	6/27	wheel	363	9.4	65.0	37.5	y	m	y		n	0	nc		no
Mon	6/27	wheel	364	5.8	57.5	31.0	y	m	y		n	0	nc		no
Mon	6/27	wheel	365	5.3	54.5	30.0	y	m	y		n	0	nc		no
Mon	6/27	wheel	366	4.7	53.5	48.5	y	m	y		n	0	nc		no
Mon	6/27	wheel	367	5.1	56.0	28.5	y	m	y		n	0	nc		no

Mon	6/27	wheel	368	4.1	51.0	27.0	y	m	y		n	0	nc		no
Mon	6/27	wheel	369	16.2	80.0	45.0	y	m	y		n	0	nc		no
Mon	6/27	wheel	370	25.4	92.0	54.5	y	f	y		n	0	nc		no
Mon	6/27	wheel	371	9.5	66.5	37.0	y	m	y		n	0	nc		no
Mon	6/27	wheel	372	11.4	70.5	40.0	y	m	y		n	0	nc		no
Mon	6/27	wheel	373	9.0	65.5	36.0	y	m	y		**p**	**50**	nc		no
Mon	6/27	wheel	374	15.8	79.5	44.5	y	m	y		n	0	nc		no
Mon	6/27	wheel	375	10.9	72.0	38.0	y	m	y		n	0	nc		no
Mon	6/27	wheel	376	11.9	72.0	40.5	y	m	y		n	0	nc		no
Mon	6/27	wheel	377	12.2	71.5	41.0	y	m	y		n	0	nc		no
Mon	6/27	wheel	378	10.7	68.5	39.0	y	m	y		n	0	nc		no
Mon	6/27	wheel	379	9.8	67.0	37.5	y	m	y		n	0	nc		no
Mon	6/27	wheel	380	9.9	67.5	38.0	y	m	y		n	0	nc		no
Mon	6/27	wheel	381	8.2	64.0	35.0	y	m	y		n	0	nc		no
Tues	6/28	wheel	382	12.1	72.5	42.0	y	m	y		n	0	nc		no
Tues	6/28	wheel	383	7.6	61.5	36.5	y	m	y		n	0	nc		no
Tues	6/28	wheel	384	10.6	70.0	39.0	y	m	y		n	0	nc		no
Tues	6/28	wheel	385	21.7	87.0	50.5	y	m	y		n	0	nc		no
Tues	6/28	wheel	386	13.7	79.5	41.0	y	m	y		n	0	nc		no
Tues	6/28	wheel	387	12.0	71.5	42.0	y	m	y		n	0	nc		no
Tues	6/28	wheel	388	29.9	96.0	57.0	y	f	y		n	0	nc		no
Tues	6/28	wheel	389	16.5	80.0	46.5	y	m	y		n	0	nc		no

Tues	6/28	wheel	390	20.1	87.0	49.0	y	m	y		n	0	nc		no
Tues	6/28	wheel	391	10.4	71.5	37.0	y	m	y		**p**	**20**	nc		no
Tues	6/28	wheel	392	8.5	64.0	36.0	y	m	y		n	0	nc		no
Tues	6/28	wheel	393	5.6	65.5	38.0	y	m	y		n	0	nc		no
Tues	6/28	wheel	394	8.2	64.0	36.0	y	m	y		n	0	nc		no
Tues	6/28	wheel	395	10.9	68.5	39.0	y	m	y		n	0	nc		no
Tues	6/28	wheel	396	24.2	90.5	52.0	y	m	y		n	0	nc		no
Tues	6/28	wheel	397	6.1	56.0	53.0	y	m	y		n	0	nc		no
Tues	6/28	wheel	398	11.3	70.0	40.0	y	m	y		n	0	nc		no
Tues	6/28	wheel	399	9.4	66.5	37.5	y	m	y		n	0	nc		no
Wed	6/29	wheel	400	5.9	56.0	33.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	401	23.5	91.5	52.5	y	f	y		n	0	nc		no
Wed	6/29	wheel	402	6.9	61.0	34.5	y	m	y		n	0	nc		no
Wed	6/29	wheel	403	15.3	78.5	46.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	404	20.8	86.0	50.5	y	f	y		n	0	nc		no
Wed	6/29	wheel	405	8.4	64.0	37.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	406	16.7	81.5	46.5	y	f	y		n	0	nc		no
Wed	6/29	wheel	407	10.2	66.5	40.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	409	20.5	84.5	50.5	y	m	y		n	0	nc		no
Wed	6/29	wheel	410	21.0	87.0	50.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	411	11.9	70.0	42.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	412	26.6	95.0	56.0	y	f	y		**p**	**150**	nc		no

Wed	6/29	wheel	413	20.6	86.0	51.0	y	f	y		n	0	nc		no
Wed	6/29	wheel	414	7.3	61.0	36.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	415	9.3	66.0	38.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	416	6.8	61.0	35.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	417	5.5	57.0	32.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	418	6.1	59.0	33.0	y	f	y		n	0	nc		no
Wed	6/29	wheel	419	4.9	55.0	31.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	420	3.5	48.5	27.5	y	m	y		**n**	**1**	nc		no
Wed	6/29	wheel	421	12.0	70.5	41.5	y	m	y		n	0	nc		no
Wed	6/29	wheel	422	13.7	74.5	43.5	y	m	y		n	0	nc		no
Wed	6/29	wheel	423	12.1	73.0	42.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	424	15.5	76.0	46.5	y	m	y		n	0	nc		no
Wed	6/29	wheel	425	8.4	63.0	37.5	y	m	y		n	0	nc		no
Wed	6/29	wheel	426	10.1	70.0	38.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	427	9.7	67.0	38.0	y	m	y		**p**	**9**	nc		no
Wed	6/29	wheel	428	12.3	72.5	41.5	y	m	y		n	0	nc		no
Wed	6/29	wheel	429	9.1	72.5	41.5	y	f	y		n	0	nc		no
Wed	6/29	wheel	430	9.1	55.0	38.5	y	f	y		**p**	**81**	nc		no
Wed	6/29	wheel	431	11.2	71.0	40.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	432	7.4	62.0	35.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	433	6.3	58.0	33.5	y	m	y		n	0	nc		no
Wed	6/29	wheel	434	5.7	56.0	31.5	y	m	y		**n**	**2**	nc		no

Wed	6/29	wheel	435	7.5	60.0	36.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	436	10.3	69.5	39.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	437	6.0	57.0	32.5	y	m	y		n	0	nc		no
Wed	6/29	wheel	438	22.9	89.0	51.5	y	f	y		n	0	nc		no
Wed	6/29	wheel	439	13.4	75.5	42.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	440	11.4	71.5	40.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	441	13.7	76.0	42.5	y	m	y		**p**	**2000**	**n**		**AYK 90**
Wed	6/29	wheel	442	11.9	73.5	41.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	443	25.7	87.5	51.5	y	f	y		n	0	nc		no
Wed	6/29	wheel	444	15.9	78.0	46.0	y	m	y		**n**	**1**	nc		no
Wed	6/29	wheel	445	16.7	83.0	44.5	y	m	y		n	0	nc		no
Wed	6/29	wheel	446	14.6	76.0	45.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	447	20.0	84.5	49.5	y	f	y		n	0	nc		no
Wed	6/29	wheel	448	31.9	96.0	58.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	449	22.3	85.0	52.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	450	21.1	86.0	50.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	451	22.2	86.5	51.5	y	m	y		n	0	nc		no
Wed	6/29	wheel	452	20.5	85.0	49.5	y	f	y		n	0	nc		no
Wed	6/29	wheel	453	12.2	69.5	43.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	454	18.2	82.5	47.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	455	17.0	78.5	47.5	y	m	y		n	0	nc		no
Wed	6/29	wheel	456	14.7	74.5	45.5	y	m	y		**n**	**2**	nc		no

Wed	6/29	wheel	457	11.4	70.5	41.0	y	m	y		**p**	**15**	nc		no
Wed	6/29	wheel	458	11.6	71.5	40.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	459	10.9	58.0	40.5	y	m	y		n	0	nc		no
Wed	6/29	wheel	460	9.9	57.0	39.5	y	m	y		n	0	nc		no
Wed	6/29	wheel	461	10.3	69.0	39.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	462	9.0	67.0	37.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	463	9.6	67.5	38.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	464	10.7	70.0	40.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	465	5.6	57.0	32.5	y	m	y		n	0	nc		no
Wed	6/29	wheel	466	12.0	73.0	42.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	467	11.4	77.0	46.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	468	10.3	69.5	39.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	469	9.3	67.0	38.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	470	9.4	67.0	39.0	y	m	y		**p**	**25**	nc		no
Wed	6/29	wheel	471	10.1	71.0	37.5	y	m	y		**p**	**3**	nc		no
Wed	6/29	wheel	472	6.9	61.0	35.0	y	m	y		n	0	nc		no
Wed	6/29	wheel	473	6.2	59.5	32.0	y	m	y		n	0	nc		no
Thurs	6/29	wheel	474	6.2	60.5	31.5	y	m	y		n	0	nc		no
Thurs	6/30	test	475	5.9											
Thurs	6/30	test	476	25.2											
Thurs	6/30	test	477	11.9											
Thurs	6/30	test	478	11.8											

King that are marked "test" in the **Fisher** column and are minus much of the data are those taken under special permit during closed season. Normally all of our data comes out of the subsistence fishery but this year because the 1st and 2nd pulse was closed this is not possible. We consider it extremely important to get data from times such as this when a significant section of the run is protected from all fishing all the way to the border.

All these king were caught in a padded fish friendly wheel and netted in a soft mesh basket right off the chute. Weighed while in the basket they were immediately released to the river seconds after being netted. Lack of all other data is to make their release as quick as possible.

Thurs	6/30	test	479	15.4											
Thurs	6/30	test	480	4.5											
Thurs	6/30	test	481	9.8											
Thurs	6/30	test	482	7.2											
Thurs	6/30	test	483	10.7											
Thurs	6/30	test	484	5.4											
Thurs	6/30	test	485	15.2											
Thurs	6/30	test	486	26.9											
Thurs	6/30	test	487	11.9											
Thurs	6/30	test	488	5.4											
Thurs	6/30	test	489	22.1											
Thurs	6/30	test	490	13.6											
Thurs	6/30	test	491	8.5											
Thurs	6/30	test	492	11.4											
Thurs	6/30	test	493	13.9											
Thurs	6/30	test	494	19											
Friday	7/1	test	495	6.2											
Friday	7/1	test	496	21.6											
Friday	7/1	test	497	11.8											
Friday	7/1	test	498	12.3											
Friday	7/1	test	499	12.6											
Friday	7/1	test	500	18											
Friday	7/1	test	501	9.5											
Friday	7/1	test	502	9.9											
Friday	7/1	test	503	14.2											

Friday	7/1	test	504	18.6											
Friday	7/1	test	505	10.4											
Friday	7/1	test	506	15.4											
Friday	7/1	test	507	10.7											
Friday	7/1	test	508	10.8											
Friday	7/1	test	509	24.9											
Friday	7/1	test	510	25.3											
Friday	7/1	test	511	10.8											
Friday	7/1	test	512	11.6											
Friday	7/1	test	513	15.7											
Friday	7/1	test	514	12.8											
Friday	7/1	test	515	19.9											
Friday	7/1	test	516	27.5											
Friday	7/1	test	517	12.2											
Friday	7/1	test	518	22.4											
Friday	7/1	test	519	27.2											
Friday	7/1	test	520	9.5											
Friday	7/1	test	521	16.8											
Friday	7/1	test	522	21.7											
Friday	7/1	test	523	22.2											
Friday	7/1	test	524	23.6											
Friday	7/1	test	525	13.7											
Friday	7/1	test	526	7.3											
Friday	7/1	test	527	15.5											
Friday	7/1	test	528	12.2											
Friday	7/1	test	529	6.3											
Friday	7/1	test	530	11.3											
Friday	7/1	test	531	13.1											
Friday	7/1	test	532	25.7											
Friday	7/1	test	533	9.2											
Friday	7/1	test	534	18.7											
Friday	7/1	test	535	14.9											

Friday	7/1	test	536	25.1											
Friday	7/1	test	537	20.3											
Friday	7/1	test	538	12.8											
Friday	7/1	test	539	14.4											
Friday	7/1	test	540	11.1											
Friday	7/1	test	541	15.6											
Sat	7/2	test	542	9.6											
Sat	7/2	test	543	9											
Sat	7/2	test	544	9.5											
Sat	7/2	test	545	10.3											
Sat	7/2	test	546	21											
Sat	7/2	test	547	27											
Sat	7/2	test	548	13.1											
Sat	7/2	test	549	13.5											
Sat	7/2	test	550	12.9											
Sat	7/2	test	551	13.6											
Sat	7/2	test	552	12											
Sat	7/2	test	553	4.7											
Sat	7/2	test	554	15.6											
Sat	7/2	test	555	11.8											
Sat	7/2	test	556	4.7											
Sat	7/2	test	557	15.1											
Sat	7/2	test	558	**54.1**											
Sat	7/2	test	559	32											
Sat	7/2	test	560	19.6											
Sat	7/2	test	561	16.7											
Sat	7/2	test	562	14											
Sat	7/2	test	563	4.7											
Sat	7/2	test	564	11											
Sat	7/2	test	565	14.4											
Sat	7/2	test	566	18											
Sat	7/2	test	567	9.9											

Sat	7/2	test	568	13										
Sat	7/2	test	569	5.2										
Sun	7/3	test	570	11.7										
Sun	7/3	test	571	19.3										
Sun	7/3	test	572	10.9										
Sun	7/3	test	573	20.9										
Sun	7/3	test	574	10.3										
Sun	7/3	test	575	13.0										
Sun	7/3	test	576	3.7										
Sun	7/3	test	577	4.0										
Sun	7/3	test	578	6.4										
Sun	7/3	test	579	8.8										
Sun	7/3	test	580	10.1										
Sun	7/3	test	581	13.7										
Sun	7/3	test	582	10.4										
Sun	7/3	test	583	10.8										
Sun	7/3	test	584	10.5										
Sun	7/3	test	585	25.1										
Sun	7/3	test	586	19.9										
Sun	7/3	test	587	7.0										
Sun	7/3	test	588	18.5										
Sun	7/3	test	589	13.9										
Sun	7/3	test	590	10.4										
Sun	7/3	test	591	10.1										
Sun	7/3	test	592	14.1										
Sun	7/3	test	593	8.7										
Sun	7/3	test	594	5.5										
Sun	7/3	test	595	13.5										
Sun	7/3	test	596	27.5										
Sun	7/3	test	597	23.7										
Sun	7/3	test	598	12.7										
Sun	7/3	test	599	16.9										

Sun	7/3	test	600	6.5											
Sun	7/3	test	601	16.5											
Sun	7/3	test	602	14.3											
Sun	7/3	test	603	20.6											
Sun	7/3	test	604	11.5											
Sun	7/3	test	605	18.9											
Sun	7/3	test	606	14.5											
Sun	7/3	test	607	24.7											
Sun	7/3	test	608	14.8											
Sun	7/3	test	609	12.1											
Sun	7/3	test	610	23.5											
Sun	7/3	test	611	20.9											
Sun	7/3	test	612	4.7											
Sun	7/3	test	613	23.4											
Sun	7/3	test	614	12.8											
Sun	7/3	test	615	18.9											
Sun	7/3	test	616	10.4											
Sun	7/3	test	617	14.1											
Sun	7/3	test	618	12.6											
Sun	7/3	test	619	14.4											
Sun	7/3	test	620	6.5											
Sun	7/3	test	621	13.0											
Sun	7/3	test	622	16.6											
Sun	7/3	test	623	12.0											
Sun	7/3	test	624	4.1											
Sun	7/3	test	625	11.0											
Sun	7/3	test	626	4.9											
Sun	7/3	test	627	9.6											
Sun	7/3	test	628	12.0											
Sun	7/3	test	629	10.0											
Sun	7/3	test	630	16.5											
Sun	7/3	test	631	10.3											

Sun	7/3	test	632	8.8											
Sun	7/3	test	633	17.5											
Sun	7/3	test	634	25.6											
Sun	7/3	test	635	5.6											
Sun	7/3	test	636	9.9											
Sun	7/3	test	637	3.2											
Sun	7/3	test	638	33.6											
Sun	7/3	test	639	23.5											
Sun	7/3	test	640	9.3											
Sun	7/3	test	641	7.6											
Sun	7/3	test	642	8.0											
Sun	7/3	test	643	9.6											
Sun	7/3	test	644	12.4											
Sun	7/3	test	645	11.0											
Sun	7/3	test	646	19.6											
Sun	7/3	test	647	29.1											
Sun	7/3	test	648	10.0											
Sun	7/3	test	649	8.5											
Mon	7/4	test	650	19											
Mon	7/4	test	651	18.8											
Mon	7/4	test	652	4.5											
Mon	7/4	test	653	10											
Mon	7/4	test	654	14.6											
Mon	7/4	test	655	11											
Mon	7/4	test	656	19.5											
Mon	7/4	test	657	5.2											
Mon	7/4	test	658	20.8											
Mon	7/4	test	659	21											
Mon	7/4	test	660	7.7											
Mon	7/4	test	661	12.3											
Mon	7/4	test	662	13											
Mon	7/4	test	663	10.8											

Mon	7/4	test	664	21.9											
Mon	7/4	test	665	12											
Mon	7/4	test	666	6											
Mon	7/4	test	667	6.8											
Mon	7/4	test	668	6.5											
Mon	7/4	test	669	11.8											
Mon	7/4	test	670	19.2											
Mon	7/4	test	671	11.6											
Mon	7/4	test	672	7.3											
Mon	7/4	test	673	14.9											
Mon	7/4	test	674	10.5											
Mon	7/4	test	675	4											
Mon	7/4	test	676	4											
Mon	7/4	test	677	16.1											
Mon	7/4	test	678	25.3											
Mon	7/4	test	679	15.8											
Mon	7/4	test	680	7.9											
Mon	7/4	test	681	6.9											
Mon	7/4	test	682	8.9											
Mon	7/4	test	683	19.8											
Mon	7/4	test	684	11.1											
Mon	7/4	test	685	13.9											
Mon	7/4	test	686	10.8											
Mon	7/4	test	687	13											
Mon	7/4	test	688	22.3											
Mon	7/4	test	689	16.1											
Tues	7/5	wheel	690	19.5	83.0	50.0	y	f	y		n	0	nc		no
Tues	7/5	wheel	691	24.5	88.0	54.0	y	f	y		n	0	nc		no
Tues	7/5	wheel	692	7.0	60.0	37.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	693	6.0	56.5	33.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	694	12.0	71.5	42.0	y	m	y		**p**	**14**	nc		no
Tues	7/5	wheel	695	9.6	66.5	38.5	y	m	y		n	0	nc		no

Tues	7/5	wheel	696	11.8	72.0	41.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	697	11.1	70.0	41.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	698	10.9	68.5	40.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	699	11.3	73.0	40.5	y	m	y		**p**	**7**	nc		no
Tues	7/5	wheel	700	7.5	60.5	35.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	701	19.5	81.0	50.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	702	6.6	57.5	33.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	703	4.9	53.5	29.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	704	15.0	75.0	44.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	705	8.4	65.0	35.0	y	m	y		**p**	**50**	nc		**AYK 91**
Tues	7/5	wheel	706	7.4	60.5	35.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	707	6.2	59.0	31.5	**n**	m	y		**p**	**75**	nc		**AYK 92**
Tues	7/5	wheel	708	12.9	75.0	41.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	709	12.6	73.0	41.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	710	17.1	80.0	47.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	711	14.7	76.0	44.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	712	11.9	69.5	42.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	713	15.4	77.0	45.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	714	7.0	61.5	34.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	715	12.2	74.0	41.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	716	6.8	61.5	34.0	y	m	**missing**		**p**	**5**	nc		no
Tues	7/5	wheel	717	16.6	80.0	46.0	y	m	y		n	**1**	nc		no
Tues	7/5	wheel	718	14.7	75.5	44.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	719	11.5	73.0	40.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	720	25.5	87.5	55.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	721	10.2	69.0	38.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	722	27.2	92.5	55.5	y	f	y		n	0	nc		no
Tues	7/5	wheel	723	17.4	81.5	46.0	y	f	y		n	0	nc		no
Tues	7/5	wheel	724	30.1	89.5	59.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	725	19.8	82.0	50.5	y	f	y		n	0	nc		no
Tues	7/5	wheel	726	12.5	74.0	42.0	y	m	y		n	0	nc		no

Tues	7/5	wheel	727	18.2	80.0	48.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	728	11.0	70.5	40.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	729	19.0	85.0	48.0	y	f	y		n	0	nc		no
Tues	7/5	wheel	730	25.9	91.5	54.5	y	f	y		n	0	nc		no
Tues	7/5	wheel	731	18.5	81.0	48.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	732	18.7	83.0	49.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	733	21.6	89.0	50.0	y	f	y		n	0	nc		no
Tues	7/5	wheel	734	11.8	69.0	42.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	735	13.2	74.0	44.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	736	10.5	67.0	41.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	737	9.7	69.0	41.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	738	13.2	73.0	44.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	739	7.0	64.5	32.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	740	14.9	74.0	45.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	741	12.9	75.0	41.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	742	10.4	69.5	38.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	743	12.5	69.0	43.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	744	10.3	68.0	39.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	745	9.4	67.0	37.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	746	9.1	60.5	35.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	747	6.7	59.0	34.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	748	7.0	61.0	45.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	749	9.4	65.0	37.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	750	8.3	64.5	25.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	751	7.6	60.5	35.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	752	5.9	56.0	32.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	753	4.7	53.5	29.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	754	4.7	52.5	30.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	755	13.5	73.5	43.0	y	f	y		n	0	nc		no
Tues	7/5	wheel	756	15.3	78.5	43.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	757	19.8	86.0	47.0	y	f	y		n	0	nc		no
Tues	7/5	wheel	758	23.8	88.0	53.0	y	f	y		n	0	nc		no

Tues	7/5	wheel	759	23.3	90.0	51.0	y	f	y		n	0	nc		no
Tues	7/5	wheel	760	29.8	94.0	57.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	761	25.0	89.5	54.0	y	f	y		n	0	nc		no
Tues	7/5	wheel	762	25.7	88.0	56.5	y	f	y		n	0	nc		no
Tues	7/5	wheel	763	23.7	90.0	52.0	y	f	y		n	0	nc		no
Tues	7/5	wheel	764	14.8	78.0	45.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	765	22.0	89.0	50.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	766	23.4	88.0	52.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	767	24.7	89.0	54.0	y	f	y		n	0	nc		no
Tues	7/5	wheel	768	21.6	87.0	52.0	y	f	y		n	0	nc		no
Tues	7/5	wheel	769	23.1	88.0	51.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	770	18.1	82.0	47.0	y	f	y		n	0	nc		no
Tues	7/5	wheel	771	15.4	78.0	24.5	y	f	y		n	0	nc		no
Tues	7/5	wheel	772	20.5	90.0	46.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	773	15.8	78.0	44.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	774	19.3	82.0	50.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	775	20.6	83.0	51.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	776	22.2	87.0	51.0	y	f	y		n	0	nc		no
Tues	7/5	wheel	777	21.7	86.5	50.5	y	f	y		n	0	nc		no
Tues	7/5	wheel	778	12.6	75.5	41.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	779	10.7	72.0	39.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	780	11.4	72.0	40.0	y	m	y		n	1	nc		no
Tues	7/5	wheel	781	14.0	76.5	43.0	y	f	y		n	0	nc		no
Tues	7/5	wheel	782	6.0	57.0	31.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	783	12.0	72.5	41.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	784	11.6	72.5	41.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	785	7.9	55.0	34.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	786	9.4	68.0	37.0	y	m	y		**p**	**100**	nc		**AYK 93**
Tues	7/5	wheel	787	10.1	69.5	38.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	788	10.7	70.0	39.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	789	14.8	76.5	44.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	790	10.8	71.5	39.0	y	m	y		n	0	nc		no

Tues	7/5	wheel	791	10.4	67.0	40.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	792	11.2	73.0	39.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	793	19.0	65.0	34.5	y	m	y		**p**	**50**	nc		**AYK 94**
Tues	7/5	wheel	794	11.5	79.0	42.5	y	f	y		n	0	nc		no
Tues	7/5	wheel	795	12.6	73.5	41.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	796	5.5	55.5	31.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	797	14.6	73.5	46.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	798	6.4	60.0	32.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	799	8.8	67.0	36.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	800	12.8	72.5	42.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	801	11.5	73.0	40.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	802	11.2	68.5	42.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	803	14.3	78.0	44.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	804	5.1	56.5	31.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	805	4.2	53.0	29.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	806	11.5	72.5	39.5	y	m	y		**p**	**30**	nc		no
Tues	7/5	wheel	807	13.0	74.5	42.0	y	m	y		n	0	nc		no
Tues	7/5	wheel	808	9.9	67.5	39.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	809	6.4	60.0	30.0	y	m	y		**p**	**100**	nc		**AYK 95**
Tues	7/5	wheel	810	8.4	67.0	35.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	811	11.0	70.5	40.5	y	m	y		n	0	nc		no
Tues	7/5	wheel	812	5.5	58.0	31.5	y	m	y		n	0	nc		no
Wed	7/6	wheel	813	9.0	69.0	36.0	y		n		nc	nc	nc		no
Wed	7/6	wheel	814	9.6	70.0	36.5	y		n		nc	nc	nc		no
Wed	7/6	wheel	815	10.2	70.0	38.5	y		n		nc	nc	nc		no
Wed	7/6	wheel	816	6.7	62.0	33.0	y		n		nc	nc	nc		no
Wed	7/6	wheel	817	19.5	85.0	48.0	y		n		nc	nc	nc		no
Wed	7/6	wheel	818	19.6	75.0	45.5	y		n		nc	nc	nc		no
Wed	7/6	wheel	819	8.6	65.0	37.0	y		n		nc	nc	nc		no
Wed	7/6	wheel	820	10.3	69.0	38.0	y		n		nc	nc	nc		no
Wed	7/6	wheel	821	21.6	85.5	51.5	y	f	y		n	0	nc		no
Wed	7/6	wheel	822	20.7	89.0	49.0	y	f	y		n	0	nc		no

Wed	7/6	wheel	823	19.2	85.5	47.0	y	f	y		n	0	nc	no
Wed	7/6	wheel	824	19.6	85.5	48.0	y	f	y		n	0	nc	no
Wed	7/6	wheel	825	23.5	87.0	54.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	826	25.2	91.0	54.5	y	m	y		n	0	nc	no
Wed	7/6	wheel	827	23.8	90.0	54.0	y	f	y		n	0	nc	no
Wed	7/6	wheel	828	23.2	89.0	52.5	y	f	y		n	0	nc	no
Wed	7/6	wheel	829	14.5	77.0	44.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	830	14.5	76.5	45.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	831	12.0	74.5	41.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	832	15.2	77.5	46.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	833	10.6	71.5	39.5	y	m	y		n	0	nc	no
Wed	7/6	wheel	834	12.8	72.0	43.5	y	m	y		n	0	nc	no
Wed	7/6	wheel	835	18.1	82.0	48.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	836	12.1	73.0	41.5	y	m	y		n	0	nc	no
Wed	7/6	wheel	837	9.8	67.0	39.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	838	9.1	68.5	36.5	y	m	y		n	0	nc	no
Wed	7/6	wheel	839	10.2	71.0	39.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	840	14.9	77.0	45.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	841	12.0	72.0	42.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	842	9.8	69.0	39.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	843	12.5	74.0	41.5	y	m	y		n	0	nc	no
Wed	7/6	wheel	844	5.1	54.0	31.5	y	m	y		n	0	nc	no
Wed	7/6	wheel	845	6.3	59.0	32.5	y	m	y		n	0	nc	no
Wed	7/6	wheel	846	11.5	73.0	40.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	847	12.9	73.5	43.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	848	5.6	58.0	31.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	849	4.1	51.5	28.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	850	8.6	66.0	36.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	851	4.9	54.0	31.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	852	9.1	68.0	36.5	y	m	y		n	0	nc	no
Wed	7/6	wheel	853	7.4	61.0	35.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	854	11.5	72.0	40.0	y	m	y		n	0	nc	no

Wed	7/6	wheel	855	8.0	62.0	36.0	y	m	y		n	0	nc		no
Wed	7/6	wheel	856	6.0	56.5	33.5	y	m	y		n	0	nc		no
Wed	7/6	wheel	857	5.0	55.0	30.5	y	m	y		n	0	nc		no
Wed	7/6	wheel	858	4.8	56.0	29.0	y	m	y		n	0	nc		no
Wed	7/6	wheel	859	13.2	74.0	42.5	y	m	y						
Wed	7/6	wheel	860	10.5	71.0	38.0	y	m	y						
Wed	7/6	wheel	861	18.6	86.5	45.5	y	m	y						
Wed	7/6	wheel	862	15.8	81.5	45.0	y	f	y						
Wed	7/6	wheel	863	14.0	75.0	44.0	y	m	y						
Wed	7/6	wheel	864	15.7	78.0	46.0	y	m	y						
Wed	7/6	wheel	865	9.2	65.0	38.0	y	m	y						
Wed	7/6	wheel	866	11.1	70.5	41.5	y	m	y						
Wed	7/6	wheel	867	8.3	64.0	36.0	y	m	y						
Wed	7/6	wheel	868	11.5	69.0	42.0	y	m	y						
Wed	7/6	wheel	869	18.6	80.0	49.0	y	m	y						
Wed	7/6	wheel	870	5.4	54.0	31.0	y	m	y						
Wed	7/6	wheel	871	22.1	84.5	50.5	y	m	y						
Wed	7/6	wheel	872	9.1	67.0	36.0	y	m	y						
Wed	7/6	wheel	873	5.0	54.5	29.5	y	m	y						
Wed	7/6	wheel	874	15.3	76.5	44.5	y	f	y						
Wed	7/6	wheel	875	7.0	59.5	35.0	y	m	y						
Wed	7/6	wheel	876	12.0	71.0	41.5	y	m	y						
Wed	7/6	wheel	877	6.0	61.0	32.5	y	m	y						
Wed	7/6	wheel	878	11.2	68.5	40.5	y	m	y						
Wed	7/6	wheel	879	13.6	73.3	45.0	y	m	y						
Wed	7/6	wheel	880	18.3	84.0	47.0	y	f	y						
Wed	7/6	wheel	881	6.5	58.0	33.0	y	m	y						
Wed	7/6	wheel	882	20.8	86.0	49.0	y	f	y						
Wed	7/6	wheel	883	4.8	52.5	30.0	y	m	y						
Wed	7/6	wheel	884	9.5	67.0	37.0	y	m	y						
Wed	7/6	wheel	885	8.4	62.5	36.0	y	m	y						
Wed	7/6	wheel	886	8.8	56.0	37.0	y	m	y						

Wed	7/6	wheel	887	7.3	60.0	35.0	y	m	y					
Wed	7/6	wheel	888	11.2	70.0	41.0	y	m	y					
Wed	7/6	wheel	889	12.2	72.0	41.5	y	m	y		n	0	nc	no
Wed	7/6	wheel	890	15.3	79.0	45.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	891	6.7	58.0	34.5	y	m	y		n	0	nc	no
Wed	7/6	wheel	892	5.5	56.5	30.5	y	m	y		n	0	nc	no
Wed	7/6	wheel	893	17.0	79.5	48.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	894	32.8	94.5	59.5	y	m	y		n	0	nc	no
Wed	7/6	wheel	895	11.9	72.5	42.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	896	4.7	54.0	29.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	897	7.4	63.0	35.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	898	5.6	56.5	31.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	899	7.8	62.5	36.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	900	4.5	56.5	31.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	901	4.9	56.0	29.5	y	m	y		n	0	nc	no
Wed	7/6	wheel	902	10.1	69.5	38.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	903	11.9	74.0	40.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	904	4.5	54.5	28.5	y	m	y		n	0	nc	no
Wed	7/6	wheel	905	6.5	58.5	32.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	906	7.1	61.5	34.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	907	6.0	57.5	32.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	908	6.9	60.5	34.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	909	5.9	58.0	33.0	y	m	y		n	0	nc	no
Wed	7/6	wheel	910	13.4	73.5	42.5	y	m	y		**p**	**10**	nc	no
Wed	7/6	wheel	911	5.1	54.5	31.5	y	m	y		n	0	nc	no
Wed	7/6	wheel	912	5.2	56.0	30.0	y	m	y		n	0	nc	no
Thu	7/7	test	913	6.4										
Thu	7/7	test	914	6.8										
Thu	7/7	test	915	19										
Thu	7/7	test	916	16.8										
Thu	7/7	test	917	7.8										
Thu	7/7	test	918	12.8										

Thu	7/7	test	919	10.9											
Thu	7/7	test	920	3.9											
Thu	7/7	test	921	11.4											
Thu	7/7	test	922	8.5											
Thu	7/7	test	923	18.7											
Thu	7/7	test	924	12.5											
Thu	7/7	test	925	4.9											
Thu	7/7	test	926	10.3											
Thu	7/7	test	927	4.4											
Thu	7/7	test	928	1.9											
Thu	7/7	test	929	3.7											
Fri	7/8	test	930	8.8											
Fri	7/8	test	931	10.5											
Fri	7/8	test	932	9.3											
Fri	7/8	test	933	14.6											
Fri	7/8	test	934	11.9											
Fri	7/8	test	935	17.4											
Fri	7/8	test	936	8.2											
Fri	7/8	test	937	9.5											
Fri	7/8	test	938	10.8											
Fri	7/8	test	939	10.4											
Fri	7/8	test	940	6.4											
Fri	7/8	test	941	6.6											
Fri	7/8	test	942	22.1											
Fri	7/8	test	943	19.1											
Fri	7/8	test	944	11.7											
Fri	7/8	test	945	5.3											
Fri	7/8	test	946	17.9											
Fri	7/8	test	947	6.1											
Fri	7/8	test	948	15.5											
Fri	7/8	test	949	6.3											
Fri	7/8	test	950	11.2											

Fri	7/8	test	951	4.2											
Fri	7/8	test	952	11.4											
Fri	7/8	test	953	4.9											
Fri	7/8	test	954	5.4											
Fri	7/8	test	955	5.1											
Fri	7/8	test	956	4.6											
Fri	7/8	test	957	8.6											
Fri	7/8	test	958	6											
Fri	7/8	test	959	12											
Fri	7/8	test	960	9.5											
Fri	7/8	test	961	20.5											
Fri	7/8	test	962	16											
Fri	7/8	test	963	14											
Fri	7/8	test	964	7.2											
Fri	7/8	test	965	11.3											
Sat	7/9	test	966	0.6											
Sat	7/9	test	967	13.7											
Sat	7/9	test	968	25.4											
Sat	7/9	test	969	7.9											
Sat	7/9	test	970	17.6											
Sat	7/9	test	971	21.6											
Sat	7/9	test	972	11.5											
Sat	7/9	test	973	5.9											
Sat	7/9	test	974	24.6											
Sat	7/9	test	975	7.1											
Sat	7/9	test	976	5.1											
Sat	7/9	test	977	6.2											
Sat	7/9	test	978	6.4											
Sat	7/9	test	979	19.3											
Sat	7/9	test	980	3.6											
Sat	7/9	test	981	12.7											
Sat	7/9	test	982	9.3											

Sat	7/9	test	983	6										
Sat	7/9	test	984	18.2										
Sat	7/9	test	985	20.5										
Sat	7/9	test	986	24.1										
Sat	7/9	test	987	13.2										
Sat	7/9	test	988	15.6										
Sat	7/9	test	989	5.5										
Sat	7/9	test	990	5.8										
Sat	7/9	test	991	6.1										
Sat	7/9	test	992	18.8										
Sat	7/9	test	993	24.2										
Sat	7/9	test	994	15										
Sat	7/9	test	995	10.6										
Sat	7/9	test	996	4.5										
Sat	7/9	test	997	10.4										
Sat	7/9	test	998	6.7										
Sat	7/9	test	999	7.7										
Sat	7/9	test	1000	19.3										
Sat	7/9	test	1001	17.1										
Sat	7/9	test	1002	7.6										
Sat	7/9	test	1003	4.6										
Sat	7/9	test	1004	11.7										
Sat	7/9	test	1005	3.4										
Sat	7/9	test	1006	25.3										
Sat	7/9	test	1007	9										
Sun	7/10	test	1008	12.2										
Sun	7/10	test	1009	25.3										
Sun	7/10	test	1010	12.7										
Sun	7/10	test	1011	19.1										
Sun	7/10	test	1012	3.1										

Sun	7/10	test	1013	21.7											
Sun	7/10	test	1014	3.1											
Sun	7/10	test	1015	17											
Sun	7/10	test	1016	12.1											
Sun	7/10	test	1017	9.8											
Sun	7/10	test	1018	5.2											
Sun	7/10	test	1019	12.8											
Sun	7/10	test	1020	11.5											
Sun	7/10	test	1021	11.8											
Sun	7/10	test	1022	7.5											
Sun	7/10	test	1023	16.7											
Sun	7/10	test	1024	13.9											
Sun	7/10	test	1025	3.9											
Sun	7/10	test	1026	13.6											
Sun	7/10	test	1027	7.8											
Sun	7/10	test	1028	10.3											
Sun	7/10	test	1029	16.3											
Sun	7/10	test	1030	8.9											
Sun	7/10	test	1031	10.4											
Sun	7/10	test	1032	15.5											
Sun	7/10	test	1033	8											
Sun	7/10	test	1034	4.9											

Sun	7/10	test	1035	5.6											
Sun	7/10	test	1036	9.1											
Sun	7/10	test	1037	24.4											
Sun	7/10	test	1038	9											
Sun	7/10	test	1039	26											
Sun	7/10	test	1040	17											
Sun	7/10	test	1041	23.4											
Sun	7/10	test	1042	8.9											
Sun	7/10	test	1043	5.1											
Sun	7/10	test	1044	4.9											
Sun	7/10	test	1045	19.3											
Sun	7/10	test	1046	5.8											
Sun	7/10	test	1047	8.4											
Sun	7/10	test	1048	4.6											
Sun	7/10	test	1049	18.5											
Sun	7/10	test	1050	9.7											
Sun	7/10	test	1051	11.1											
Sun	7/10	test	1052	16											
Sun	7/10	test	1053	13.8											
Mon	7/11	test	1054	9.3											
Mon	7/11	test	1055	5.6											
Mon	7/11	test	1056	3.3											

Mon	7/11	test	1057	21.9											
Mon	7/11	test	1058	10.1											
Mon	7/11	test	1059	11.3											
Mon	7/11	test	1060	31.5											
Mon	7/11	test	1061	12.9											
Mon	7/11	test	1062	5.5											
Mon	7/11	test	1063	9.8											
Mon	7/11	test	1064	14.7											
Mon	7/11	test	1065	9.2											
Mon	7/11	test	1066	10.8											
Mon	7/11	test	1067	15.6											
Mon	7/11	test	1068	5.8											
Mon	7/11	test	1069	13											
Mon	7/11	test	1070	12.3											
Mon	7/11	test	1071	4.1											
Mon	7/11	test	1072	25.2											
Mon	7/11	test	1073	6.6											
Mon	7/11	test	1074	12.2											
Mon	7/11	test	1075	10.6											
Mon	7/11	test	1076	6.6											
Mon	7/11	test	1077	18.5											
Mon	7/11	test	1078	8.9											

Mon	7/11	test	1079	4.9											
Mon	7/11	test	1080	21											
Mon	7/11	test	1081	23.2											
Mon	7/11	test	1082	18.7											
Mon	7/11	test	1083	13.3											
Mon	7/11	test	1084	5.6											
Mon	7/11	test	1085	9.4											
Mon	7/11	test	1086	6.2											
Mon	7/11	test	1087	14.2											
Mon	7/11	test	1088	21.4											
Mon	7/11	test	1089	24.2											
Mon	7/11	test	1090	19.5											
Mon	7/11	test	1091	15.8											
Mon	7/11	test	1092	5.4											
Mon	7/11	test	1093	9.3											
Mon	7/11	test	1094	4.1											
Mon	7/11	test	1095	8.8											
Mon	7/11	test	1096	17											
Mon	7/11	test	1097	10.4											
Mon	7/11	test	1098	12.6											
Mon	7/11	test	1099	20.4											
Mon	7/11	test	1100	11.2											

Mon	7/11	test	1101	13.6										
Mon	7/11	test	1102	5.4										
Mon	7/11	test	1103	15.4										
Tues	7/12	wheel	1104	9.6	86.0	49.0	y	f	y		n	0	nc		no
Tues	7/12	wheel	1105	19.0	83.0	29.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1106	21.6	89.0	49.5	y	f	y		n	0	nc		no
Tues	7/12	wheel	1107	23.3	86.2	54.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1108	22.0	90.0	49.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1109	19.0	85.0	49.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1110	18.4	80.0	49.5	y	f	y		n	0	nc		no
Tues	7/12	wheel	1111	23.8	89.5	53.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1112	24.3	89.0	52.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1113	27.1	94.0	56.0	y	f	y		n	0	nc		no
Tues	7/12	wheel	1114	25.0	92.0	53.0	y	f	y		n	0	nc		no
Tues	7/12	wheel	1115	32.5	95.0	60.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1116	20.0	85.0	50.0	y	f	y		n	0	nc		no
Tues	7/12	wheel	1117	19.2	85.0	48.0	y	m	y		**p**	**4**	nc		no
Tues	7/12	wheel	1118	29.9	94.0	57.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1119	15.6	76.5	46.0	y	f	y		n	0	nc		no
Tues	7/12	wheel	1120	15.4	78.0	46.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1121	17.8	82.5	46.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1122	20.6	88.5	48.0	y	f	y		n	0	nc		no

Tues	7/12	wheel	1123	12.8	77.0	42.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1124	17.1	81.0	45.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1125	13.1	77.0	41.0	y	f	y		n	0	nc		no
Tues	7/12	wheel	1126	12.5	72.0	42.5	y	m	y		**p**	**18**	nc		no
Tues	7/12	wheel	1127	13.6	74.5	44.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1128	13.5	78.0	42.5	y	f	y		n	0	nc		no
Tues	7/12	wheel	1129	11.2	70.0	40.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1130	13.4	76.0	44.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1131	10.3	70.5	39.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1132	12.9	74.0	42.0	y	f	y		n	0	nc		no
Tues	7/12	wheel	1133	13.3	77.0	42.0	y	f	y		n	0	nc		no
Tues	7/12	wheel	1134	12.2	73.0	42.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1135	10.6	71.0	38.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1136	10.3	71.0	39.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1137	9.0	67.0	36.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1138	11.7	70.0	41.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1139	10.5	70.5	38.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1140	10.4	69.0	40.0	y	m	y		**p**	**16**	nc		no
Tues	7/12	wheel	1141	8.9	67.0	36.0	y	m	y		**p**	**30**	nc		no
Tues	7/12	wheel	1142	11.3	70.0	39.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1143	6.4	59.0	32.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1144	5.7	59.5	31.5	y	m	y		n	0	nc		no

Tues	7/12	wheel	1145	7.3	64.0	34.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1146	5.4	57.0	31.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1147	7.6	63.5	35.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1148	5.2	55.0	30.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1149	6.0	58.0	31.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1150	9.5	68.0	36.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1151	4.5	54.0	29.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1152	4.8	53.0	30.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1153	4.9	56.0	28.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1154	21.0	87.0	50.0	y	f	y		n	0	nc		no
Tues	7/12	wheel	1155	10.4	72.0	37.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1156	13.1	74.5	42.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1157	14.2	76.0	43.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1158	8.0	63.5	36.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1159	14.0	74.0	42.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1160	13.4	73.0	43.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1161	14.4	76.0	44.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1162	10.0	69.5	38.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1163	11.4	71.0	42.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1164	13.1	77.5	42.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1165	8.0	63.0	35.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1166	37.5	101.5	63.0	y	m	y		n	0	nc		no

Tues	7/12	wheel	1167	33.4	97.5	59.5	y	f	y		n	0	nc		no
Tues	7/12	wheel	1168	20.7	84.0	50.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1169	25.9	92.0	54.0	y	f	y		n	0	nc		no
Tues	7/12	wheel	1170	4.9	55.0	31.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1171	24.5	90.5	52.5	y	f	y		n	0	nc		no
Tues	7/12	wheel	1172	5.1	57.0	30.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1173	8.7	67.0	37.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1174	12.9	76.5	41.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1175	3.0	47.0	25.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1176	8.4	66.5	36.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1177	14.4	80.5	41.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1178	6.9	64.0	32.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1179	21.4	86.0	51.0	y	f	y		n	0	nc		no
Tues	7/12	wheel	1180	7.9	64.0	36.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1181	13.9	74.5	44.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1182	16.6	81.0	46.0	y	f	y		n	0	nc		no
Tues	7/12	wheel	1183	5.9	56.0	32.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1184	20.6	87.5	49.0	y	f	y		n	0	nc		no
Tues	7/12	wheel	1185	15.6	81.0	44.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1186	6.7	60.0	34.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1187	18.9	88.0	47.0	y	f	y		n	0	nc		no
Tues	7/12	wheel	1188	7.3	62.0	34.5	y	m	y		n	0	nc		no

Tues	7/12	wheel	1189	9.3	67.0	37.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1190	8.0	63.0	36.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1191	4.6	55.5	29.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1192	5.2	58.0	30.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1193	8.5	64.5	37.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1194	9.4	66.5	38.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1195	34.3	99.0	60.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1196	6.0	59.0	31.0	y	m	y		n	1	nc		no
Tues	7/12	wheel	1197	8.4	67.5	36.0	n	m	y		n	0	nc		no
Tues	7/12	wheel	1198	7.8	63.0	36.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1199	5.7	59.0	31.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1200	9.2	65.5	38.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1201	5.3	54.5	31.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1202	13.0	76.0	42.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1203	5.2	57.5	31.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1204	29.0	93.0	56.5	y	f	y		**p**	**13**	nc		no
Tues	7/12	wheel	1205	14.0	75.5	43.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1206	7.4	63.0	34.0	y	m	y		**p**	**20**	nc		no
Tues	7/12	wheel	1207	23.0	88.0	52.0	y	f	y		**p**	**4000**	nc		**AYK 96**
Tues	7/12	wheel	1208	7.4	64.0	34.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1209	14.7	79.0	45.0	y	f	y		n	0	nc		no
Tues	7/12	wheel	1210	10.8	71.0	40.0	y	m	y		n	0	nc		no

Tues	7/12	wheel	1211	13.5	77.0	42.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1212	5.6	57.0	30.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1213	9.3	69.5	36.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1214	6.9	61.5	34.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1215	6.7	60.5	33.5	y	m	y		n	0	nc		no
Tues	7/12	wheel	1216	8.8	65.5	37.0	y	m	y		n	0	nc		no
Tues	7/12	wheel	1217	4.7	55.0	29.0	y	m	y		n	0	nc		no
Wed	7/13	wheel	1218	9.7	70.5	37.0	y	m	y		n	0	nc		no
Wed	7/13	wheel	1219	5.4	57.0	31.0	y	m	y		n	0	nc		no
Wed	7/13	wheel	1220	7.3	63.5	34.5	y	m	y		n	0	nc		no
Wed	7/13	wheel	1221	5.4	58.0	30.0	y	m	y		n	0	nc		no
Wed	7/13	wheel	1222	6.0	57.5	33.0	y	m	y		n	0	nc		no
Wed	7/13	wheel	1223	4.9	55.5	29.5	y	m	y		n	0	nc		no
Wed	7/13	wheel	1224	15.0	78.5	45.0	y	m	y		**p**	**40**	nc		no
Wed	7/13	wheel	1225	8.6	68.0	35.0	y	m	y		n	0	nc		no
Wed	7/13	wheel	1226	4.4	56.0	27.0	y	m	y		**p**	**11**	nc		no
Wed	7/13	wheel	1227	9.4	69.0	38.0	y	m	y		n	0	nc		no
Wed	7/13	wheel	1228	9.8	68.5	37.0	y	m	y		n	0	nc		no
Wed	7/13	wheel	1229	13.4	74.5	43.0	y	m	y		n	0	nc		no
Wed	7/13	wheel	1230	18.2	84.5	48.0	y	f	y		n	0	nc		no
Wed	7/13	wheel	1231	6.2	60.0	32.0	y	m	y		n	0	nc		no
Wed	7/13	wheel	1232	6.5	60.5	32.0	y	m	y		n	0	nc		no

Wed	7/13	wheel	1233	6.7	62.0	33.0	y	m	y		n	0	nc		no
Wed	7/13	wheel	1234	11.1	73.0	37.5	y	f	y		n	0	nc		no
Wed	7/13	wheel	1235	12.3	75.0	40.5	y	f	y		n	0	nc		no
Wed	7/13	wheel	1236	4.7	56.0	28.0	y	m	y		n	0	nc		no
Wed	7/13	wheel	1237	6.2	60.0	32.5	y	m	y		n	0	nc		no
Thurs	7/14	wheel	1238	18.5	83.5	47.5	y	m	y		n	0	nc		no
Thurs	7/14	wheel	1239	15.1	76.5	45.0	y	m	y		n	0	nc		no
Thurs	7/14	wheel	1240	19.3	86.0	48.5	y	f	y		n	0	nc		no
Thurs	7/14	wheel	1241	16.8	83.5	45.5	y	f	y		n	0	nc		no
Thurs	7/14	wheel	1242	15.6	79.0	46.5	y	f	y		n	0	nc		no
Thurs	7/14	wheel	1243	14.2	75.5	44.5	y	m	y		n	0	nc		no
Thurs	7/14	wheel	1244	12.8	73.5	43.0	y	m	y		**p**	**8**	nc		no
Thurs	7/14	wheel	1245	13.7	80.0	42.5	y	f	y		n	0	nc		no
Thurs	7/14	wheel	1246	9.7	70.0	36.5	y	m	y		n	0	nc		no
Thurs	7/14	wheel	1247	9.9	70.5	39.0	y	m	y		**p**	**20**	nc		no
Thurs	7/14	wheel	1248	9.2	69.5	38.0	y	m	y		n	0	nc		no
Thurs	7/14	wheel	1249	7.2	62.0	34.5	y	m	y		n	0	nc		no
Thurs	7/14	wheel	1250	8.5	66.0	36.5	y	m	y		n	0	nc		no
Thurs	7/14	wheel	1251	8.8	65.5	37.5	y	m	y		n	0	nc		no
Thurs	7/14	wheel	1252	5.5	58.0	32.5	y	m	y		n	0	nc		no
Thurs	7/14	wheel	1253	5.5	57.5	32.0	y	m	y		n	0	nc		no
Thurs	7/14	wheel	1254	5.1	55.5	32.0	y	m	y		n	0	nc		no

Thurs	7/14	wheel	1255	7.7	66.0	36.0	y	m	y		n	0	nc		no
Thurs	7/14	wheel	1256	5.9	61.0	32.0	y	m	y		n	0	nc		no
Thurs	7/14	wheel	1257	6.0	58.0	33.0	y	m	y		n	0	nc		no
Thurs	7/14	wheel	1258	5.5	57.0	33.0	y	m	y		n	0	nc		no
Thurs	7/14	wheel	1259	5.8	59.5	32.5	y	m	y		n	0	nc		no
Thurs	7/14	wheel	1260	4.7	56.0	30.0	y	m	y		n	0	nc		no
Thurs	7/14	wheel	1261	6.0	61.0	33.0	y	m	y		n	0	nc		no
Thurs	7/14	wheel	1262	7.1	63.0	35.0	y	m	y		n	0	nc		no
Sat	7/16	wheel	1263	12.7	74.0	41.5	y	m	y		n	0	nc		no
Sat	7/16	wheel	1264	8.8	66.0	37.0	y	m	y		n	0	nc		no
Sat	7/16	wheel	1265	11.1	69.5	41.5	y	m	y		n	0	nc		no
Sat	7/16	wheel	1266	10.3	70.0	40.0	y	m	y		n	0	nc		no
Sat	7/16	wheel	1267	14.4	77.0	44.0	y	f	y		n	0	nc		no
Sat	7/16	wheel	1268	9.0	67.0	37.0	y	m	y		n	0	nc		no
Sat	7/16	wheel	1269	12.0	75.0	39.0	y	f	y		n	0	nc		no
Sat	7/16	wheel	1270	12.0	74.0	41.0	y	m	y		n	0	nc		no
Sat	7/16	wheel	1271	13.8	74.0	43.0	y	m	y		**p**	**100**	nc		no
Sat	7/16	wheel	1272	15.5	81.0	44.0	y	m	y		n	0	nc		no
Sat	7/16	wheel	1273	18.0	83.5	47.0	y	m	y		n	0	nc		no
Sat	7/16	wheel	1274	20.1	83.0	49.4	y	m	y		n	0	nc		no
Sat	7/16	wheel	1275	25.5	92.0	53.5	y	f	y		n	0	nc		no
Sat	7/16	wheel	1276	13.6	77.0	42.0	**n**	f	y		n	0	nc		no

Sat	7/16	wheel	1277	18.6	82.0	47.0	y	m	y		n	0	nc		no
Sat	7/16	wheel	1278	16.2	82.0	45.0	y	f	y		n	0	nc		no
Sat	7/16	wheel	1279	5.7	56.5	31.0	y	m	y		n	0	nc		no
Sat	7/16	wheel	1280	11.9	71.0	41.0	y	m	y		n	0	nc		no
Sat	7/16	wheel	1281	13.2	73.0	42.0	y	m	y		**p**	**250**	nc		no
Sat	7/16	wheel	1282	4.4	53.0	28.5	**n**	m	y		n	0	nc		no
Sat	7/16	wheel	1283	14.9	76.0	44.0	y	m	y		n	0	nc		no
Sat	7/16	wheel	1284	14.0	78.5	41.0	y	f	y		n	0	nc		no
Sat	7/16	wheel	1285	18.7	82.0	47.0	y	m	y		n	0	nc		no
Sat	7/16	wheel	1286	8.1	65.0	34.0	y	m	y		**p**	**50**	nc		no
Sat	7/16	wheel	1287	18.9	82.0	48.0	y	f	y		n	0	nc		no
Sat	7/16	wheel	1288	10.1	70.0	37.0	y	m	y		**p**	**30**	nc		no
Sat	7/16	wheel	1289	6.5	59.0	32.5	y	m	y		n	0	nc		no
Sat	7/16	wheel	1290	25.9	91.0	55.0	y	f	y		n	0	nc		no
Sat	7/16	wheel	1291	21.8	87.5	52.0	n	f	y		n	0	nc		no
Sat	7/16	wheel	1292	6.9	63.0	34.0	y	m	y		n	0	nc		no
Sat	7/16	wheel	1293	15.7	79.5	45.0	y	m	y		n	0	nc		no
Sat	7/16	wheel	1294	19.9	89.0	47.5	y	f	y		n	0	nc		no
Sat	7/16	wheel	1295	19.4	85.0	49.5	y	f	y		n	0	nc		no
Sat	7/16	wheel	1296	25.2	91.5	54.0	y	f	y		n	0	nc		no
Sat	7/16	wheel	1297	20.4	85.0	50.0	y	f	y		n	0	nc		no
Sat	7/16	wheel	1298	18.6	86.5	47.0	y	f	y		n	0	nc		no

Sat	7/16	wheel	1299	29.4	94.0	57.5	y	m	y		n	0	nc		no
Sat	7/16	wheel	1300	17.7	84.0	47.0	y	f	y		n	0	nc		no
Sat	7/16	wheel	1301	23.5	90.5	51.5	n	f	y		n	0	nc		no
Sat	7/16	wheel	1302	15.2	78.0	44.0	y	m	y		n	0	nc		no
Sat	7/16	wheel	1303	20.6	86.0	52.0	y	f	y		n	0	nc		no
Sat	7/16	wheel	1304	12.9	74.5	43.0	y	m	y		n	0	nc		no
Sat	7/16	wheel	1305	19.7	87.5	48.0	n	f	y		n	0	nc		no
Sat	7/16	wheel	1306	13.8	74.0	44.5	y	m	y		n	0	nc		no
Sat	7/16	wheel	1307	3.2	49.0	25.5	y		y		n	0	nc		no
Sat	7/16	wheel	1308	9.9	60.5	37.5	y	m	y		n	0	nc		no
Sat	7/16	wheel	1309	6.6	59.0	33.0	y	m	y		n	0	nc		no
Sat	7/16	wheel	1310	9.0	67.5	35.0	y	m	y		n	0	nc		no
Sat	7/16	wheel	1311	10.2	68.0	39.0	y	m	y		n	0	nc		no
Sat	7/16	wheel	1312	4.7	56.0	29.0	y	m	y		n	0	nc		no
Sat	7/16	wheel	1313	6.8	60.0	33.5	y	m	y		n	0	nc		no
Sat	7/16	wheel	1314	9.5	69.0	37.0	y	m	y		n	0	nc		no
Sun	7/17	wheel	1315	27.0	88.0	56.5	y	m	y		n	0	nc		no
Sun	7/17	wheel	1316	12.7	75.0	42.0	y	m	y		n	0	nc		no
Sun	7/17	wheel	1317	12.5	72.0	43.0	y	m	y		n	0	nc		no
Sun	7/17	wheel	1318	11.3	72.0	41.0	y	m	y		n	0	nc		no
Sun	7/17	wheel	1319	10.4	70.0	39.0	y	m	y		n	0	nc		no
Sun	7/17	wheel	1320	15.9	81.5	45.0	y	m	y		n	0	nc		no

Sun	7/17	wheel	1321	10.1	67.5	38.0	y	m	y		n	0	nc		no
Sun	7/17	wheel	1322	11.6	72.5	39.5	y	m	y		n	0	nc		no
Sun	7/17	wheel	1323	10.5	70.0	39.5	y	m	y		n	0	nc		no
Sun	7/17	wheel	1324	12.3	75.5	40.5	y	m	y		n	0	nc		no
Sun	7/17	wheel	1325	24.8	90.5	50	y	f	y		n	0	nc		no
Sun	7/17	wheel	1326	24.2	93.5	51.0	y	m	y		n	0	nc		no
Sun	7/17	wheel	1327	16.4	80.5	45.5	y	f	y		n	0	nc		no
Sun	7/17	wheel	1328	24.6	92.5	53.5	y	f	y		n	0	nc		no
Sun	7/17	wheel	1329	25.0	89.5	54.5	y	m	y		n	0	nc		no
Sun	7/17	wheel	1330	26.6	93.0	57.5	y	f	y		n	0	nc		no
Sun	7/17	wheel	1331	18.9	85.0	47.5	y	f	y		n	0	nc		no
Sun	7/17	wheel	1332	21.2	87.0	52.5	y	f	y		n	0	nc		no
Sun	7/17	wheel	1333	24.6	88.5	55.0	y	f	y		n	0	nc		no
Sun	7/17	wheel	1334	20.1	85.0	51.0	y	f	y		n	0	nc		no
Sun	7/17	wheel	1335	21.7	89.0	51.0	y	f	y		n	0	nc		no
Sun	7/17	wheel	1336	9.3	68.0	37.5	y	m	y		n	0	nc		no
Sun	7/17	wheel	1337	12.5	72.0	42.5	y	m	y		n	0	nc		no
Sun	7/17	wheel	1338	12.0	74.5	39.5	y	m	y		n	0	nc		no
Sun	7/17	wheel	1339	15.0	80.5	45.0	y	f	y		n	0	nc		no
Sun	7/17	wheel	1340	11.3	69.5	41.0	y	m	y		n	0	nc		no
Sun	7/17	wheel	1341	9.0	66.5	38.0	y	m	y		n	0	nc		no
Sun	7/17	wheel	1342	7.5	61.0	35.0	y	m	y		**p**	**50**	nc		no

Sun	7/17	wheel	1343	6.5	61.5	32.5	y	m	y		n	0	nc		no
Sun	7/17	wheel	1344	10.6	70.0	40.0	y	m	y		n	0	nc		no
Sun	7/17	wheel	1345	12.8	73.0	45.0	y	m	y		n	0	nc		no
Sun	7/17	wheel	1346	13.9	76.0	43.0	y	m	y		n	0	nc		no
Sun	7/17	wheel	1347	7.7	62.0	34.0	y	m	y		n	0	nc		no
Sun	7/17	wheel	1348	10.6	71.0	41.5	y	m	y		n	0	nc		no
Sun	7/17	wheel	1349	8.5	66.0	57.5	y	m	y		n	0	nc		no
Sun	7/17	wheel	1350	9.9	69.5	38.5	y	m	y		n	0	nc		no
Sun	7/17	wheel	1351	5.0	54.5	31.0	y	m	y		n	0	nc		no
Mon	7/18	wheel	1352	11.1	73.0	39.5	y	m	y		n	0	nc		no
Mon	7/18	wheel	1353	7.0	62.0	34.0	y	m	y		**p**	**4**	nc		no
Mon	7/18	wheel	1354	16.3	84.0	44.5	y	f	y		n	0	nc		no
Mon	7/18	wheel	1355	21.4	88.0	49.5	y	m	y		n	0	nc		no
Mon	7/18	wheel	1356	20.6	85.0	50.0	y	f	y		n	0	nc		no
Mon	7/18	wheel	1357	16.0	81.0	45.5	y	f	y		n	0	nc		no
Wed	7/20	wheel	1358	32.6	98.5	60.0	y	m	y		n	0	nc		no
Wed	7/20	wheel	1359	27.6	91.5	56.0	y	m	y		n	0	nc		no
Wed	7/20	wheel	1360	25.7	93.0	54.5	y	m	y		n	0	nc		no
Wed	7/20	wheel	1361	19.9	85.0	49.5	y	f	y		n	0	nc		no
Wed	7/20	wheel	1362	18.0	82.5	49.0	y	f	y		**n**	**1**	nc		no
Wed	7/20	wheel	1363	18.3	83.5	48.0	y	f	y		n	0	nc		no
Wed	7/20	wheel	1364	23.0	90.5	51.5	y	f	y		**p**	**1000**	**no**		**AYK 97**

Wed	7/20	wheel	1365	17.9	83.0	47.5	y	f	y		n	0	nc		no
Wed	7/20	wheel	1366	12.4	74.0	41.5	y	m	y		n	0	nc		no
Wed	7/20	wheel	1367	16.0	76.5	47.0	y	m	y		n	0	nc		no
Wed	7/20	wheel	1368	23.1	89.5	50.5	y	m	y		n	0	nc		no
Wed	7/20	wheel	1369	18.9	81.5	50.0	y	f	y		n	0	nc		no
Wed	7/20	wheel	1370	15.7	78.5	47.0	y	m	y		n	0	nc		no
Wed	7/20	wheel	1371	3.5	51.0	26.5	y	f	y		n	0	nc		no
Wed	7/20	wheel	1372	14.5	80.0	43.5	y	m	y		n	0	nc		no
Wed	7/20	wheel	1373	11.4	71.0	40.5	y	f	y		n	0	nc		no
Wed	7/20	wheel	1374	10.4	69.0	41.0	y	m	y		n	0	nc		no
Wed	7/20	wheel	1375	5.6	57.5	32.0	y	m	y		n	0	nc		no
Wed	7/20	wheel	1376	7.5	65.0	34.0	y	m	y		n	0	nc		no
Wed	7/20	wheel	1377	5.5	58.0	30.5	y	m	y		n	0	nc		no
Wed	7/20	wheel	1378	11.5	71.5	41.0	y	m	y		n	0	nc		no
Wed	7/20	wheel	1379	7.3	61.5	36.0	y	m	y		n	0	nc		no
Wed	7/20	wheel	1380	5.4	57.5	31.0	y	m	y		n	0	nc		no
Wed	7/20	wheel	1381	6.0	61.5	32.0	y	m	y		n	0	nc		no
Wed	7/20	wheel	1382	5.9	59.5	31.5	y	m	y		n	0	nc		no
Wed	7/20	wheel	1383	1.8	43.5	21.0	y	m	y		n	0	nc		no
Wed	7/20	wheel	1384	13.5	74.0	43.5	y	m	y		n	0	nc		no
Wed	7/20	wheel	1385	14.0	76.0	43.5	y	m	y		**n**	**1**	nc		no
Wed	7/20	wheel	1386	20.2	85.0	49.0	n	f	y		n	0	nc		no

Wed	7/20	wheel	1387	10.4	69.0	39.0	y	m	y		n	0	nc		no
Wed	7/20	wheel	1388	12.8	73.5	72.0	y	m	y		n	0	nc		no
Wed	7/20	wheel	1389	15.7	76.5	45.5	y	m	y		n	0	nc		no
Wed	7/20	wheel	1390	24.9	90.0	53.0	y	f	y		n	0	nc		no
Wed	7/20	wheel	1391	11.9	73.0	38.0	y	f	y		n	0	nc		no
Wed	7/20	wheel	1392	32.1	94.5	60.0	y	m	y		n	0	nc		no
Wed	7/20	wheel	1393	2.1	41.5	21.5	n	m	y		n	0	nc		no
Wed	7/20	wheel	1394	23.4	89.0	52.0	y	f	y		n	0	nc		no
Wed	7/20	wheel	1395	12.9	75.0	41.5	y	f	y		n	0	nc		no
Wed	7/20	wheel	1396	12.5	74.0	42.0	y	f	y		n	0	nc		no
Wed	7/20	wheel	1397	8.4	67.0	33.5	y	m	y		n	0	nc		no
Wed	7/20	wheel	1398	9.9	69.0	38.0	y	m	y		n	0	nc		no
Wed	7/20	wheel	1399	15.2	75.0	43.0	y	f	y		n	0	nc		no
Wed	7/20	wheel	1400	24.5	89.0	62.5	y	f	y		n	0	nc		no
Wed	7/20	wheel	1401	23.3	88.0	52.0	y	f	y		n	0	nc		no
Wed	7/20	wheel	1402	11.8	74.0	40.0	y	m	y		n	0	nc		no
Wed	7/20	wheel	1403	4.2	57.5	27.5	y	m	y		n	0	nc		no
Thurs	7/21	wheel	1404	14.9	73.5	44.5	y	m	y		n	0	nc		no
Thurs	7/21	wheel	1405	21.6	88.5	50.5	y	f	y		n	0	nc		no
Thurs	7/21	wheel	1406	19.0	86.0	47.0	y	f	y		n	0	nc		no
Thurs	7/21	wheel	1407	23.3	90.5	53.0	y	f	y		n	0	nc		no
Thurs	7/21	wheel	1408	22.3	88.0	52.0	y	f	y		n	0	nc		no

Thurs	7/21	wheel	1409	13.7	77.0	43.0	y	m	y		n	0	nc		no
Thurs	7/21	wheel	1410	18.3	85.0	47.0	y	f	y		**p**	**20**	nc		no
Thurs	7/21	wheel	1411	21.9	87.0	50.5	y	f	y		n	0	nc		no
Thurs	7/21	wheel	1412	13.2	77.5	43.0	y	f	y		n	0	nc		no
Thurs	7/21	wheel	1413	15.2	81.0	45.0	y	f	y		**p**	**5**	nc		no
Thurs	7/21	wheel	1414	16.4	80.5	46.0	y	m	y		n	0	nc		no
Thurs	7/21	wheel	1415	13.1	76.0	42.0	y	m	y		n	0	nc		no
Thurs	7/21	wheel	1416	24.6	96.0	52.5	y	f	y		n	0	nc		no
Thurs	7/21	wheel	1417	24.2	91.0	52.0	y	f	y		**p**	**100**	nc		no
Thurs	7/21	wheel	1418	12.5	73.0	42.0	y	m	y		n	0	nc		no
Thurs	7/21	wheel	1419	14.8	82.5	44.0	y	f	y		n	0	nc		no
Thurs	7/21	wheel	1420	12.6	77.0	43.0	y	m	y		n	0	nc		no
Thurs	7/21	wheel	1421	12.2	73.5	40.0	y	m	y		n	2	nc		no
Thurs	7/21	wheel	1422	13.1	74.5	43.5	y	m	y		n	0	nc		no
Thurs	7/21	wheel	1423	11.5	73.0	41.5	y	m	y		n	0	nc		no
Thurs	7/21	wheel	1424	10.2	71.0	39.0	y	m	y		n	0	nc		no
Thurs	7/21	wheel	1425	11.0	76.5	39.5	y	m	y		n	0	nc		no
Thurs	7/21	wheel	1426	10.4	72.0	40.0	y	m	y		n	0	nc		no
Thurs	7/21	wheel	1427	10.9	72.0	41.0	y	m	y		n	0	nc		no
Thurs	7/21	wheel	1428	8.9	68.0	37.0	y	m	y		n	0	nc		no
Thurs	7/21	wheel	1429	9.7	74.0	36.5	y	m	y		**p**	**50**	nc		no
Thurs	7/21	wheel	1430	8.2	68.0	36.0	y	m	y		n	0	nc		no

Thurs	7/21	wheel	1431	10.3	70.0	39.0	y	m	y		n	0	nc		no
Thurs	7/21	wheel	1432	8.8	70.0	37.5	y	m	y		n	0	nc		no
Thurs	7/21	wheel	1433	6.7	63.0	34.0	y	m	y		n	0	nc		no
Thurs	7/21	wheel	1434	6.3	62.0	33.0	y	m	y		n	0	nc		no
Thurs	7/21	wheel	1435	5.0	55.0	31.0	y	m	y		n	0	nc		no
Thurs	7/21	wheel	1436	9.2	66.5	36.5	y	m	y		n	0	nc		no
Thurs	7/21	wheel	1437	21.2	86.0	50.5	y	m	y		n	0	nc		no
Thurs	7/21	wheel	1438	15.2	79.0	43.5	y	f	y		n	0	nc		no
Thurs	7/21	wheel	1439	20.3	85.0	51.5	y	f	y		n	0	nc		no
Thurs	7/21	wheel	1440	15.0	76.5	45.5	y	f	y		n	0	nc		no
Thurs	7/21	wheel	1441	11.4	73.5	39.0	y	m	y		**n**	**1**	nc		no
Thurs	7/21	wheel	1442	6.1	5.7	33.0	y	m	y		n	0	nc		no
Thurs	7/21	wheel	1443	6.9	61.5	33.0	y	m	y		n	0	nc		no
Thurs	7/21	wheel	1444	20.8	88.0	49.0	y	f	y		n	0	nc		no
Thurs	7/21	wheel	1445	12.4	74.0	41.0	y	f	y		n	0	nc		no
Thurs	7/21	wheel	1446	22.4	90.0	51.0	y	f	y		n	0	nc		no
Thurs	7/21	wheel	1447	5.0	54.0	30.5	y	m	y		n	0	nc		no
Thurs	7/21	wheel	1448	20.5	85.5	50.0	y	f	y		n	0	nc		no
Thurs	7/21	wheel	1449	10.4	69.5	39.5	y	m	y		n	0	nc		no
Thurs	7/21	wheel	1450	10.4	70.0	38.5	y	m	y		n	0	nc		no
Thurs	7/21	wheel	1451	14.9	76.0	45.0	y	m	y		n	0	nc		no
Thurs	7/21	wheel	1452	20.9	86.5	48.0	y	f	y		n	0	nc		no

Thurs	7/21	wheel	1453	24.4	87.5	53.5	y	f	y		n	0	nc	no
Thurs	7/21	wheel	1454	6.7	63.5	32.0	y	m	y		n	0	nc	no
Thurs	7/21	wheel	1455	24.5	91.0	53.0	y	f	y		n	0	nc	no
Thurs	7/21	wheel	1456	3.6	49.0	27.0	y	m	y		n	0	nc	no
Thurs	7/21	wheel	1457	14.3	78.0	42.0	y	f	y		n	0	nc	no
Thurs	7/21	wheel	1458	5.0	55.0	30.0	y	m	y		n	0	nc	no
Thurs	7/21	wheel	1459	10.8	71.5	38.5	y	m	y		n	0	nc	no
Thurs	7/21	wheel	1460	6.5	60.0	33.5	y	m	y		n	0	nc	no
Thurs	7/21	wheel	1461	5.6	56.0	30.5	y	m	y		n	0	nc	no
Thurs	7/21	wheel	1462	3.4	47.0	26.0	y	m	y		n	0	nc	no
Sat	7/23	wheel	1463	7.0	59.0	34.5	y	m	y		n	0	nc	no
Sat	7/23	wheel	1464	10.9	72.0	39.5	y	m	y		n	0	nc	no
Sat	7/23	wheel	1465	3.9	52.5	27.0	y	m	y		n	0	nc	no
Sat	7/23	wheel	1466	27.1	93.5	53.0	y	f	y		n	0	nc	no
Sat	7/23	wheel	1467	3.2	51.0	28.0	y	m	y		n	0	nc	no
Sat	7/23	wheel	1468	10.9	75.0	38.0	y	f	y		n	0	nc	no
Sat	7/23	wheel	1469	8.8	69.0	35.0	y	m	y		n	0	nc	no
Sat	7/23	wheel	1470	4.4	52.5	29.5	y	m	y		n	0	nc	no
Sat	7/23	wheel	1471	5.9	57.0	32.5	y	m	y		nc	nc	nc	no
Sat	7/23	wheel	1472	7.2	63.5	33.5	y	m	y		n	0	nc	no
Sat	7/23	wheel	1473	11.0	76.0	37.5	y	m	y		n	0	nc	no
Sat	7/23	wheel	1474	8.1	65.0	36.0	y	m	y		n	0	nc	no

Sat	7/23	wheel	1475	16.8	78.0	47.5	y	f	y		n	0	nc		no
Sat	7/23	wheel	1476	32.0	95.0	58.5	y	m	y		n	0	nc		no
Sat	7/23	wheel	1477	6.0	58.5	32.0	y	m	y		n	0	nc		no
Sat	7/23	wheel	1478	13.4	76.0	42.5	y	m	y		n	0	nc		no
Sat	7/23	wheel	1479	18.8	82.0	47.0	y	f	y		n	0	nc		no
Sat	7/23	wheel	1480	12.9	75.5	42.0	y	m	y		n	0	nc		no
Sat	7/23	wheel	1481	13.7	77.0	42.0	y	f	y		n	0	nc		no
Sat	7/23	wheel	1482	23.7	91.5	51.5	y	m	y		n	0	nc		no
Sat	7/23	wheel	1483	6.5	63.0	32.0	y	m	y		n	0	nc		no
Sat	7/23	wheel	1484	7.7	64.0	34.5	y	m	y		n	0	nc		no
Sat	7/23	wheel	1485	15.2	81.0	43.5	y	f	y		n	0	nc		no
Sat	7/23	wheel	1486	16.9	83.0	44.0	y	m	y		n	0	nc		no
Sat	7/23	wheel	1487	12.6	72.5	42.0	y	m	y		n	0	nc		no
Sat	7/23	wheel	1488	24.0	88.0	53.0	y	f	y		n	0	nc		no
Sat	7/23	wheel	1489	19.4	86.0	48.5	y	f	y		n	0	nc		no
Sat	7/23	wheel	1490	8.4	66.5	36.0	y	m	y		**p**	**50**	nc		no
Sat	7/23	wheel	1491	11.7	74.0	39.0	y	m	y		n	0	nc		no
Sat	7/23	wheel	1492	20.4	86.5	48.5	y	f	y		n	0	nc		no
Sat	7/23	wheel	1493	7.6	61.0	36.5	y	m	y		n	0	nc		no
Sat	7/23	wheel	1494	7.4	65.0	33.0	y	m	y		n	0	nc		no
Sat	7/23	wheel	1495	21.1	89.0	49.0	y	f	y		n	0	nc		no
Sat	7/23	wheel	1496	6.3	60.0	32.5	y	m	y		n	0	nc		no

Sat	7/23	wheel	1497	3.3	48.5	26.0	n	m	y		n	0	nc		no
Sat	7/23	wheel	1498	18.5	84.5	49.0	y	f	y		n	0	nc		no
Sat	7/23	wheel	1499	21.0	88.0	50.0	y	f	y		n	0	nc		no
Sat	7/23	wheel	1500	11.0	70.5	40.0	y	m	y		n	0	nc		no
Sat	7/23	wheel	1501	8.7	68.0	35.0	y	m	y		n	0	nc		no
Sat	7/23	wheel	1502	6.0	60.0	31.0	y	m	y		n	0	nc		no
Sat	7/23	wheel	1503	26.2	91.5	54.0	y	f	y		n	0	nc		no
Sat	7/23	wheel	1504	23.7	86.5	53.0	y	f	y		n	0	nc		no
Sat	7/23	wheel	1505	14.9	78.0	43.0	y	f	y		n	1	nc		no
Sat	7/23	wheel	1506	24.4	91.0	52.5	y	m	y		n	0	nc		no
Sat	7/23	wheel	1507	21.9	85.0	53.0	y	m	y		n	0	nc		no
Sat	7/23	wheel	1508	5.6	56.0	32.0	y	m	y		n	0	nc		no
Sat	7/23	wheel	1509	18.0	84.5	46.5	y	m	y		n	0	nc		no
Sat	7/23	wheel	1510	22.0	89.0	50.0	y	f	y		n	0	nc		no
Sat	7/23	wheel	1511	24.2	90.0	52.0	y	f	y		n	0	nc		no
Sat	7/23	wheel	1512	28.2	91.5	56.0	y	m	y		n	0	nc		no
Sat	7/23	wheel	1513	11.2	72.0	39.5	y	m	y		n	0	nc		no
Sat	7/23	wheel	1514	5.1	56.5	29.0	y	m	y		n	0	nc		no
Sat	7/23	wheel	1515	13.0	75.0	42.0	y	m	y		n	0	nc		no
Sat	7/23	wheel	1516	25.2	94.0	51.0	y	f	y		n	0	nc		no
Sat	7/23	wheel	1517	32.0	96.5	60.0	y	f	y		n	0	nc		no
Sat	7/23	wheel	1518	21.6	87.5	51.0	y	f	y		n	0	nc		no

Sat	7/23	wheel	1519	14.5	79.0	42.0	y	m	y		n	0	nc		no
Sat	7/23	wheel	1520	5.5	56.5	30.0	y	m	y		n	0	nc		no
Sat	7/23	wheel	1521	18.7	84.5	46.0	y	m	y		n	0	nc		no
Sat	7/23	wheel	1522	4.5	56.5	27.0	y	m	y		n	0	nc		no
Sat	7/23	wheel	1523	14.2	77.0	42.5	y	m	y		n	0	nc		no
Sat	7/23	wheel	1524	15.5	81.0	44.0	y	f	y		n	0	nc		no
Sat	7/23	wheel	1525	2.6	45.0	24.5	y	m	y		n	0	nc		no
Sat	7/23	wheel	1526	7.6	63.0	35.0	y	f	y		n	0	nc		no
Wed	7/27	wheel	1527	8.9	67.0	37.5	y	m	y		**p**	**20**	nc		no
Wed	7/27	wheel	1528	7.2	62.5	34.0	y	m	y		n	0	nc		no
Wed	7/27	wheel	1529	4.2	54.0	28.0	y	m	y		n	0	nc		no
Wed	7/27	wheel	1530	16.3	81.5	46.0	y	m	y		n	0	nc		no
Wed	7/27	wheel	1531	3.3	51.0	25.0	y	m	y		n	0	nc		no
Wed	7/27	wheel	1532	19.1	82.0	49.5	y	m	y		n	0	nc		no
Wed	7/27	wheel	1533	4.3	52.5	28.0	y	m	y		n	0	nc		no
Wed	7/27	wheel	1534	16.2	77.5	46.0	y	m	y		n	0	nc		no
Wed	7/27	wheel	1535	28.4	94.5	55.0	y	f	y		n	0	nc		no
Wed	7/27	wheel	1536	23.3	88.0	53.0	y	f	y		n	0	nc		no
Wed	7/27	wheel	1537	14.0	77.0	42.0	y	f	y		n	0	nc		no
Wed	7/27	wheel	1538	4.8	54.5	30.0	y	m	y		n	0	nc		no
Wed	7/27	wheel	1539	24.9	90.0	54.0	y	f	y		n	0	nc		no

Fully Protected Pulses (2009 and 20011) compared to
Unprotected ones (2008 and 2010)
2008 Pulse 1 average weight - 9.7 lbs. (no protection)
2009 Pulse 1 average weight - 14.5 lbs. (full protection / closure)
2010 Pulse 1 average weight - 11.2 lbs. (no protection)
2011 Pulse 1 average weight - 14 lbs. (full protection / closure)

Below is king data from large mesh gillnets which is being used to compare to fish wheel data. The purpose is to see if any difference exists in Ichthyophonus disease rate between king caught in the two gear types. We are continuing to look into parts of the ADF&G theory that Rapids fishwheels catch mostly the small, male, less vigorous, sick, handicapped, large fish with shore preference, and diseased king compared to the king population in the river, nets in general and driftnets. This issue has been constantly brought up at numerous meetings including State Board of Fish and reported on in an ADF&G Ichthyophonus report and data needs to be collected on this.

Important notes: Visible ICH disease can vary greatly by date and even from the front of a pulse to the backside. At minimum the same dates should be used in comparing nets/wheels (as best as can be done). Other considerations can also be taken and will, as we look over this net data set which is admittedly small each year.

As visible ICH disease (not infection as this is reported to exist relatively similar in all size groups) seems to be found in larger percents in larger fish one might also compare same size king (50 - 60 cm for instance) from both gear types.

2011 Rapids Student Data Collection Project - Main Raw Net Data Sheet

		ICHTHYOPHONUS	
Data preliminary till gone overpost season	**ADF&G**	3 spots or more = pos.	**AYK SSI**

Day	Date	Fisher	Fish	Weight	Length	Girth	Adipose	Sex	Fin Clip		Heart	# spots	Flesh		Culture
			#	(tenths)	(.5 cm)	(.5 cm)	y / n	m / f	y / n		(p - Pos),(n - Neg),(nc - No Check)				AYK + Vial # + R / P
Sat	6/18	7 1/4"	1	15.9	75.0	47.0	y	f	y		n	0	nc		no
Sun	6/19	7 1/4"	2	15.0	31.0	17.0	y	m	n		n	0	nc		no
Sun	6/19	7 1/4"	3	12.0	28.5	16.5	y	m	n		n	0	nc		no
Sun	6/19	7 1/4"	4	12.0	28.0	16.0	y	m	n		n	0	nc		no
Sun	6/19	7 1/4"	5	14.5	75.0	44.5	y	m	n		n	0	nc		no
Sun	6/19	7 1/4"	6	14.2	76.0	44.0	y	m	n		n	0	nc		no
Mon	6/20	7 1/4"	7	32.4	100.5	60.5	y	m	n		n	0	nc		no
Mon	6/20	7 1/4"	8	12.4	71.5	43.0	y	m	n		**p**	**12**	**nc**		no
Mon	6/20	7 1/4"	9	12.9	72.0	45.0	y	m	n		n	0	nc		no
Wed	6/22	7 1/2"	10	14.7	74.0	44.0	y	m	y		n	0	nc		no
Wed	6/22	7 1/2"	11	18.0	82.0	47.0	y	m	y		n	0	nc		no
Wed	6/22	7 1/2"	12	14.7	75.5	43.0	y	m	y		n	0	nc		no
Wed	6/22	7 1/2"	13	12.0	72.0	40.0	y	m	y		n	0	nc		no
Wed	6/22	7 1/2"	14	12.9	71.0	42.5	y	m	y		n	0	nc		no
Wed	6/22	7 1/2"	15	17.3	77.5	47.5	y	m	y		n	0	nc		no
Wed	6/22	7 1/2"	16	14.5	77.5	44.0	y	m	y		n	0	nc		no
Wed	6/22	7 1/4"	17	19.9	82.0	48.5	y	m	y		**p**	**20**	**nc**		**AYK # 84**
Wed	6/22	7 1/4"	18	19.2	84.5	47.5	y	m	y		n	0	nc		no
Wed	6/22	7 1/4"	19	13.1	75.0	41.0	y	m	y		n	0	nc		no
Wed	6/22	7 1/4"	20	11.5	71.0	40.5	y	m	y		**p**	**70**	**nc**		no

Wed	6/22	7 1/4"	21	14.2	75.5	43.5	y	m	y		**n**	**1**	**nc**		no
Wed	6/22	7 1/2"	22	20.5	80.0	49.5	y	m	y		n	0	nc		no
Wed	6/22	7 1/2"	23	23.6	83.5	54.0	y	m	y		n	0	nc		no
Wed	6/22	7 1/2"	24	20.1	80.5	50.0	y	m	y		n	0	nc		no
Wed	6/22	7 1/2"	25	14.6	74.0	43.0	y	m	y		n	0	nc		no
Wed	6/22	7 1/2"	26	14.7	73.5	43.0	y	m	y		n	0	nc		no
Wed	6/22	7 1/2"	27	15.0	76.0	45.0	y	m	y		**p**	**12**	**nc**		no
Wed	6/22	7 1/2"	28	20.0	84.5	48.5	y	m	y		n	0	nc		no
Wed	6/22	7 1/2"	29	12.3	71.5	40.0	y	m	y		n	0	nc		no
Thur	6/23	7 1/4"	30	17.0	76.5	46.0	y	f	y		n	0	nc		no
Thur	6/23	7 1/4"	31	16.7	78.0	47.0	y	m	y		n	0	nc		no
Thur	6/23	7 1/4"	32	13.3	74.5	42.0	y	m	y		**p**	**35**	**nc**		no
Thur	6/23	7 1/4"	33	13.6	73.0	43.0	y	m	y		n	0	nc		no
Thur	6/23	7 1/4"	34	13.0	72.0	41.0	y	m	y		n	0	nc		no
Thur	6/23	7 1/4"	35	9.8	66.5	37.0	y	m	y		n	0	nc		no
Thur	6/23	7 1/2"	36	14.7	75.5	41.5	y	m	y		n	0	nc		no
Thur	6/23	7 1/2"	37	14.3	74.5	42.0	y	m	y		n	0	nc		no
Thur	6/23	7 1/2"	38	25.2	90.5	53.0	y	f	y		n	0	nc		no
Thur	6/23	7 1/2"	39	16.4	78.5	44.0	y	m	y		n	0	nc		no
Thur	6/23	7 1/2"	40	18.6	83.0	47.0	y	f	y		n	0	nc		no
Thur	6/23	7 1/2"	41	14.8	75.0	43.5	y	m	y		n	0	nc		no
Thur	6/23	7 1/2"	42	12.0	70.5	41.0	y	m	y		n	0	nc		no

Thur	6/23	7 1/2"	43	14.7	74.0	42.5	y	m	y		n	0	nc		no
Thur	6/23	7 1/2"	44	8.4	60.5	34.5	y	m	y		n	0	nc		no
Thur	6/23	7 1/4"	45	20.6	84.0	51.0	y	m	y		**p**	**50**	**nc**		no
Thur	6/23	7 1/4"	46	26.0	93.0	55.0	y	f	y	n	n	0	nc		no
Thur	6/23	7 1/4"	47	12.7	70.5	43.0	y	m	y		n	0	nc		no
Thur	6/23	7 1/4"	48	12.3	74.5	39.5	y	m	y		n	0	nc		no
Fri	6/24	7 1/4"	49	23.0	89.5	52.0	y	f	y		n	0	nc		no
Fri	6/24	7 1/4"	50	19.2	84.0	48.0	y	f	t		n	0	nc		no
Fri	6/24	7 1/4"	51	12.5	71.5	40.0	y	m	y		n	0	nc		no
Fri	6/24	7 1/4"	52	16.4	77.0	48.0	y	m	y		n	0	nc		no
Fri	6/24	7 1/4"	53	15.7	80.0	45.0	y	m	y		n	0	nc		no
Fri	6/24	7 1/4"	54	12.4	69.5	43.0	y	m	y	n	n	0	nc		no
Fri	6/24	7 1/4"	55	6.6	59.5	33.0	y	m	y		n	0	nc		no
Fri	6/24	7 1/4"	56	6.4	56.5	35.0	y	m	y		n	0	nc		no
Fri	6/24	7 1/4"	57	9.6	67.0	37.5	y	m	y		n	0	nc		no
Fri	6/24	7 1/4"	58	12.5	71.5	43.5	y	m	y		n	o	nc		no
Fri	6/24	7 1/2"	59	21.6	84.5	52.5	y	f	y		n	0	nc		no
Fri	6/24	7 1/2"	60	16.7	77.0	48.0	y	m	y		**n**	**1**	**nc**		no
Fri	6/24	7 1/2"	61	11.7	69.5	40.5	y	m	y		n	0	nc		no
Fri	6/24	7 1/2"	62	11.3	69.0	40.0	y	m	y		n	0	nc		no
Fri	6/24	7 1/2"	63	12.8	74.0	43.0	y	m	y		n	0	nc		no
Fri	6/24	7 1/2"	64	10.9	72.0	35.0	y	m	y		n	0	nc		no

Fri	6/24	7 1/2"	65	12.0	70.5	42.0	y	m	y		n	0	nc		no
Fri	6/24	7 1/2"	66	12.8	72.0	42.5	y	m	y		n	0	nc		no
Fri	6/24	7 1/2"	67	14.7	76.0	45.0	y	m	y		n	0	nc		no
Fri	6/24	7 1/2"	68	14.7	76.5	44.5	y	m	y		n	0	nc		no
Fri	6/24	7 1/2"	69	21.1	85.0	50.0	y	m	y		n	0	nc		no
Fri	6/24	7 1/2"	70	14.1	76.0	44.0	y	m	y		n	0	nc		no
Fri	6/24	7 1/2"	71	24.0	90.0	52.0	y	f	y		n	0	nc		no
Fri	6/24	7 1/2"	72	25.0	91.5	53.0	y	m	y		n	0	nc		no
Fri	6/24	7 1/2"	73	14.2	75.5	45.0	y	m	y		n	0	nc		no
Fri	6/24	7 1/2"	74	20.2	83.5	50.5	y	f	y		n	0	nc		no
Fri	6/24	7 1/2"	75	12.9	73.0	43.0	y	m	y		**p**	**5**	**nc**		no
Fri	6/24	7 1/2"	76	10.9	70.5	39.0	y	m	y		n	0	nc		no
Sat	6/25	7 1/4"	77	17.6	83.0	47.5	y	m	y		n	0	nc		no
Sat	6/25	7 1/4"	78	16.4	79.0	45.5	y	m	y		n	0	nc		no
Sat	6/25	7 1/4"	79	12.6	73.5	40.5	y	m	y		**p**	**9**	**nc**		no
Wed	6/29	7 1/2"	80	28.3	91.5	56.5	y	m	y		n	0	nc		no
Wed	6/29	7 1/2"	81	20.5	85.5	49.0	y	m	y		n	0	nc		no
Wed	6/29	7 1/2"	82	25.3	89.0	53.0	y	m	y		n	0	nc		no
Wed	6/29	7 1/2"	83	31.8	98.0	58.5	y	f	y		n	0	nc		no

2012 Rapids Student Data Collection Project - Main Raw Wheel Data Sheet

Previous years student data reports and info available at www.RapidsResearch.com (Student Project Data page)

(AK SSF + AYK SSI Funded - Tanana Tribal Council, R&E Rapids Fishwheel Project + Rapids Research Supported)

Different colors are separate days

									ADF&G	ICHTHYOPHONUS			AYK SSI
										3 spots or more = pos.			
Day	Date	Fisher	Fish	Weight	Length	Girth	Adipose	Sex	Fin Clip	Heart	# spots	Flesh	Culture
			#	(tenths)	(.5 cm)	(.5 cm)	y / n	m / f	y / n	(p - Pos),(n - Neg),(nc - No Check)			AYK + Vial # + R / P
Wed	6/27	wheel	1	11.1	72	40.5	y	m	y	n	0	nc	
Wed	6/27	wheel	2	26	94.5	54	y	f	y	n	0	nc	
Thurs	6/28	wheel	3	13.5	76.5	43	y	m	y	n	0	nc	
Thurs	6/28	wheel	4	15.2	80	44.5	y	m	y	n	0	nc	
Thurs	6/28	wheel	5	18.7	83	48	y	m	y	n	0	nc	
Thurs	6/28	wheel	6	22.5	87.5	53	y	f	y	n	0	nc	
Thurs	6/28	wheel	7	12.1	72	41.5	y	m	y	n	0	nc	
Thurs	6/28	wheel	8	11.1	71.5	40.0	y	f	y	n	0	nc	
Thurs	6/28	wheel	9	23.8	90.5	53.5	y	f	y	n	0	nc	
Thurs	6/28	wheel	10	14.9	80.0	43.5	y	f	y	n	0	nc	
Thurs	6/28	wheel	11	11.1	72.0	39.5	y	m	y	n	0	nc	
Thurs	6/28	wheel	12	12.1	73.5	41.0	y	m	y	n	0	nc	
Thurs	6/28	wheel	13	17.5	79.0	48.0	y	m	y	n	0	nc	
Thurs	6/28	wheel	14	19.7	86.5	50.5	y	f	y	n	0	nc	
Thurs	6/28	wheel	15	20.8	84.5	52.0	y	f	y	**n**	**1**	nc	
Thurs	6/28	wheel	16	14.3	76.5	43.5	y	m	y	n	0	nc	
Thurs	6/28	wheel	17	8.1	64.5	36.5	n	m	y	n	0	nc	
Thurs	6/28	wheel	18	12.9	72.5	42.5	y	m	y	n	0	nc	
Thurs	6/28	wheel	19	14.2	74.5	46.0	y	m	y	n	0	nc	
Fri	6/29	wheel	20	14.5	78.0	43.5	y	m	y	n	0	nc	
Fri	6/29	wheel	21	16.6	80.0	45.5	y	m	y	n	0	nc	

Fri	6/29	wheel	22	13.4	76.0	43.0	y	m	y	n	0	nc		
Fri	6/29	wheel	23	12.3	72.5	41.5	y	m	y	n	0	nc		
Fri	6/29	wheel	24	8.4	65.5	35.0	y	m	y	n	0	nc		
Fri	6/29	wheel	25	20.3	84.5	50.0	y	f	y	n	0	nc		
Sat	6/30	wheel	26	26.5	93.0	55.0	y	f	y	n	0	nc		
Sat	6/30	wheel	27	20.7	85.0	51.0	y	m	y	n	0	nc		
Sat	6/30	wheel	28	10.1	69.0	38.0	y	m	y	n	0	nc		
Sat	6/30	wheel	29	20.9	80.0	51.0	y	m	y	n	0	nc		
Sat	6/30	wheel	30	22.6	80.5	52.0	y	f	y	n	0	nc		
Sat	6/30	wheel	31	23.6	84.5	54.5	y	f	y	**p**	**4**	nc		
Sat	6/30	wheel	32	10.8	69.0	41.0	y	m	y	n	0	nc		
Sat	6/30	wheel	33	15.4	78.5	45.0	y	m	y	n	0	nc		
Sat	6/30	wheel	34	13.2	76.5	41.5	y	m	y	n	0	nc		
Sat	6/30	wheel	35	8.4	66.0	36.5	y	m	y	n	0	nc		
Sat	6/30	wheel	36	20.9	83.5	51.0	y	m	y	n	0	nc		
Sun	7/1	wheel	37	25.3	91.0	55.5	y	f	y	n	0	nc		
Sun	7/1	wheel	38	22.3	88.0	52.0	y	f	y	n	0	nc		
Sun	7/1	wheel	39	21.1	90.0	51.0	Y	f	Y	n	0	nc		
Sun	7/1	wheel	40	19.9	82.0	52.0	y	m	y	n	0	nc		
Sun	7/1	wheel	41	16.8	82.5	46.0	y	m	y	n	0	nc		
Sun	7/1	wheel	42	21.2	87.0	51.0	y	f	y	n	0	nc		
Sun	7/1	wheel	43	19.0	85.5	48.5	y	m	y	n	0	nc		
Sun	7/1	wheel	44	21.1	89.0	51.0	y	f	y	n	0	nc		
Sun	7/1	wheel	45	17.7	83.0	48.0	y	f	y	**n**	**1**	nc		
Sun	7/1	wheel	46	13.7	74.0	44.5	y	m	y	n	0	nc		
Sun	7/1	wheel	47	21.1	87.0	51.0	y	m	y	n	0	nc		
Sun	7/1	wheel	48	11.6	72.0	41.5	y	m	y	n	0	nc		
Sun	7/1	wheel	49	22.6	92.0	51.5	y	f	y	**p**	**23**	nc		
Sun	7/1	wheel	50	14.0	78.5	44.0	y	m	y	n	0	nc		
Sun	7/1	wheel	51	20.4	85.5	51.5	y	m	y	n	0	nc		
Sun	7/1	wheel	52	11.5	73.5	39.5	y	m	y	**p**	**1000**	nc		
Sun	7/1	wheel	53	29.2	98.5	59.0	y	f	y	n	0	nc		

Sun	7/1	wheel	54	7.0	63.0	34.0	y	m	y	n	0	nc		
Sun	7/1	wheel	55	11.3	71.0	41.0	y	m	y	n	0	nc		
Sun	7/1	wheel	56	6.6	60.0	34.5	y	m	y	n	0	nc		
Sun	7/1	wheel	57	11.0	71.5	41.0	y	m	y	n	0	nc		
Sun	7/1	wheel	58	9.5	65.5	38.5	y	m	y	n	0	nc		
Sun	7/1	wheel	59	37.2	103.5	62.0	y	f	y	n	0	nc		
Sun	7/1	wheel	60	12.8	73.0	43.0	y	m	y	n	0	nc		
Sun	7/1	wheel	61	11.8	73.5	40.5	y	m	y	n	0	nc		
Sun	7/1	wheel	62	14.5	75.0	43.5	y	m	y	n	0	nc		
Mon	7/2	wheel	63	17.0	80.0	47.0	y	f	y	n	0	nc		
Mon	7/2	wheel	64	6.0	56.0	33.0	y	m	y	n	0	nc		
Mon	7/2	wheel	65	20.6	83.5	51.0	y	m	y	n	0	nc		
Mon	7/2	wheel	66	19.4	86.0	48.0	y	f	y	n	0	nc		
Mon	7/2	wheel	67	13.0	75.5	42.0	y	m	y	n	0	nc		
Mon	7/2	wheel	68	18.6	84.0	49.0	y	f	y	n	0	nc		
Mon	7/2	wheel	69	13.5	75.5	43.0	y	m	y	n	0	nc		
Mon	7/2	wheel	70	17.6	81.0	47.5	y	m	y	n	0	nc		
Mon	7/2	wheel	71	30.0	94.0	59.0	y	f	y	n	0	nc		
Mon	7/2	wheel	72	19.1	83.5	48.5	y	m	y	n	0	nc		
Mon	7/2	wheel	73	33.4	102.0	60.5	y	f	y	n	0	nc		
Mon	7/2	wheel	74	17.0	80.5	47.0	y	m	y	n	0	nc		
Mon	7/2	wheel	75	14.4	77.5	43.5	y	f	y	n	0	nc		
Mon	7/2	wheel	76	16.9	79.5	49.0	y	m	y	n	0	nc		
Mon	7/2	wheel	77	19.5	80.0	48.0	y	f	y	n	0	nc		
Mon	7/2	wheel	78	23.7	88.5	54.5	y	f	y	n	0	nc		
Mon	7/2	wheel	79	20.9	85.0	52.0	y	m	y	n	0	nc		
Mon	7/2	wheel	80	17.4	82.5	47.0	y	f	y	n	0	nc		
Mon	7/2	wheel	81	16.1	78.0	46.0	y	m	y	n	0	nc		
Mon	7/2	wheel	82	24.2	89.0	54.0	y	m	y	n	0	nc		
Mon	7/2	wheel	83	18.2	81.0	48.5	y	f	y	n	0	nc		
Mon	7/2	wheel	84	14.7	77.5	43.5	y	m	y	n	0	nc		
Mon	7/2	wheel	85	29.6	98.5	56.0	y	m	y	n	0	nc		

Mon	7/2	wheel	86	15.9	81.0	45.0	y	m	y	n	0	nc		
Mon	7/2	wheel	87	22.7	86.0	52.5	y	f	y	n	0	nc		
Mon	7/2	wheel	88	16.8	79.5	49.0	y	f	y	n	0	nc		
Mon	7/2	wheel	89	17.9	83.0	48.0	y	f	y	n	0	nc		
Mon	7/2	wheel	90	12.4	72.0	42.5	y	m	y	n	0	nc		
Mon	7/2	wheel	91	10.7	72.5	39.0	y	m	y	n	0	nc		
Mon	7/2	wheel	92	8.1	63.5	35.0	y	m	y	n	0	nc		
Mon	7/2	wheel	93	7.3	62.0	34.5	y	m	y	n	0	nc		
Mon	7/2	wheel	94	11.0	70.5	40.0	y	m	y	n	0	nc		
Mon	7/2	wheel	95	11.6	71.5	41.0	y	m	y	n	0	nc		
Mon	7/2	wheel	96	9.8	66.0	39.0	y	m	y	n	0	nc		
Mon	7/2	wheel	97	9.2	68.0	36.5	y	m	y	n	0	nc		
Mon	7/2	wheel	98	5.5	57.5	31.0	y	m	y	n	0	nc		
Wed	7/4	wheel	99	7.7	59.5	37.0	y	m	y	n	0	nc		
Wed	7/4	wheel	100	9.9	66.0	40.0	y	m	y	n	0	nc		
Wed	7/4	wheel	101	8.9	64.0	38.5	y	m	y	n	0	nc		
Wed	7/4	wheel	102	5.0	54.0	31.5	y	m	y	n	0	nc		
Wed	7/4	wheel	103	13.5	76.5	41.0	y	f	y	n	0	nc		
Wed	7/4	wheel	104	18.1	83.0	48.5	y	m	y	n	0	nc		
Wed	7/4	wheel	105	11.7	71.0	43.0	y	m	y	n	0	nc		
Wed	7/4	wheel	106	15.3	75.0	47.0	y	m	y	n	0	nc		
Wed	7/4	wheel	107	15.1	81.5	45.0	y	f	y	n	0	nc		
Wed	7/4	wheel	108	12.9	75.0	44.0	y	m	y	n	0	nc		
Wed	7/4	wheel	109	29.0	94.5	57.5	y	m	y	**p**	**8**	nc		
Wed	7/4	wheel	110	33.9	99.0	61.0	y	m	y	n	0	nc		
Wed	7/4	wheel	111	14.2	76.0	45.0	y	m	y	n	0	nc		
Wed	7/4	wheel	112	18.4	83.5	50.0	y	m	y	n	0	nc		
Wed	7/4	wheel	113	13.9	78.5	43.5	y	f	y	n	0	nc		
Wed	7/4	wheel	114	16.0	79.0	46.0	y	m	y	n	0	nc		
Wed	7/4	wheel	115	27.4	92.0	57.0	y	f	y	n	0	nc		
Wed	7/4	wheel	116	24.9	88.5	56.0	y	f	y	n	0	nc		
Wed	7/4	wheel	117	12.5	75.5	42.0	y	f	y	n	0	nc		

Thurs	7/5	wheel	118	7.8	62.5	36.5	y	m	y	n	0	nc		
Thurs	7/5	wheel	119	14.2	75.5	44.5	y	m	y	n	0	nc		
Thurs	7/5	wheel	120	12.8	73.0	43.5	y	m	y	n	0	nc		
Thurs	7/5	wheel	121	6.3	58.5	33.0	y	m	y	n	0	nc		
Thurs	7/5	wheel	122	7.4	64.5	34.0	y	m	y	n	0	nc		
Thurs	7/5	wheel	123	9.0	67.0	38.0	y	m	y	n	0	nc		
Thurs	7/5	wheel	124	14.3	76.0	45.0	y	f	y	n	0	nc		
Thurs	7/5	wheel	125	8.3	63.5	36.0	y	m	y	n	0	nc		
Thurs	7/5	wheel	126	7.4	61.5	34.5	y	m	y	n	0	nc		
Thurs	7/5	wheel	127	7.0	60.5	35.0	y	m	y	n	0	nc		
Thurs	7/5	wheel	128	16.9	81.5	46.5	y	f	y	n	0	nc		
Thurs	7/5	wheel	129	8.3	63.0	37.0	y	m	y	n	0	nc		
Thurs	7/5	wheel	130	8.8	67.5	36.0	y	m	y	n	0	nc		
Thurs	7/5	wheel	131	24.5	90.0	53.0	y	f	y	n	0	nc		
Thurs	7/5	wheel	132	17.2	83.0	46.0	y	f	y	n	0	nc		
Thurs	7/5	wheel	133	30.1	95.5	57.5	y	m	y	n	0	nc		
Thurs	7/5	wheel	134	11.0	70.5	40.0	y	m	y	n	0	nc		
Thurs	7/5	wheel	135	24.5	89.0	53.5	y	f	y	n	0	nc		
Thurs	7/5	wheel	136	5.3	56.0	30.5	y	m	y	n	0	nc		
Thurs	7/5	wheel	137	19.9	85.5	48.0	y	f	y	n	0	nc		
Thurs	7/5	wheel	138	10.1	68.0	39.5	y	m	y	n	0	nc		
Thurs	7/5	wheel	139	5.5	56.0	32.5	y	m	y	n	0	nc		
Thurs	7/5	wheel	140	8.9	66.5	37.0	y	m	y	n	0	nc		
Thurs	7/5	wheel	141	9.5	66.0	38.0	y	m	y	n	0	nc		
Thurs	7/5	wheel	142	9.3	67.5	37.0	y	m	y	n	0	nc		
Thurs	7/5	wheel	143	24.3	87.5	54.0	y	m	y	n	0	nc		
Thurs	7/5	wheel	144	8.4	64.0	36.5	y	m	y	n	0	nc		
Thurs	7/5	wheel	145	11.3	69.5	31.0	y	m	y	n	0	nc		
Thurs	7/5	wheel	146	17.1	82.5	46.5	y	m	y	n	0	nc		
Thurs	7/5	wheel	148	9.9	68.0	38.0	y	m	y	n	0	nc		
Thurs	7/5	wheel	149	23.9	92.0	51.0	y	m	y	n	0	nc		
Thurs	7/5	wheel	150	5.8	55.5	33.0	y	m	y	n	0	nc		

Thurs	7/5	wheel	151	9.6	67.5	39.0	y	m	y	n	0	nc		
Thurs	7/5	wheel	152	23.5	89.5	52.0	y	f	y	n	0	nc		
Thurs	7/5	wheel	153	21.2	88.0	49.5	y	f	y	n	0	nc		
Thurs	7/5	wheel	154	24.9	87.5	54.5	y	f	y	n	0	nc		
Thurs	7/5	wheel	155	10.8	68.5	41.0	y	m	y	n	0	nc		
Thurs	7/5	wheel	156	16.0	79.0	46.0	y	m	y	n	0	nc		
Thurs	7/5	wheel	157	9.4	67.5	38.5	y	m	y	n	0	nc		
Thurs	7/5	wheel	158	21.1	89.0	49.0	y	f	y	n	0	nc		
Fri	7/6	wheel	159	16.2	78.5	47.5	y	m	y	n	0	nc		
Fri	7/6	wheel	160	20.0	87.0	51.0	y	f	y	n	0	nc		
Fri	7/6	wheel	161	19.3	86.0	49.0	y	m	y	n	0	nc		
Fri	7/6	wheel	162	17.9	82.5	47.5	y	m	y	n	0	nc		
Fri	7/6	wheel	163	18.5	85.0	48.0	y	m	y	n	0	nc		
Fri	7/6	wheel	164	20.1	85.5	50.0	y	m	y	n	0	nc		
Fri	7/6	wheel	165	16.8	83.5	46.0	y	m	y	n	0	nc		
Fri	7/6	wheel	166	23.3	87.5	54.0	y	m	y	n	0	nc		
Fri	7/6	wheel	167	14.4	75.5	44.5	y	f	y	n	0	nc		
Fri	7/6	wheel	168	13.3	78.0	42.5	y	m	y	n	0	nc		
Fri	7/6	wheel	169	17.5	84.5	46.5	y	m	y	n	0	nc		
Fri	7/6	wheel	170	17.7	84.0	47.0	y	f	y	n	0	nc		
Fri	7/6	wheel	171	17.6	80.0	49.5	y	m	y	n	0	nc		
Fri	7/6	wheel	172	27.4	93.5	55.5	y	m	y	n	0	nc		
Fri	7/6	wheel	173	23.3	88.0	55.0	y	f	y	n	0	nc		
Fri	7/6	wheel	174	20.5	85.5	51.5	y	f	y	n	0	nc		
Fri	7/6	wheel	175	13.9	75.0	45.5	y	f	y	n	0	nc		
Fri	7/6	wheel	176	16.9	83.0	46.0	y	m	y	n	0	nc		
Fri	7/6	wheel	178	14.0	76.5	44.5	y	m	y	n	0	nc		
Fri	7/6	wheel	179	6.2	59.0	33.0	n	m	y	n	0	nc		
Fri	7/6	wheel	180	5.6	57.0	33.0	y	m	y	n	0	nc		
Fri	7/6	wheel	181	8.7	64.0	39.0	y	m	y	n	0	nc		
Fri	7/6	wheel	182	9.3	66.0	39.0	y	m	y	n	0	nc		
Fri	7/6	wheel	183	11.3	70.0	42.0	y	m	y	n	0	nc		

Fri	7/6	wheel	184	10.3	70.5	38.5	y	m	y	n	0	nc		
Fri	7/6	wheel	185	5.3	56.0	32.0	y	m	y	n	0	nc		
Fri	7/6	wheel	186	9.2	66.0	38.5	y	m	y	n	0	nc		
Fri	7/6	wheel	187	9.7	70.0	38.5	y	m	y	n	0	nc		
Fri	7/6	wheel	188	5.9	58.5	32.5	y	m	y	n	0	nc		
Fri	7/6	wheel	189	11.0	71.5	38.5	y	m	y	n	0	nc		
Fri	7/6	wheel	190	6.5	60.0	33.5	y	m	y	n	0	nc		
Fri	7/6	wheel	191	8.2	62.5	38.0	y	m	y	n	0	nc		
Fri	7/6	wheel	192	6.0	59.5	32.5	y	m	y	n	0	nc		
Fri	7/6	wheel	193	9.7	68.0	39.5	y	m	y	n	0	nc		
Fri	7/6	wheel	194	6.0	57.5	33.5	y	m	y	n	0	nc		
Fri	7/6	wheel	195	10.5	70.0	39.0	y	m	y	n	0	nc		
Fri	7/6	wheel	196	8.8	68.0	36.5	y	m	y	n	0	nc		
Fri	7/6	wheel	197	10.9	68.5	41.5	y	m	y	n	0	nc		
Fri	7/6	wheel	198	13.7	75.0	44.5	y	m	y	n	0	nc		
Fri	7/6	wheel	199	10.1	68.5	39.5	y	m	y	n	0	nc		
Fri	7/6	wheel	200	9.8	69.5	39.0	y	m	y	n	0	nc		
Fri	7/6	wheel	201	11.0	72.0	40.0	y	m	y	n	0	nc		
Fri	7/6	wheel	202	5.6	55.5	33.0	y	m	y	n	0	nc		
Fri	7/6	wheel	203	8.9	64.5	38.0	y	m	y	n	0	nc		
Fri	7/6	wheel	204	6.7	61.0	34.5	y	m	y	n	0	nc		
Fri	7/6	wheel	205	9.5	68.0	38.0	y	m	y	n	0	nc		
Fri	7/6	wheel	206	9.0	66.0	38.0	y	m	y	n	0	nc		
Fri	7/6	wheel	207	10.5	70.0	40.0	y	m	y	n	0	nc		
Fri	7/6	wheel	208	5.5	56.0	33.0	y	m	y	n	0	nc		
Fri	7/6	wheel	209	6.0	58.0	32.5	y	m	y	**n**	**1**	nc		
Fri	7/6	wheel	210	10.8	71.0	40.0	y	m	y	n	0	nc		
Fri	7/6	wheel	211	5.0	54.0	31.0	y	m	y	n	0	nc		
Fri	7/6	wheel	212	21.0	86.5	50.5	y	f	y	n	0	nc		
Fri	7/6	wheel	213	19.1	84.0	48.5	y	f	y	n	0	nc		
Fri	7/6	wheel	214	15.2	77.5	46.0	y	m	y	n	0	nc		
Fri	7/6	wheel	215	14.7	77.5	44.0	y	f	y	n	0	nc		

Fri	7/6	wheel	216	27.6	92.5	56.0	y	m	y	n	0	nc		
Fri	7/6	wheel	217	11.6	71.0	40.5	y	m	y	n	0	nc		
Fri	7/6	wheel	218	19.8	86.5	49.0	y	f	y	n	0	nc		
Fri	7/6	wheel	219	20.5	87.0	50.0	y	f	y	n	0	nc		
Fri	7/6	wheel	220	22.9	91.5	52.0	y	f	y	n	0	nc		
Fri	7/6	wheel	221	23.9	89.5	53.5	y	f	y	n	0	nc		
Fri	7/6	wheel	222	13.6	77.0	43.0	y	m	y	n	0	nc		
Fri	7/6	wheel	223	26.0	90.0	56.0	y	f	y	n	0	nc		
Fri	7/6	wheel	224	12.3	74.0	32.0	y	m	y	n	0	nc		
Fri	7/6	wheel	225	12.8	75.0	41.0	y	m	y	n	0	nc		
Fri	7/6	wheel	226	16.1	81.5	45.0	y	m	y	n	0	nc		
Fri	7/6	wheel	227	14.6	76.5	45.0	y	m	y	n	0	nc		
Fri	7/6	wheel	228	17.4	83.5	47.0	y	f	y	n	0	nc		
Fri	7/6	wheel	229	14.0	79.5	41.5	y	f	y	n	0	nc		
Fri	7/6	wheel	230	17.7	82.0	44.5	y	f	y	n	0	nc		
Fri	7/6	wheel	231	24.3	89.5	55.0	y	m	y	n	0	nc		
Sun	7/8	wheel	232	17.0										
Sun	7/8	wheel	233	10.3										
Sun	7/8	wheel	234	7.1										
Sun	7/8	wheel	235	11.5										
Sun	7/8	wheel	236	10.9										
Sun	7/8	wheel	237	24.3										
Sun	7/8	wheel	238	11.4										
Sun	7/8	wheel	239	8.1										
Sun	7/8	wheel	240	18.9										
Sun	7/8	wheel	241	13.6										
Sun	7/8	wheel	242	14.0										
Sun	7/8	wheel	243	13.1										
Sun	7/8	wheel	244	11.0										
Sun	7/8	wheel	245	13.8										
Sun	7/8	wheel	246	12.3										

Data in this portion of worksheet that has only weights was taken during closed periods by fish friendly video fish wheel. King were netted, weighed and immediately released as they came off the basket chutes. Total time of procedure averages about 10 seconds

Sun	7/8	wheel	247	17.5										
Sun	7/8	wheel	248	7.5										
Sun	7/8	wheel	249	11.1										
Sun	7/8	wheel	250	21.0										
Sun	7/8	wheel	251	7.0										
Sun	7/8	wheel	252	15.3										
Sun	7/8	wheel	253	9.8										
Sun	7/8	wheel	254	6.9										
Sun	7/8	wheel	255	10.7										
Sun	7/8	wheel	256	6.4										
Sun	7/8	wheel	257	12.8										
Sun	7/8	wheel	258	4.9										
Sun	7/8	wheel	259	17.7										
Sun	7/8	wheel	260	8.7										
Sun	7/8	wheel	261	6.2										
Sun	7/8	wheel	262	10.0										
Sun	7/8	wheel	263	6.4										
Sun	7/8	wheel	264	9.0										
Sun	7/8	wheel	265	4.6										
Sun	7/8	wheel	266	19.6										
Sun	7/8	wheel	267	6.7										
Sun	7/8	wheel	268	6.7										
Sun	7/8	wheel	269	9.3										
Sun	7/8	wheel	270	8.0										
Sun	7/8	wheel	271	19.9										
Sun	7/8	wheel	272	5.7										
Sun	7/8	wheel	273	5.8										
Sun	7/8	wheel	274	9.9										
Sun	7/8	wheel	275	5.3										
Sun	7/8	wheel	276	3.8										
Sun	7/8	wheel	277	11.5										
Sun	7/8	wheel	278	13.7										

Sun	7/8	wheel	279	11.9										
Sun	7/8	wheel	280	7.2										
Sun	7/8	wheel	281	5.7										
Sun	7/8	wheel	282	11.0										
Sun	7/8	wheel	283	15.5										
Sun	7/8	wheel	284	12.7										
Sun	7/8	wheel	285	10.0										
Sun	7/8	wheel	286	15.6										
Sun	7/8	wheel	287	12.8										
Sun	7/8	wheel	288	11.4										
Sun	7/8	wheel	289	8.1										
Mon	7/9	wheel	290	12.3										
Mon	7/9	wheel	291	19.6										
Mon	7/9	wheel	292	15.9										
Mon	7/9	wheel	293	6.2										
Mon	7/9	wheel	294	9.1										
Mon	7/9	wheel	295	24.5										
Mon	7/9	wheel	296	10.8										
Mon	7/9	wheel	297	12.3										
Mon	7/9	wheel	298	23.5										
Mon	7/9	wheel	299	9.6										
Mon	7/9	wheel	300	11.9										
Mon	7/9	wheel	301	6.3										
Mon	7/9	wheel	302	14.9										
Mon	7/9	wheel	303	18.0										
Mon	7/9	wheel	304	9.5										
Mon	7/9	wheel	305	19.5										
Mon	7/9	wheel	306	12.6										
Mon	7/9	wheel	307	12.8										
Mon	7/9	wheel	308	17.1										
Mon	7/9	wheel	309	9.0										
Mon	7/9	wheel	310	11.2										

Mon	7/9	wheel	311	17.0										
Mon	7/9	wheel	312	25.9										
Mon	7/9	wheel	313	17.1										
Mon	7/9	wheel	314	7.9										
Mon	7/9	wheel	315	6.0										
Mon	7/9	wheel	316	11.7										
Mon	7/9	wheel	317	8.3										
Mon	7/9	wheel	318	24.2										
Mon	7/9	wheel	319	6.7										
Mon	7/9	wheel	320	14.5										
Mon	7/9	wheel	321	10.6										
Mon	7/9	wheel	322	13.3										
Mon	7/9	wheel	323	11.2										
Mon	7/9	wheel	324	4.7										
Mon	7/9	wheel	325	7.9										
Mon	7/9	wheel	326	17.6										
Mon	7/9	wheel	327	11.9										
Mon	7/9	wheel	328	8.9										
Mon	7/9	wheel	329	5.6										
Tue	7/10	wheel	330	12.0										
Tue	7/10	wheel	331	4.3										
Tue	7/10	wheel	332	15.3										
Tue	7/10	wheel	333	26.0										
Tue	7/10	wheel	334	13.3										
Tue	7/10	wheel	335	11.2										
Tue	7/10	wheel	336	10.6										
Tue	7/10	wheel	337	10.7										
Tue	7/10	wheel	338	9.1										
Tue	7/10	wheel	339	18.7										
Tue	7/10	wheel	340	5.8										
Tue	7/10	wheel	341	16.2										
Tue	7/10	wheel	342	7.3										

Tue	7/10	wheel	343	3.7										
Tue	7/10	wheel	344	7.2										
Tue	7/10	wheel	345	7.6										
Tue	7/10	wheel	346	7.3										
Tue	7/10	wheel	347	8.6										
Tue	7/10	wheel	348	12.5										
Tue	7/10	wheel	349	15.3										
Tue	7/10	wheel	350	14.2										
Tue	7/10	wheel	351	9.3										
Tue	7/10	wheel	352	5.9										
Tue	7/10	wheel	353	15.2										
Tue	7/10	wheel	354	5.5										
Tue	7/10	wheel	355	26.1										
Tue	7/10	wheel	356	7.9										
Tue	7/10	wheel	357	4.7										
Tue	7/10	wheel	358	20.1										
Tue	7/10	wheel	359	11.2										
Tue	7/10	wheel	360	10.0										
Tue	7/10	wheel	361	12.5										
Tue	7/10	wheel	362	15.3										
Tue	7/10	wheel	363	9.9										
Tue	7/10	wheel	364	22.2										
Tue	7/10	wheel	365	8.2										
Tue	7/10	wheel	366	8.6										
Tue	7/10	wheel	367	5.7										
Tue	7/10	wheel	368	7.3										
Tue	7/10	wheel	369	10.2										
Tue	7/10	wheel	370	12.1										
Tue	7/10	wheel	371	14.3										
Tue	7/10	wheel	372	10.2										
Tue	7/10	wheel	373	18.9										
Tue	7/10	wheel	374	8.5										

Tue	7/10	wheel	375	9.0										
Tue	7/10	wheel	376	8.7										
Tue	7/10	wheel	377	7.5										
Tue	7/10	wheel	378	28.1										
Tue	7/10	wheel	379	22.8										
Wed	7/11	wheel	380	19.4										
Wed	7/11	wheel	381	19.3										
Wed	7/11	wheel	382	5.7										
Wed	7/11	wheel	383	19.4										
Wed	7/11	wheel	384	8.5										
Wed	7/11	wheel	385	19.7										
Wed	7/11	wheel	386	9.3										
Wed	7/11	wheel	387	4.0										
Wed	7/11	wheel	388	18.3										
Wed	7/11	wheel	389	19.0										
Wed	7/11	wheel	390	15.4										
Wed	7/11	wheel	391	5.5										
Wed	7/11	wheel	392	3.7										
Wed	7/11	wheel	393	14.8										
Wed	7/11	wheel	394	14.5										
Wed	7/11	wheel	395	9.8										
Wed	7/11	wheel	396	14.4										
Wed	7/11	wheel	397	14.3										
Wed	7/11	wheel	398	7.8										
Wed	7/11	wheel	399	11.3										
Wed	7/11	wheel	400	15.9										
Wed	7/11	wheel	401	14.7										
Wed	7/11	wheel	402	7.5										
Wed	7/11	wheel	403	12.8										
Wed	7/11	wheel	404	10.1										
Wed	7/11	wheel	405	6.3										
Wed	7/11	wheel	406	26.7										

Wed	7/11	wheel	407	20.5										
Wed	7/11	wheel	408	6.1										
Wed	7/11	wheel	409	4.9										
Thurs	7/12	wheel	410	15.7										
Thurs	7/12	wheel	411	19.9										
Thurs	7/12	wheel	412	6.3										
Thurs	7/12	wheel	413	20.9										
Thurs	7/12	wheel	414	7.9										
Thurs	7/12	wheel	415	16.8										
Thurs	7/12	wheel	416	16.4										
Thurs	7/12	wheel	417	5.2										
Thurs	7/12	wheel	418	8.8										
Thurs	7/12	wheel	419	4.5										
Thurs	7/12	wheel	420	13.4										
Thurs	7/12	wheel	421	9.0										
Thurs	7/12	wheel	422	7.0										
Thurs	7/12	wheel	423	8.6										
Thurs	7/12	wheel	424	11.6										
Thurs	7/12	wheel	425	9.4										
Thurs	7/12	wheel	426	9.8										
Thurs	7/12	wheel	427	12.5										
Thurs	7/12	wheel	428	25.8										
Thurs	7/12	wheel	429	9.0										
Thurs	7/12	wheel	430	6.6										
Thurs	7/12	wheel	431	16.0										
Thurs	7/12	wheel	432	17.1										
Thurs	7/12	wheel	433	9.5										
Thurs	7/12	wheel	434	13.7										
Thurs	7/12	wheel	435	19.4										
Thurs	7/12	wheel	436	4.5										
Thurs	7/12	wheel	437	24.1										
Thurs	7/12	wheel	438	4.1										

Thurs	7/12	wheel	439	11.4										
Fri	7/13	wheel	440	21.1										
Fri	7/13	wheel	441	9.9										
Fri	7/13	wheel	442	18.1										
Fri	7/13	wheel	443	22.2										
Fri	7/13	wheel	444	22.2										
Fri	7/13	wheel	445	15.9										
Fri	7/13	wheel	446	17.5										
Fri	7/13	wheel	447	6.9										
Fri	7/13	wheel	448	20.6										
Fri	7/13	wheel	449	16.2										
Fri	7/13	wheel	450	7.2										
Fri	7/13	wheel	451	16.3										
Fri	7/13	wheel	452	6.5										
Fri	7/13	wheel	453	14.7										
Fri	7/13	wheel	454	15.8										
Fri	7/13	wheel	455	17.6										
Fri	7/13	wheel	456	5.6										
Fri	7/13	wheel	457	11.3										
Fri	7/13	wheel	458	13.5										
Fri	7/13	wheel	459	11.4										
Fri	7/13	wheel	460	13.2										
Fri	7/13	wheel	461	23.3										
Fri	7/13	wheel	462	20.4										
Fri	7/13	wheel	463	13.1										
Fri	7/13	wheel	464	9.3										
Fri	7/13	wheel	465	10.2										
Fri	7/13	wheel	466	22.4										
Fri	7/13	wheel	467	16.5										
Fri	7/13	wheel	468	24.8										
Fri	7/13	wheel	469	13.9										
Sat	7/14	wheel	470	12.1										

Sat	7/14	wheel	471	8.4										
Sat	7/14	wheel	472	12.7										
Sat	7/14	wheel	473	16.6										
Sat	7/14	wheel	474	4.3										
Sat	7/14	wheel	475	11.0										
Sat	7/14	wheel	476	9.6										
Sat	7/14	wheel	477	15.9										
Sat	7/14	wheel	478	13.7										
Sat	7/14	wheel	479	10.0										
Sat	7/14	wheel	480	14.4										
Sat	7/14	wheel	481	13.5										
Sat	7/14	wheel	482	20.2										
Sat	7/14	wheel	483	11.4										
Sat	7/14	wheel	484	15.1										
Sat	7/14	wheel	485	12.5										
Sat	7/14	wheel	486	9.1										
Sat	7/14	wheel	487	12.6										
Sat	7/14	wheel	488	9.8										
Sat	7/14	wheel	489	15.4										
Sun	7/15	wheel	490	23.3										
Sun	7/15	wheel	491	9.4										
Sun	7/15	wheel	492	3.8										
Sun	7/15	wheel	493	13.8										
Sun	7/15	wheel	494	6.3										
Sun	7/15	wheel	495	20.6										
Sun	7/15	wheel	496	28.5										
Sun	7/15	wheel	497	14.1										
Sun	7/15	wheel	498	8.7										
Sun	7/15	wheel	499	13.3										
Sun	7/15	wheel	500	4.2										
Sun	7/15	wheel	501	15.1										
Sun	7/15	wheel	502	15.9										

Sun	7/15	wheel	503	8.8										
Sun	7/15	wheel	504	21.8										
Sun	7/15	wheel	505	12.0										
Sun	7/15	wheel	506	13.2										
Sun	7/15	wheel	507	5.7										
Sun	7/15	wheel	508	3.5										
Sun	7/15	wheel	509	7.3										
Sun	7/15	wheel	510	26.7										
Sun	7/15	wheel	511	22.9										
Sun	7/15	wheel	512	9.6										
Mon	7/16	wheel	513	21.2										
Mon	7/16	wheel	514	13.7										
Mon	7/16	wheel	515	15.5										
Mon	7/16	wheel	516	17.6										
Mon	7/16	wheel	517	7.9										
Mon	7/16	wheel	518	10.7										
Mon	7/16	wheel	519	9.4										
Mon	7/16	wheel	520	14.4										
Mon	7/16	wheel	521	8.7										
Mon	7/16	wheel	522	17.4										
Mon	7/16	wheel	523	17.6										
Mon	7/16	wheel	524	21.5										
Mon	7/16	wheel	525	10.6										
Mon	7/16	wheel	526	14.1										
Mon	7/16	wheel	527	5.6										
Mon	7/16	wheel	528	17.8										
Mon	7/16	wheel	529	14.2										
Mon	7/16	wheel	530	24.6										
Mon	7/16	wheel	531	5.4										
Mon	7/16	wheel	532	5.7										
Thurs	7/19	wheel	533	25.6	88.5	55.5	y	f	y	n	0	nc		
Thurs	7/19	wheel	534	9.1	66	37.0	y	m	y	n	0	nc		

Thurs	7/19	wheel	535	13.6	74.5	43.0	y	m	y	n	0	nc		
Thurs	7/19	wheel	536	10.6	70	39.0	y	m	y	n	0	nc		
Thurs	7/19	wheel	537	3.7	50	27.5	y	m	y	n	0	nc		
Thurs	7/19	wheel	538	19.2	81	50.0	y	m	y	n	0	nc		
Thurs	7/19	wheel	539	5.9	56	32.5	y	m	y	n	0	nc		
Thurs	7/19	wheel	540	13.7	71.5	45.0	y	m	y	n	0	nc		
Thurs	7/19	wheel	541	15.1	77.5	45.0	y	f	y	n	0	nc		
Thurs	7/19	wheel	542	27.6	91.5	56.5	y	f	y	n	0	nc		
Thurs	7/19	wheel	543	8.7	66	37.5	y	m	y	n	0	nc		
Thurs	7/19	wheel	544	24.1	87.5	55.5	y	f	y	n	1	nc		
Thurs	7/19	wheel	545	12.1	73	41.0	y	m	y	n	0	nc		
Thurs	7/19	wheel	546	18.7	84.5	47.0	y	f	y	**p**	**4**	nc		
Thurs	7/19	wheel	547	18.2	83.5	47.5	y	f	y	n	0	nc		
Thurs	7/19	wheel	548	21.9	87	50.5	y	m	y	n	0	nc		
Thurs	7/19	wheel	549	22.4	87	51.0	y	f	y	n	0	nc		
Thurs	7/19	wheel	550	16.1	82	44.0	y	f	y	n	0	nc		
Thurs	7/19	wheel	551	16.4	77	47.0	y	m	y	n	0	nc		
Thurs	7/19	wheel	552	6.7	61.5	33.5	y	m	y	n	0	nc		
Thurs	7/19	wheel	553	6.5	59.5	33.5	y	m	y	n	0	nc		
Thurs	7/19	wheel	554	4.1	51.5	28.0	y	m	y	n	0	nc		
Thurs	7/19	wheel	555	8.6	56.5	36.5	y	m	y	n	0	nc		
Thurs	7/19	wheel	556	11.0	69.5	40.5	y	m	y	n	0	nc		
Thurs	7/19	wheel	557	8.5	67	35.5	y	m	y	n	0	nc		
Thurs	7/19	wheel	558	4.4	53.5	29.5	y	m	y	n	0	nc		
Thurs	7/19	wheel	559	17.3	79	47.5	y	m	y	n	0	nc		
Thurs	7/19	wheel	560	12.3	74	41.0	y	m	y	n	0	nc		
Thurs	7/19	wheel	561	17.4	81	48.0	y	m	y	**p**	**700**	nc		
Thurs	7/19	wheel	562	13.0	73.5	43.0	y	m	y	n	0	nc		
Thurs	7/19	wheel	563	13.5	74	43.0	y	m	y	n	0	nc		
Thurs	7/19	wheel	564	6.5	57.5	34.0	y	m	y	n	0	nc		
Thurs	7/19	wheel	565	12.0	70.5	41.0	y	m	y	n	0	nc		
Thurs	7/19	wheel	566	10.0	57	37.5	y	m	y	n	0	nc		

Thurs	7/19	wheel	567	6.6	59	32.0	y	m	y	n	0	nc		
Thurs	7/19	wheel	568	14.1	76.5	45.0	y	f	y	n	0	nc		
Thurs	7/19	wheel	569	21.5	86.0	51.5	y	m	y	n	0	nc		
Thurs	7/19	wheel	570	8.7	63.0	36.5	y	m	y	n	0	nc		
Thurs	7/19	wheel	571	25.7	92.0	54.5	y	f	y	n	0	nc		
Thurs	7/19	wheel	572	20.7	81.5	51.0	y	m	y	n	0	nc		
Thurs	7/19	wheel	573	16.1	79.0	46.5	y	m	y	n	0	nc		
Thurs	7/19	wheel	574	7.0	60.0	34.5	y	m	y	n	0	nc		
Thurs	7/19	wheel	575	18.1	84.0	46.0	y	f	y	n	0	nc		
Thurs	7/19	wheel	576	9.0	65.0	38.0	y	m	y	n	0	nc		
Thurs	7/19	wheel	577	4.8	51.0	30.0	y	m	y	n	0	nc		
Thurs	7/19	wheel	578	9.3	67.5	37.0	y	m	y	n	0	nc		
Thurs	7/19	wheel	579	3.6	48.0	27.0	y	m	y	n	0	nc		
Thurs	7/19	wheel	580	6.6	56.5	34.5	y	m	y	n	0	nc		
Thurs	7/19	wheel	581	10.7	68.5	40.0	y	m	y	n	0	nc		
Thurs	7/19	wheel	582	5.6	54.0	33.0	y	m	y	n	0	nc		
Thurs	7/19	wheel	583	16.9	82.0	47.0	y	f	y	n	0	nc		
Thurs	7/19	wheel	584	16.6	84.5	45.0	y	f	y	n	0	nc		
Thurs	7/19	wheel	585	15.2	77.0	43.5	y	m	y	n	0	nc		
Thurs	7/19	wheel	586	17.7	78.0	48.0	y	f	y	n	0	nc		
Thurs	7/19	wheel	587	4.2	49.5	27.0	y	m	y	n	0	nc		
Thurs	7/19	wheel	588	28.8	91.0	58.0	y	f	y	n	0	nc		
Thurs	7/19	wheel	589	31.7	97.0	60.5	y	m	y	n	0	nc		
Thurs	7/19	wheel	590	19.1	81.5	48.0	y	m	y	n	0	nc		
Thurs	7/19	wheel	591	13.4	71.5	43.5	y	m	y	n	0	nc		
Thurs	7/19	wheel	592	33.6	100.5	59.0	y	f	y	n	0	nc		
Thurs	7/19	wheel	593	21.7	85.0	52.0	y	f	y	n	0	nc		
Thurs	7/19	wheel	594	13.7	74.0	43.0	y	m	y	**p**	**7**	nc		
Thurs	7/19	wheel	595	25.6	89.5	54.0	y	m	y	n	0	nc		
Thurs	7/19	wheel	596	12.5	71.0	42.5	y	m	y	n	0	nc		
Thurs	7/19	wheel	597	17.6	81.5	47.0	y	f	y	n	0	nc		
Thurs	7/19	wheel	598	25.9	89.0	54.0	y	f	y	n	0	nc		

Thurs	7/19	wheel	599	23.8	86.0	53.0	y	f	y	n	0	nc		
Thurs	7/19	wheel	600	20.2	84.0	49.5	y	f	y	n	0	nc		
Thurs	7/19	wheel	601	11.1	69.5	41.0	y	m	y	n	0	nc		
Thurs	7/19	wheel	602	19.7	83.0	49.0	y	f	y	n	0	nc		
Thurs	7/19	wheel	603	20.0	83.0	50.0	y	f	y	n	0	nc		
Thurs	7/19	wheel	604	6.3	57.0	32.0	y	m	y	n	0	nc		
Thurs	7/19	wheel	605	18.6	85.0	46.0	y	m	y	n	0	nc		
Thurs	7/19	wheel	606	19.6	83.0	49.5	y	f	y	n	0	nc		
Thurs	7/19	wheel	607	18.2	80.5	47.5	y	f	y	n	0	nc		
Thurs	7/19	wheel	608	9.5	66.5	37.0	y	m	y	n	0	nc		
Thurs	7/19	wheel	609	9.4	67.0	36.5	y	m	y	n	0	nc		
Thurs	7/19	wheel	610	7.5	62.5	35.0	y	m	y	n	0	nc		
Thurs	7/19	wheel	611	6.0	58.0	32.0	y	m	y	n	0	nc		
Thurs	7/19	wheel	612	6.2	56.0	32.5	y	m	y	n	0	nc		
Thurs	7/19	wheel	613	5.8	58.0	31.0	y	m	y	n	0	nc		
Fri	7/20	wheel	614	11.2	72.5	39.5	y		y					
Fri	7/20	wheel	615	23.4	86.5	52.5	y		y					
Fri	7/20	wheel	616	10.5	70.5	39.5	y		y					
Fri	7/20	wheel	617	10.6	69.0	39.5	y		y					
Fri	7/20	wheel	618	13.4	73.0	44.0	y		y					
Fri	7/20	wheel	619	19.0	86.0	47.0	y		y					
Fri	7/20	wheel	620	21.2	86.5	50.5	y		y					
Fri	7/20	wheel	621	18.4	82.5	49.0	y		y					
Fri	7/20	wheel	622	15.8	78.5	45.0	y		y					
Fri	7/20	wheel	623	19.2	82.0	50.0	y		y					
Fri	7/20	wheel	624	17.4	84.0	45.0	y		y					
Fri	7/20	wheel	625	16.9	79.0	47.5	y		y					
Fri	7/20	wheel	626	13.1	77.5	42.0	y		y					
Fri	7/20	wheel	627	14.3	74.5	45.0	y		y					
Fri	7/20	wheel	628	14.6	79.5	43.0	y		y					
Fri	7/20	wheel	629	16.5	78.0	45.5	y		y					

Fish from 614 to 688 were not sampled for sex or ICH disease due to 2 days of poor weather when 3 fishermen stopped cutting and ran fish to freezers whole

Fri	7/20	wheel	630	18.4	84.0	49.0	y		y					
Fri	7/20	wheel	631	10.4	69.0	39.5	y		y					
Fri	7/20	wheel	632	17.4	80.0	48.0	y		y					
Fri	7/20	wheel	633	13.5	74.0	42.5	y		y					
Fri	7/20	wheel	634	12.9	75.0	42.0	y		y					
Fri	7/20	wheel	635	10.1	68.0	40.0	y		y					
Fri	7/20	wheel	636	11.5	71.0	41.0	y		y					
Fri	7/20	wheel	637	11.0	75.0	38.5	y		y					
Fri	7/20	wheel	638	10.6	73.0	38.5	y		y					
Fri	7/20	wheel	639	7.7	61.5	36.5	y		y					
Fri	7/20	wheel	640	10.8	69.5	41.0	y		y					
Fri	7/20	wheel	641	10.6	69.0	40.5	y		y					
Fri	7/20	wheel	642	6.9	60.0	35.0	y		y					
Fri	7/20	wheel	643	6.5	61.0	33.0	y		y					
Fri	7/20	wheel	644	6.4	58.0	34.0	y		y					
Fri	7/20	wheel	645	6.2	57.5	34.0	y		y					
Fri	7/20	wheel	646	4.7	52.5	29.0	y		y					
Fri	7/20	wheel	647	7.8	63.5	34.5	y		y					
Fri	7/20	wheel	648	6.8	60.0	33.0	y		y					
Fri	7/20	wheel	649	7.8	65.0	34.0	y		y					
Fri	7/20	wheel	650	6.3	60.0	33.0	y		y					
Fri	7/20	wheel	651	7.9	63.0	35.5	y		y					
Fri	7/20	wheel	652	4.7	52.0	29.0	y		y					
Fri	7/20	wheel	653	15.1	79.5	44.0	y		y					
Fri	7/20	wheel	654	18.8	82.5	47.0	y		y					
Fri	7/20	wheel	655	20.7	87.0	49.0	y		y					
Fri	7/20	wheel	656	18.9	85.5	46.5	y		y					
Fri	7/20	wheel	657	23.7	89.0	52.5	y		y					
Fri	7/20	wheel	658	20.7	83.0	51.5	y		y					
Fri	7/20	wheel	659	27.5	93.5	55.0	y		y					
Fri	7/20	wheel	660	25.4	90.0	54.0	y		y					
Fri	7/20	wheel	661	27.1	91.0	57.0	y		y					

Fri	7/20	wheel	662	25.9	92.0	53.5	y		y					
Fri	7/20	wheel	663	11.7	70.0	42.0	y		y					
Fri	7/20	wheel	664	12.4	72.5	41.5	y		y					
Fri	7/20	wheel	665	13.5	73.5	43.0	y		y					
Fri	7/20	wheel	666	23.8	87.0	53.0	y		y					
Fri	7/20	wheel	667	24.5	88.0	54.5	y		y					
Fri	7/20	wheel	668	25	92.0	53.5	y		y					
Fri	7/20	wheel	669	21.4	85.0	51.5	y		y					
Fri	7/20	wheel	670	22.6	87.5	52.5	y		y					
Fri	7/20	wheel	671	18.3	83.0	48.0	y		y					
Fri	7/20	wheel	672	14.2	75.5	45.5	y		y					
Fri	7/20	wheel	673	13.9	74.5	43.5	y		y					
Fri	7/20	wheel	674	15.6	77.5	44.0	y		y					
Fri	7/20	wheel	675	26.6	88.0	52.0	y		y					
Fri	7/20	wheel	676	27.5	92.5	56.0	y		y					
Fri	7/20	wheel	677	26.3	91.5	56.0	y		y					
Fri	7/20	wheel	678	11.3	69.0	41.0	y		y					
Fri	7/20	wheel	679	21.1	85.5	51.5	y		y					
Fri	7/20	wheel	680	10.0	69.0	39.0	y		y					
Fri	7/20	wheel	681	24.9	90.0	53.5	y		y					
Fri	7/20	wheel	682	23.3	86.5	53.5	y		y					
Fri	7/20	wheel	683	28.9	95.0	58.0	y		y					
Fri	7/20	wheel	684	13.8	74.5	44.0	y		y					
Fri	7/20	wheel	685	6.9	59.0	34.5	y		y					
Fri	7/20	wheel	686	9.4	66.5	39.0	y		y					
Fri	7/20	wheel	687	23.3	90.0	52.0	y		y					
Fri	7/20	wheel	688	3.5	48.0	27.0	y		y					
Sat	7/28	wheel	689	6.8	59.0	34.5	y	m	y	n	0	nc		
Sat	7/28	wheel	690	8.7	65.0	37.0	y	m	y	n	0	nc		
Sat	7/28	wheel	691	10.9	72.0	39.5	y	m	y	n	0	nc		
Sat	7/28	wheel	692	5.4	57.0	30.5	y	m	y	n	0	nc		
Sat	7/28	wheel	693	17.7	83.0	47.5	y	f	y	**p**	**8**	nc		

Sat	7/28	wheel	694	13.1	74.5	43.5	y	m	y	n	0	nc		
Sat	7/28	wheel	695	7.6	63.0	35.0	y	m	y	n	0	nc		
Sat	7/28	wheel	696	23.3	88.0	53.0	y	m	y	n	0	nc		
Sat	7/28	wheel	697	5.7	56.0	32.0	y	m	y	n	0	nc		
Sat	7/28	wheel	698	21.5	86.0	53.5	y	f	y	**p**	**12**	nc		
Sat	7/28	wheel	699	6.4	60.0	32.5	y	m	y	n	0	nc		
Sat	7/28	wheel	700	11.6	71.0	42.0	y	m	y	n	0	nc		
Sat	7/28	wheel	701	21.3	84.5	50.5	y	f	y	n	0	nc		
Sat	7/28	wheel	702	17.2	79.5	47.5	y	f	y	n	0	nc		
Sat	7/28	wheel	703	14.7	77.5	44.5	y	m	y	n	0	nc		
Sat	7/28	wheel	704	19.4	85.0	50.0	y	f	y	**p**	**3**	nc		
Sun	7/29	wheel	705	1.5	36.0	20.0	y	m	y	n	0	nc		
Sun	7/29	wheel	706	18.4	82.0	49.0	y	f	y	n	0	nc		
Sun	7/29	wheel	707	2.8	51.5	27.5	y	m	y	n	0	nc		
Sun	7/29	wheel	708	21.6	88.0	52.0	y	f	y	n	0	nc		
Sun	7/29	wheel	709	21.0	87.5	51.0	y	f	y	n	0	nc		
Sun	7/29	wheel	710	7.4	63.5	34.0	y	m	y	n	0	nc		
Sun	7/29	wheel	711	19.4	87.0	47.0	y	f	y	**p**	**200**	nc		
Sun	7/29	wheel	712	10.1	70.5	39.5	y	m	n	n	0	nc		
Sun	7/29	wheel	713	23.4	90.5	52.0	y	f	n	n	0	nc		
Sun	7/29	wheel	714	23.1	88.5	53.0	y	f	n	n	0	nc		
Sun	7/29	wheel	715	20.8	84.0	52.0	y	f	n	**p**	**10**	nc		
Sun	7/29	wheel	716	15.8	79.5	45.0	y	m	n	n	0	nc		
Sun	7/29	wheel	717	21.1	88.5	50.5	y	f	n	n	0	nc		
Sun	7/29	wheel	718	13.1	75.5	42.0	y	f	n	n	0	nc		
Sun	7/29	wheel	719	20.8	85.0	51.0	y	f	n	n	0	nc		
Sun	7/29	wheel	720	24.7	92.0	53.5	y	f	n	n	0	nc		
Sun	7/29	wheel	721	24.7	90.0	52.5	y	m	n	n	0	nc		
Fri	8/3	wheel	722	18.4	85.0	50.5	y	f	y	n	0	nc		
Fri	8/3	wheel	723	27.6	92.0	56.0	y	m	y	n	0	nc		
Fri	8/3	wheel	724	17.3	84.5	47.0	y	m	y	n	0	nc		
Fri	8/3	wheel	725	5.9	58.0	32.0	y	m	y	n	0	nc		

Fri	8/3	wheel	726	18.7	83.0	49.5	y	f	y	n	0	nc		
Fri	8/3	wheel	727	18.6	86.5	48.5	y	m	y	**p**	**5**	nc		**AYK727**
Fri	8/3	wheel	728	15.9	79.5	46.5	y	f	y	n	0	nc		
Fri	8/3	wheel	729	15.2	77.5	44.0	y	m	y	n	0	nc		
Sat	8/4	wheel	730	4.6	55.0	27.0	y	m	y	n	0	nc		
Sat	8/4	wheel	731	18.1	84.0	47.5	y	m	y	n	0	nc		
Sat	8/4	wheel	732	21.6	86.5	51.0	y	f	y	n	0	nc		
Sat	8/4	wheel	733	9.4	69.0	36.5	y	f	y	n	0	nc		
Sun	8/5	wheel	734	21.5	86.5	50.5	y	f	y	**n**	**1**	nc		

Below is king data from large mesh gillnets which is being used to compare to fish wheel data. The purpose is to see if any difference exists in Ichthyophonus disease rate between king caught in the two gear types. We are continuing to look into parts of the ADF&G theory that Rapids fishwheels catch mostly the small, male, less vigorous, sick, handicapped, large fish with shore preference, and diseased king compared to the king population in the river, nets in general and driftnets. This issue has been constantly brought up at numerous meetings including State Board of Fish and reported on in an ADF&G Ichthyophonus report and data needs to be collected on this.

Important notes: Visible ICH disease can vary greatly by date and even from the front of a pulse to the backside. At minimum the same dates should be used in comparing nets/wheels (as best as can be done). Other considerations can also be taken and will, as we look over this net data set which is admittedly small each year.

As visible ICH seems to be found in larger percents in larger fish one might also compare same size king (50 - 60 cm for instance) from both gear types.

2012 Rapids Student Data Collection Project - Main Raw Net Data Sheet

Data preliminary till gone overpost season

									ADF&G	ICHTHYOPHONUS			
										3 spots or more = pos.			
Day	**Date**	**Fisher**	**Fish**	**Weight**	**Length**	**Girth**	**Adipose**	**Sex**	**Fin Clip**	**Heart**	**# spots**	**Flesh**	**Net Size**
			#	(tenths)	(.5 cm)	(.5 cm)	y / n	m / f	y / n	(p - Pos),(n - Neg),(nc - No Check)			
Wed	6/27	net	1	22.5	88.5	53.5	y	f	y	**n**	**1**		7 1/2" net
Wed	6/27	net	2	16.2	79.5	46.5	y	m	y	n	0		7 1/2" net
Sat	6/30	net	3	13.8	78.0	43.5	y	m	y	n	0		7 1/2" net
Sat	6/30	net	4	16.9	82.5	47.0	y	f	y	n	0		7 1/2" net
Sat	6/30	net	5	17.5	83.5	46.0	y	f	y	**p**	**50**		7 1/2" net
Sat	6/30	net	6	17.8	82.0	48.0	y	f	y	n	0		7 1/2" net
Sat	6/30	net	7	23.9	92.0	52.5	y	f	y	n	0		7 1/2" net
Sat	6/30	net	8	18.8	84.0	47.0	y	f	n	n	0		7 1/2" net
Sat	6/30	net	9	22.0	87.5	51.0	y	f	n	n	0		7 1/2" net
Sat	6/30	net	10	17.4	83.0	47.0	y	m	n	n	0		7 1/2" net
Sat	6/30	net	11	13.8	75.0	42.0	y	m	n	n	0		7 1/2" net
Sun	7/1	net	12	14.5	74.0	48.0	y	m	n	n	0		7 1/2" net
Wed	7/4	net	13	18.4	82.0	48.0	y	f	n	n	0		7" net
Wed	7/4	net	14	16.8	78.5	45.5	y	m	n	n	0		7" net
Wed	7/4	net	15	11.3	71.0	39.0	y	m	n	n	0		7" net
Wed	7/4	net	16	12.3	71.0	41.5	y	m	n	**n**	**2**		7" net
Wed	7/4	net	17	12.4	73.5	40.5	y	f	n	n	0		7" net
Thurs	7/5	net	18	21.2	84.5	50.5	y	f	n	**n**	**1**		5" net
Thurs	7/5	net	19	16.9	81.0	47.0	y	f	n	n	0		5" net
Thurs	7/5	net	20	7.1	60.5	34.0	y	m	n	n	0		5" net
Thurs	7/5	net	21	7.2	63.0	32.5	y	m	n	n	0		5" net
Thurs	7/5	net	22	6.4	58.0	32.5	y	m	n	n	0		5" net
Thurs	7/5	net	23	5.0	54.0	28.5	y	m	n	n	0		5" net

Thurs	7/19	net	24	19.1	82.0	48.0	y	m	y	n	0			7 1/2" net
Thurs	7/19	net	25	12.0	70.0	40.0	y	m	y	n	0			7 1/2" net
Thurs	7/19	net	26	17.4	77.0	49.5	y	m	y	n	0			7 1/2" net
Thurs	7/19	net	27	25.8	90.0	54.0	y	m	y	n	0			7 1/2" net
Thurs	7/19	net	28	12.5	70.0	32.5	y	m	y	n	0			7 1/2" net
Thurs	7/19	net	29	14.1	76.0	43.5	y	m	y	n	0			7 1/2" net
Thurs	7/19	net	30	14.5	77.0	42.5	y	f	y	n	0			7 1/2" net
Thurs	7/19	net	31	15.1	76.0	44.0	y	m	y	n	0			7 1/2" net
Thurs	7/19	net	32	15.6	79.5	45.0	y	f	y	n	0			7 1/2" net
Thurs	7/19	net	33	13.1	72.0	42.0	y	m	y	n	0			7 1/2" net
Thurs	7/19	net	34	22.5	85.5	51.0	y	f	y	**n**	**1**			7 1/2" net
Thurs	7/19	net	35	16.0	79.5	44.5	y	f	y	n	0			7 1/2" net
Thurs	7/19	net	36	19.2	83.0	48.5	y	f	y	**n**	**1**			7 1/2" net
Thurs	7/19	net	37	16.2	75.0	48.0	y	m	y	n	0			7 1/2" net
Thurs	7/19	net	38	14.8	75.5	42.0	y	f	y	n	0			7 1/2" net
Thurs	7/19	net	39	23.1	86.0	53.0	y	m	y	n	0			7 1/2" net
Thurs	7/19	net	40	18.3	82.0	46.5	y	f	y	n	0			7 1/2" net
Thurs	7/19	net	41	12.1	70.5	42.5	y	m	y	n	0			7 1/2" net
Thurs	7/19	net	42	13.0	72.0	43.0	y	m	y	n	0			7 1/2" net
Thurs	7/19	net	43	11.4	71.5	39.0	y	m	y	n	0			7 1/2" net
Thurs	7/19	net	44	11.5	69.0	40.0	y	m	y	n	0			7 1/2" net
Thurs	7/19	net	45	5.7	56.0	30.5	y	m	y	n	0			7 1/2" net
Thurs	7/19	net	46	10.5	69.0	39.0	y	m	y	n	0			7 1/2" net
Thurs	7/19	net	47	11.8	71.0	39.0	y	f	y	n	0			5" net
Thurs	7/19	net	48	6.1	56.5	31.0	y	m	y	n	0			5" net
Thurs	7/19	net	49	5.9	57.0	30.5	y	m	y	n	0			5" net
Thurs	7/19	net	50	6.0	56.0	32.0	y	m	y	n	0			5" net
Thurs	7/19	net	51	2.7	42.5	24.0	y	m	y	n	0			5" net
Thurs	7/19	net	52	15.6	78.0	44.5	y	f	y	n	0			4" net
Thurs	7/19	net	53	18.6	85.0	46.5	y	f	y	n	0			4" net
Thurs	7/19	net	54	7.9	60.5	35.0	y	m	y	n	0			4" net
Thurs	7/19	net	55	6.5	58.0	32.5	y	m	y	n	0			4" net

Thurs	7/19	net	56	4.0	47.0	27.0	y	m	y	n	0			4" net
Thurs	7/19	net	57	4.9	54.5	28.5	y	m	y	n	0			4" net
Fri	7/20	net	58	15.0	77.0	44.0	y	m	y	**p**	**3**			7" net
Fri	7/20	net	59	16.0	80.0	45.0	y	f	y	n	0			7" net
Fri	7/20	net	60	23.8	89.5	51.5	y	f	y	n	0			7" net
Fri	7/20	net	61	18.0	80.5	49.0	y	m	y	n	0			7" net
Fri	7/20	net	62	14.1	76.0	41.0	y	m	y	n	0			7" net
Fri	7/20	net	63	14.6	78.0	43.0	y	f	y	n	0			7" net
Fri	7/20	net	64	11.4	70.0	40.0	y	m	y	n	0			7" net
Fri	7/20	net	65	11.2	73.0	39.5	y	f	y	n	0			7" net
Fri	7/20	net	66	12.1	73.5	39.0	y	f	y	n	0			7" net
Fri	7/20	net	67	13.6	75.0	43.0	y	m	y	n	0			7" net
Fri	7/20	net	68	6.3	59.5	31.5	n	m	y	n	0			7" net
Sun	7/22	net	69	29.5	93.0	58.0	y	f	y	n	0			7" net
Sun	7/22	net	70	29.4	94.0	57.0	y	m	y	n	0			7" net
Sun	7/22	net	71	12.7	73.5	41.5	y	m	y	n	0			7" net
Sun	7/22	net	72	13.1	75.0	41.5	y	m	y	n	0			7" net
Sun	7/22	net	73	13.9	78.0	42.5	y	f	y	n	0			7" net
Sun	7/22	net	74	10.4	68.0	39.5	y	m	y	n	0			7" net
Sun	7/22	net	75	6.6	59.0	34.0	y	m	y	n	0			5" net
Sun	7/22	net	76	6.5	59.0	33.5	y	m	y	n	0			5" net
Sun	7/22	net	77	5.8	56.0	32.0	y	m	y	n	0			5" net
Sun	7/22	net	78	4.5	53.0	28.0	y	m	y	n	0			5" net
Sun	7/22	net	79	5.1	53.0	30.5	y	m	y	n	0			5" net
Sun	7/22	net	80	5.4	55.0	31.0	y	m	y	n	0			5" net
Sat	7/28	net	81	3.5	49.0	27.0	y	m	y	**n**	**1**			4" mesh net
Sat	7/28	net	82	16.4	78.0	47.0	y	m	y	n	0			7" mesh net
Sat	7/28	net	83	17.1	82.5	47.0	y	f	y	n	0			7" mesh net
Sat	7/28	net	84	12.4	76.0	40.5	y	m	y	n	0			7" mesh net
Sat	7/28	net	85	12.2	73.5	42.0	y	m	y	n	0			7" mesh net
Sun	7/29	net	86	22.0	87.5	51.5	y	f	y	n	0			7.5" mesh net
Sun	7/29	net	87	17.6	84.5	47.5	y	f	y	n	0			7.5" mesh net

Sun	7/29	net	88	23.2	87.0	53.5	y	m	y	n	0			7.5" mesh net

2013 Rapids Student Data Collection Project - Main Raw Wheel Data Sheet

Previous years student data reports and info available at www.RapidsResearch.com (Student Project Data page)

(AK SSF + AYK SSI Funded - Tanana Tribal Council, R&E Rapids Fishwheel Project + Rapids Research Supported)

Different colors are separate days

											ICHTHYOPHONUS				
									ADF&G		3 spots or more = pos.				AYK SSI
Day	Date	Fisher	Fish	Weight	Length	Girth	Adipose	Sex	Fin Clip		Heart	# spots	Flesh		Culture
			#	(tenths)	(.5 cm)	(.5 cm)	y / n	m / f	y / n		(p - Pos),(n - Neg),(nc - No Check)				AYK + Vial # + R / P
															Thiamine Samples
Sat	6/29	wheel	1	13.1	73.5	42	Y	F	Y		N	0	NC		
Sun	6/30	wheel	2	13.9	76	44	Y	M	Y		N	0	NC		
Sun	6/30	wheel	3	14.8	76	44.5	Y	M	Y		N	0	NC		
Sun	6/30	wheel	4	12.0	73.5	41.5	Y	M	Y		N	0	NC		
Sun	6/30	wheel	5	16.0	80.0	46.5	Y	M	Y		N	0	NC		
Sun	6/30	wheel	6	11.8	75.0	42.0	Y	M	Y		N	0	NC		
Sun	6/30	wheel	7	23.9	89.5	54.0	Y	F	Y		N	0	NC		
Sun	6/30	wheel	8	14.3	77.5	43.5	Y	F	Y		N	0	NC		
Sun	6/30	wheel	9	16.9	82.5	46.5	Y	F	Y		N	0	NC		
Tues	7/2	wheel	10	24.8	91	54.5	Y	F	Y		N	0	NC		
Wed	7/3	wheel	11	16.0	80.5	46.0	Y	F	Y		N	0	NC		
Wed	7/3	wheel	12	18.8	81.0	48.5	Y	F	Y		N	0	NC		
Wed	7/3	wheel	13	13.3	76.0	43.5	Y	M	Y		N	0	NC		
Wed	7/3	wheel	14	17.5	83.0	47.0	Y	F	Y		N	0	NC		
Wed	7/3	wheel	15	21.2	86.0	51.0	Y	F	Y		N	0	NC		
Wed	7/3	wheel	16	16.8	78.5	47.5	Y	M	Y		N	0	NC		
Wed	7/3	wheel	17	19.6	86.5	49.0	Y	F	Y		N	0	NC		
Wed	7/3	wheel	18	10.9	73.0	39.0	Y	M	Y		N	0	NC		
Wed	7/3	wheel	19	16.6	81.5	45.5	Y	F	Y		N	0	NC		
Wed	7/3	wheel	20	9.9	69.5	39.0	Y	M	Y		N	0	NC		
Wed	7/3	wheel	21	16.2	81.0	45.5	Y	M	Y		N	0	NC		
Wed	7/3	wheel	22	11.2	71.5	41.0	Y	M	Y		N	0	NC		
Wed	7/3	wheel	23	16.8	83.5	44.5	Y	F	Y		N	0	NC		

Wed	7/3	wheel	24	16.6	80.0	45.5	Y	M	Y		N	0	NC		
Wed	7/3	wheel	25	10.5	71.5	38.5	Y	M	Y		N	0	NC		
Wed	7/3	wheel	26	10.7	71.0	40.5	Y	M	Y		N	0	NC		
Wed	7/3	wheel	27	14.2	75.0	45.5	Y	M	Y		N	0	NC		
Wed	7/3	wheel	28	13.6	75.0	44.0	Y	M	Y		N	0	NC		
Wed	7/3	wheel	29	12.4	74.5	41.5	Y	M	Y		N	0	NC		
Thur	7/4	wheel	30	21.7	93.0	57.5	Y	M	Y		N	0	NC		
Thur	7/4	wheel	31	17.0	85.0	45.0	Y	M	Y		N	0	NC		
Thur	7/4	wheel	32	16.1	83.0	45.5	Y	F	Y		N	0	NC		
Thur	7/4	wheel	33	19.4	85.0	49.0	Y	F	Y		N	0	NC		
Thur	7/4	wheel	34	21.5	88.0	51.0	Y	F	Y		N	0	NC		
Thur	7/4	wheel	35	32.5	100.0	60.0	Y	M	Y		**P**	**7**	NC		
Thur	7/4	wheel	36	20.3	87.0	49.0	Y	F	Y		N	0	NC		
Thur	7/4	wheel	37	20.4	85.5	50.0	Y	F	Y		N	0	NC		
Thur	7/4	wheel	38	17.2	84.0	47.0	Y	F	Y		N	0	NC		
Thur	7/4	wheel	39	19.8	87.5	49.0	Y	F	Y		N	0	NC		
Thur	7/4	wheel	40	15.2	81.0	43.5	Y	M	Y		N	0	NC		
Thur	7/4	wheel	41	12.0	74.0	41.0	Y	M	Y		N	0	NC		
Thur	7/4	wheel	42	10.8	71.5	39.5	Y	M	Y		**N**	**2**	NC		
Thur	7/4	wheel	43	17.3	78.5	47.0	Y	F	Y		N	0	NC		AYK#1
Thur	7/4	wheel	44	20.8	86.0	51.0	Y	F	Y		N	0	NC		AYK#2
Thur	7/4	wheel	45	9.3	66.5	36.5	Y	M	Y		N	0	NC		
Thur	7/4	wheel	46	36.9	100.5	62.5	Y	M	Y		N	0	NC		
Thur	7/4	wheel	47	12.5	72.5	42.0	Y	M	Y		N	0	NC		
Thur	7/4	wheel	48	14.9	77.0	44.0	Y	F	Y		N	0	NC		AYK#3
Thur	7/4	wheel	49	8.1	66.5	34.5	Y	M	Y		**P**	**3**	NC		
Thur	7/4	wheel	50	17.4	81.0	45.0	Y	M	Y		N	0	NC		
Thur	7/4	wheel	51	12.2	71.5	41.5	Y	M	Y		N	0	NC		
Thur	7/4	wheel	52	3.8	50.0	27.0	Y	M	Y		N	0	NC		
Thur	7/4	wheel	53	13.1	73.0	42.5	Y	M	Y		**N**	**1**	NC		
Thur	7/4	wheel	54	22.6	87.0	51.5	Y	F	Y		N	0	NC		AYK#4
Fri	7/5	wheel	55	16.3	81.5	44.0	Y	M	Y		N	0	NC		
Fri	7/5	wheel	56	13.5	74.0	42.5	Y	M	Y		N	0	NC		
Fri	7/5	wheel	57	22.9	91.1	51.0	Y	F	Y		N	0	NC		AYK#5

Fri	7/5	wheel	58	8.5	67.5	34.5	Y	M	Y		N	0	NC	
Fri	7/5	wheel	59	20.4	87.0	48.5	Y	F	Y		N	0	NC	AYK#6
Fri	7/5	wheel	60	9.5	67.5	37.0	Y	M	Y		N	0	NC	
Fri	7/5	wheel	61	6.8	62.0	33.0	Y	M	Y		N	0	NC	
Fri	7/5	wheel	62	3.5	49.0	27.0	Y	M	Y		N	0	NC	
Fri	7/5	wheel	63	15.3	79.0	44.0	Y	F	Y		N	0	NC	AYK#7
Fri	7/5	wheel	64	12.2	72.0	41.0	Y	M	Y		N	0	NC	
Fri	7/5	wheel	65	16.2	84.0	43.5	Y	F	Y		N	0	NC	AYK#8
Fri	7/5	wheel	66	30.0	90.0	53.0	Y	F	Y		N	0	NC	AYK#9
Fri	7/5	wheel	67	12.3	72.0	41.0	Y	M	Y		N	0	NC	
Fri	7/5	wheel	68	15.1	78.5	44.0	Y	M	Y		N	0	NC	
Fri	7/5	wheel	69	17.1	83.5	44.5	Y	F	Y		N	0	NC	AYK#10
Fri	7/5	wheel	70	13.9	78.0	43.0	Y	F	Y		N	0	NC	AYK#11
Fri	7/5	wheel	71	16.6	77.5	46.5	Y	M	Y		N	0	NC	
Fri	7/5	wheel	72	20.6	86.5	49.0	Y	F	Y		N	0	NC	AYK#12
Fri	7/5	wheel	73	9.9	67.5	38.0	Y	M	Y		N	0	NC	
Fri	7/5	wheel	74	16.9	81.5	46.0	Y	M	Y		N	0	NC	
Mon	7/8	wheel	75	16.9										
Mon	7/8	wheel	76	11.9										
Mon	7/8	wheel	77	4.8										
Mon	7/8	wheel	78	12.7										
Mon	7/8	wheel	79	18.4										
Mon	7/8	wheel	80	4.9										
Mon	7/8	wheel	81	11.3										
Mon	7/8	wheel	82	21.8										
Mon	7/8	wheel	83	5.7										
Mon	7/8	wheel	84	7.7										
Mon	7/8	wheel	85	13.9										
Mon	7/8	wheel	86	13.5										
Mon	7/8	wheel	87	8.5										
Mon	7/8	wheel	88	20.6										
Mon	7/8	wheel	89	14.9										

Data in this portion of worksheet that has only weights was taken during closed periods by fish friendly video fish wheel. King were netted, weighed and immediately released as they came off the basket chutes. Total time of procedure averages about 10 seconds

In 2013 most of the area fishing pressure was from nets. In order to get enough of a sample size for partial data (weights only) from the fishwheels it was neccesary to give up large amounts of net data. It took all the older crew to do the weights due to strength and care concerns in handling live fish at the wheel under a special permit. Crew could not be split up as was normal other years. Net data while important has never been the main focus and was of many different mesh sizes also.

Mon	7/8	wheel	90	15.1										
Mon	7/8	wheel	91	13.4										
Mon	7/8	wheel	92	9.7										
Mon	7/8	wheel	93	18.2										
Mon	7/8	wheel	94	15.7										
Mon	7/8	wheel	95	5.3										
Mon	7/8	wheel	96	12.5										
Mon	7/8	wheel	97	7.0										
Mon	7/8	wheel	98	17.5										
Mon	7/8	wheel	99	7.7										
Mon	7/8	wheel	100	8.5										
Mon	7/8	wheel	101	15.6										
Mon	7/8	wheel	102	19.9										
Mon	7/8	wheel	103	4.5										
Mon	7/8	wheel	104	12.9										
Mon	7/8	wheel	105	11.2										
Mon	7/8	wheel	106	4.4										
Mon	7/8	wheel	107	25.5										
Mon	7/8	wheel	108	6.8										
Mon	7/8	wheel	109	7.0										
Mon	7/8	wheel	110	10.0										
Mon	7/8	wheel	111	12.3										
Mon	7/8	wheel	112	8.8										
Mon	7/8	wheel	113	16.6										
Mon	7/8	wheel	114	8.4										
Mon	7/8	wheel	115	19.5										
Mon	7/8	wheel	116	13.1										
Mon	7/8	wheel	117	13.9										
Mon	7/8	wheel	118	16.4										
Mon	7/8	wheel	119	24.2										
Mon	7/8	wheel	120	14.4										
Mon	7/8	wheel	121	13.0										
Mon	7/8	wheel	122	25.2										
Mon	7/8	wheel	123	4.2										

Mon	7/8	wheel	124	8.1											
Mon	7/8	wheel	125	10.6											
Mon	7/8	wheel	126	12.5											
Mon	7/8	wheel	127	9.2											
Mon	7/8	wheel	128	11.6											
Mon	7/8	wheel	129	7.4											
Mon	7/8	wheel	130	4.4											
Mon	7/8	wheel	131	9.5											
Mon	7/8	wheel	132	3.0											
Mon	7/8	wheel	133	12.0											
Mon	7/8	wheel	134	23.5											
Tues	7/9	wheel	135	3.4											
Tues	7/9	wheel	136	14.0											
Tues	7/9	wheel	137	17.0											
Tues	7/9	wheel	138	8.5											
Tues	7/9	wheel	139	11.8											
Tues	7/9	wheel	140	10.6											
Tues	7/9	wheel	141	1.8											
Tues	7/9	wheel	142	21.7											
Tues	7/9	wheel	143	14.3											
Tues	7/9	wheel	144	8.2											
Tues	7/9	wheel	145	4.5											
Tues	7/9	wheel	146	10.1											
Tues	7/9	wheel	147	23.8											
Tues	7/9	wheel	148	6.2											
Tues	7/9	wheel	149	13.8											
Tues	7/9	wheel	150	11.9											
Tues	7/9	wheel	151	6.2											
Tues	7/9	wheel	152	11.1											
Tues	7/9	wheel	153	22.7											
Tues	7/9	wheel	154	14.5											
Tues	7/9	wheel	155	6.1											
Tues	7/9	wheel	156	7.0											
Tues	7/9	wheel	157	4.2											

Tues	7/9	wheel	158	17.8											
Tues	7/9	wheel	159	16.2											
Tues	7/9	wheel	160	16.5											
Tues	7/9	wheel	161	16.7											
Tues	7/9	wheel	162	13.4											
Tues	7/9	wheel	163	7.2											
Tues	7/9	wheel	164	15.3											
Tues	7/9	wheel	165	18.3											
Tues	7/9	wheel	166	11.8											
Tues	7/9	wheel	167	12.7											
Tues	7/9	wheel	168	16.1											
Tues	7/9	wheel	169	15.6											
Tues	7/9	wheel	170	23.5											
Tues	7/9	wheel	171	6.9											
Tues	7/9	wheel	172	11.1											
Tues	7/9	wheel	173	11.9											
Tues	7/9	wheel	174	10.2											
Tues	7/9	wheel	175	12.6											
Wed	7/10	wheel	176	10.3											
Wed	7/10	wheel	177	8.6											
Wed	7/10	wheel	178	12.8											
Wed	7/10	wheel	179	16.8											
Wed	7/10	wheel	180	5.1											
Wed	7/10	wheel	181	10											
Wed	7/10	wheel	182	9.7											
Wed	7/10	wheel	183	16.2											
Wed	7/10	wheel	184	12.3											
Wed	7/10	wheel	185	11.4											
Wed	7/10	wheel	186	5.7											
Wed	7/10	wheel	187	7.3											
Wed	7/10	wheel	188	4.6											
Wed	7/10	wheel	189	16.4											
Wed	7/10	wheel	190	22.2											
Wed	7/10	wheel	191	7											

Wed	7/10	wheel	192	12										
Wed	7/10	wheel	193	21.2										
Wed	7/10	wheel	194	4.9										
Wed	7/10	wheel	195	7.3										
Wed	7/10	wheel	196	8.3										
Wed	7/10	wheel	197	7.5										
Wed	7/10	wheel	198	4.2										
Wed	7/10	wheel	199	8										
Wed	7/10	wheel	200	17.8										
Wed	7/10	wheel	201	10.2										
Wed	7/10	wheel	202	10.1										
Wed	7/10	wheel	203	9.2										
Wed	7/10	wheel	204	9.2										
Wed	7/10	wheel	205	13.1										
Thur	7/11	wheel	206	3.2										
Thur	7/11	wheel	207	15.7										
Thur	7/11	wheel	208	13.2										
Thur	7/11	wheel	209	11.3										
Thur	7/11	wheel	210	8.4										
Thur	7/11	wheel	211	14.5										
Thur	7/11	wheel	212	22										
Thur	7/11	wheel	213	19.5										
Thur	7/11	wheel	214	2.4										
Thur	7/11	wheel	215	17.2										
Thur	7/11	wheel	216	4.5										
Thur	7/11	wheel	217	8.4										
Thur	7/11	wheel	218	11.5										
Thur	7/11	wheel	219	4.5										
Thur	7/11	wheel	220	2.9										
Thur	7/11	wheel	221	5										
Thur	7/11	wheel	222	10.8										
Thur	7/11	wheel	223	11.1										
Thur	7/11	wheel	224	3.4										
Thur	7/11	wheel	225	33.5										

Thur	7/11	wheel	226	15.2										
Thur	7/11	wheel	227	13.5										
Thur	7/11	wheel	228	9.3										
Thur	7/11	wheel	229	11.4										
Thur	7/11	wheel	230	6.9										
Thur	7/11	wheel	231	5.7										
Thur	7/11	wheel	232	3										
Thur	7/11	wheel	233	23										
Thur	7/11	wheel	234	5.9										
Fri	7/12	wheel	235	4.2										
Fri	7/12	wheel	236	10.7										
Fri	7/12	wheel	237	6										
Fri	7/12	wheel	238	5.6										
Fri	7/12	wheel	239	3										
Fri	7/12	wheel	240	12.5										
Fri	7/12	wheel	241	28.5										
Fri	7/12	wheel	242	9.5										
Fri	7/12	wheel	243	13.9										
Fri	7/12	wheel	244	13										
Fri	7/12	wheel	245	6.7										
Fri	7/12	wheel	246	10.3										
Fri	7/12	wheel	247	7										
Sun	7/14	wheel	248	23.7										
Sun	7/14	wheel	249	3.5										
Sun	7/14	wheel	250	9.9										
Sun	7/14	wheel	251	15.0										
Sun	7/14	wheel	252	17.1										
Sun	7/14	wheel	253	15.0										
Sun	7/14	wheel	254	13.3										
Sun	7/14	wheel	255	14.1										
Sun	7/14	wheel	256	12.2										
Sun	7/14	wheel	257	30.6										
Sun	7/14	wheel	258	5.2										
Sun	7/14	wheel	259	14.4										

Sun	7/14	wheel	260	9.8											
Sun	7/14	wheel	261	5.5											
Sun	7/14	wheel	262	12.6											
Sun	7/14	wheel	263	3.8											
Sun	7/14	wheel	264	7.3											
Sun	7/14	wheel	265	10.6											
Sun	7/14	wheel	266	10.5											
Sun	7/14	wheel	267	14.8											
Sun	7/14	wheel	268	17.3											
Sun	7/14	wheel	269	19.0											
Sun	7/14	wheel	270	4.7											
Sun	7/14	wheel	271	9.9											
Sun	7/14	wheel	272	10.2											
Sun	7/14	wheel	273	13.1											
Sun	7/14	wheel	274	5.5											
Sun	7/14	wheel	275	26.5											
Sun	7/14	ADFG	276	21.1	86.0	50.0	Y	F	Y		N	0	NC		AYK#13
Sun	7/14	ADFG	277	14.3	78.5	42.0	Y	M	Y		N	0	NC		
Tues	7/16	wheel	278	8.0											
Tues	7/16	wheel	279	10.8											
Tues	7/16	wheel	280	11.9											
Tues	7/16	wheel	281	9.7											
Tues	7/16	wheel	282	17.0											
Tues	7/16	wheel	283	7.0											
Tues	7/16	wheel	284	10.7											
Tues	7/16	wheel	285	21.1											
Tues	7/16	wheel	286	18.0											
Tues	7/16	wheel	287	12.8											
Tues	7/16	wheel	288	17.5											
Tues	7/16	wheel	289	7.8											
Tues	7/16	wheel	290	14.9											
Tues	7/16	wheel	291	22.0											
Tues	7/16	wheel	292	12.5											
Tues	7/16	wheel	293	7.3											

Tues	7/16	wheel	294	14.0											
Tues	7/16	wheel	295	5.2											
Tues	7/16	wheel	296	7.7											
Tues	7/16	wheel	297	16.5											
Tues	7/16	wheel	298	23.0											
Tues	7/16	wheel	299	12.0											
Tues	7/16	wheel	300	12.3											
Tues	7/16	wheel	301	19.5											
Tues	7/16	wheel	302	8.0											
Weds	7/17	wheel	303	14.6											
Weds	7/17	wheel	304	18.9											
Weds	7/17	wheel	305	20.3											
Weds	7/17	wheel	306	22.8											
Weds	7/17	wheel	307	17.4											
Weds	7/17	wheel	308	15.7											
Weds	7/17	wheel	309	15.9											
Weds	7/17	wheel	310	17.0											
Weds	7/17	wheel	311	13.5											
Weds	7/17	wheel	312	17.7											
Weds	7/17	wheel	313	11.5											
Weds	7/17	wheel	314	15.5											
Weds	7/17	wheel	315	6.2											
Weds	7/17	wheel	316	18.4											
Weds	7/17	wheel	317	5.3											
Weds	7/17	wheel	318	5.7											
Weds	7/17	wheel	319	3.3											
Weds	7/17	wheel	320	18.0											
Weds	7/17	wheel	321	19.1											
Weds	7/17	wheel	322	8.3											
Weds	7/17	wheel	323	23.4											
Weds	7/17	wheel	324	15.0											
Weds	7/17	wheel	325	15.4											
Thurs	7/18	wheel	326	22.1											
Thurs	7/18	wheel	327	23.0											

Thurs	7/18	wheel	328	21.5										
Thurs	7/18	wheel	329	15.2										
Thurs	7/18	wheel	330	21.2										
Thurs	7/18	wheel	331	19.2										
Thurs	7/18	wheel	332	12.2										
Thurs	7/18	wheel	333	5.0										
Thurs	7/18	wheel	334	14.0										
Thurs	7/18	wheel	335	12.7										
Thurs	7/18	wheel	336	5.7										
Thurs	7/18	wheel	337	20.7										
Thurs	7/18	wheel	338	15.5										
Thurs	7/18	wheel	339	13.8										
Thurs	7/18	wheel	340	13.5										
Thurs	7/18	wheel	341	8.9										
Thurs	7/18	wheel	342	17.3										
Thurs	7/18	wheel	343	17.0										
Thurs	7/18	wheel	344	8.4										
Thurs	7/18	wheel	345	6.5										
Thurs	7/18	wheel	346	16.6										
Thurs	7/18	wheel	347	11.9										
Thurs	7/18	wheel	348	7.1										
Thurs	7/18	wheel	349	15.2										
Thurs	7/18	wheel	350	15.8										
Sat	7/20	wheel	351	17.0										
Sat	7/20	wheel	352	14.1										
Sat	7/20	wheel	353	10.0										
Sat	7/20	wheel	354	13.5										
Sat	7/20	wheel	355	5.4										
Sat	7/20	wheel	356	26.8										
Sat	7/20	wheel	357	20.3										
Sat	7/20	wheel	358	16.8										
Sat	7/20	wheel	359	16.7										
Sat	7/20	wheel	360	17.4										
Sat	7/20	wheel	361	14.9										

Sat	7/20	wheel	362	14.6										
Sat	7/20	wheel	363	14.4										
Sat	7/20	wheel	364	14.6										
Sat	7/20	wheel	365	16.3										
Sat	7/20	wheel	366	11.6										
Sat	7/20	wheel	367	10.4										
Sat	7/20	wheel	368	22.8										
Sat	7/20	wheel	369	4.8										
Sat	7/20	wheel	370	14.6										
Sat	7/20	wheel	371	10.1										
Sat	7/20	wheel	372	19.0										
Sat	7/20	wheel	373	17.4										
Sat	7/20	wheel	374	6.4										
Sat	7/20	wheel	375	21.4										
Sun	7/21	wheel	376	12.8										
Sun	7/21	wheel	377	27.6										
Sun	7/21	wheel	378	23.0										
Sun	7/21	wheel	379	13.0										
Sun	7/21	wheel	380	12.2										
Sun	7/21	wheel	381	17.2										
Sun	7/21	wheel	382	20.1										
Sun	7/21	wheel	383	10.0										
Sun	7/21	wheel	384	4.3										
Sun	7/21	wheel	385	20.8										
Sun	7/21	wheel	386	7.8										
Sun	7/21	wheel	387	21.2										
Sun	7/21	wheel	388	24										
Sun	7/21	wheel	389	8.9										
Sun	7/21	wheel	390	19.5										
Weds	7/24	wheel	391	17.0	81.5	45.5	Y	F	Y		N	0	NC		AYK#14
Weds	7/24	wheel	392	14.1	77.0	43.5	Y	M	Y		N	0	NC		AYK#15
Weds	7/24	wheel	393	17.0	83.0	46.0	Y	M	Y		N	0	NC		AYK#16
Weds	7/24	wheel	394	19.5	88.5	38.0	Y	M	Y		N	0	NC		AYK#17
Weds	7/24	wheel	395	12.9	76.0	42.0	Y	F	Y		N	0	NC		AYK#18

Weds	7/24	wheel	396	14.9	75.5	47.0	Y	M	Y		N	0	NC		AYK#19
Weds	7/24	wheel	397	11.1	71.0	37.5	Y	M	Y		N	0	NC		AYK#20
Weds	7/24	wheel	398	19.1	84.0	50.0	Y	F	Y		N	0	NC		AYK#21
Weds	7/24	wheel	399	3.7	51.0	27.0	Y	M	Y		N	0	NC		AYK#22
Weds	7/24	wheel	400	6.6	60.5	34.0	Y	M	Y		N	0	NC		AYK#23
Weds	7/24	wheel	401	2.4	43.0	24.5	Y	M	Y		N	0	NC		AYK#24
Weds	7/24	wheel	402	6.7	62.0	32.0	Y	M	Y		N	0	NC		AYK#25
Weds	7/24	wheel	403	4.7	53.0	31.0	Y	M	Y		N	0	NC		AYK#26
Thurs	7/25	wheel	404	20.3	83.0	50.0	Y	M	Y		N	0	NC		AYK#27
Thurs	7/25	wheel	405	10.9	70.0	39.5	Y	M	Y		N	0	NC		AYK#28
Thurs	7/25	wheel	406	17.2	80.5	46.5	Y	M	Y		N	0	NC		AYK#29
Thurs	7/25	wheel	407	21.8	87.5	52.0	Y	F	Y		N	0	NC		AYK#30
Thurs	7/25	wheel	408	19.5	86.5	48.0	Y	F	Y		N	0	NC		AYK#31
Thurs	7/25	wheel	409	13.0	74.5	42.0	Y	M	Y		**P**	**10**	NC		AYK#32
Thurs	7/25	wheel	410	22.4	84.0	52.0	Y	M	N		**P**	**6**	NC		AYK#34
Thurs	7/25	wheel	411	17.1	81.5	48.0	Y	M	N		**P**	**8**	NC		AYK#35
Thurs	7/25	wheel	412	13.2	74.5	42.0	Y	M	N		**N**	**1**	NC		AYK#36
Thurs	7/25	wheel	413	21.2	85.0	52.0	Y	F	N		N	0	NC		AYK#37
Thurs	7/25	wheel	414	22.0	88.5	50.5	Y	F	N		N	0	NC		AYK#38
Thurs	7/25	wheel	415	21.0	86.0	50.0	Y	F	N		N	0	NC		AYK#39
Thurs	7/25	wheel	416	19.5	84.0	48.5	Y	F	N		N	0	NC		AYK#40
Thurs	7/25	wheel	417	24.8	91.5	54.0	Y	F	N		N	0	NC		AYK#41
Thurs	7/25	wheel	418	27.4	95.0	55.5	Y	F	N		**P**	**25**	NC		
Thurs	7/25	wheel	419	10.1	73.5	36.5	Y	F	N		N	0	NC		
Thurs	7/25	wheel	420	8.5	61.5	36.5	Y	M	N		N	0	NC		
Thurs	7/25	wheel	421	17.5	81.0	49.0	Y	M	N		N	0	NC		
Thurs	7/25	wheel	422	19.0	87.0	46.5	Y	F	N		N	0	NC		
Thurs	7/25	wheel	423	4.0	51.0	29.0	Y	M	N		N	0	NC		
Thurs	7/25	wheel	424	11.0	75.0	39.0	Y	F	N		N	0	NC		
Thurs	7/25	wheel	425	9.8	68.5	39.0	Y	M	N		**N**	**2**	NC		
Thurs	7/25	wheel	426	7.0	63.0	34.0	Y	M	N		N	0	NC		
Thurs	7/25	wheel	427	11.0	73.5	40.5	Y	M	N		N	0	NC		
Thurs	7/25	wheel	428	7.6	66.0	35.0	Y	M	N		N	0	NC		
Thurs	7/25	wheel	429	4.5	54.0	29.5	Y	M	N		N	0	NC		

Below is king data from large mesh gillnets which is being used to compare to fish wheel data. The purpose is to see if any difference exists in Ichthyophonus disease rate between king caught in the two gear types. We are continuing to look into parts of the ADF&G theory that Rapids fishwheels catch mostly the small, male, less vigorous, sick, handicapped, large fish with shore preference, and diseased king compared to the king population in the river, nets in general and driftnets. This issue has been constantly brought up at numerous meetings including State Board of Fish and reported on in an ADF&G Ichthyophonus report and data needs to be collected on this.

Important notes:

Visible ICH disease can vary greatly by date and even from the front of a pulse to the backside. At minimum the same dates should be used in comparing nets/wheels (as best as can be done). Other considerations can also be taken and will, as we look over this net data set which is admittedly small each year.

As visible ICH seems to be found in larger percents in larger fish one might also compare same size king (50 - 60 cm for instance) from both gear types.

In 2013 most of the area fishing pressure was from nets. In order to get enough of a sample size for partial data (weights only) from the fishwheels it was neccesary to give up large amounts of net data. It took all the older crew to do the weights due to strength and care concerns in handling live fish at the wheel under a special permit. Crew could not be split up as was normal other years. Net data while important has never been the main focus and was of different mesh sizes also.

2013 Rapids Student Data Collection Project - Main Raw Net Data Sheet

									ADF&G	ICHTHYOPHONUS			
Data preliminary till gone overpost season										3 spots or more = pos.			
Day	**Date**	**Fisher**	**Fish**	**Weight**	**Length**	**Girth**	**Adipose**	**Sex**	**Fin Clip**	**Heart**	**# spots**	**Flesh**	**Net Size**
			#	(tenths)	(.5 cm)	(.5 cm)	y / n	m / f	y / n	(p - Pos),(n - Neg),(nc - No Check)			

Sun	6/30	net	1	10.6	67.0	40.0	Y	M	Y		N	0	NC		5 1/2" NET
Sun	6/30	net	2	27.7	95.5	55.0	Y	F	Y		N	0	NC		5 1/2" NET
Sun	6/30	net	3	14.3	77.5	41.0	Y	M	Y		N	0	NC		5 1/2" NET
Sun	6/30	net	4	24.7	91.0	63.0	Y	M	Y		N	0	NC		5 1/2" NET
Sun	6/30	net	5	14.2	74.5	44.0	Y	M	Y		N	0	NC		5 1/2" NET
Sun	6/30	net	6	12.9	75.0	43.5	Y	M	Y		N	0	NC		5 1/2" NET
Sun	6/30	net	7	5.8	57.5	34.0	Y	M	Y		N	0	NC		5 1/2" NET
Wed	7/2	net	8	13.2	73.5	43	Y	F	Y		N	0	NC		4" NET
Wed	7/3	net	9	15.3	76.5	47.0	Y	F	Y		N	0	NC		4" NET
Wed	7/3	net	10	13.4	75.0	42.5	Y	M	Y		N	0	NC		6" NET
Wed	7/3	net	11	10.2	68.0	38.0	Y	M	Y		N	0	NC		6" NET
Wed	7/3	net	12	11.8	73.0	42.0	Y	M	Y		N	0	NC		6" NET
Wed	7/3	net	13	28.2	95.0	56.0	Y	M	Y		N	0	NC		6" NET
Wed	7/3	net	14	7.9	63.0	36.5	Y	M	Y		N	0	NC		6" NET
Wed	7/3	net	15	10.7	72.0	38.5	Y	M	Y		N	0	NC		6" NET
Wed	7/3	net	16	18.6	84.0	38.0	Y	F	Y		N	0	NC		6" NET
Wed	7/3	net	17	16.9	80.5	46.0	Y	F	Y		N	0	NC		6" NET
Mon	7/15	net	18	31.0	96.5	57.5	Y	F	Y		N	0	NC		6" NET
Mon	7/15	net	19	14.9	81.0	42.0	Y	F	Y		N	0	NC		6" NET
Mon	7/15	net	20	12.4	73.0	42.5	Y	F	Y		N	0	NC		6" NET
Mon	7/15	net	21	10.9	70.0	41.5	Y	M	Y		N	0	NC		6" NET
Mon	7/15	net	22	8.4	65.0	38.0	**N**	M	Y		N	0	NC		6" NET
Mon	7/15	net	23	19.1	82.0	47.0	Y	F	Y		N	0	NC		6" NET
Mon	7/15	net	24	12.0	72.0	40.0	Y	M	Y		N	0	NC		6" NET
Mon	7/15	net	25	17.6	77.0	49.5	Y	F	Y		N	0	NC		6" NET
Mon	7/15	net	26	25.6	89.0	54.0	Y	M	Y		N	0	NC		6" NET