Nechako White Sturgeon Database Summary 2007







June 2008

Prepared for:

Ministry of Environment Environmental Stewardship Division, Omineca Region 4051 18th Ave. Prince George, BC V2N 1B3

Prepared by:

Greg Sykes, M.Sc., R.P. Bio. Biologist Triton Environmental Consultants Ltd.



#201 –1157 Fifth Ave. Prince George, BC. Canada V2L 3L1 Phone (250) 562-9155 Fax (250) 562-9135 www.triton-env.com

Table of Contents

Introduction2
Methods
Fish Summaries3
Mapping 4
Results5
Sexual Maturity5
Year of Birth
Discussion8
Movement8
Male vs. Female
Sexual Maturity11
Key Habitats14
Nechako River14
Stuart River
Fraser River
Conceptual Model
Data Gaps
Recommendations
References
Figure 1. Sexual maturity histogram for fish captured in the Nechako and Stuart systems (n = 399)
Figure 3. Histogram showing the percent of total telemetry records identified at 10 km intervals for the Nechako River
of habitats in the vicinity of km 70 over several years
Appendices
Appendix 1. Table of sexual maturity codes for Nechako white sturgeon Appendix 2. Table of fish with only a single capture record and no telemetry Appendix 3. Capture and telemetry summaries Appendix 4. Maps

Introduction

The Nechako population of white sturgeon (Acipenser transmontanus) has been ranked as a critically imperilled species in British Columbia (BC Conservation Data Centre 2006), as well as a species listed as endangered on Schedule 1 of the Species at Risk Act (SARA). Since 1994, data on white sturgeon within the upper Fraser and Nechako Rivers have been collected and entered into an Access database maintained by the Ministry of Environment (MoE). The database lists all records of sturgeon captures where physical data such as length, weight, sex, age and tagging information was collected, as well as telemetry data where individual fish movements have been recorded. Detailed information on hundreds of adult fish is included, many of which have been captured and tracked multiple times since 1994. This information is extremely valuable from a conservation standpoint since it provides a means of determining the timing of critical life history periods (ex. spawning), and identifying important rearing, spawning and overwintering habitats within the Nechako and Stuart Rivers. In addition, the comparison of data collected over the period of record provides a means of determining the rate of individual fish development and sexual maturity as well as examining how behaviour patterns change over time. This goal of the present study was to provide a summary of the life history information and movement data collected for each of the fish captured within the Nechako and Stuart Rivers. Interpretation of the movements of individual fish was included as well as any identified trends or potential critical habitats. This report summarizes the results of the database review and provides a discussion of how fish capture and telemetry locations change throughout the year.

Methods

The database used for the completion of this study was dated March 6th, 2008 and includes all data collected through the summer of 2007. Data collected by the Carrier Sekani Tribal Council (CSTC) and Lheidli T'enneh First Nation in the fall of 2007 had not been entered into the database, however, summaries for individual fish were updated

to include this data. Queries of the database were developed and used to extract the data for this study based on the following criteria:

- 1. Only fish with Passive Integrated Transponder (PIT) tags were included as this was the only means of reliably identifying an individual fish.
- 2. Only data from fish captured in the Nechako or Stuart Rivers (including Stuart and Trembleur Lakes) were included. Data for fish captured in the Fraser River were not included with the exception of those fish originally captured in the Nechako/Stuart with subsequent records from the Fraser River.
- 3. All telemetry data (aerial, boat and ground basestation) for Nechako/Stuart fish (including records from the Fraser River) was included.

Fish Summaries

Data summarized for each fish captured included the following:

- PIT tag number;
- Capture date;
- Capture location (river km);
- Sexual maturity (as determined during examination and based on classifications defined in Conte et al. 1988; see Appendix 1);
- Fork length (cm; measured from tip of snout to fork of tail);
- Total length (cm; measured form tip of snout to tip of tail);
- Age (as determined from ageing structures collected from captured fish); and
- Date of birth (estimated year of birth calculated by subtracting estimated age from year of capture).

In addition, any fish for which radio telemetry data existed had the following data summarized as well:

• Frequency of tag;

- Code of tag;
- Date of telemetry record;
- Location of record (river km);
- Telemetry station (aerial, boat, ground);
- River (Nechako, Stuart, Stuart Lake, or Trembleur Lake).

Graphical summaries of fish captures and telemetry locations over time were developed for those fish with more than two capture or telemetry records. The graphs displayed fish movement patterns and differentiated capture locations, Nechako River telemetry, and Stuart River telemetry over time. Since the bulk of the records are from the Nechako, specific geographical landmarks on the Nechako River were identified including: the Stuart River confluence (km 89.7), km 116 overwintering location, Burrard Bridge (Vanderhoof spawning area, km 136), Braeside (km 162), and the Nautley River confluence (km 192). Data from the Stuart and Fraser Rivers was included and differentiated from Nechako Data by colour.

Lastly, a text summary in bullet form was provided for each fish which listed relevant additional information (e.g. known spawning history, brood stock fish, rated end of radio tag life) and provided interpretation of individual fish movements.

Mapping

A series of overview maps of the Nechako and Stuart Rivers were produced that identify all capture and telemetry locations for which UTM coordinates exist. The data was separated into 4 periods based on life history activity:

- Overwintering November to February
- Early spring rearing/feeding March to April,
- Staging and Spawning May to June, and
- Summer and fall rearing/feeding July to October.

A separate map was developed for each time period in order to show how fish location changes over the year. An additional map was also developed showing all of the sample site locations (gill nets, setlines, angling and trapnet) within the study area including those where no fish were captured.

Results

The query of the database identified a total of 303 fish that met the criteria outlined in the methods section. Of those fish, approximately half (n = 155) had only one capture records and no telemetry data (i.e. had not been radio tagged). Summary data for each of these fish is provided in Appendix 2. Due to the lack of multiple records, graphs and text summaries were not developed for these fish

The remaining 148 fish are those for which there is either data from a single capture along with telemetry data (n = 77), or multiple captures with or without telemetry data (n = 71). Summaries and graphs for each of these fish are provided in Appendix 3.

Sexual Maturity

The majority of fish that were captured were assessed to determine sexual maturity. In the case of those fish with multiple captures, more than one assessment may have been completed. A total of 399 assessments have been completed on fish that met the criteria of this study and a histogram showing the breakdown for each maturity code is provided in Figure 1. A description of each maturity code is provided in Appendix 1.

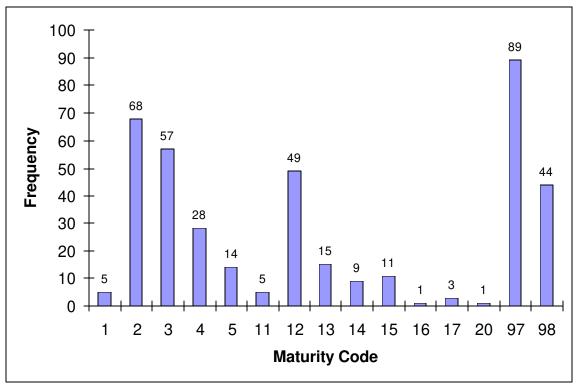


Figure 1. Sexual maturity histogram for fish captured in the Nechako and Stuart systems (n = 399).

The majority of the fish captured were male (codes 1-5; 43%) followed by fish of unknown sex (code 97 adults or code 98 juveniles; 33%). Females (code 11-20) represented the remaining 24% of the assessed fish. The high proportion of unknown sex adult sized fish (code 97) is a result of the physical similarities between the sexes and difficulty in differentiating the males from females when sex organs are not visible. In addition, identification of females is made more difficult by the relative infrequence of sexual maturity (estimated to be every 3-5 years vs. 2 years for males. In the case of both males and females, fish at the maturing stages (code 2 and 12, respectively) have been most commonly encountered. This suggests that these age classes are most common in the population, which is reasonable, especially given that the fish will revert back to an early maturity level following spawning events. As a result, the same fish could be considered to be maturing at multiple times throughout its life. However, there are also several other potential explanations as to why these codes are most commonly encountered that could be biasing the dataset and should be considered. First, it is likely that fish at the maturing stages represent the period where testes and ovaries become

more obvious resulting in easier classification than code 1 or 11. Secondly, fish at these stages may be more likely to be found at those habitats where intensive sampling has been completed (e.g. km 116 and 125). Thirdly, fish at those stages of development may be more susceptible to being captured due to increased feeding activity and the type of sampling gear being employed.

Year of Birth

A summary of the estimated year of birth for those fish included in the study for which aging data was available is provided in Figure 2.

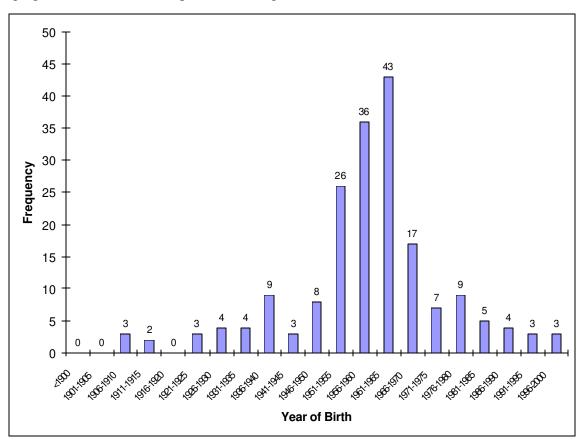


Figure 2. Estimated year of birth histogram for fish captured in the Nechako and Stuart systems for which aging data is available (n = 189).

The oldest fish included in the database is estimated to have been born in 1907 whereas the youngest was estimated to have been born in 1999. The majority of fish that have been captured are estimated to have been born between 1951 and 1965 (55%). These results suggest that fish older than 100 years are likely either not present or very rare in

the study area. Similarly, fish born prior to 1935 and after 1981 have been infrequently encountered suggesting fish at the extremes of the age range are also rare. It should be noted, however, that the results will be biased by the sampling locations and techniques employed as well as the differences in behaviour that might exist between the age groups. For example, fish born between 1951 and 1965 are at an age that would be expected to be reproductively active and as a result will frequent the staging and rearing habitats within the river that have been most intensely sampled (e.g. km 116 and 125). Fish that are either older or younger are less likely to be tagged and therefore less well represented in the database. Therefore, while the results likely do describe the Nechako white sturgeon population to a certain extent, it is possible that more fish at the extremes of the age range do exist than figure 1 depicts. Sampling a wider range of habitats at different times of year may help produce a more accurate representation of the age range of fish in the system.

Discussion

Movement

Maps showing the capture and telemetry locations for all of the study fish at four different times of year are provided in Appendix 4. A histogram showing the percent of telemetry records identified within each 10 km section of the Nechako River (0-200 km) for each of the four periods is provided in Figure 3.

The results show that during each of the 4 periods, the majority of fish have been identified between km 80 and 140. This is partially due to the focus on this area during more recent (i.e. 2004-2007) telemetry programs and the presence of three permanent base stations in that section of the river (Stuart River confluence, km 116, and Burrard bridge). In addition, shed tags are more likely to be found in this area given the increased fish use. Both of these factors can bias the dataset making it seem like certain areas are more heavily used than others, or alternatively that other areas are less heavily used than they really are. Despite these potential biases the section of the river from km 80 to 140 has also been shown to contain critical overwintering and rearing habitat (km 110, 116,

and 125) as well as the only confirmed spawning habitat (km 136-137) in the river. As a result, it reasonable to expect that there will be greater usage of that section of river by sturgeon throughout the year.

Comparison of the results between the four times of year does identify some trends in the data. During the overwintering period (November to February) the majority of the records were located at known overwintering locations at km 116 and 125. Several records also exist for the section from km 130.1 to 137 and these are primarily the result of records from smaller potential overwintering locations in the vicinity of km 132 as well as several shed tags at km 135. Potential overwintering habitats also may exist in the vicinity of km 83-87 as several records from this area have been identified.

In March and April, the pattern is similar to that of November to February; however, a greater proportion of records area located at km 116 and 125. Based on this it appears that over the course of the winter many of the fish that were initially located at other rearing and overwintering locations move to the major overwintering locations, particularly km 116, and remain there through early spring.

In May and June, there is an obvious dispersal of fish away from the overwintering habitats to rearing and spawning locations. This period, along with the July to October period, is also the time when fish are most likely to move outside of the region between km 80 and 140. During the July to October period there is also the greatest proportion of telemetry records were identified between km 80.1 and 90. This is the location of the Stuart River confluence and many of the records at that location in late summer represent fish that have spawned and are returning to Stuart Lake.

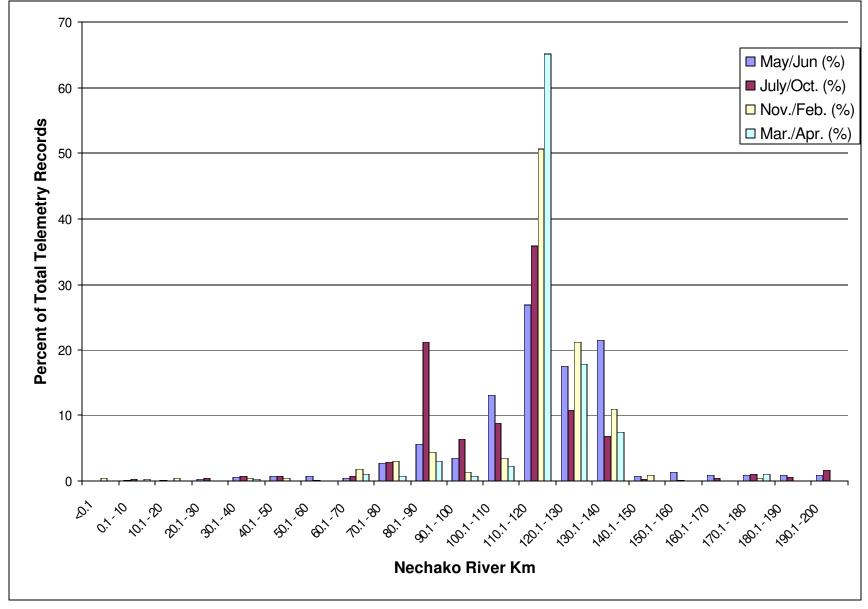


Figure 3. Histogram showing the percent of total telemetry records identified at 10 km intervals for the Nechako River.

Male vs. Female

Both males and females make use of the same key habitats in the river (ex. spawning area at km 136, overwintering at km 125, 116 and 110) and exhibit similar movement patterns between them. Males tend to be more commonly captured, however, it is unclear whether that is due to behavioural differences and susceptibility to capture or a reflection of a disproportionate sex ratio. In the Kootenai River system, it has been observed that males show a tendency to migrate to the spawning area earlier than females by approximately a week and also remain longer following spawning event (Paragamian et al. 2002). This pattern has been observed in the Nechako with males and immature fish tending to move to spawning area earlier and remaining for longer than do females. However, both males and females also display relatively quick migrations to and from the spawning area and the entire spawning event tending to last only a couple of days. A more detailed comparison of male and female behavior may be able to identify behavioural differences between the sexes within the study area, however, the results of this analysis suggest that sexual maturity likely has more of an influence on white sturgeon behaviour than does sex.

Sexual Maturity

For both males and females, sexual maturity does have substantial influence on movement patterns. In general, fish nearing sexual maturity (code 3 or 4 males and code 13 or 14 females) tend to show increased movement in the spring, some even migrating to and from the spawning area for several years in a row. The time it takes for these fish to mature (i.e. become code 5 or 15) can vary. For example, most male fish that are code 4 in the fall show behaviours that suggest they are ripe the following year (e.g. PIT tag 41247C4F74, Figure 4) but there are also examples of fish that take two years to reach maturity (e.g. PIT tag 4124714367). In general, males appear to spawn at two year intervals with a year spent at rearing/feeding habitats in between events. It is uncertain how long the biennial spawning pattern persists since in general the radio tags used by the NWSRI do not last more than 6 years. In the case of the fish in Figure 4, which appears to have spawned in 2002 and 2004, it was assessed as being immature (code 97)

in 2007 suggesting that over the course of 6 years the fish matured from code 4, spawned twice and became immature. Continued tracking and assessment of fish such at this will provide information on whether or not the fish becomes sexually mature again and how long the process takes.

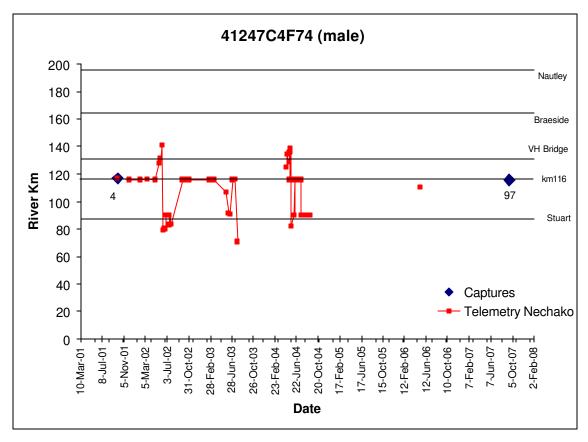


Figure 4. Example of timing of maturity and spawning in a code 4 male between Sept 2001 and Oct 2007.

In the case of females (code 14), the general trend is for fish that do not show spawning behaviours until the second year following assessment. For example, in the case of fish #7F7B033622 (Figure 5), it was assessed as code 14 in Sept of 2005 but did not appear to spawn in 2006. In May of 2007 it was recaptured and assessed as code 15 and spawned that year. Based on these general trends, it is conceivable that the rate of achieving sexual maturity is an area where males and females could differ. Further research to define general patterns around the timing, duration and frequency of sexual maturity for each sex would be necessary to confirm this observation.

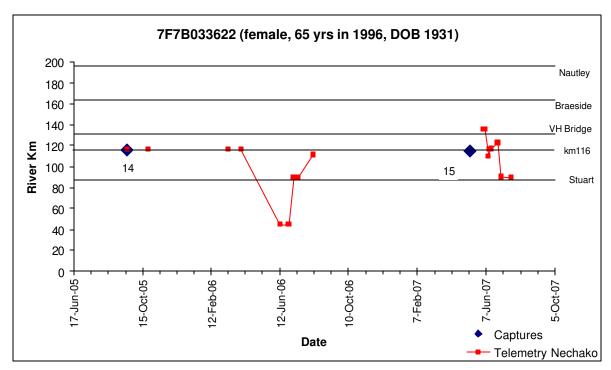


Figure 5. Example of a female fish that matured between Sept 2005 and May 2007.

The records in the database clearly show that once a fish reaches sexual maturity (code 5 males or code 15 females) it will move to the spawning area that spring, remain for a few days and then return to the rearing habitat locations. This pattern is generally reliable and occurs regardless of sex. However, environmental conditions within the river have been shown to influence the timing of spawning and there is the possibility that adverse conditions could delay or prevent spawning. A more detailed discussion of this is contained within the Adult White Sturgeon Monitoring – Nechako River 2007 report (Triton Environmental Consultants Ltd. 2007). There are also several instances in the database where fish that spawned in the spring moved downstream to the Stuart River and migrate into Stuart Lake in late summer (August/September). Due to the fact that white sturgeon do not generally spawn in subsequent years, Stuart Lake could provide rearing, feeding and overwintering habitat for many adults between spawning events. More detailed discussion on movements associated with Stuart Lake is provided in the next section.

Male and female fish that are still maturing (code 1 males; code 11 females) are not as well represented in the database potentially as a result of biases due to sampling location and gear or due to the fact that these maturity stages are hard to identify and could conceivable classed as code 97 (immature). In addition recent tagging programs have tended to focus on fish closer to reproductive maturity. As a result there is limited data available for these fish, particularly in regards to movement patterns. From the data is available, these fish generally show less extensive movement than mature fish but will make short migrations in the spring and summer presumably for rearing and feeding purposes. However, these fish do appear to respond to spawning cues and may show movements during the spawning period that include migrating to areas just outside of the spawning area or migrating to the spawning area after adults have left. The inclusion of these fish in future tagging programs would provide valuable information on immature fish behaviors and habitats.

Key Habitats

Based on the analysis of fish movements included in the database, several key habitats within the Nechako and Stuart systems have been identified. Many of these are already known and have been the focus of intensive tagging and tracking programs in the past. However, there are indications of other habitats that may be important and that could warrant more detailed study to gather a more complete understanding of white sturgeon behavior and habitat use in the Nechako and Stuart systems.

Nechako River

Km 30-45

This section of the Nechako corresponds to the area where the Chilako River and other tributaries enter. Within the database there are a total of 8 fish¹ that have shown direct migrations to this area during June and July (example PIT tag #501F7A3051; Figure 6).

¹ PIT tags: 4124680C7A, 4528347F32, 501F7A3051, 7F7B033622, 7F7B036C09, 7F7B0B2E51, 7F7B0C4A60, 7F7B0C6864

The time spent in this area is generally short with the fish usually returning to upstream rearing habitats by August. Due to the consistent timing of these migrations they are assumed to be associated with feeding and the availability of a particular food source. For example, chinook salmon smolts outmigrating, fish moving into or out of the Chilako River, or fish feeding on an invertebrate hatch in that area. A review of the sampling data shows that that section of river has never been sampled (see Appendix 4). As a result, monitoring of this area along with habitat surveys and sampling during June and July should help explain the observed migrations.

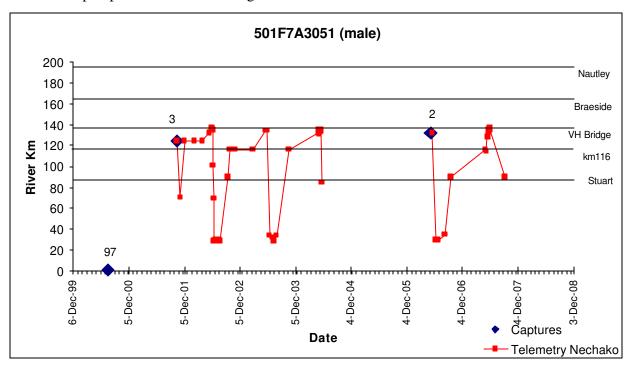


Figure 6. Showing the movement pattern for PIT tag #501F7A3051 showing several migrations to km 30-40 in June and July. These movements are presumably associated with feeding possibly in the Chilako River.

Km 58-74

This section corresponds to Isle Pierre and is an area where fish have been captured in the past. Available telemetry data suggests it may be more likely to be used in the late summer/fall (July to October) and could provide suitable rearing and feeding habitat during that period. PIT tag # 7F7D43767B (Figure 7) is an example of a fish that has been identified in the vicinity of km 70 several times suggesting the availability of summer feeding and/or rearing opportunities in this area. Habitat surveys and sampling

timed to correspond with telemetry data could result in useful data on preferred rearing habitat conditions.

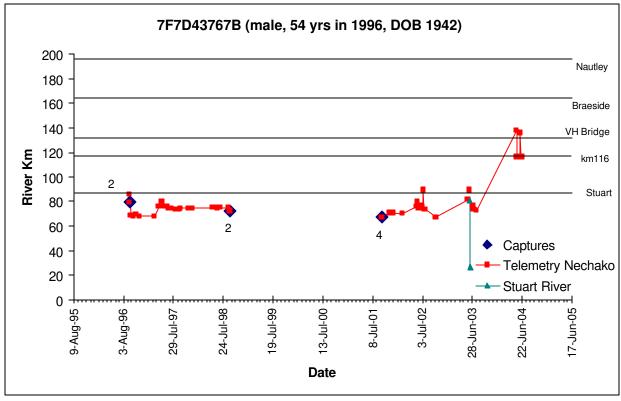


Figure 7. Showing the movement pattern of PIT tag # 7F7D43767B, which has made use of habitats in the vicinity of km 70 over several years.

Km 75-85

Telemetry records suggest that this section of river is used in the late summer and fall potentially as rearing and feeding habitat. The presence of tagged fish in this area during the winter also suggests that potential overwintering habitat might exist, particularly in the vicinity of km 83 and 84. Although sampling has been completed in the area, only a few fish have been captured. Habitat surveys and sampling timed to correspond with telemetry data could result in useful data on preferred rearing habitat conditions and may help identify other important overwintering locations.

Km 89.7 – Stuart Confluence

Due to fish regularly moving in and out of the Stuart River, this location is important for determining the timing of migrations between the Stuart and Nechako systems.

Telemetry data shows that the majority (78%) of the records from the base station at the confluence of the Stuart River were collected between June and August. The remaining records were from September (14%), May (3%), April and October (2%) and November (1%). No records exist for the months of December-February. These results are consistent with the trend of fish being more active in the summer and being stationary through the winter. The continued collection of telemetry data from this location throughout the year will be beneficial to describing the general migration trends of the population.

Km 107

A narrowing of the river at this location results in a short section of riffle morphology downstream of which sturgeon have been identified throughout the spring and summer. The area likely provides rearing and feeding opportunities due to the slightly faster water velocities. Sampling has occurred at this location, however, no fish have been captured. Timing future sampling to correspond to telemetry data may result in more success. In addition, habitat surveys that correspond to the period when fish are present may provide information on habitat preferences.

Km 110 – Keilor's Point

Telemetry and capture records identify this location as being important for overwintering and rearing since fish are typically identified at this location throughout the year. In the spring, fish will migrate from this location to the spawning area (km 136) and it may also be used by fish migrating downstream towards the Stuart following spawning. As a result of the presence of fish all year round, this location must provide good feeding, rearing and overwintering opportunities.

Km 116 and 125

These areas represent the primary rearing and overwintering habitats for sturgeon in the Nechako River. The majority of telemetry and capture records for the system are from these locations and both are used all year round. In the case of km 116, this is the primary known overwintering site within the system. Fish of varying life stages are

found at this location throughout the year, however, the majority do leave the location in the spring and summer for spawning or feeding. By the end of summer and early fall many fish return to the location and remain throughout the winter. In the case of km 125, fewer fish make use of this location throughout the winter than do km 116, presumably due to it being a smaller, shallower hole. However, in the early spring, fish will migrate upstream to 125 from 116 possibly in preparation for spawning at km 136. Both of these locations represent critical overwintering and rearing locations and continued monitoring of these areas will provide further information on movement patterns particularly around the spawning period.

Km 129 – 134

Although fish do not appear to overwinter at these locations (presumably due to being too shallow), these areas are active in terms of telemetry records prior to and following spawning in the spring. Based on this it is assumed that these locations are staging areas for fish moving to and from the spawning area at km 136. Telemetry flights completed on subsequent days during the spawning period show fish moving upstream and downstream throughout this area on a daily basis.

Km 136-137- Vanderhoof Spawning Area

This section is the only confirmed spawning area in the river. Congregations were observed in 2004 and 2006 (May 18th and 19th, respectively) and eggs were collected in 2007 on June 2nd and 8th and in 2008 on June 2nd and 9th. Continued monitoring will be necessary to confirm spawning and collect data to understand the environmental cues associated with spawning. Sampling for larvae post-spawning in this area will also provide the best opportunity to collect information on habitat preferences for that life stage.

Since the use of this area for spawning was not confirmed until 2004, telemetry surveys prior to that time did not focus on it during the spawning period. As a result, it is not possible to confirm the timing of spawning events for each year in the database. However, during the data review there was a subset of years for which telemetry records

for code 5 or 15 fish were available for this area making it possible to estimate the spawning window for those years.

- 1996 PIT tag # 7F7B0C5763 assessed as code 4 in fall of 1995 and migrated to the spawning area between May 28th and June 18th.
- 1997 PIT tag # 7F7B033622 assessed as code 14 the previous fall and migrated upstream to km 132 on May 23rd. Tag appears to have been shed at that location so it cannot be confirmed that fish continued upstream to km 136-137. However, based on the fish's maturity, the time of year, and the fact that the upstream movements appeared purposeful, it seems likely the fish was moving to the spawning area.
- 2002 PIT tags 4124680C7A, 41246D0D41, 4124741829, 41247C4F74, 412515071A, and 501F7A3051. These area all code 4 or 14 fish as assessed the previous fall that were identified in the vicinity of the spawning area between May 27th and June 7th.
- 2003 PIT tag # 413B2F1C79 assessed as code 4 the previous fall and was identified in the vicinity of the spawning area on May 28th. In addition, fish were visually confirmed to be within the spawning area on May 26th and 28th (Pers. Comm. Cory Williamson, MOE).

Km 140.5 - 141.5

Telemetry records show fish have been identified in this area during the potential spawning period (May – June) in at least four different years. In 1999 (tag #7F7B0B1974), 2006 (tag # 7F7D7C115E) and 2007 (tag # 4528732143 and 452A2B4E5F) fish were identified at this location in May. The timing suggests the movements of these fish may have been spawning related however, they could have been staging upstream of the known spawning area at km 136-137 or migrating upstream to the potential spawning area at km 160. 2002 was the only year a group of fish was identified at this location and that occurred on June 7th and included 4 fish: 41247C4F74, 412515071A, 4124741829 and 41246D0D41. It is unknown how long the fish remained at this boation since telemetry was not completed on subsequent days however, by June $10^{th} - 12^{th}$ 3 of the 4 had been identified at downstream locations.

<u>Km 160 – 162 – Braeside</u>

Telemetry records show fish in the vicinity of the Braeside boat launch (km 162) in several years during the spawning window. This includes 1999 (tag # 7F7B0B1504), 2006 (tag # 7F7D7C115E at km 164) and 2007. In 2007 a total of 5 fish were identified between June 3rd and 5th, however, spawning was not confirmed (see Triton Environmental Consultants 2007 for discussion). Continued monitoring in future years will be necessary to determine whether or not spawning occurs in this area.

Km 165 - 192 – *Nautley River Confluence*

In general, few telemetry and capture records exist upstream of the Braeside boat launch. The map of sampled site locations shows that only the area around km 177 has been sampled and that at least one fish has been captured at that location. Telemetry records show that during the spring and summer, fish have been identified throughout the region, but at lower densities than downstream locations. However, this could be partially due to fewer telemetry surveys targeting the region. Upstream of the Nautley confluence, fish have been identified to km 197.

Another consideration is that all of the telemetry records reviewed in this study were from fish that were tagged downstream in the Nechako River and Stuart Lake. Due to the possibility that fish from Fraser Lake, which has not been extensively sampled and therefore have not been tagged, may be using this section of the Nechako in the same way that fish from Stuart Lake use the middle Nechako, the existing data may be under representing the overall importance of this area to the population. Habitat surveys of this area might help identify potential overwintering, rearing and spawning habitats while additional sampling within Fraser Lake and the Nechako upstream of Braeside may result in the capture of fish that do not utilize the same habitats as the Stuart Lake fish.

Stuart River

Based on the telemetry and capture data from the Stuart River, it appears that the river itself may only provide limited white sturgeon habitat. While telemetry records show

that fish have been identified throughout the river in spring and summer, sampling has resulted in very few being captured. This suggests that the river may serve primarily as a migration corridor between the Nechako and Stuart Lake and fish are not spending a significant amount of time in the river itself. Anecdotal information of sturgeon captures from "Sturgeon Point" (estimated to be km 10 of the Stuart River) suggest this location may provide important overwintering and rearing opportunities. However, few actual capture and telemetry data points exist for this location therefore, it is difficult to determine its importance. The majority of telemetry records that do exist are from either km 104 (approximately 30%), where a base station is located, or from the vicinity of km 48 (approximately 27% of records). On the map this section of the river has a tortuous meander and could provide rearing opportunities. The records are primarily from June-August and very few winter telemetry records exist possibly suggesting minimal overwintering habitat is available in the Stuart River. Given the proximity to Stuart Lake, this may be a reasonable assumption however, in general telemetry surveys of the Stuart River are infrequent (particularly during the winter) which could bias the interpretation of the relative importance of the system.

Stuart Lake

The data reviewed suggests that Stuart Lake provides important rearing habitat for the Nechako population of white sturgeon. There are many examples in the database of fish showing spawning behaviours in the Nechako at km 136-137 and then being identified in late summer by the telemetry basestation at km 104 in the Stuart River (approx 5 km downstream of Stuart Lake). These fish² are presumably returning to Stuart Lake following spawning to feed and rear. Fish migrating out of Stuart Lake tend to do so 1 or 2 years prior to spawning suggesting that the final stages of sexual maturation are completed within the Nechako River. Sampling within Stuart Lake has been fairly extensive with the majority of captures occurring near the inlets and outlets of Tachie River and Stuart River, respectively.

² PIT tags: 4124741829, 412515071A, 422E754551, 424E574A40, 4526754B01, 4528394A39, 45285A7033, 48594B4052, 7F7B0C6856

Fraser River

In general, instances of Nechako fish moving into the Fraser River are rare. A total of 8 fish were identified that were originally captured in the Nechako with subsequent telemetry or capture records from the Fraser. Three of the fish were identified at telemetry the base station at km 2.3 of the Nechako in April – June of 2006 and it is assumed they moved into the Fraser but cannot be confirmed as no telemetry records within the Fraser for these fish exist. The fish are:

- 1. 4529141153 identified at the Nechako confluence June 15th, 2006 and was not identified again till August 5, 2007 at the Stuart confluence;
- 452938611B identified at Nechako confluence May 20th and Sept 26th, 2006 possibly in the Fraser between those dates; and
- 3. 45296A4B00 identified at the Nechako confluence on July 9th, 2006 and was not detected again till Sept 3rd, 2007 at the Stuart confluence.

An additional 3 fish have confirmed telemetry records from the Fraser River:

- 4124680C7A (149.700 code 4) has 7 records from the Fraser between July 21st, 2002 and May 26th, 2003. It has been identified at the following rkm: 652.1, 674, 764.9, 765, 769.9, 777, and 778.9.
- 2. 41250F0A39 (149.700 code 12) has a single record from the Fraser on May 26, 2003 at rkm 772.3.
- 3. 7F7D77302F (149.500 code 9) has a single record from the Fraser on Sept. 5th, 1999 at rkm 826.6.

The remaining two fish were both captured in the Fraser in the fall of 2007 having been previously identified in the Nechako (tags 22236F2C51) and Nechako and Stuart (tag 7F7B031824). It should be noted that compared to the Nechako River, sampling and telemetry from the Fraser River has been minimal. Continued monitoring of the Nechako/Fraser confluence is necessary to determine the degree to which Nechako fish make use of the Fraser as well as define the time periods for when such movements occur.

Conceptual Model

Following the review of the Nechako white sturgeon database several observations of behavior and life history patterns can be made which constitute a conceptual model of the Nechako population of white sturgeon. Due to the focus on adults in the database, the observations pertain primarily to that life stage. Recent and ongoing work by Steve McAdam (MOE) on the larval and juvenile stages will provide insight into the behaviors, habitat preferences and life history patterns of those age classes and will also provide direction for future studies. It should be noted that many of the observations are based on impressions and perceived trends in behaviour and should therefore not be interpreted to suggest that all fish in the population behave the same way or follow the same patterns.

Telemetry and capture results have identified several key habitat areas within the middle Nechako River. Overwintering locations at which fish have been identified all year round include km 110, 116 and 125. Data suggests fish tend to migrate to these locations in the fall and remain there through the early spring. Movement during the winter is difficult to assess due to the limited telemetry data however, the data that is available shows that fish do move to some degree. These movements could be associated with foraging or be the result of redistribution due to overcrowding or competitive exclusion of smaller size classes at the key areas. Habitat conditions at the overwintering locations that make them suitable include greater depth (as much as 10 m at km 116), which ensures suitable space and limits the impact of ice cover and low dissolved oxygen. These locations are also depositional areas where food resources likely accumulated within the river. Lastly, the areas also tend to be located on bends or meanders where refuge areas (low velocities), back eddies, and variable currents are present.

The only confirmed spawning area within the system to date is located in the vicinity of the braided bird sanctuary area of Vanderhoof at km 136 (Burrard St. Bridge) to approximately km 137. Fish have been observed spawning within the braided bird sanctuary but eggs have been collected from upstream and downstream of the braided channel as well. The location of spawning may be velocity related and surveys completed by northwest hydraulic consultants in 2007 show that at higher discharges, the

higher velocity areas move upstream of the braided channel (northwest hydraulic consultants, 2008). Clean, gravel/cobble substrates seem to be targeted and the braided bird sanctuary area may provide refuge and rearing habitat for juveniles. The timing of spawning has been shown to be temperature dependent with a daily mean of approximately 13-14°C required for spawning to occur. However, prior to that threshold being achieved, fish tend to show increased movement in the spring, leaving the overwintering holes and distributing throughout the river. Males and juvenile fish tend to move to the spawning area up to a week or two before spawning, with females tending to migrate when the threshold has been achieved. The fish can remain in the spawning area for as short as 72 hours (Triton Environmental Consultants, 2004) to up to two weeks or more. However, it tends to be the males that remain with females leaving once spawning is complete. In 2008, eggs were collected on two separate occasions (July 2nd and 9th. Triton Environmental Consultants 2008 in prep.) suggesting multiple spawning events are possible. Following spawning, fish tend to migrate downstream from the spawning area and remain dispersed throughout the river (as opposed to directly returning to the overwintering locations).

During the capture and assessment of adults in 2008 it was confirmed that males are capable of spawning every 2nd year whereas females are likely on a 3-4 year cycle (Pers. Comm. Cory Williamson). Telemetry data suggests that following spawning some fish may move to Stuart Lake for a period of up to several years where they likely feed and rear. The lake environment is more productive than the riverine environment and likely provides greater rearing opportunities. This is especially true for females who expend a significant amount of energy in the production of eggs and therefore require a longer period of recover. Telemetry data shows that fish will migrate out of the lake and back to the Nechako during the summer where they overwinter and spawn the following spring.

The use of the Nechako upstream of Vanderhoof and downstream of the Stuart River confluence is less well understood. Telemetry data shows that fish do make use of these areas but to date no additional critical habitat areas (i.e. spawning and overwintering) have been identified. Suspected feeding areas in the vicinity of the Chilako River

confluence (km 33) may warrant future investigations as do a potential spawning area at Braeside (km 162) and potential rearing/overwintering locations upstream of Vanderhoof (such as km 146 and 175 for which winter telemetry records exist). In particular the area upstream of the Nautley confluence has had very limited data collected and therefore the relative importance of the upper Nechako is unknown. Anecdotal information suggests fish were previously identified in that area but that needs to be confirmed. Similarly the use of the Fraser River and its importance to the Nechako population is unknown. While telemetry and capture records of Nechako fish in the Fraser are limited, those that are present confirm that at least a subset of the population enters the Fraser. At this stage, the reason for the apparent limited usage of the Fraser is unknown. Fish that do make use of the Fraser may be genetically predisposed to do so, but further analysis would be needed to study this. In addition, the behavior or activity of fish once in the Fraser is unknown. Rearing and overwintering opportunities certainly exist and therefore fish could be making use of those habitats. Lastly, the role of Fraser Lake is also not well understood. Given the apparent importance of Stuart Lake as a rearing/overwintering location, it seems reasonable that Fraser Lake would fill a similar role. Fish within Fraser Lake may make use of the upper Nechako in a similar way that Stuart Lake fish make use of the middle Nechako River.

Data Gaps

A review of the capture and telemetry data shows that substantial data exists between km 60 and 160 of the Nechako as well as within the Stuart River and Stuart Lake. Limited telemetry data exists for the Nechako between km 0 and 60 as well as upstream of km 160, while little or no sampling has been completed in the same area. As a result, these areas represent the largest geographic data gaps in regards to white sturgeon usage. Another geographic data gap is the Tachie and Middle Rivers for which no telemetry and very limited sampling data exists. Since fish are known to occur in Trembleur and Stuart Lakes and may occur in Takla Lakes, telemetry of these rivers may provide information on the timing of migrations to and from lake habitats. Lastly, data from Fraser Lake and

the Nautley River is limited and therefore there is no information on the life history patterns of fish that might be making use of those habitats.

In regards to temporal data gaps, the majority of capture and telemetry records that exist are from the spring, summer and early fall and as a result, there is a data gap for the overwintering period. However, due to river and lake conditions during that period (i.e. ice cover) it is recognized that the capture of fish and collection of telemetry data from that period may not be the most efficient use of available funds.

Recommendations

The following recommendations would address some of the data gaps outlined in the previous section:

- Continued operation and monitoring of telemetry base stations at key points along the migration routes. This includes at the confluences of the Nautley, Stuart and Nechako Rivers, the Vanderhoof spawning area and km 116 overwintering location.
- More regular extended aerial telemetry surveys of the lower and middle Nechako and upper Stuart systems in order to identify the timing and location of fish use.
- Additional sampling in those areas that have not previously sampled or where sampling was completed but not at the most opportune time of year. In particular, a focused program on Fraser Lake and the middle and upper Nechako would help address the question of whether or not there is a subset of the population that use those areas.
- Completion of habitat surveys for those areas identified as having the potential to provide rearing, spawning and overwintering habitats.
- Continued development and analysis of the database. In particular, there is sufficient data at present to complete additional analyses including determination of individual growth rates, length-at-age, and rate of sexual maturity.

References

- B.C. Conservation Data Centre. 2006. BC Species and Ecosystems Explorer. B.C. Minist. of Environ. Victoria, BC. Available: http://srmapps.gov.bc.ca/apps/eswp/(accessed [November 6, 2006]).
- Conte, F.S., Doroshov, S.I., and Lutes, P.B. 1988. Hatchery Manual for White Sturgeon with application to other North American Acipenseridae. University of California Publication 3322.
- Northwest hydraulic consultants (nhc) 2008. Nechako River at Vanderhoof Hydrodynamic Model Upgrade. Prepared for BC Ministry of Environment, RioTinto Alcan, and Carrier Sekani Tribal Council.
- Paragamian, V. L., G. Kruse, V. Wakkinen. 2001. Spawning habitat of Kootenai River white sturgeon, post-Libby Dam: North American Journal of Fisheries. 21:1:22-33.
- Triton Environmental Consultants Ltd. 2007. Adult white sturgeon monitoring Nechako River 2007. Prepared for Alcan Primary Metal. Prepared by Sykes, G., and R. Liebe.

Personal Communication:

Cory Williamson, Fisheries Biologist, Ministry of Environment, Environmental Stewardship Division, Omineca Region

Appendix 1. Summary table of sexual maturity codes for Nechako white sturgeon

Maturity Code	Sex	Description
1	Male	Non-reproductive, testes appear as thin strips with no pigmentation.
2	Male	Maturing; small testes, some folding may be apparent; translucent, smoky pigmentation.
3	Male	Early reproductive; large testes, folds beginning to form lobes; some pigmentation still present. Testes more white than cream coloured.
4	Male	Late reproductive; testes large, often filling posterior of body cavity; white with little or no pigmentation.
5	Male	Ripe; milt flowing; large white lobular testes; no pigmentation.
6	Male	Spent; testes pinkish-white, flaccid, and strongly lobed.
10	Male	General unknown maturity.
11	Female	Non-reproductive; ovaries small, folded with no visible oocytes; tissue color white to yellowish.
12	Female	Pre-vitellogenic, moderate size ovary with small eggs present (0.2 to 0.5 mm diameter) may have "salt and pepper" appearance.
13	Female	Early vitellogenic; large ovary varying in color from white to yellowish-cream to light grey; eggs 0.6 to 2.11 mm diameter.
14	Female	Late vitellogenic; ovaries large with pigmented oocytes still attached to ovarian tissue; eggs 2.2 to 2.9 mm in diameter; sometimes with "salt and pepper" appearance.
15	Female	Ripe; eggs fully pigmented and easily detached from ovarian tissue; eggs 3.0 to 3.4 m in diameter.
16	Female	Spent; ovaries are flaccid with some residual eggs.
17	Female	Pre-vitellogenic with attritic oocytes; small eggs (< 0.5 mm diameter) present; dark pigmented tissue present that may be reabsorbed eggs.
20	Female	General unknown maturity.
97	Unknown	Gonad not visible; juvenile based on size.
98	Unknown	Gonad not visible; adult based on size.

^{*} Description of maturity state classifications adapted from Conte et al. (1988).

Appendix 2. Summary table of fish with a single capture record and no telemetry

PIT tag #	Sex	River Km	River	Capture date	FL (cm)	TL (cm)	WT (kg)	Age	Est. Birth year
2223420262	97	116.5	Nechako River	21/08/1995	148.5	168	28.6	45	1950
2223501D5C	2	110.2	Nechako River	08/05/1997	181	202.5	51.3	59	1938
222372444E	3	61.1	Nechako River	10/05/1997	148.5	166	28.6	39	1958
22240A5FE3	2	124.5	Nechako River	19/05/2006	186	211	61		
222414641F	2	65.8	Nechako River	18/06/1997	135	152.5	19.1	45	1952
222419127A	3	61.1	Nechako River	21/06/1997	199.5	222		67	1930
22363C3E0A	14	n/a	Trembleur Lake	17/09/2004	226	260		48	1956
4124665E75	97	115.2	Nechako River	11/09/1999	148.5	167	20.4	36	1963
412466701E	97	124.7	Nechako River	24/09/2001	141.5	155.5	17.252		
4124667D61	12	116.2	Nechako River	10/09/1999	217	242.5	59.4	62	1937
4124671F3B	97	107.6	Nechako River	12/09/1999	143.5	162.5	22.2	30	1969
4124687B73	97	116.8	Nechako River	25/09/2001	184	208	45.8		
4124692877	3	110	Nechako River	12/09/1999	151.5	171	25.9	37	1962
4124697953	97	116.8	Nechako River	26/09/2001	158.5	181.5	34		
41246B7817	97	92	Nechako River	05/08/1999	162	183	26.3	32	1967
41246C3057	3	107.9	Nechako River	12/09/1999	145	165	22.7	34	1965
41246D3805	97	125.1	Nechako River	24/09/2001	126	140.5	14.969		
4124705139	97	90.1	Nechako River	05/08/1999	162	181	36.8	26	1973
4124707E71	97	107.6	Nechako River	12/09/1999	182	204	40.8	58	1941
4124711077	97	90.3	Nechako River	05/08/1999	156	176	23.2	38	1961
4124721004	97	110.1	Nechako River	12/09/1999	180.5	202	42.6	44	1955
412472662E	97	115.2	Nechako River	03/10/2001	123.5	139.5	14.016		
4124731A62	97	90.3	Nechako River	05/08/1999	200.5	223	64.5	38	1961
4124734300	98	124.7	Nechako River	23/09/2001	110	124	9.1		
4124747221	2	124.6	Nechako River	10/09/1999	141.5	160.5	19.5	22	1977

PIT tag #	Sex	River Km	River	Capture date	FL (cm)	TL (cm)	WT (kg)	Age	Est. Birth year
4124751461	97	115	Nechako River	11/09/1999	138.5	157	20	30	1969
4124777903	97	125	Nechako River	09/09/1999	142.5	160	20.4	34	1965
4124792E35	97	107.6	Nechako River	12/09/1999	132.5	151	18.1	36	1963
41247A086B	97	116.2	Nechako River	24/09/2001	138.5	156	19.522		
41247A221A	3	114.9	Nechako River	26/09/2001	187	213	50.8		
41247A5430	3	116.2	Nechako River	25/09/2001	164.5	187.5	31.3		
41247B7427	3	116.2	Nechako River	21/09/2001	188	211.5	49.03		
41247D0448	3	114.9	Nechako River	22/09/2001	115.5	173.5	25.855		
41247D310C	97	91.4	Nechako River	05/08/1999	133	151.5	16.8	22	1977
41247F0738	97	92	Nechako River	05/08/1999	168.5	193	33.1	35	1964
412500497F	97	116.2	Nechako River	02/10/2001	145.5	166.5	20.9		
4125005E0C	97	116.2	Nechako River	11/09/1999	179	200	40.8	43	1956
4125010F3C	12	125	Nechako River	09/09/1999	166.5	187.5	33.1	38	1961
4125034473	98	125.2	Nechako River	26/09/2001			12		
412504440C	97	116.8	Nechako River	28/09/2001	151.5	169	26.3		
4125062840	97	110	Nechako River	12/09/1999	153.5	173	24.5	42	1957
41250F5929	97	124.7	Nechako River	24/09/2001	166	186	35.412		
412510146B	12	115.2	Nechako River	22/09/2001	161	182.5	30.844		
4125131B53	97	116.8	Nechako River	28/09/2001	156.5	176.5	26.3		
412513715B	97	124.7	Nechako River	02/10/2001	158	181.5	31.3		
4138686B7D	97	116.2	Nechako River	13/10/2001	198	224	52.6		
41390D643C	3	67.4	Nechako River	14/09/1999	140.5	160	20.4	37	1962
413913523F	97	115.2	Nechako River	26/09/2001	138.5	154	17.7		
4139256371	97	107.9	Nechako River	12/09/1999	122.5	140.5	14.1	29	1970
41392A0951	12	68.3	Nechako River	12/10/2001	171.5	189	37.6		
4139333903	3	67.4	Nechako River	14/09/1999	160	180	29.5	38	1961

PIT tag #	Sex	River Km	River	Capture date	FL (cm)	TL (cm)	WT (kg)	Age	Est. Birth vear
4139522777	97	116.8	Nechako River	05/10/2001	154.5	169.5	25.855		your
4139666A06	97	66.3	Nechako River	14/09/1999	143	162	19.6	35	1964
413B106468	13	0.3	Nechako River	14/07/2002	180	206	50.4		
41424B7273	97	114.9	Nechako River	26/09/2001	125.5	140.5	13.1		
41493F7C14	98	124.6	Nechako River	09/09/1999	84	97	4.1	9	1990
41497E087F	97	125.2	Nechako River	28/09/2001	141	156.5	19.5		
420E616F33	97	91.4	Nechako River	05/08/1999	160.5	181.5	26.3	36	1963
422E2A6E26	98	115.9	Nechako River	31/08/2006	104.5	121	7.27		
422E311002	97	0	Stuart Lake	13/08/2004	175	197	37.5	31	1973
422E415376	98	0	Nechako River	29/08/2004	51.5	59	5.897	8	1996
422E42571F	98	116	Nechako River	28/09/2005	102	118	6.3		
422E44015D	98	91.3	Nechako River	03/09/2005	62.5	70.5	1.51		
422E616706	98	116.5	Nechako River	31/08/2006	79	89.5	3.06		
423C1A2D62	4	125	Nechako River	14/05/2007	187	207	55		
423C1B2E61	98	124.6	Nechako River	18/10/2006	71.5	81.6	1.905		
423C1F424B	3	124.9	Nechako River	09/05/2007	199	224	57.3		
424D772278	98	0.3	Nechako River	21/07/2001	87	99.5	3.645	15	1986
424E087403	98	0	Nechako River	27/07/2004	66	74	1.882	9	1995
424E0B7403	98	116	Nechako River	28/09/2005	70	78.5	1.91		
424E6E1700	98	0	Nechako River	27/07/2004	74	86.5	2.552	5	1999
424E707876	98	116.4	Nechako River	31/08/2006	65.5	74.5	1.824		
424E707E4F	6	0	Stuart Lake	09/09/2004	183	210	42.857	47	1957
451D364D58	5	129	Nechako River	12/05/2007	215	235	77.3		
45227F1A49	98	110	Nechako River	15/05/2007	87.5	98.5	4.5		
4523051833	97	116.2	Nechako River	18/09/2005	193	215.5	57.2		
4523285E3C	12	125.1	Nechako River	16/05/2006	164	188	35		

PIT tag #	Sex	River Km	River	Capture date	FL (cm)	TL (cm)	WT (kg)	Age	Est. Birth year
4525006927	97	115.3	Nechako River	17/09/2005	153	172	24.9		year
452711542A	4	132.1	Nechako River	11/05/2006	181	205	48		
4527132936	98	110	Nechako River	13/05/2007	93	106	5		
4527246A5C	2	120.7	Nechako River	15/05/2007	206	231	61.4		
4527276447	2	124.5	Nechako River	09/05/2007	201	230	91.4		
45275F7763	2	110	Nechako River	15/05/2007	145	164	21.8		
452761656E	97	115.3	Nechako River	19/09/2005	109.5	127.5	8.4		
4527666B79	97	117.3	Nechako River	19/09/2005	116.5	133.5	9.4		
4528342369	3	129.3	Nechako River	14/05/2006	160	178	37		
4528404012	98	116.9	Nechako River	31/08/2006	35.5	41	0.242		
4528477E78	97	110	Nechako River	16/05/2007	192	220	47.3		
45285F5E40	98	114.9	Nechako River	18/09/2005	74	83	2.7		
4529173846	2	132.1	Nechako River	16/05/2006	172	192	41		
4529413820	3	124.5	Nechako River	12/05/2006	165	192	91		
4529443547	98	115.3	Nechako River	18/09/2005	97	114	5.9		
452A03165E	12	124.5	Nechako River	09/05/2007	148	170	34.1		
452B05415B	98	110.1	Nechako River	12/05/2007	78	92	3.3		
501F651016	97	116.1	Nechako River	27/09/2005	94	107.5	31.3		
501F6B1604	97	0.4	Nechako River	15/07/2000	140	158.5	18.225	36	1964
501F70364F	97	0	Stuart Lake	03/09/2004	201	226	44.196	na	
501F703F2A	97	0.4	Nechako River	15/07/2000	122.5	138.5	15.075	22	1978
501F770257	97	0	Trembleur Lake	19/09/2004	154	175		34	1970
5020135414	98	110.1	Nechako River	01/09/2006	33	38.5	0.2		
50201F5930	97	0.4	Nechako River	15/07/2000	192	215	58.5	45	1955
50283B403A	97	0.4	Nechako River	15/07/2000	140	165	24.3	19	1981
5027275953	98	116	Nechako River	28/09/2005	95.5	110	4.7		

PIT tag #	Sex	River Km	River	Capture date	FL (cm)	TL (cm)	WT (kg)	Age	Est. Birth year
7F70781E6C	2	124.9	Nechako River	05/09/1998	143	160	20	39	1959
7F7B02741B	10	111.2	Nechako River	01/09/1998	179	199	37.7	54	1944
7F7B027C16	2	125	Nechako River	16/09/1995	156.5	177	34.958	39	1956
7F7B027D67	2	108	Nechako River	01/09/1998	147	162	20.4	37	1961
7F7B031021	12	124.7	Nechako River	07/09/1998	129.5	149.5	15.4	34	1964
7F7B03124E	2	111.2	Nechako River	01/09/1998	131	146.5	15	32	1966
7F7B031D1B	98	132.1	Nechako River	06/09/1996	69	82	2.7	11	1985
7F7B032A30	12	114.9	Nechako River	16/09/1995	175	197	41.768	48	1947
7F7B03326A	2	124.9	Nechako River	07/09/1998	129	144	12.3	22	1976
7F7B0B1452	12	124.9	Nechako River	16/09/1995	144	165	24.062	34	1961
7F7B0B1458	2	91.5	Nechako River	23/06/1996	120.5	138.5	15.4	25	1971
7F7B0B1B59	12	124.9	Nechako River	05/09/1998	126.5	143	12.3	36	1962
7F7B0B1B5C	98	90.2	Nechako River	10/06/1995	114.5	130	10.432	18	1977
7F7B0B1C28	2	124.5	Nechako River	15/09/1995	143.5	159.5	20.884	36	1959
7F7B0B2861	2	124.9	Nechako River	17/09/1997	136	155.5	23.2	41	1956
7F7B0C1874	97	92.4	Nechako River	17/06/1995	181	205.5	39.462	57	1938
7F7B0C2938	97	116.2	Nechako River	22/06/1998	147.5	168.5	20	35	1963
7F7B0C4A4D	12	116.2	Nechako River	15/09/1995	181	204	50.394	57	1938
7F7B0C4D3B	2	110.2	Nechako River	20/06/1996	147	165	23.6	35	1961
7F7B0C4E27	3	125.1	Nechako River	06/09/1998	172.5	191.5	34.5	35	1963
7F7B0C540B	2	116.2	Nechako River	15/09/1995	167	191	47.216	37	1958
7F7B0C5B7A	2	116.5	Nechako River	08/09/1996	171.5	192.5	37.23	57	1939
7F7B0C6B60	2	91.5	Nechako River	12/09/1996	162.5	187	39.1	40	1956
7F7D4F4130	13	110.2	Nechako River	21/06/1996	187	209	59.474	43	1953
7F7D4FS21A	97	116.2	Nechako River	25/09/2001	139	154	18.6		
7F7D52086E	12	93	Nechako River	23/06/1996	127	143.5	15.9	30	1966

PIT tag #	Sex	River Km	River	Capture date	FL (cm)	TL (cm)	WT (kg)	Age	Est. Birth year
7F7D571949	98	116.2	Nechako River	18/09/1997	126.5	145	16.8	32	1965
7F7D572F22	11	124.9	Nechako River	07/09/1998	132	149	15.9	26	1972
7F7D767322	2	92.4	Nechako River	10/06/1995	123	138.5	15.649	35	1960
7F7D770D5C	3	90.1	Nechako River	13/09/1997	139	158	22.7	41	1956
7F7D772A5C	2	111.2	Nechako River	01/09/1998	174	192.5	39.5	45	1953
7F7D773228	2	96.4	Nechako River	24/06/1996	120.5	139	15.4	26	1970
7F7D775B04	3	124.9	Nechako River	06/09/1998	138.5	159	20	33	1965
7F7D781103	2	117.2	Nechako River	08/09/1996	126	141.5	16.8	31	1965
7F7D781C3B	2	124.7	Nechako River	07/09/1998	151	173	26.8	46	1952
7F7D7A3278	12	110.2	Nechako River	20/06/1996	134	152	22.7	33	1963
7F7D7A3C1F	12	124.7	Nechako River	15/09/1995	125	140.5	15.436	32	1963
7F7D7A4003	3	39.9	Stuart River	23/09/1997	150	168.5	26.8	45	1952
7F7D7A4F0D	12	117.3	Nechako River	03/09/1998	168	189	36.3	40	1958
7F7D7B182D	12	110.1	Nechako River	20/06/1996	154	174.5	29.1	44	1952
7F7D7C6666	12	90.2	Nechako River	22/06/1996	132	148.5	17.7	32	1964
7F7D7D2A27	2	76	Nechako River	13/06/1998	130	147.5	16.798	35	1963
7F7D7D2A42	12	124.9	Nechako River	07/09/1998	139.5	156	16.3	24	1974
7F7D7D2D24	2	109.2	Nechako River	01/09/1998	162.5	184	35	36	1962
7F7D7D2E0E	1	109.4	Nechako River	10/09/1996	135	153	23.2	31	1965
7F7D7D373D	2	125.1	Nechako River	15/09/1995	138.5	157	18.614	19	1976
7F7D7D4311	3	125.1	Nechako River	06/09/1998	131	149.5	15.9	32	1966
7F7D7D4335	98	91.5	Nechako River	11/06/1995	96.5	109	5.443	16	1979
7F7D7D5141	12	116.8	Nechako River	04/09/1998	181	205	51.8	45	1953
7F7D7D5815	98	66.3	Nechako River	11/06/1998	130	149.5	17.706	36	1962
7F7D7D5904	2	116.2	Nechako River	07/09/1996	151.5	172.5	29.06	37	1959
7F7D7D6601	2	116.2	Nechako River	29/09/1997	138	157	18.2	36	1961

Appendix 3. Capture and telemetry summaries

Note: Records are in ascending order based on PIT tag number.

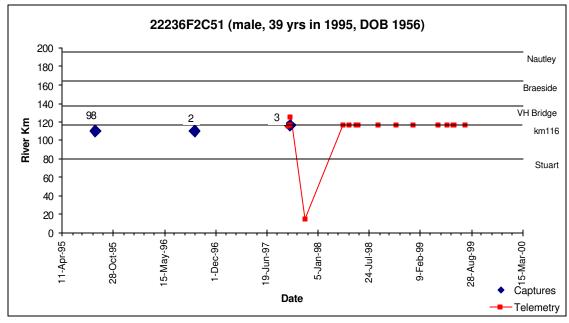
<i>PITtag</i> 22234A7C59		Capture Date 18/08/1995 30/09/2001	River Km 110.1 116.2	Sex 98 98	FL (cm) 109 123.5	TL (cm) 123.5 139	WT (kg) 11.35 14	Age 23	Birth Year 1972							
PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year							
222350651E		07/05/1997	129.5	1	245	272	111.7	88	1909							
Frequency	Code		River Km	Station	River	212	111.7	00	1505							
149.658	116	07-May-97	129.5	B	NECHAKO	DIVED										
149.658	116	07-May-97 08-May-97	129.3	В	NECHARO	KIVEK										
149.658	116	08-May-97 09-May-97	130	A A												
149.658	116	23-May-97	132	A			2223506	51E (male, 88 y	rs in '	1997	DOE	3 190	19)		
149.658	116	04-Jun-97	132	A				, , ,	, , ,			, – – –		,		
149.658	116	07-Jun-97	132	A	200) ¬										
149.658	116	12-Jun-97	132	A	200	, I										Nautley
149.658	116	16-Jun-97	132	A	180	, -										,
149.658	116	24-Jun-97	131.5	A	100	'										
149.658	116	02-Jul-97	131.5	A	160) -										Braeside
149.658	116	14-Jul-97	132.2	A		^										Bracside
149.658	116	11-Sep-97	132.2	A	140) -	4									VH Bridge
149.658	116	20-Sep-97	132	В	''	´		•		-					-	— VIT Bridge
149.658	116	17-Nov-97	132	A	E 120) -										l140
149.658 149.658	116 116	10-Dec-97	132	A	E 120	'										km116
149.658	116	08-May-98 02-Jun-98	132.2 132	A A	5 100) -										
149.658	116	02-Jun-98 15-Jun-98	132	A	100 H 80	^										Stuart
149.658	116	20-Jun-98	132	В	E 80) -										Otaan
149.658	116	03-Jul-98	132	A												
149.658	116	29-Aug-98	132	A	60) -										
149.658	116	22-Apr-99	132	A												
149.658	116	11-May-99	133	A	40) -l								• 0	. 4	
149.658	116	27-May-99	132.5	A		^								Cap	otures	
149.658	116	08-Jun-99	132.2	A	20) -							_	 Tele	emetrv	Nechako
149.658	116	22-Jun-99	132.2	A											· · · · · · ·	
149.658	116	06-Jul-99	132	В) ++	+	+ +			+	-+-	+	+	+	
149.658	116	09-Jul-99	132.1	Α		97	76	97	88 88	86	98	66	66	66	66	66
149.658	116	04-Aug-99	132.1	A		pr-rg	Ė	مَ مَ	g &	-br	Š	Ë	ğ	≟	å	o တိ
149.658	116	08-Sep-99	131.9	В		9-Jan-97 2-Apr-97	23-Jun-97	14-Sep-97 6-Dec-97	26-Feb-98 20-May-98	10-Aug-98	1-Nov-98	23-Jan-99	15-Apr-99	7-Jul-99	27-Sep-99	19-Dec-99
							cv ,	- "	20 20	7		W	-		0	÷
									[Date						

- Tagged and assessed at km 129 in May 1997. Assessed as code 4 male suggesting fish could have been sexually mature (code 5) in 1998. Following tagging fish migrated upstream to km 132 on May 23rd and possibly could have been responding to spawning cues.
- Tag likely shed at km 132.

PITtag	Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year
22235D2A63	18/08/1995 21/09/2001	107.5 116.2	97 3	165 178.5	184.5 201	38.14 46.31	45	1950
PITtag	Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT (kg)	Age	Birth Year
22236F2C51	18/08/1995	110.1	98	134	151.5	20.88	39	1956
	09/09/1996	110.1	2	139.5	156	21.8		
	19/09/1997	116.2	3	144	162.5	25		
	30/09/2007	Fraser River	3	188.5	209	46		

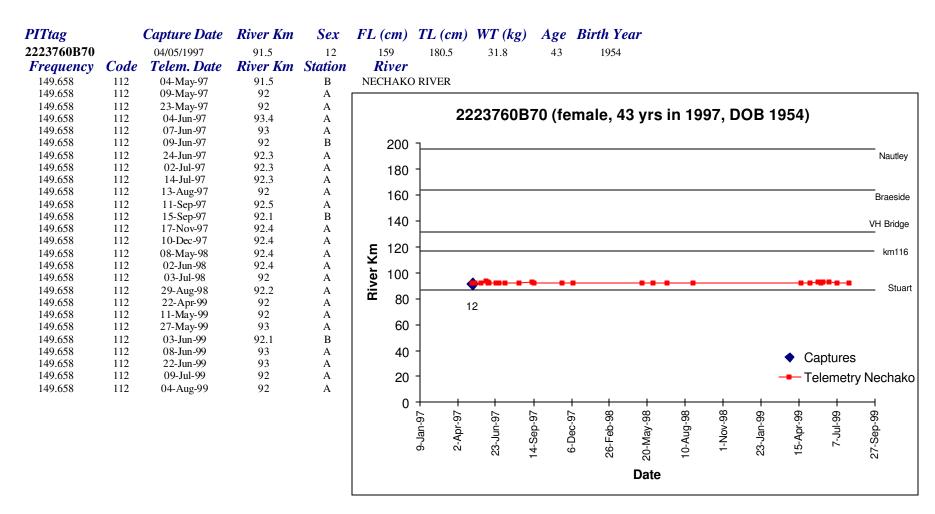
River Km Station Frequency Code Telem. Date 149.500 113 10-Sep-97 115.2 Α 19-Sep-97 149.500 113 116.2 В 20-Sep-97 149.500 113 124.8 В 17-Nov-97 149.500 113 15.2 Α 14-Apr-98 149.500 113 116.2 S 149.500 08-May-98 116.5 Α 113 02-Jun-98 149.500 113 116.5 Α 149.500 113 14-Jun-98 116.2 S 29-Aug-98 149.500 113 116.2 Α 149.500 01-Sep-98 116.2 В 113 09-Nov-98 149.500 113 116.2 Α 149.500 113 13-Jan-99 116.2 S 22-Apr-99 149.500 113 116 Α 149.500 113 27-May-99 116.2 Α 149.500 113 22-Jun-99 116.2 Α 149.500 113 04-Aug-99 116.2 В





- Fish was never identified at the known spawning area at VH.

 The single telemetry record from km 15.2 (Nov 17th, 1997) may be a data entry area as all subsequent records are from km 116.2.
- Tag likely was shed at km 116.
- Fish was captured on Sept 30th, 2007 in the Fraser River (10.588477.5978821). Maturity code 3 and fish was radio tagged (148.420 code 51).



- Fish captured at km 91.5 in May 1997. Assessed as code 12 female.
- Tag likely shed at km 92.

PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT (kg)	Age	Birth Year	•					
22237A1004		10/05/1997	66.5	14	200	6.5	230.5	77.6	71	1926						
22237A1004		12/05/2007	116.2	15	21	17	243	93.2								
Frequency	Code	Telem. Date	River Km	Station	D:	iver										
							DIVED									
149.658	110	10-May-97	66.5	В	NECI	HAKU	RIVER									
149.658	110	23-May-97	75 77	A												
149.658	110	04-Jun-97	77	A			22	2237A100	04 (fe	male, 71	vrs ir	า 199	7. DO	DB 1	926)	
149.658	110	12-Jun-97	77	A					- (-	,	, -		,	_	,	
149.658	110	24-Jun-97	77	A		200	_									
149.658	110	02-Jul-97	77	A		200										Nautley
149.658	110	14-Jul-97	77	A		180	_									· iddi.oy
149.658	110	13-Aug-97	77	A		100										
149.658	110	11-Sep-97	78.5	Α		160										Dun a siala
149.658	110	17-Nov-97	78	Α		160										Braeside
149.658	110	10-Dec-97	77	Α		140										
149.658	110	08-May-98	77.5	A		140										VH Bridge
149.658	110	02-Jun-98	75.1	A	_	100										
149.658	110	13-Jun-98	75.7	В	River Km	120	T									km116
149.658	110	03-Jul-98	75.1	A	×	400										
149.658	110	29-Aug-98	75.3	A	ē	100	7									
149.658	110	22-Apr-99	77.5	A												Stuart
149.658	110	11-May-99	76	A	ш	80	T ,		-		-	_				
149.658	110	27-May-99	76.8	Α			4									
149.658	110	08-Jun-99	76.8	Α		60	14									
149.658	110	22-Jun-99	75.5	A			14									
149.658	110	09-Jul-99	75.5	A		40	7								Captur	20
149.658	110	13-Jul-99	75.5	A												
148.320	15	20-May-07	130	A		20	†								Telem	etry Nechako
148.320	15	23-May-07	89	A												-
148.320	15	23-May-07	89.7	GS		0	+ + + +	+ + + +	+ -	 		. .	+ -	+ -	+ + + +	
148.320	15	25-May-07	120	A			97	97	76	86 86	98	86	86	66	66	66
148.320	15	28-May-07	150.7	A			₹ a.	늘	8	ਜ਼ੂ ਤੋਂ ਕਾ	Ė	ģ	ģ	Ė	- ' = =	<u> </u>
148.320	15	30-May-07	135.7	GS			31-Mar-97 30-May-97	29-Jul-97 27-Sep-97	26-Nov-97	25-Jan-98 26-Mar-98 25-May-98	24-Jul-98	22-Sep-98	21-Nov-98	20-Jan-99	21-Mar-99 20-May-99	19-Jul-99
148.320	15	30-May-07	135	A			31	27. 2	28	26 -75	Ñ	22.	7	8	20-	17 1
148.320	15	01-Jun-07	161.1	A			(-)				_				· · ·	
148.320	15	03-Jun-07	160.8	A							ate					
148.320	15	04-Jun-07	135.7	GS												
140.320	1.5	04 Jun 07	20.7	CC												

15 15 15

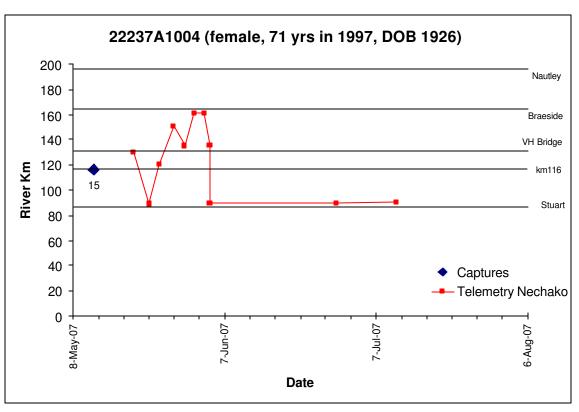
04-Jun-07 29-Jun-07 11-Jul-07

89.7 89.7 90

GS GS A

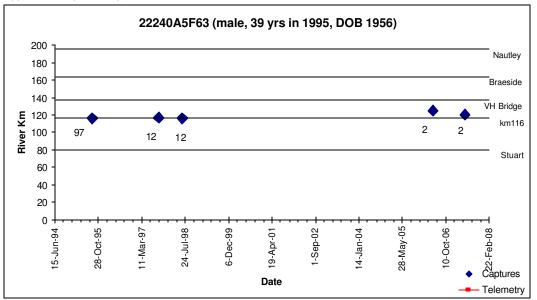
148.320 148.320

148.320

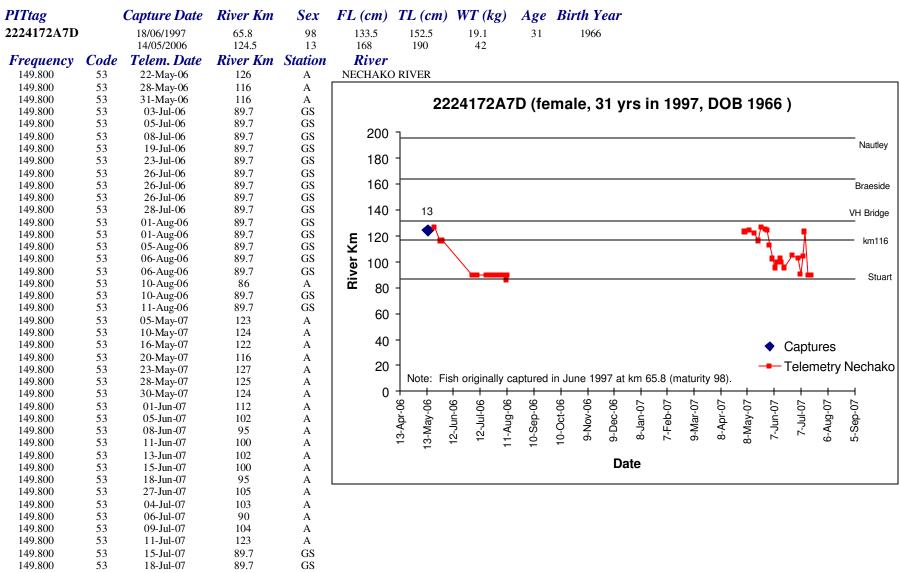


- From May 1997 to July 1999, fish was only identified in vicinity of km 77 with no apparent migrations from that location. It is likely that the tag was shed in that area. The fish was assessed as code 14 in October of 1997 suggesting that it may have been sexually mature and spawned the following year. Assuming the tag was not shed, spawning would potentially have occurred around km 77.
- In 2007, the fish was assessed as being ripe (code 15). During the period were eggs were collected at VH (June 2nd-8th), the fish was located at km 160 (Braeside, June 1-3rd) but migrated downstream to VH on June 4th. However, on the same date it was identified at km 89 (Stuart River confluence) suggesting it did not stop at the VH spawning area.
- The 2007 results suggest this fish may have spawned at Braeside.

PITtag	Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year
22240A5F63	21/08/1995	116.5	97	152	173.5	33.14	39	1956
	18/09/1997	116.9	12	159.5	182	38.6		
	22/06/1998	116.2	12	165.5	186	39.5		
	11/05/2006	125	2	186	211	61		
	15/05/2007	120.7	2	193	218	64.1		



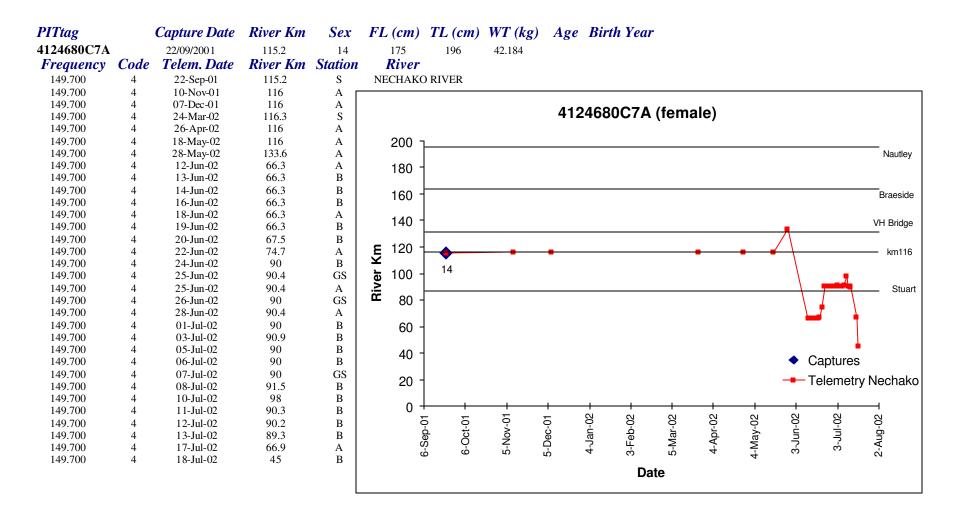
- Fish was originally assessed as a code 12 female (1997 & 1998), however subsequent assessments in 2006 and 2007 have identified it as a male (code 2).
- Fish has not been radio tagged and has been captured at either km 116 (3 times) or 125 (2 times).



- Fish originally captured at km 65.8 in June, suggesting rearing habitat in that area.
- Following re-capture in May 2006 (code 13) fish migrated to km 116 (end of May) then to km 89.7 (Stuart River confluence; July to mid-August).
- In 2007, fish was quite active but was not identified at either the known VH spawning area (km 137) or the potential secondary site at Braeside (km 162).

Movements likely associated with feeding/rearing migrations but may also suggest fish is maturing.

- Based on fish being a code 13 in 2006, there is the potential that it will be mature and ready to spawn in 2008.
- Rated end of tag life is December 2010.



- Fish captured at km 115 in Sept 2001 and assessed as code 14 suggesting it was nearly ready to spawn.
- Telemetry data from 2002 showed the fish migrated to the known VH spawning area on May 28th, which would coincide with the timing of spawning

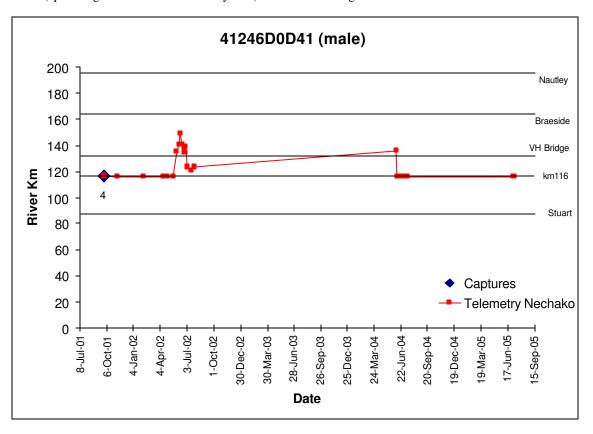
events observed in later years.

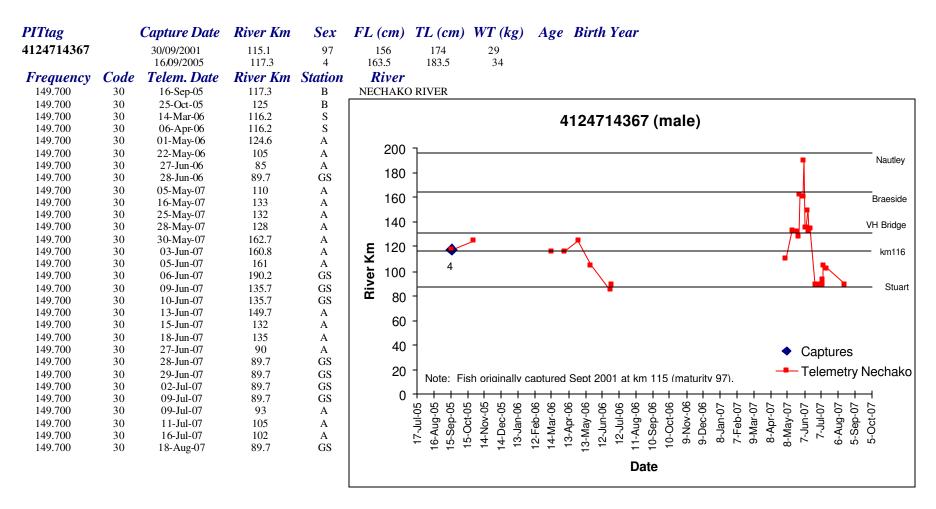
- Following spawning, fish migrated to km 66 and 90 presumably for rearing/feeding (summer 2002).
- Last record (July 18th, 2002) identified the fish at km 45, which is an area several fish have migrated to in late summer suggesting feeding opportunities. From June 21st 2002 to May 26th, 2003 fish was identified in the Fraser River between km 652 and 778.

<i>PITtag</i> 4124684A2D		Capture Date 21/09/2001 17/09/2005	River Km 116.2 115.3	Sex 97 12	FL (cm) 149.5 163	<i>TL (cm)</i> 167.5 182.5	WT (kg) 21.36 28.1	Age	Birth Year
PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT (kg)	Age	Birth Year
412469273C		11/09/1999	116.2	97	153	169		37	1962
412409273C		17/05/2006	0	13	169	189	24 39	37	1902
		17/03/2000	O	13	109	109	39		
PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT (kg)	Age	Birth Year
41246D0D41		26/09/2001	116.8	4	228	254	95.2		
Frequency	Code	Telem. Date	River Km	Station	River				
149.700	11	26-Sep-01	116.8	S	NECHAKO	RIVER			
149.700	11	10-Nov-01	116	Ā					
149.700	11	06-Feb-02	116	Α					
149.700	11	14-Apr-02	116.3	S					
149.700	11	26-Apr-02	116	A					
149.700	11	18-May-02	116	A					
149.700	11	28-May-02	135.6	Α					
149.700	11	07-Jun-02	140.5	Α					
149.700	11	10-Jun <i>-</i> 02	149.5	В					
149.700	11	18-Jun-02	140.3	A					
149.700	11	22-Jun-02	138.8	A					
149.700	11	25-Jun-02	134.5	GS					
149.700	11	25-Jun-02	134.5	A					
149.700	11	28-Jun-02	139.2	A					
149.700 149.700	11 11	03-Jul-02	123.8 121.2	В					
149.700	11	17-Jul-02 25-Jul-02	123.8	A A					
149.700	11	05-Jun-04	136	GS					
149.700	11	10-Jun-04	116	GS					
149.700	11	11-Jun-04	116	GS					
149.700	11	12-Jun-04	116	GS					
149.700	11	14-Jun-04	116	GS					
149.700	11	15-Jun-04	116	GS					
149.700	11	16-Jun-04	116	GS					
149.700	11	20-Jun-04	116	GS					
149.700	11	21-Jun-04	116	GS					
149.700	11	23-Jun-04	116	GS					
149.700	11	24-Jun-04	116	GS					
149.700	11	25-Jun-04	116	GS					
149.700	11	26-Jun-04	116	GS					

Frequency	Code	Telem. Date	River Km	Station	River
149.700	11	27-Jun-04	116	GS	
149.700	11	28-Jun-04	116	GS	
149.700	11	08-Jul-04	116	GS	
149.700	11	09-Jul-04	116	GS	
149.700	11	10-Jul-04	116	GS	
149.700	11	11-Jul-04	116	GS	
149.700	11	14-Jul-04	116	GS	
149.700	11	05-Jul-05	116	GS	
149.700	11	06-Jul-05	116	GS	
149.700	11	07-Jul-05	116	GS	

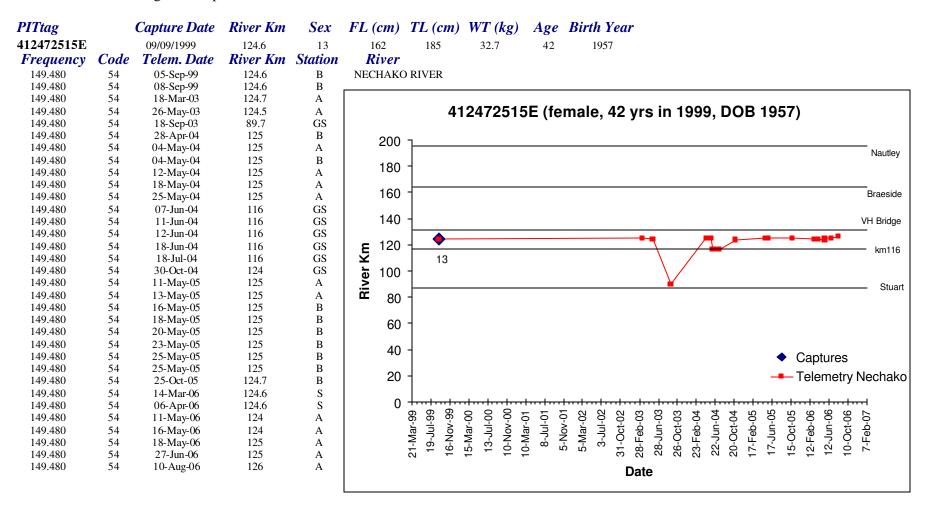
- Captured at km 116 in Sept 2001 and assessed as code 4 suggesting the fish would spawn the following year.
- Telemetry data shows it migrated to the VH spawning area on May 28th and remained in the general area until July 3rd.
- Was not identified in 2003.
- In 2004 was identified at the VH spawning area on June 5th (spawning had been observed May 18th) and all remaining records are from km 116.



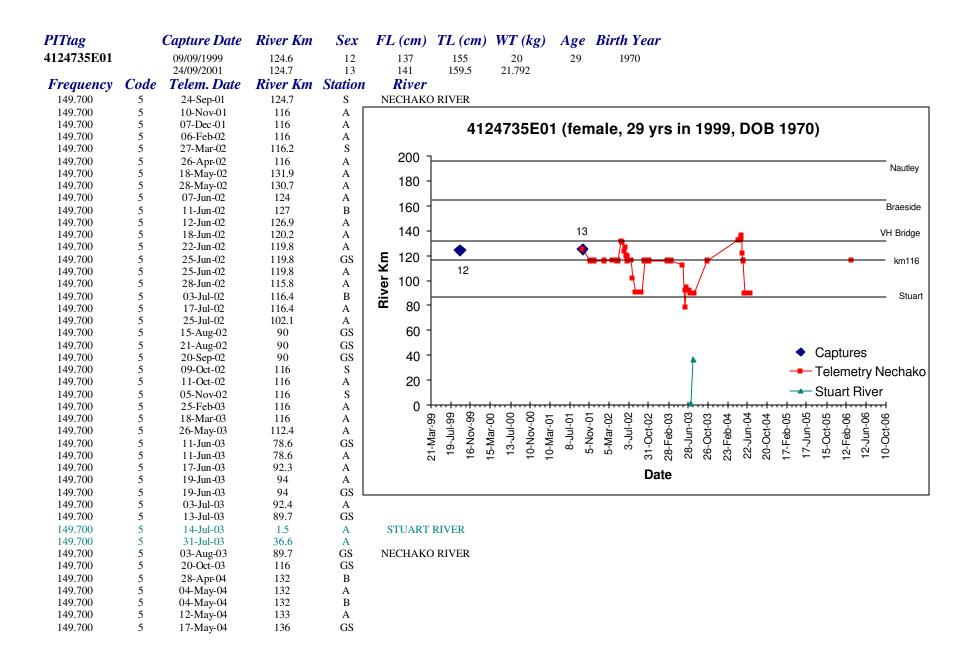


- Fish was originally captured at km 115 but sex could not be determined (adult based on size).
- In September of 2005 it was captured as assessed as a code 4 male. This suggests that it was sexually mature (code 5) in 2006, however was not identified at the VH spawning area during the known spawning event (May 19th to 21st). Telemetry records suggest it was moving downstream during the spawning event in 2006 and was located between km 124 and 105. These results suggest that the fish may not have matured until the following year (2007).
- In 2007, the fish was located at km 160 (Braeside) during the period where eggs were collected at VH. As a result the fish may have been part of a spawning event that occurred at that location.
- On June 5th the fish was located at km 161 but was identified 30 km upstream at km 190 on June 6th. However, it did not remain at this location and instead returned to the VH spawning area were it was predominantly located from June 9th to 18th.

- In both 2006 and 2007, the fish was located at km 89 (Stuart River confluence) at the end of summer suggesting it may be overwintering downstream of Stuart confluence or within the Stuart River. Database comment says fish identified "upstream in Nechako" therefore does not appear to have entered Stuart
- Rated end of tag life is April 2010.



- Fish captured at km 124.9 in Sept 1999 and assessed as code 13.
- Telemetry records have identified it at km 125 predominantly with 1 record from the Stuart River confluence (Sept 18th, 2003).
- Tag was not detected in 2007 and based on rated tag life was Oct 2007 therefore is likely dead.



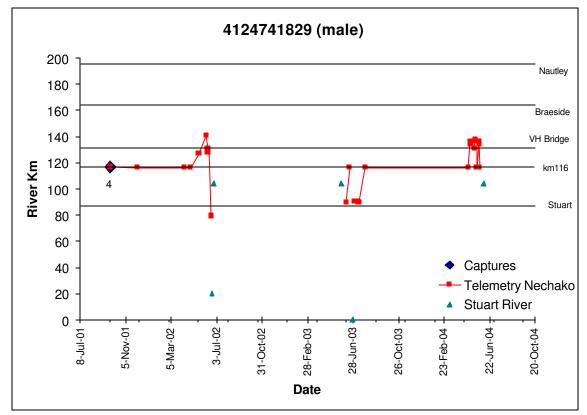
149.700	5	18-May-04	134	A
149.700	5	25-May-04	121.5	A
149.700	5	26-May-04	116	GS
149.700	5	08-Jun-04	89.7	GS
149.700	5	11-Jun-04	89.7	GS
149.700	5	18-Jun-04	89.7	GS
149.700	5	23-Jun-04	89.7	GS
149.700	5	11-Jul-04	89.7	GS
149.700	5	14-Mar-06	116.2	S

- Fish has been identified in the vicinity of the known spawning area at VH in May of 2002 and 2004. In 2004 it was identified on May 18th which is the data spawning was observed. Fish was assessed as code 13 in 2001 and was potentially mature (code 15) by 2004.
- Fish has overwintered at km 116 (2002/2003) and has been identified several time at km 89 (Stuart River confluence).
- In July of 2003 it was identified within the Stuart River but returned to the Nechako by early August, possibly as part of a feeding migration.
- Rated end of tag life was May 2006, therefore likely has expired.

PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT (kg)	Age	Birth Year
4124741829		25/09/2001	116.8	4	199	223	60.3		
Frequency	Code	Telem. Date	River Km	Station	River				
149.700	9	25-Sep-01	116.8	S	NECHAKO	RIVER			
149.700	9	07-Dec-01	116	Ā					
149.700	9	08-Apr-02	116.2	S					
149.700	9	26-Apr-02	116	A					
149.700	9	18-May-02	127.1	A					
149.700	9	07-Jun-02	140.5	Α					
149.700	9	10-Jun-02	131	В					
149.700	9	11-Jun-02	128	В					
149.700	9	12-Jun-02	131.3	A					
149.700	9	18-Jun-02	80	A					
149.700	9	19-Jun-02	79	В					
149.700	9	22-Jun-02	20.1	A	STUART	RIVER			
149.700	9	25-Jun-02	104.6	A					
149.700	9	25-Jun-02	104.6	GS					
149.700	9	29-May-03	104.2	GS					
149.700	9	11-Jun-03	89.7	GS	NECHAKO	RIVER			
149.700	9	11-Jun-03	89.7	A					
149.700	9	19-Jun <i>-</i> 03	116.1	A					
149.700	9	19-Jun-03	116.1	GS					
149.700	9	28-Jun-03	0.1	A	STUART	RIVER			
149.700	9	03-Jul-03	90.4	A	NECHAKO	RIVER			
149.700	9	13-Jul-03	89.7	GS					
149.700	9	14-Jul-03	90.4	A					
149.700	9	15-Jul-03	89.7	GS					
149.700	9	31-Jul-03	116.2	A					
149.700	9	28-Apr-04	116.2	A					
149.700	9	28-Apr-04	116.2	В					
149.700	9	03-May-04	136	GS					
149.700	9	04-May-04	134	A					
149.700	9	04-May-04	134	В					

Frequency	Code	Telem. Date	River Km	Station	River
149.700	9	06-May-04	136	GS	
149.700	9	12-May-04	131	A	
149.700	9	15-May-04	136	GS	
149.700	9	18-May-04	138	В	
149.700	9	19-May-04	136	GS	
149.700	9	20-May-04	116	GS	
149.700	9	25-May-04	134	A	
149.700	9	25-May-04	136	GS	
149.700	9	28-May-04	116	GS	
149.700	9	29-May-04	116	GS	
149.700	9	07-Jun-04	104.2	GS	STUART RIVER

- Fish captured at km 116 in Sept 2001 and assessed as code 4 suggesting it would be ripe the following year.
- Telemetry data shows the fish migrated to the vicinity of the VH spawning area sometime between May 18th (km 127) and June 7th (km 140.5).
- Following the assumed spawning event in 2002, the fish migrated to the Stuart River and was identified at km 20 and 104.6. In May of 2003 it was still located in the Stuart (km 104) suggesting it overwintered there (possibly in Stuart Lake).
- For the remainder of 2003, the fish migrated between rearing locations at km 116 and the Stuart confluence.
- In 2004 the fish was identified at the VH spawning area between May 3rd and May 19th (congregation observed on May 18th). Fish briefly migrated to km 116 on May 20th but returned to the VH spawning area on May 25th and then back to km 116 on May 28/29th. By June 7th the fish had returned to the Stuart River and was identified at the basestation moving upstream presumably to Stuart Lake.

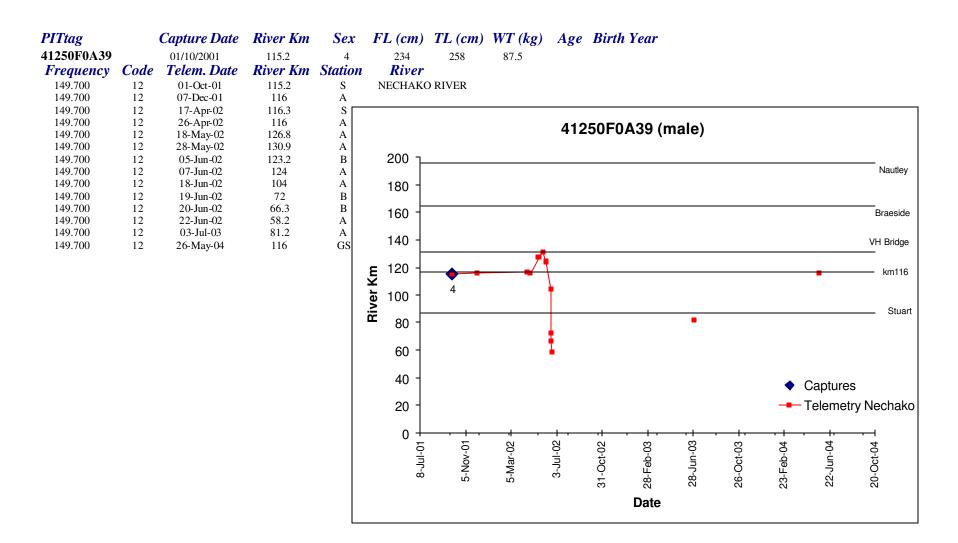


PITtag		Capture Date	River Km	Sex	FL (c	m) [TL (c	m)	W7	r (kg	?)	Age	e B	irth	ı Ye	ar												
41247C4F74		01/10/2001 17/09/2007	116.8 116.8	4 97	188 181		212 219		55	5.3																		
Frequency	Code	Telem. Date	River Km		Ri																							
149.700	2	01-Oct-01	116.8	S	NECH	AKO I	RIVER																					
149.700	2	07-Dec-01	116	A																								
149.700	2	06-Feb-02	116	A																								
149.700	2	18-Mar-02	116.2	S																								
149.700	2	26-Apr-02	116	A																								
149.700	2	18-May-02	127.4	A									440		~ 4		A /	1	٠,									
149.700	2	28-May-02	131.1	Α									412	24 /	C 4	F / 4	4 (n	nai	e)									
149.700	2	07-Jun-02	140.5	A																								
149.700	2	12-Jun-02	79.2	A	2	200 -																						
149.700	2	15-Jun-02	81	В																							Naut	ley
149.700	2	19-Jun-02	80.1	В		180 -																						
149.700	2	22-Jun-02	80.2	A		100																						
149.700	2	25-Jun-02	80.8	A		160 -																					— Braes	ido
149.700	2	25-Jun-02	80.8	GS		100																					Diaes	lue
149.700	2	26-Jun-02	90	GS	_					_																		
149.700	2	28-Jun-02	90.2	A		140 -				J																	VH Bric	dge
149.700	2	03-Jul-02	90.2	В						•						ı												
149.700	2	05-Jul-02	90.3	В	E 1	120 -		4 -	-	4	_	_	_			_										•	— km1	16
149.700	2	06-Jul-02	90.3	В	River Km			, –			Γ		■ Ⅱ			Ш										97		
149.700	2	08-Jul-02	90.5	В	<u>.</u>	100 -		4		/			W			Ш										97		
149.700	2	10-Jul-02	90.3	В	≥					 			4														Str	uart
149.700	2	11-Jul-02	90.3	В	<u>~</u>	80 -				قلل						ľ											0.	uari
149.700	2	12-Jul-02	90.3	В		00				_			1															
149.700	2	13-Jul-02	90.3	В		00							_															
149.700	2	14-Jul-02	90.3	В		60 -																						
149.700	2	17-Jul-02	82.9	A																								
149.700	2	18-Jul-02	82.7	В		40 -																	•	Ca	ntur	00		
149.700	2	19-Jul-02	90	В																					-			
149.700	2	25-Jul-02	83.1	A		20 -																	_	-Tel	eme	etrv	Necha	ako
149.700	2	28-Sep-02	116	S																						,		
149.700	2	09-Oct-02	116	S		0 -						_,								- -			-1		-,1	-1-	-	
149.700	2	11-Oct-02	116	A			- =	Ξ	Q	Ø	2	က	က္က	က	4	4	4	Ω.	Ŋ	2	9	9	9	<u>_</u>	<u></u>	_	ω	
149.700	2	05-Nov-02	116	S		2	8-Jul-01	5-Nov-01	5-Mar-02	3-Jul-02	31-Oct-02	28-Feb-03	28-Jun-03	26-Oct-03	23-Feb-04	22-Jun-04	20-Oct-04	17-Feb-05	17-Jun-05	5-Oct-05	2-Feb-06	12-Jun-06	10-Oct-06	7-Feb-07	7-Jun-07	5-Oct-07	2-Feb-08	
149.700	2	25-Feb-03	116	A		5	ă i	2	₹	÷	ဝိ	ě	Ę	õ	ě	Ę	õ	ě	Ę	õ	ē	Ę	ဝိ	ē	Ę	ဝိ	<u>19</u>	
149.700	2	18-Mar-03	116	A		-	5 ∞	5	5	က	-	<u>ω</u>	8	9	<u>~</u>	ζ	ò	7	-/ 1	5	7	5	0	7	7	5	-2	
149.700	2	26-May-03	107.1	A		•	-				ניט	N	.,	CA	N			_	•	_	_	•	_					
149.700	2	11-Jun-03	91.5	A												Da	ıte											
149.700	2	11-Jun-03	91.5	GS																								
149.700	2	19-Jun-03	90.6	A GS																								
149.700 149.700	2 2	19-Jun-03 03-Jul-03	90.6 116																									
				A																								
149.700	2	14-Jul-03	116.4	A																								
149.700	2 2	31-Jul-03	70.4	A B																								
149.700	2	28-Apr-04	124.6	В																								

149.700	2	04-May-04	134	A
149.700	2	04-May-04	134	В
149.700	2	12-May-04	128	A
149.700	2	16-May-04	136	GS
149.700	2 2 2	17-May-04	116	GS
149.700		18-May-04	138	В
149.700	2 2	18-May-04	137	A
149.700	2	19-May-04	136	GS
149.700	2	25-May-04	82	A
149.700	2	09-Jun-04	89.7	GS
149.700	2	10-Jun-04	116	GS
149.700	2 2 2	10-Jun-04	89.7	GS
149.700		11-Jun-04	89.7	GS
149.700	2	11-Jun-04	116	GS
149.700	2 2	19-Jun-04	116	GS
149.700	2	20-Jun-04	116	GS
149.700	2	21-Jun-04	116	GS
149.700	2 2	22-Jun-04	116	GS
149.700	2	23-Jun-04	116	GS
149.700	2	13-Jul-04	116	GS
149.700	2	18-Jul-04	116	GS
149.700	2 2	19-Jul-04	89.7	GS
149.700	2	20-Jul-04	89.7	GS
149.700	2 2	22-Jul-04	89.7	GS
149.700		23-Jul-04	89.7	GS
149.700	2	24-Jul-04	89.7	GS
149.700	2	21-Aug-04	89.7	GS
149.700	2	22-Aug-04	89.7	GS
149.700	2 2	25-Aug-04	89.7	GS
149.700	2	08-Sep-04	89.7	GS
149.700	2	13-May-06	110.2	В

- Fish captured at km 116 in Oct 2001 and assessed as code 4 suggesting it would be ripe the following year.
- Telemetry data shows the fish in the vicinity of the VH spawning area between May 28th and June 7th, 2002.
- Following the presumed spawning event, it migrated to km 80-90 where it spent the summer rearing and feeding.
- Fish likely overwintered in 2002/2003 at km 116. The summer of 2003 it was identified at km 90 and km 70.4, presumably rearing and feeding.
- In 2004, fish was identified at the VH spawning area between May 4th and 19th and presumable spawned as part of observed congregation on May 18th.
- Following spawning, fish migrated to km 89 and 116 for rearing and feeding.
- Last record was from May 2006 at km 110. Tag is presumed to be dead (rated end of life was October 2003).
- Fish was recaptured in Sept 2007 at km 116 (code 97).

PITtag	Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year
41250B2C18	24/09/2001	124.7	2	172	196	39.044		
	12/05/2006	132.1	2	185	210	54		

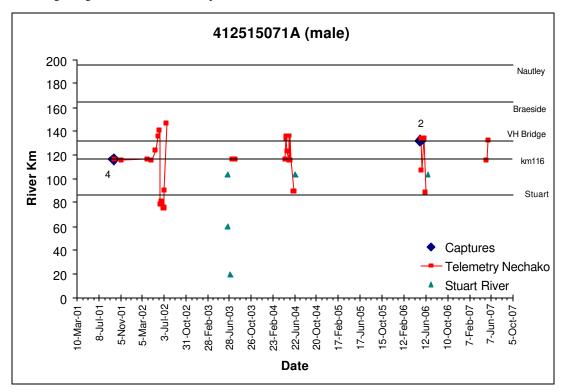


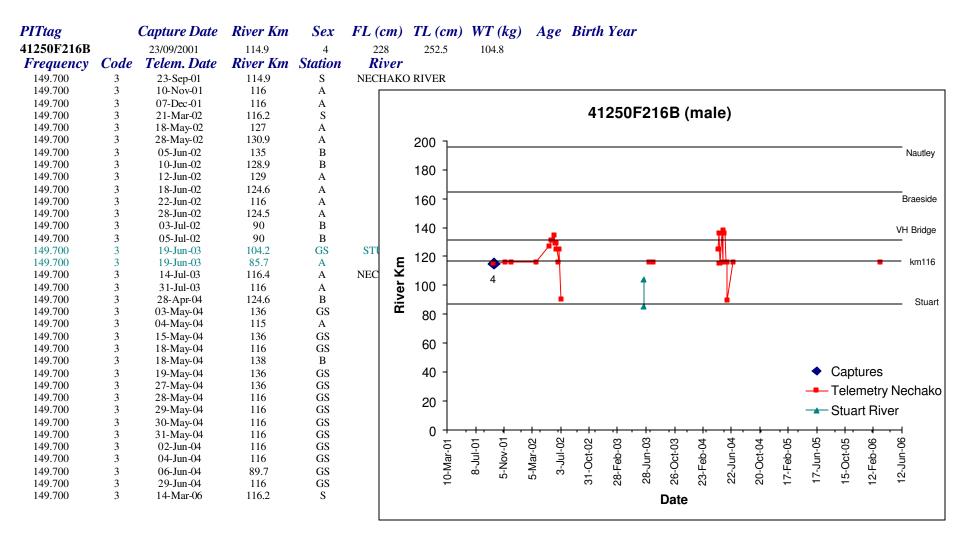
- Fish captured at km 115 in Oct 2001 and assessed as code 4 suggesting it would be ripe the following year.
- Telemetry data shows the fish migrated to km 130 (approx 6 km d/s of VH spawning area) on May 28th, 2002. Fish then migrated downstream and was located at km 58 on June 22nd. Migration likely associated with rearing/feeding habitat.
- On May 26th, 2003 fish was identified in the Fraser River at km 668.
- Single record from 2003 at km 81 (July 3rd).
- Single record from 2004 at km 116 (May 26). Was not identified as part of the congregation at the VH spawning area in 2004.

PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year
412515071A		28/09/2001	116.2	4	183.5	207.5	51.3		
412515071A		12/05/2006	132.1	2	180	209	51.5		
412313071A		12/03/2000	132.1	2	100	209	31		
Frequency	Code	Telem. Date	River Km	Station	River				
149.700	8	28-Sep-01	116.2	S	NECHAKO	RIVER			
149.700	8	10-Nov-01	116	A					
149.700	8	05-Apr-02	116.2	S					
149.700	8	26-Apr-02	116	Α					
149.700	8	18-May-02	124.5	A					
149.700	8	28-May-02	135.3	A					
149.700	8	07-Jun-02	140.5	A					
149.700	8	12-Jun-02	78.4	A					
149.700	8	15-Jun-02	80.6	В					
149.700	8	18-Jun-02	80.4	A					
149.700	8	19-Jun <i>-</i> 02	78.6	В					
149.700	8	22-Jun-02	80	A					
149.700	8	25-Jun-02	79	Α					
149.700	8	25-Jun-02	79	GS					
149.700	8	28-Jun <i>-</i> 02	76.4	A					
149.700	8	29-Jun <i>-</i> 02	75.2	В					
149.700	8	01-Jul-02	76	В					
149.700	8	03-Jul-02	74.8	В					
149.700	8	04-Jul-02	90	GS					
149.700	8	17-Jul-02	146.4	A					
149.700	8	19-Jun-03	104.2	GS	STUART	RIVER			
149.700	8	19-Jun-03	59.8	A					
149.700	8	03-Jul-03	19.5	A					
149.700	8	14-Jul-03	116.4	A	NECHAKO	RIVER			
149.700	8	31-Jul-03	116.2	A					
149.700	8	28-Apr-04	116.2	A					
149.700	8	28-Apr-04	116.2	В					
149.700	8	03-May-04	136	GS					
149.700	8	04-May-04	134	В					
149.700	8	04-May-04	134	A					
149.700	8	12-May-04	123	A					
149.700	8	19-May-04	116	GS					
149.700	8 8	21-May-04	136 116	GS GS					
149.700		23-May-04		GS					
149.700	8 8	24-May-04	116 136.5						
149.700	8	25-May-04	116	A GS					
149.700		28-May-04							
149.700 149.700	8 8	16-Jun-04 19-Jun-04	89.7 89.7	GS GS					
149.700	8	19-Jun-04 26-Jun-04	89.7 104.2	GS	STUART	DIVED			
149.700	49	18-May-06	134	GS	NECHAKO				
149.800	49	22-May-06	107	A	INECHANC	KIVEK			
149.800	49 49	02-Jun-06	134	GS					
147.000	49	U∠-Jull-UU	134	as					

Frequency	Code	Telem. Date	River Km	Station	River
149.800	49	13-Jun-06	89	A	
149.800	49	27-Jun-06	104.2	GS	STUART RIVER
149.800	49	16-May-07	116	A	NECHAKO RIVER
149.800	49	25-May-07	132	A	

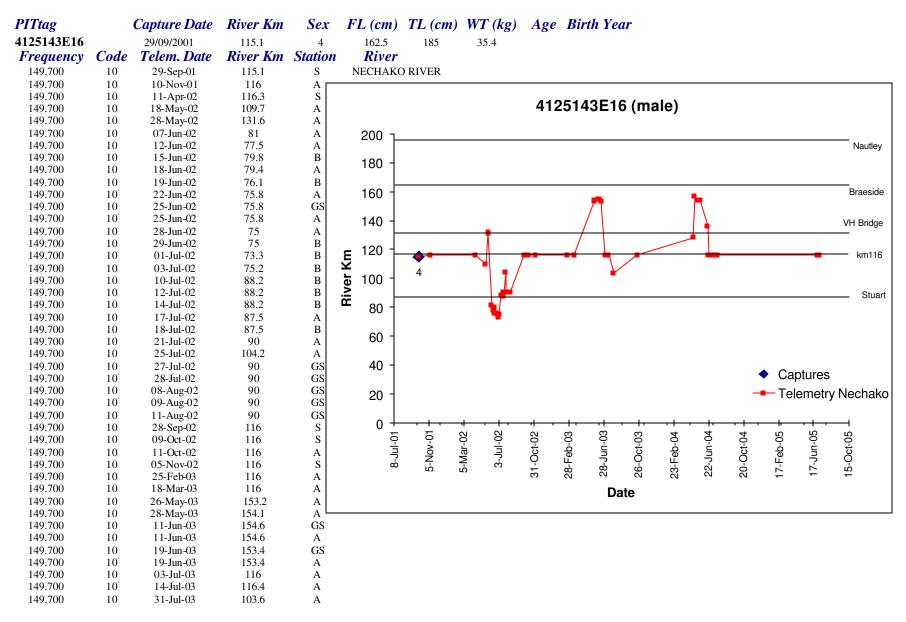
- Assessed as code 4 in fall of 2001, therefore likely code 5 (ripe) in spring of 2002. Was identified in the vicinity of the VH spawning area from May 27th June 7th, 2002 (potential spawning event).
- Was not identified as part of the 2004 spawning congregation (May 18th), however, migrated to the VH spawning area May 21st and 25th.
 Was not identified as part of the 2006 spawning congregation (May 19th 21st), however was identified at km 134 (approx 2 km d/s of Burrard Bridge) on May 18th and June 2nd.
- In 2007, fish was identified at km 132 (approximately 4 km d/s of Burrard Bridge) on May 25th (10 days prior to eggs being collected).
- Has been identified on 4 occasions within the Stuart River. In 2003, 2004 and 2006, the fish was identified within the Stuart at the end of June. This suggests it is likely overwintering in Stuart Lake and migrating into the Nechako to spawn.
- Rated end of tag life is December 2010.





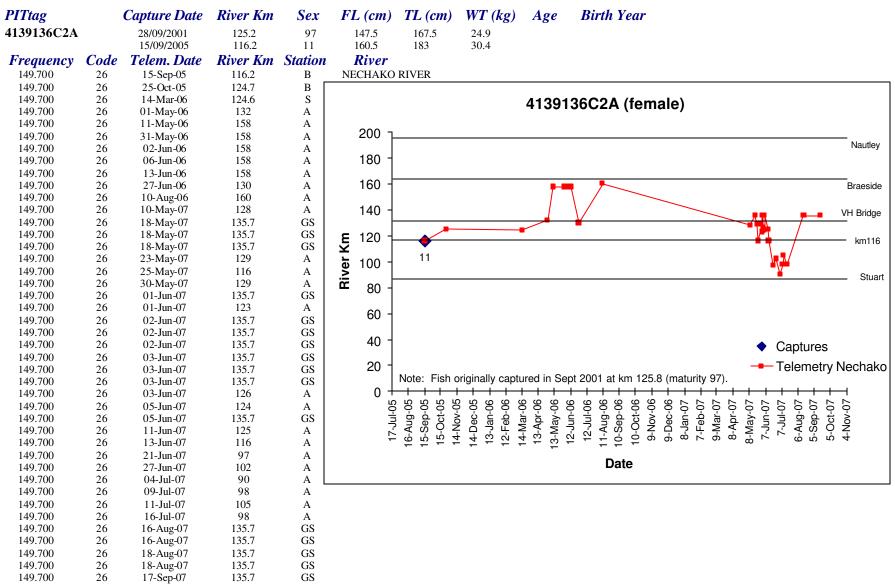
- Fish captured at km 115 in Sept 2001 and assessed as code 4 suggesting it would be ripe the following year.
- Telemetry data shows the fish at the VH spawning area on June 2nd, 2002. Fish then migrated downstream and was located at km 90 on July 3rd. Migration likely associated with rearing/feeding.
- Fish may have been in Stuart Lake between July 2002 and June 2003.
- In 2003, fish was identified in the Stuart River (km 104 and 85.7; June 19th) before moving into the Nechako (km 116; July 14th and 31st). In 2004, fish was identified at the VH spawning area on May 3rd, 18th, 19th, and 27th, with migrations to km 116 interspersed between those dates. By the end of June, fish was located at km 116.

• Final record is from km 116 in March 2006. No records from 2007 and tag is presumed dead (rated end of life May 2006).



149.700 Frequency	10 Code	20-Oct-03 Telem. Date	116 River Km	GS Station	River
149.700	10	28-Apr-04	128	A	
149.700	10	28-Apr-04	128	В	
149.700	10	04-May-04	157	Α	
149.700	10	12-May-04	154	A	
149.700	10	18-May-04	154	A	
149.700	10	25-May-04	154	A	
149.700	10	18-Jun-04	136	GS	
149.700	10	21-Jun-04	116	GS	
149.700	10	22-Jun-04	116	GS	
149.700	10	23-Jun-04	116	GS	
149.700	10	24-Jun-04	116	GS	
149.700	10	25-Jun-04	116	GS	
149.700	10	26-Jun-04	116	GS	
149.700	10	27-Jun-04	116	GS	
149.700	10	28-Jun-04	116	GS	
149.700	10	29-Jun-04	116	GS	
149.700	10	30-Jun-04	116	GS	
149.700	10	08-Jul-04	116	GS	
149.700	10	09-Jul-04	116	GS	
149.700	10	10-Jul-04	116	GS	
149.700	10	11-Jul-04	116	GS	
149.700	10	12-Jul-04	116	GS	
149.700	10	13-Jul-04	116	GS	
149.700	10	14-Jul-04	116	GS	
149.700	10	15-Jul-04	116	GS	
149.700	10	16-Jul-04	116	GS	
149.700	10	21-Jul-04	116	GS	
149.700	10	01-Jul-05	116	GS	
149.700	10	02-Jul-05	116	GS	
149.700	10	03-Jul-05	116	GS	
149.700	10	04-Jul-05	116	GS	
149.700	10	05-Jul-05	116	GS	
149.700	10	06-Jul-05	116	GS	
149.700	10	07-Jul-05	116	GS	

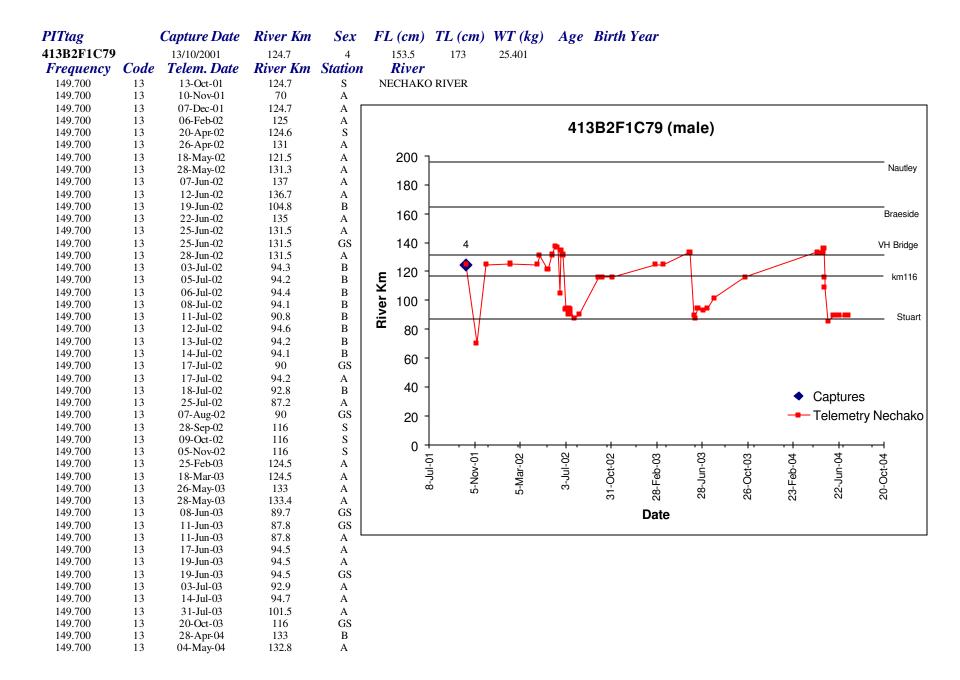
- Fish captured at km 115 in Sept 2001 and assessed as code 4 suggesting it would be ripe the following spring.
- Telemetry data shows the fish at km 131 on May 28th, 2002 (approx 5 km d/s of VH spawning area). This may have been associated with a spawning event. Fish then migrated downstream and was located at km 73-81 through June and July. Migration likely associated with rearing/feeding.
- Fish likely overwintered at km 116 in 2002/2003.
- Fish was identified in vicinity of km 154 from May 26th and June 19th, 2003 and from May 12th to 25th, 2005. The 2004 dates overlap observed spawning activity at VH and the potential exists that this fish may have been staging at km 154 but unlikely it was spawning since it likely spawned in 2003.
- All records from 2004 and 2005 are from km 116 (rearing).



- Fish was tagged in Sept 2005 and likely overwintered at km 124.
- In 2006, fish was located at km 158 (approx 4 km d/s of Braeside) during period where spawning was observed at VH (May 19-22nd). Last recorded location in 2006 (Aug 10th) was at km 160. The overwintering location for 2006 is unknown.

- In 2007, fish was identified at the VH spawning area on May 18th, then again on June 2nd, 3rd, and 5th (period when eggs were collected from that location). This suggests the fish spawned during the 2007 event. Therefore the fish would have matured from code 11 in Sept 2005 to code 15 in May 2007. Alternatively, fish may have been displaying immature movements responding to cues but not spawning.
- Following possible spawning, the fish migrated to the section upstream of the Stuart River confluence presumably for feeding/rearing. However, the fish returned to the VH spawning area by mid-August and remained there through mid-September.
- Rated end of tag life is April 2010.

PITtag	Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year
41392C0A2D	05/07/1999 28/09/2001	125.2 125.1	98 98	77 92	88 102.5	3.5 5.5	10	1989
PITtag	Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT (kg)	Age	Birth Year
413931641C	10/09/1999 17/05/2006	125 124.5	2 97	98.5 120	114 137	8.2 12	18	1981



Frequency	Code	Telem. Date	River Km	Station	River
149.700	13	04-May-04	132.8	В	
149.700	13	12-May-04	133	A	
149.700	13	15-May-04	136	GS	
149.700	13	18-May-04	116	GS	
149.700	13	18-May-04	108.5	A	
149.700	13	25-May-04	85.5	A	
149.700	13	10-Jun-04	89.7	GS	
149.700	13	20-Jun-04	89.7	GS	
149.700	13	25-Jun-04	89.7	GS	
149.700	13	10-Jul-04	89.7	GS	
149.700	13	11-Jul-04	89.7	GS	
149.700	13	14-Jul-04	89.7	GS	
149.700	13	15-Jul-04	89.7	GS	
149.700	13	18-Jul-04	89.7	GS	

- Fish captured at km 124 in Oct 2001 and assessed as code 4 suggesting it would be ripe (code 5) the following year.
- Telemetry data shows the fish migrated to km 70 in Nov but was at km 124 in Dec (overwintering).
- In 2002, telemetry data shows the fish at the VH spawning area from June 7th-12th. Fish then migrated downstream and was located at km 94 through July. Migration likely associated with rearing/feeding.
- In 2003, fish was at km 133 on May 26-28th, but migrated d/s to vicinity of km 94 in June and July.

 In 2004, fish was identified at km 136 on May 15th but on day that spawning was observed (May 18th) fish had returned to km 116. As a result it is unclear if fish spawned or not.

PITtag 422E40300F Frequency 149.770 149.770	Code 26 26	Capture Date 01/09/2005 Telem. Date 01-Sep-05 01-Sep-05	116 River Km 116.2 116.2	97	FL (cm) 91 River NECHAKO	104.5	WT (kg) 4.4	Age	Birth 1	Year						
149.770 149.770 149.770 149.770	26 26 26 26 26	25-Oct-05 25-Oct-05 14-Mar-06 14-Mar-06	125 125 124.6 124.6	B B S S	000			42	2E403	00F (ı	unkno	own)				
149.770 149.770 149.770 149.770	26 26 26 26 26	01-May-06 01-May-06 11-May-06	120 120 120 120 120	A A A	180											Nautley
149.770 149.770 149.770	26 26 26	11-May-06 28-May-06 28-May-06	120 125 125	A A A	160) 										Braeside
149.770 149.770 149.770	26 26	31-May-06	123 120 120	A	140	o -										VH Bridge
149.770 149.770 149.770	26 26 26	31-May-06 13-Jun-06 13-Jun-06	120 120 120	A A A	River Km	97						-			1	km116
					Ē 80) -										Stuart
					60	o -										
					4(o -								•	Captures	
					20	o -									Telemetry	Nechako
						-Aug-05	- 20-doc-	90-vov-t	Dec-05	3-Jan-06 —	-Feb-06 -	t-Mar-06 —	3-Apr-06 -	-May-06 	3un-06	2-Jul-06 📙

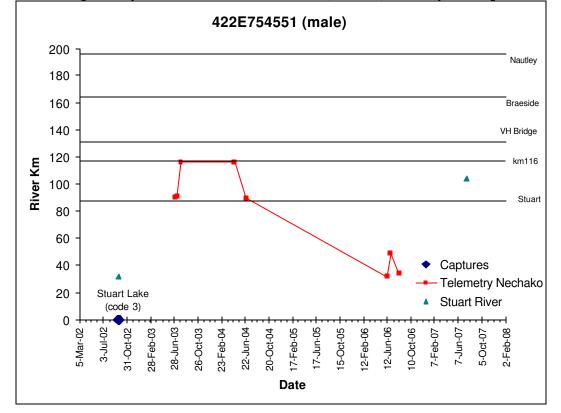
- Captured in Sept 2005 at km 116. Adult fish based on size but sex unknown.
- Telemetry shows fish remained at km 120-125 in 2006.
- Was not identified in 2007 (frequency not tracked due to tag being different codeset).

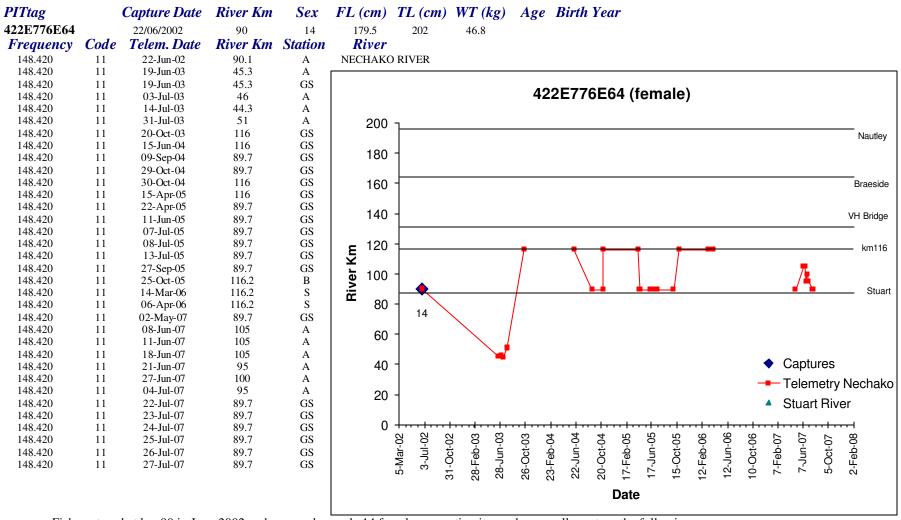
Date

PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year
422E754551		19/09/2002	Stuart Lake	3	195	231	61	44	1958
Frequency	Code	Telem. Date	River Km	Station	River				
148.420	12	19-Sep-02	31.8	В	STUART	LAKE			
148.420	12	03-Jul-03	90.2	A	NECHAKO	RIVER			
148.420	12	14-Jul-03	91	A					
148.420	12	31-Jul-03	116	A					
148.420	12	28-Apr-04	116.2	В					
148.420	12	25-Jun-04	89.7	GS					
148.420	12	13-Jun-06	32	A					
148.420	12	27-Jun-06	49	A					
148.420	12	10-Aug-06	34	A					
148.420	12	20-Jul-07	104.2	GS	STUART	RIVER			

- Fish originally captured in Stuart Lake (Sept 2002) and has been identified in the Stuart River at km 32 (Sept 2002) and km 104 (July 2007).
- Fish was identified in the Nechako at km 90 (July 2003) and then moved to km 116 where it likely overwintered.
- In 2004, fish was located at km 89 (Stuart River confluence) on June 25th.
- In 2006, fish was identified at km 32-49 from June 27th and August 10th. This area has been used by other fish during the same period and likely provides feeding opportunities.

• In 2007, tag was only identified once in the Stuart River (km 104.2). Fish may have migrated back into Stuart Lake (direction of travel not determined).





- Fish captured at km 90 in June 2002 and assessed as code 14 female suggesting it may be sexually mature the following year.
- In 2003, fish was not identified at VH spawning area and instead was located in vicinity of km 45 in June and July. This area is assumed to provide rearing and feeding habitat.
- In 2004-2006 fish was only identified at either km 116 or 89 (Stuart River confluence). It was not identified at the VH spawning area during any known spawning events.
- In 2007 fish was located between km 105 (June 8th-18th) and km 89 (May 2nd, July 22nd-27th).
- Rated end of tag life is unknown.

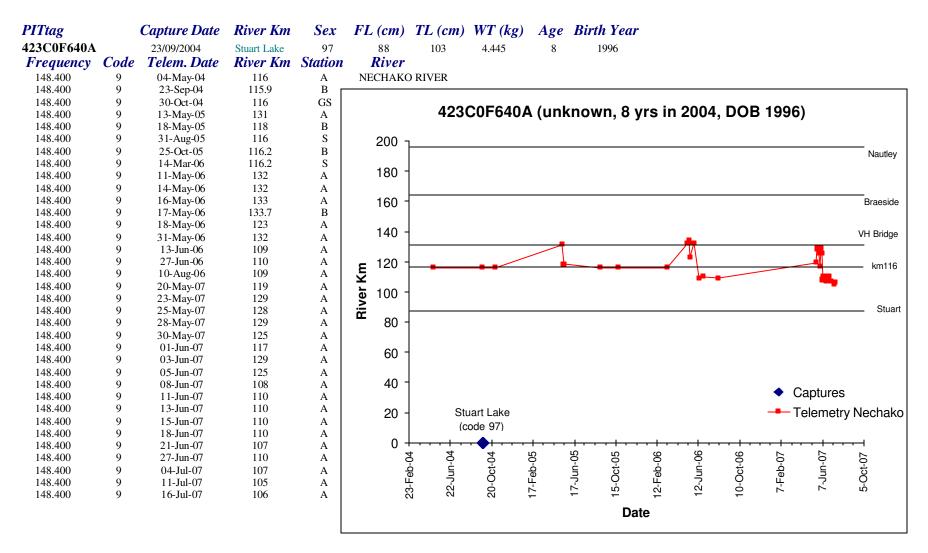
PITtag 42360E1A0F Frequency 149.770	Code 18	31-Aug-05	116 River Km 116.2	97 Station S		109.5 River	TL (cm) 126.5 PRIVER	WT (kg) 7.6	Age	Birth	Year						
149.770 149.770 149.770 149.770 149.770 149.770	18 18 18 18 18	25-Oct-05 14-Mar-06 06-Apr-06 01-May-06 11-May-06	116.2 116.2 116.2 114 130 100	B S S A A		200 -			4236	0E1A	.0F (u	nkno	wn)				
149.770 149.770	18	28-May-06 31-May-06	108	A A		180 -											Nautley
						160 - 140 -											Braeside VH Bridge
					Ę	120 -	•	-					•				km116
					River Km	100 -	97									7	Stuart
					ш	80 - 60 -											
						40 -										aptures	
						20 -										elemetry Stuart Riv	Nechako er
						0 -	15-Sep-05 	15-Oct-05	14-Nov-05 -	14-Dec-05 -	13-Jan-06 -	12-Feb-06 -	14-Mar-06 -	13-Apr-06 -	13-May-06 -	12-Jun-06 —	12-Jul-06
						·	, -			•	Date	•	•		-		

- Fish captured in August 2005 at km 116 and assessed as being adult based on size but sex unknown. Likely overwintered at km 116 in 2005/2006 and was identified at km 130 on May 11th 2006. At end of May was located at km 108. Migrations presumably for rearing and feeding due to sexual immaturity.
- Frequency not tracked in 2007 due to tag being a different codeset.

PITtag 42395A774E Frequency 148.320 148.320		Capture Date 06/09/2004 Telem. Date 25-Oct-05 14-Mar-06	River Km Stuart Lake River Km 116.2 116.2	Sex Station B S		206 River	TL (cm) 234 D RIVER	WT (kg) 62.053	Age 52	Birth Ye 6 1952	ar					
148.320 148.320 148.320 148.320 148.320	2 2 2 2 2	05-May-07 25-May-07 28-May-07 30-May-07	116 127 124 121	A A A A		200 -	42	395 A 77	4E (ma	ale, 52 y	rs in 2	004, D	OB 1	952)		
148.320 148.320 148.320 148.320	2 2 2 2	01-Jun-07 05-Jun-07 08-Jun-07 04-Jul-07	118 121 120 123	A A A		180 -								Ī	1	Nautley
148.320 148.320	2 2	30-Aug-07 05-Sep-07	192.5 192.5	GS GS		160 -										Braeside VH Bridge
					E)	120 -					<u> </u>			<u> </u>		km116
					River Km	100 -										Stuart
						80 - 60 -										
						40 -								◆ Cap		
						20 -	Stuart Lake (code 2)		+	 		 	. 	. 	emetry	Nechako
						2	22-Jun-04 20-Oct-04	17-Feb-05	17-Jun-05	15-Uct-05 12-Feb-06	12-Jun-06	10-Oct-06	7-Feb-07	7-Jun-07	5-Oct-07	2-Feb-08
						•		-		•	Date	←				

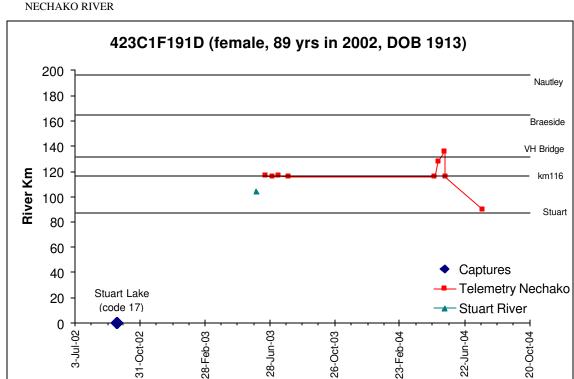
- Fish originally captured in Stuart Lake in Sept 2004 (code 2).

- Telemetry data identified the fish at km 116 from Oct 2005 to May 2007.
 Fish showed some limited movement in the summer of 2007 between May 5th and July 4th between km 116 and 123, respectively.
 On Aug 30th and Sept 5th it was identified at the Nautley confluence (km 192). Direction suggests it was in Fraser Lake between those dates.
- Rated end of tag life is April 2009.



- Telemetry records exist before tagging date. Likely data entry error.
- Fish originally tagged in Stuart Lake (Sept 2004) and was assessed as an adult based on size but sex unknown.
- Fish has shown migrations to the vicinity of km 132 in spring of 2005, 2006 and 2007, however has not been identified within any spawning congregations.
- Fish is too young to be spawning and is likely just responding to spawning cues.
- Rated end of tag life is April 2009.

PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)
423C1F191D		18/09/2002	0	17	243.5	273	122.85
Frequency	Code	Telem. Date	River Km	Station	River		
148.320	5	18-Sep-02	20.8	GS	STUART	LAKE	
148.320	5	18-Sep-02	20.8	В			
148.320	5	03-Jun-03	104.2	GS	STUART	RIVER	
148.320	5	19-Jun-03	116.2	GS	NECHAKO	RIVER	
148.320	5	19-Jun-03	116.2	Α _			
148.320	5	03-Jul-03	116	A			
148.320	5	14-Jul-03	116.5	Α		423	C1F191E
148.320	5	31-Jul-03	116	A			
148.320	5	28-Apr-04	116	A	200 ¬		
148.320	5	04-May-04	127.2	A	200		
148.320	5	15-May-04	136	GS	180 -		
148.320	5	17-May-04	116	GS	100		
148.320	5	24-Jul-04	89.7	GS	160 -		



Date

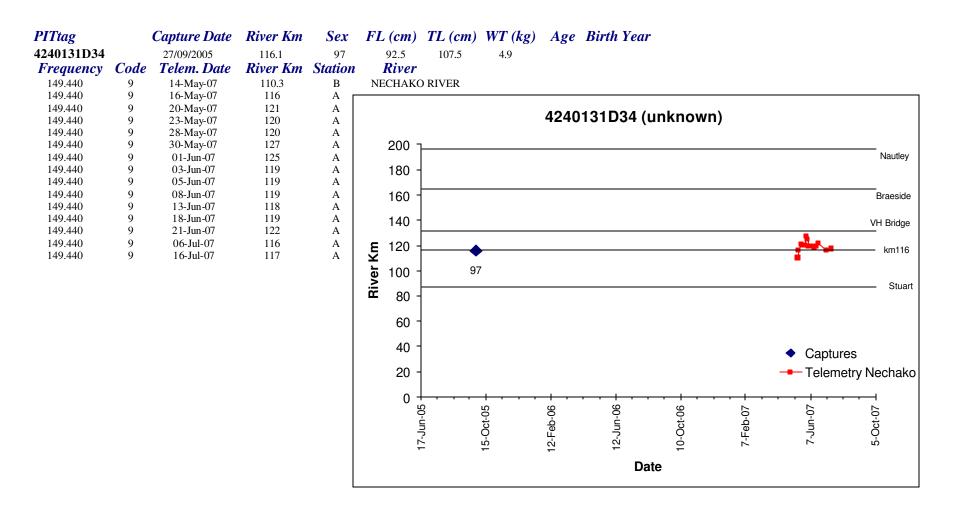
Age Birth Year

1913

- Originally tagged in Stuart Lake in Sept 2002 (code 17) and overwintered there.

 Identified in Stuart River on June 3rd, 2003 (km 104) but by June 19th was identified at km 116.

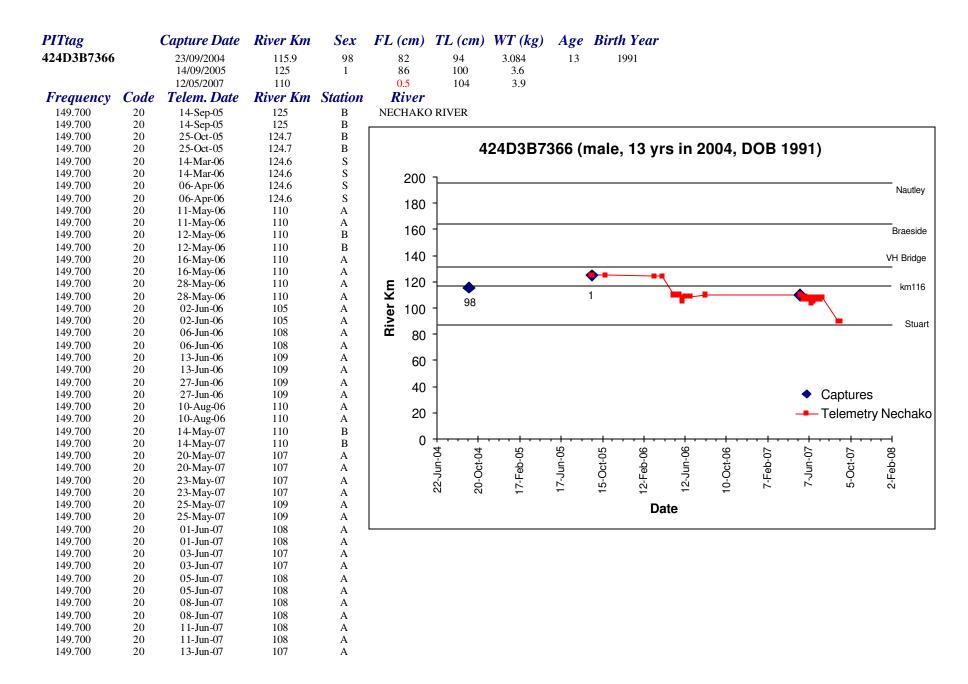
 On May 15th, 2004 fish was identified at the VH spawning area however, had returned to km 116 on May 17th. The congregation was observed on May 18th and it is unclear if fish spawned or not.
- Has not been identified since July 24th 2004 at km 89 (Stuart confluence) and may have returned to Stuart Lake.



- Fish originally tagged at km 116 in Sept of 2005. Adult based on size but sex unknown.
- Telemetry records are all from 2007 when fish moved between km 110 (May 14th) and km 127 (May 30th). In June and July fish had returned to km 116.
- Possibly a mortality in Nautley River (Pers. Comm. Cory Williamson)
- Rated end of tag life is unknown.

PITtag 424D24192A Frequency 149.700	Code 45	05-Jun-07	129.3 River Km 116	A		224 River	TL (cm) 253.5 PRIVER	WT (kg) 77.7	Age	Birth Year
149.700 149.700 149.700 149.700	45 45 45 45	08-Jun-07 08-Jun-07 15-Jun-07 21-Jun-07	135.7 130 124 135	GS A A A					42	4D24192A (male)
						200 -				Nautley
						160 -				Braeside
					٤	140 - 120 -				5 VH Bridge km116
					River Km	100 -				Stuart
						80 - 60 -				
						40 - 20 -				◆ Captures Telemetry Nechako
						0 -	<u> </u>		+ 20-	+
						0 70 70 8	-0 -0		8-May-07	

- Fish was captured at km 129 on May 10th, 2007 and assessed as a ripe male (code 5). Fish used as brood stock for 2007 hatchery program (male #1). Telemetry data shows the fish migrated to the VH spawning area on June 8th, which was the second day eggs were collected from that location.
- Rated end of tag life is January 2012.



Frequency	Code	Telem. Date	River Km	Station	River
149.700	20	13-Jun-07	107	A	
149.700	20	15-Jun-07	104	Α	
149.700	20	15-Jun-07	104	Α	
149.700	20	18-Jun-07	105	A	
149.700	20	18-Jun <i>-</i> 07	105	Α	
149.700	20	21-Jun-07	108	A	
149.700	20	21-Jun-07	108	A	
149.700	20	27-Jun-07	106	Α	
149.700	20	27-Jun-07	106	Α	
149.700	20	04-Jul-07	108	A	
149.700	20	04-Jul-07	108	Α	
149.700	20	06-Jul-07	108	Α	
149.700	20	06-Jul-07	108	A	
149.700	20	09-Jul-07	106	A	
149.700	20	09-Jul-07	106	Α	
149.700	20	11-Jul-07	107	Α	
149.700	20	11-Jul-07	107	A	
149.700	20	16-Jul-07	108	A	
149.700	20	16-Jul-07	108	Α	
149.700	20	01-Sep-07	89.7	GS	
149.700	20	01-Sep-07	89.7	GS	
149.700	20	04-Sep-07	89.7	GS	
149.700	20	04-Sep-07	89.7	GS	
		•			

- Fish has never been identified in known spawning areas. Likely too young.
- Predominantly located in the vicinity of km 110 and was identified at the Stuart Confluence in Sept of 2007.
- Estimated end of tag life December 2011.
- Fork length for 2007 assessment entered as 0.5 cm but should be 90.5 cm (Pers. Comm. Cory Williamson).

PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age Birth Year
424D654209		17/09/2002	Stuart Lake	2	141	157	71.363	28-40+
Frequency	Code	Telem. Date	River Km	Station	River			
148.320	4	17-Sep-02	21.7	В	STUART	LAKE		

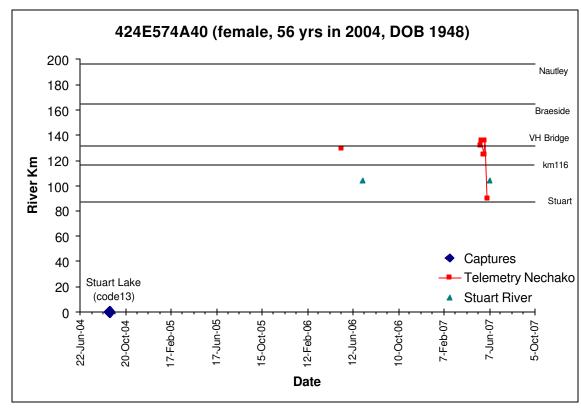
- Fish only identified in Stuart Lake.
- Rated end of tag life was May 2005 therefore assumed to be dead.

PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year
424E476B0C		07/09/2004	Stuart Lake	15	262	292	151.8		
Frequency	Code	Telem. Date	River Km	Station	River				
148.380	1	25-Oct-05	116.2	В	NECHAKO	RIVER			
148.380	1	06-Apr-06	116.2	S					
148.380	1	01-May-06	124.6	A					

- Fish captured in Stuart Lake and assessed as ripe female (code 15). Fish identified at km 116 and 124 in Oct 2005 and April/May 2006, respectively.
- Rated end of tag life is April 2009.

PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year
424E574A40		07/09/2004	Stuart Lake	13	231	259	83.035	56	1948
Frequency	Code	Telem. Date	River Km	Station	River				
148.380	5	13-May-06	129.4	В	NECHAKO	RIVER			
148.380	5	08-Jul-06	104.2	GS	STUART	RIVER			
148.380	5	16-May-07	132	A	NECHAKO	RIVER			
148.380	5	17-May-07	135.7	GS					
148.380	5	17-May-07	135.7	GS					
148.380	5	23-May-07	125	A					
148.380	5	26-May-07	135.7	GS					
148.380	5	01-Jun-07	89.7	GS					
148.380	5	07-Jun-07	104.2	GS	STUART	RIVER			

- Fish originally captured in Stuart Lake in Sept 2004 (female, code 13).
- In 2006, was identified in the Nechako (km 129, May 13th) and Stuart (km 104, July 8th), presumably entered lake.
- In 2007, fish was identified at the VH spawning area on May 17th and 26th but had left area and returned to the Stuart River (km 104) by June 7th. As a result fish likely did not take part in spawning that occurred between June 2nd and 9th.
- Fish likely returned to Stuart Lake.
- Rated end of tag life is April 2009.

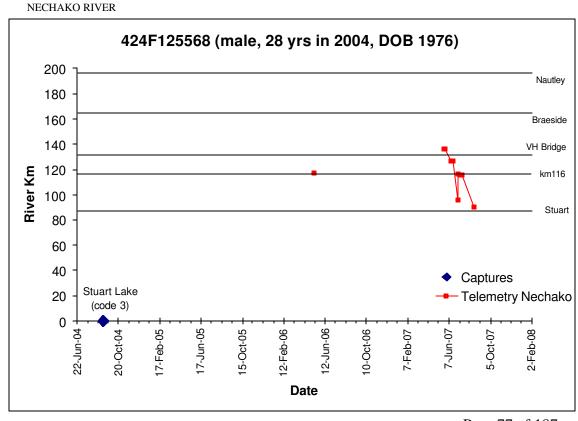


PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year
424F046D54		09/09/2004	Stuart Lake	16	218	247	79.464	nr	
Frequency	Code	Telem. Date	River Km	Station	River				
149.800	3	07-Sep-04	110	В	STUART	LAKE			
149.800	3	09-Sep-04	0	В					
149.800	3	10-May-05	104.2	GS	STUART	RIVER			
149.800	3	07-Jul-05	89.7	GS	NECHAKO	RIVER			
149.800	3	08-Jul-05	89.7	GS					

- Fish tagged in Stuart Lake in Sept 2004.
- Fish was identified in the Stuart River (km 104) in May 2005 and at the confluence of the Stuart in July 2005.

Rated end of tag life was May 2007 therefore likely dead.

PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	
424F125568		06/09/2004	Stuart Lake	3	182.5	203	55.803	
Frequency	Code	Telem. Date	River Km	Station	River			
148.320	3	12-May-06	116.2	В	NECHAKO	RIVER		
148.320	3	26-May-07	135.7	GS 🗖				-
148.320	3	26-May-07	135.7	GS		4.0	4540550	
148.320	3	15-Jun-07	126	A		42	4F12556	į
148.320	3	18-Jun-07	126	A				
148.320	3	04-Jul-07	95	Α	200 ¬			
148.320	3	04-Jul-07	116	Α				
148.320	3	09-Jul-07	115	Α	180 -			
148.320	3	11-Jul-07	115	A				
148.320	3	16-Jul-07	115	Α	160 -			
148.320	3	20-Aug-07	89.7	GS	100			

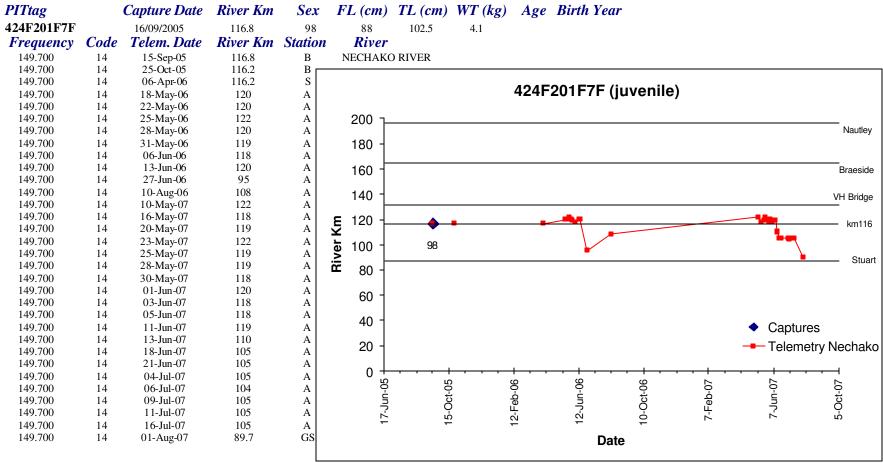


Age Birth Year

1976

28

- Fish originally captured in Stuart Lake in Sept 2004.
- In May 2006, fish was identified at km 116 (Nechako).
- Fish was identified at VH spawning area on May 26th, 2007 but was not identified within spawning congregation from June 2-8th, 2007. As a result, it is unclear whether fish was involved in spawning or not.
- On August 20th, fish was identified at Stuart confluence and may have returned to Stuart system.
- Rated end of tag life is April 2009.



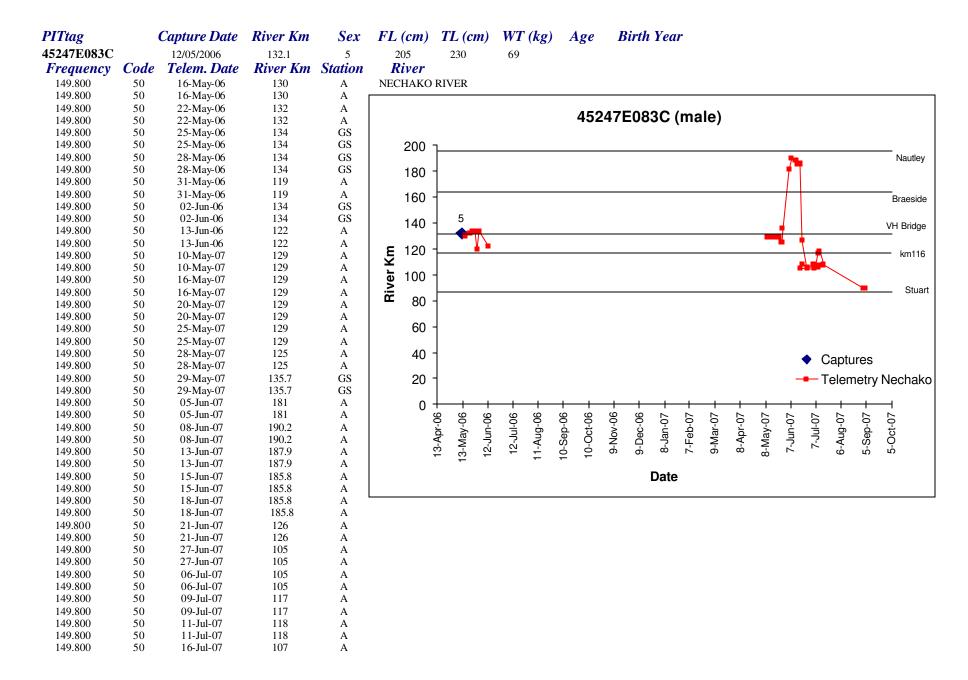
- Originally captured at km 116 in Sept 2005 and assessed as a juvenile based on size.
- Telemetry predominantly locates it at known overwintering/rearing locations (km 116, 110 and 105), however fish does show short migrations presumably associated with rearing and feeding.

PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year
4250137C79		09/09/2004	Stuart Lake	11	210	236	64.285	44	1960
Frequency	Code	Telem. Date	River Km	Station	River				
148.380	4	18-Jul-05	89.7	GS	NECHAKO	RIVER			
148.380	4	20-Jul-05	89.7	GS					
148.380	4	24-Jul-05	89.7	GS					
148.380	4	25-Oct-05	116.2	В					
148.380	4	14-Mar-06	116.2	S					
148.380	4	06-Apr-06	116.2	S					
148.380	4	27-Apr-06	116.2	S					
148.380	4	01-May-06	116.2	A					

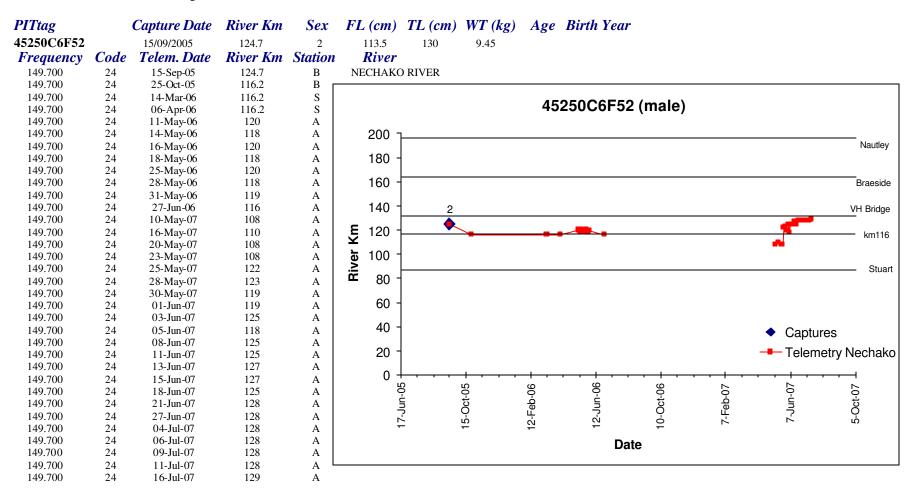
- Fish originally tagged in Stuart Lake (Sept 2004) and has since been identified at km 89 (Stuart confluence, July 2005) and km 116 (Oct 2005 May 2006).
- Rated end of tag life is April 2009.

PITtag 4255261C66 Frequency 148.420 148.420	Code 13 13	Capture Date 10/05/2006 Telem. Date 12-May-06 13-May-06	124.5 River Km 125.6 116.2	Sex 3 Station B B B	FL (cm) 221 River NECHAKO	247	WT (kg) 86	Age	Birth Ye	ear			
148.420 148.420 148.420 148.420 148.420 148.420 148.420 148.420 148.420 148.420 148.420 148.420 148.420 148.420 148.420 148.420	13 13 13 13 13 13 13 13 13 13 13 13 13 1	14-May-06 17-May-06 17-May-06 16-May-07 29-May-07 30-May-07 30-May-07 02-Jun-07 02-Jun-07 07-Jun-07 08-Jun-07 10-Jun-07 27-Jun-07 07-Sep-07 05-Oct-07	116.2 116.2 116.2 116.2 135.7 135.7 135.7 135.7 135.7 135.7 135.7 135.7 135.7 139.7 128 89.7 89.7	B B GS GS GS GS GS GS GS GS GS GS	200 180 160 140 W 120 100 80 60 40 20 0	-	12-Jun-06 –	. 190+00-01		C66 (ma	e) - 20-unr-2	Capture Teleme	Nautley Braeside VH Bridge while It was a straig of the straig of th
										Date			

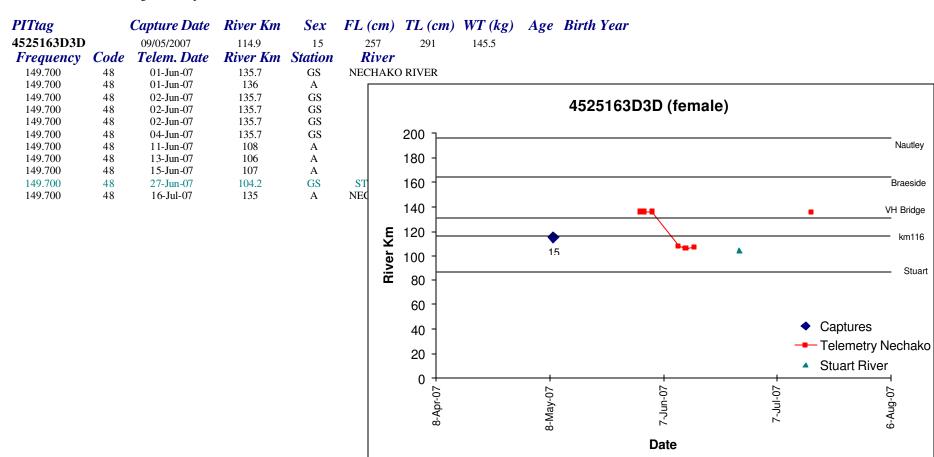
- Fish originally captured at km 124.5 in May 2006 and assessed as code 3. Telemetry data from 2006 show the fish moved from km 125 to km 116 where is likely overwintered.
- In 2007, fish was located at the VH spawning area from May 29th to June 10th and therefore it may have taken part in spawning activities observed at that location from June 2nd to 8th.
- Following spawning, fish moved downstream to km 89.7 (Stuart confluence).
- Rated end of tag life is Dec 2010.



- 149.800 50 16-Jul-07 107 A
 - Identified in the vicinity of the 2006 spawning congregation at Vanderhoof (May 22nd, km 134).
 - Migrated to VH spawning area at the end of May 2007. Potentially could have been present for beginning of spawning event (June 2nd) but was identified upstream at km 181 on June 5th and therefore left part way through (second group of eggs were collected from VH June 8th). The fish remained at km 181-190 until June 18th, suggesting potential spawning or rearing/feeding habitat in that area.
- Fish was last identified at km 107 on July 17th, 2007. Potential overwintering habitat could be km 116 or 110.
- Estimated end of life of tag December 2011.

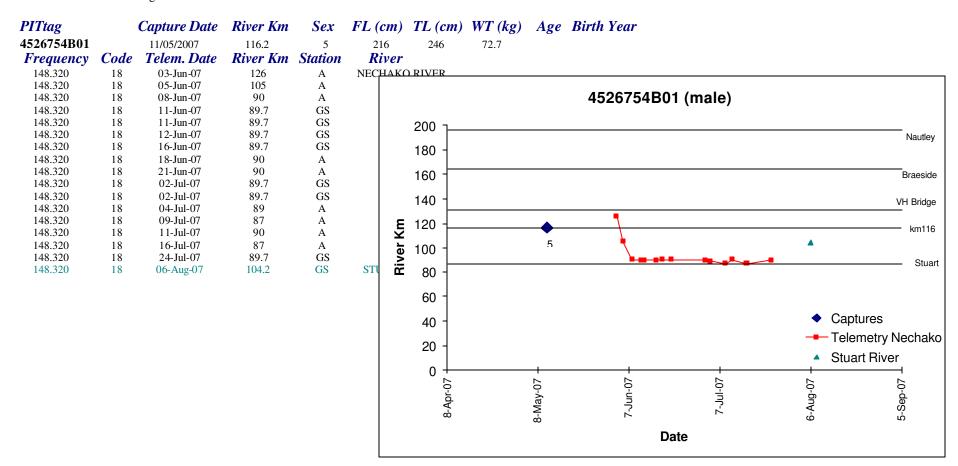


- Fish originally tagged in Sept 2005 at km 124.7 (code 2). Telemetry data from 2005 and 2006 predominantly locate it in the vicinity of km 116.
- In 2007, fish migrated from km 108 (May 10th) to km 125 (June 3rd) likely in response to spawning cues. However, fish was not identified at known VH spawning area and therefore likely did not spawn.
- Rated end of tag life is April 2010.



- Fish originally tagged at km 115 in May 2007 and assessed as a ripe female (code 15). Fish was used a brood stock for 2007 hatchery program (Female #3)
- Fish was released back into the river at km 135.7 and remained in vicinity of spawning area till June 4th. Fish may or may not have contributed eggs to those collected at the VH location during that period.

- Fish migrated into Stuart River (km 104, June 27th) but returned to Nechako (km 135, July 16th). Rationale for migration unclear but fish may have been responding to spawning cues or seeking out rearing habitat.
- Rated end of tag life is unknown.

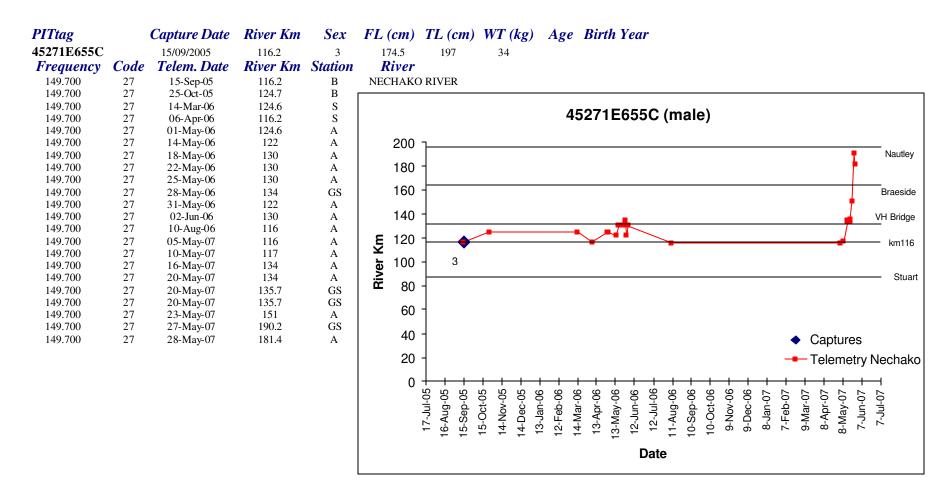


- Fish originally captured at km 116 in May 2007 and assessed as being a ripe male (code 5). Taken as brood stock for the 2007 hatchery program (Male #2).
- Fish was released back into the river at km 126 on June 3rd. Following release the fish migrated to the Stuart confluence and into the Stuart River. On August 6th the fish was located at km 104 and moved into Stuart Lake.
- Rated end of tag life is January 2012.

PITtag 4527094241 Frequency 148.320	Code 10	Capture Date 17/05/2007 Telem. Date 03-Jun-07	River Km 115.3 River Km 131	5	FL (cm) 189 River NECHAKO	218	WT (kg) 49.1	Age	Birth Year			
148.320	10	05-Jun-07	129	А								
148.320	10	08-Jun-07	129	A				4-	0700404	1 / 1 - 1		
148.320	10	11-Jun-07	130	A				45	27094241	ı (maie)		
148.320	10	13-Jun-07	127	A								
148.320	10 10	15-Jun-07 18-Jun-07	129 129	A	200 ⁻	1						
148.320 148.320	10	21-Jun-07	129	A A	400							Nautley
148.320	10	27-Jun-07	129	A	180							
148.320	10	04-Jul-07	125	A	160							Braeside
148.320	10	09-Jul-07	126	A	160							Dideside
148.320	10	11-Jul-07	126	A	140							VH Bridge
148.320	10	16-Jul-07	126	A	140							
148.320	10	01-Sep-07	89.7	GS	E 120							km116
					×							KIIIIO
					و 100 -	5						
					120 100 80							Stuart
					- 00							
					60 ·	1						
					40	1					•	Captures
					20 -						_	
					20						_	Telemetry Nechako
					0 -	ļ	+		+	+		
					- !	07	-07		.07	07	07	0
						a A	Ė		7-Jul-07	-Bn	6	c t
						8-May-07	7-Jun-07		7.	6-Aug-07	5-Sep-07	5-Oct-07
						ω			_		4,	
									Da	ite		

- Fish was captured at km 116 in May 2007 and assessed as being ripe (code 5). Taken as brood stock for the 2007 hatchery program (Male #3). Released on June 3rd at km 131 and fish remained in that general area until July 16th. On Sept 1st fish was identified at Stuart confluence.

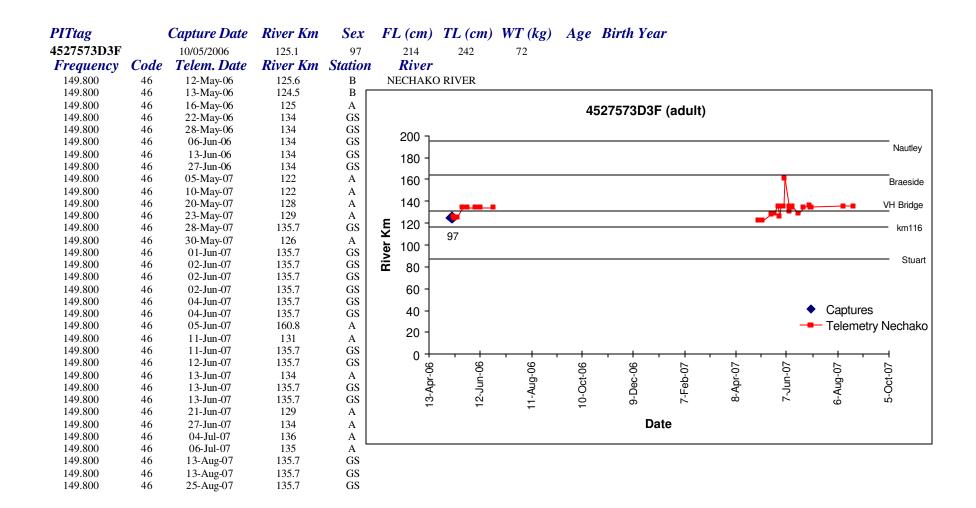
- Rated end of tag life is January 2012.



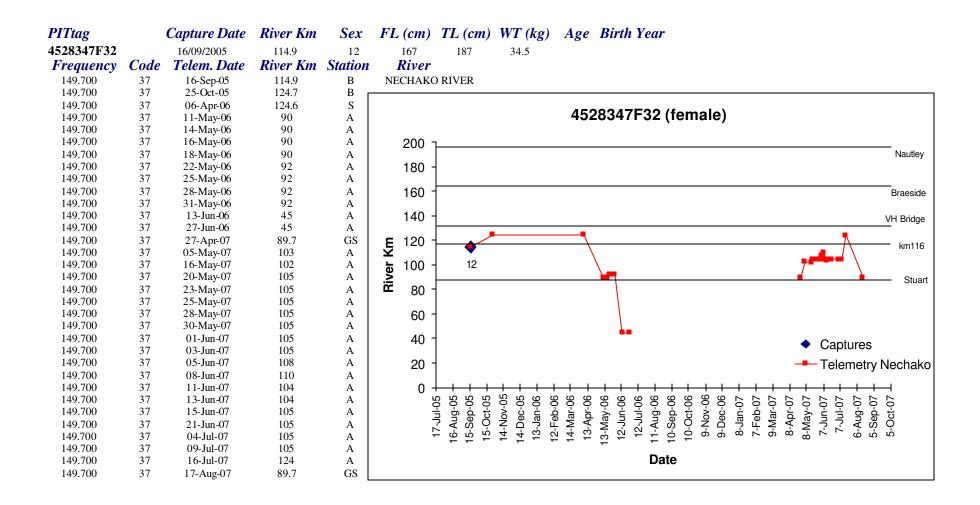
- Fish originally captured at km 116 in Sept 2005 and assessed as a code 3 male. Fish appears to have overwintered at km 124 in 2005/2006.
- In 2006, fish was predominantly located at km 130 and likely overwintered at km 116.
- In 2007, fish was identified at the VH spawning area on May 20th but migrated upstream to km 151 (May 23rd), 190 (May 27th), and 181 (May 28th). Fish may have been responding to spawning cues but was not observed at congregations at VH or Braeside.
- Rated end of tag life is April 2010.

PITtag 45272B3122 Frequency	Code	Capture Date 17/05/2006 Telem. Date	129.2	Sex 5 Station	197 River	TL (cm) 222	67.		Age	Bir	th Yea	ur								
149.800	55	18-May-06	133	A	NECHAKO	RIVER														
149.800	55	22-May-06	129	A																
149.800	55	25-May-06	134	GS						4527	2B312	22 (m	اماد							
149.800	55	28-May-06	134	GS						4521	20312	22 (1116	ale)							
149.800	55	31-May-06	119	Α	200															
149.800	55	02-Jun-06	128	A																Nautley
149.800	55	13-Jun-06	126	A	180 -															,
149.800	55	10-Aug-06	116	A	160 -															Braeside
149.800	55	23-Mar-07	116.1	Α		5														braeside
149.800	55	05-May-07	107	A	140 -															VH Bridge
149.800	55	10-May-07	116	A	토 120 -									_	_	•				
149.800	55	16-May-07	118	Α	¥			•							~~	¥ \				km116
149.800	55	20-May-07	107	Α	৳ 100 -											1		_		01
149.800	55	23-May-07	120	A	80 -															- Stuart
149.800	55	26-May-07	89.7	GS	60 -															
149.800	55	05-Aug-07	89.7	GS	60 7															
149.800	55	16-Aug-07	89.7	GS	40 -															
					20 -															
					20															
					0 +	-+		+		+		+	_ +		-+-	-+	-+			
					90-	90-	90-	-Aug-06	0-Oct-06	90-	-06	s-Jan-U7 7-Feb-07	9-Mar-07	-07	-07	7-Jun-07	7-Jul-07	-07	-Sep-07	5-Oct-07
					μφ	lay un	≒	n d	Sct.	<u> </u>	ec :	an	۱ar	ģ	l ay	Ġ	Ė	gn	eb	Sct
					13-Apr-06	13-May-06 12-Jun-06	12-Jul-06	11-Aug-06		90-voN-6	9-Dec-06	8-Jan-U7 7-Feb-07	2-6	8-Apr-07	8-May-07	J-7	7-	6-Aug-07	5-S	2-(
					_	¥ ÷	-	- =	-		٠, ٠		-,			-	•		otures	
											Da	ate					_	-		
																		_ i ele	emetr	y Nechako

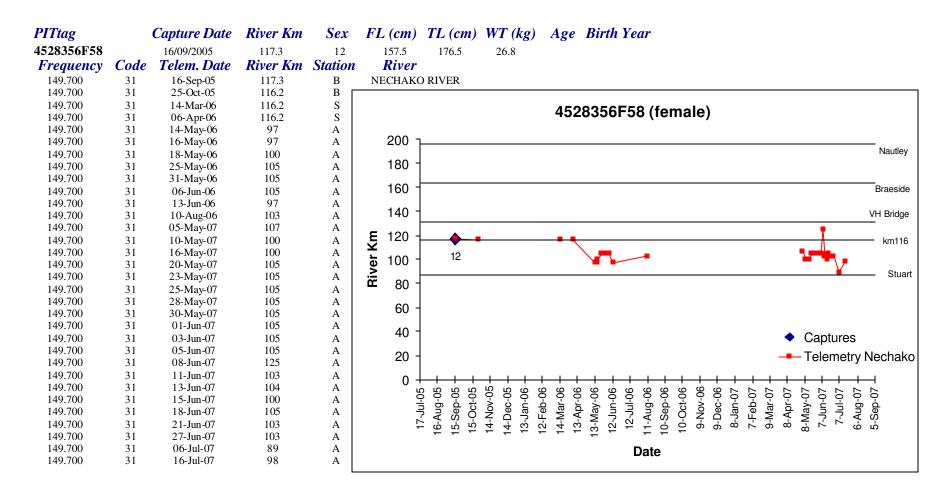
- Fish was assessed as being ripe (code 5) on May 17th, 2006 and was identified in the vicinity of the 2006 spawning congregation at Vanderhoof (km 134) between May 18th and 22nd. Potentially overwintered at km 116 in 2006.
 Did not migrate to the known VH spawning area in 2007 and was instead located in the vicinity of the Stuart confluence during the spawning period.
- Estimated end of tag life December 2010.



- Captured at km 125 in May 2006 and assessed as an adult based on size. Fish was predominantly located at km 134 in 2006 but migrated there after the 2006 spawning event which occurred around May 19th.
- In 2007, fish was identified at the VH spawning area from June 1st 4th which corresponds to when spawning was observed in that area. However, due to being a juvenile fish was likely only responding to spawning cues and not spawning.
- Fish briefly migrated to km 160 on June 5th and then returned to km 135 where it remained. Small congregation was observed at km 160 (Braeside) and fish likely was responding to spawning cues in that area.
- Rated end of tag life is December 2010.



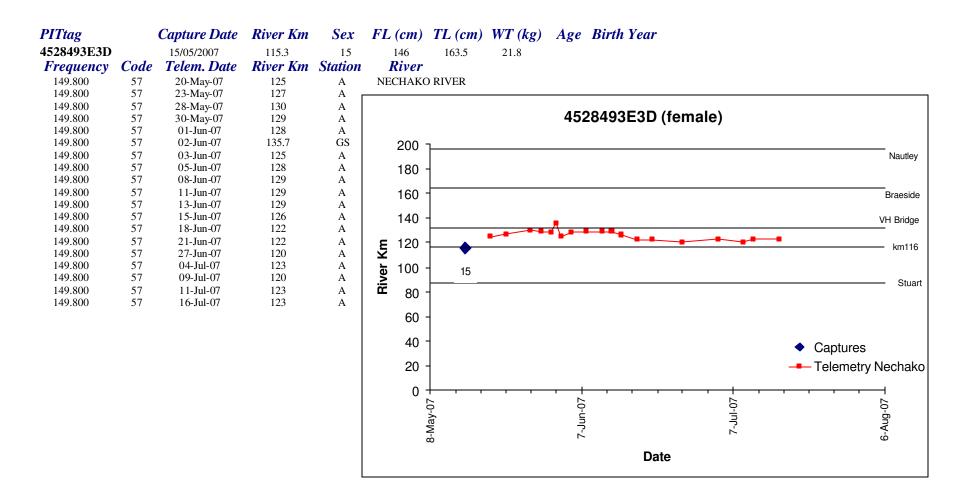
- Captured at km 114.9 in Sept of 2005 and assessed as a code 12 female. Fish likely overwintered at km 124 in 2005/2006.
- In 2006, fish predominantly located at km 90 with exception of a migration to km 45 (feeding/rearing) in June.
- In 2007, fish was predominantly located at km 105 but showed increased movement in July when it moved to km 124 (rearing) and in August when it moved to km 89.7 (Stuart Confluence).
- Rated end of tag life is April 2010.



- Fish captured at km 117 in Sept of 2005. Assessed as code 12 female.
- Fish overwintered at km 116 in 2005/2006 and remained in the vicinity of km 105 through 2006 and 2007 with the exception of rearing migrations to km 125 and 89.
- Not identified at VH spawning area.
- Rated end of tag life is April 2010.

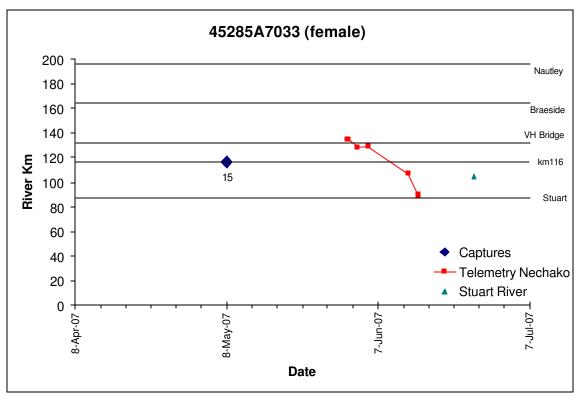
PITtag 4528394A39 4528394A39		Capture Date 18/09/2005 18/09/2005	River Km 116.8 124.5	Sex 4 5	FL (6		TL (cm) 203.5	WT (kg) 47.6	Age	Birth	Year									
Frequency 149.700	Code 41 41 41 41 41 41 41 41 41 41 41 41 41	Telem. Date 18-Sep-05 18-Sep-05 25-Oct-05 25-Oct-05 25-Oct-05 06-Apr-06 06-Apr-06 27-Apr-06 01-May-06 01-May-06 25-May-06 06-Jun-06 06-Jun-06 23-Jun-06 23-Jun-07 08-Jun-07 13-Sep-07 13-Sep-07 19-Sep-07	124.5 River Km 116.8 116.8 116.2 116.2 116.2 116.2 116.2 116.2 116.2 116.2 116.2 116.2 116.2 116.2 116.2 108 108 104.2 104.2 108 108 89.7 89.7 89.7 89.7 89.7			River Km 1 1 1 1	200	16-Aug-05	14-Dec-05	13-Apr-06	52839 - 90-un-0-7-1	94A39 90-0n8-11	10-Oct-06 +	le) - 90-0-0-0-6	7-Feb-07 +	8-Apr-07 —	7-Jun-77	⊢ Tel	otures emetry art,Riv	/ Nechako
												Da	ite							

- Fish captured at km 116 in Sept 2005 and assessed as code 4 male suggesting it may be ready to spawn in 2006. Fish was recaptured at km 124.5 on May 11th, 2006 but was not assessed and data was not collected. Fish was used as brood stock (Male #1) classified as code 5 flowing male based on external exam. Fish was released at km 135 on May 25th.
- On June 23rd 2006 fish was identified at km 104 in the Stuart River and direction data suggests it overwintered in Stuart Lake.
- In 2007, fish was identified at km 108 and 89 and was not identified at the VH spawning area.
- Rated end of tag life is May 2010.

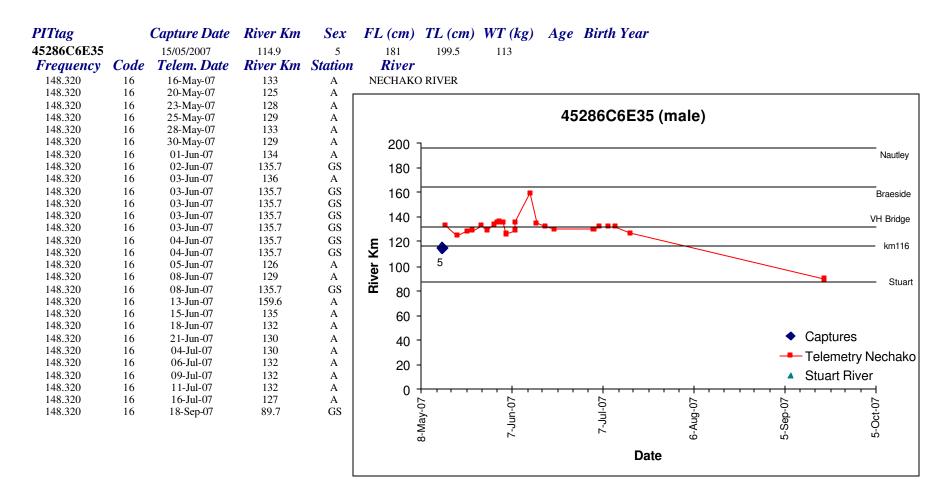


- Fish captured in May 2007 at km 115 and assessed as ripe (code 15). Fish migrated to km 135.7 on June 2nd and spawned.
- Following spawning fish remained at km 120-129.
- Rated end of tag life is December 2011.

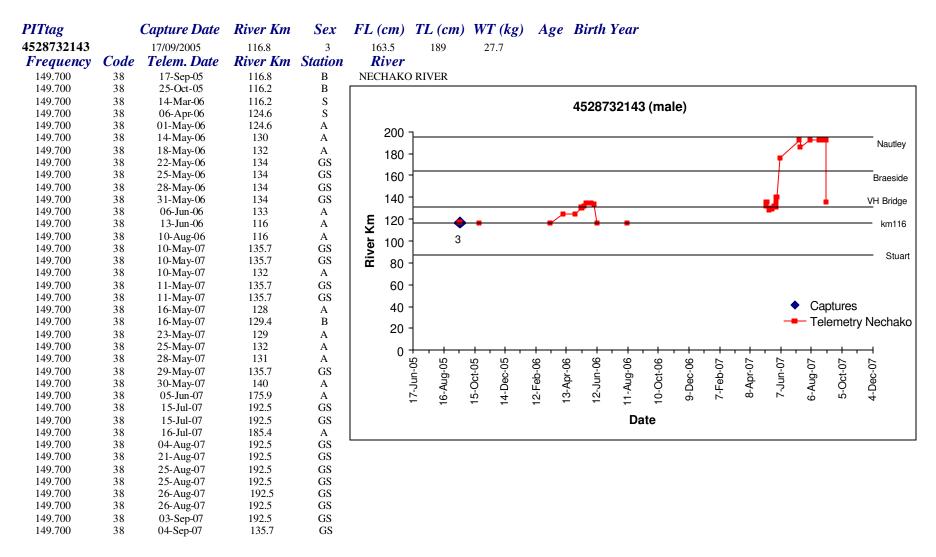
PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year
45285A7033	<i>a</i> 1	08/05/2007	116.2	15	204	235	76.4		
Frequency	Code	Telem. Date	River Km	Station	River				
149.700	46	01-Jun-07	135	A	NECHAKO	RIVER			
149.700	46	03-Jun-07	128	A					
149.700	46	05-Jun-07	129	A					
149.700	46	13-Jun-07	107	A					
149.700	46	15-Jun-07	89.7	GS					
149.700	46	26-Jun-07	104.2	GS	STUART	RIVER			



- Fish captured at km 116 in May 2007 and assessed as ripe (code 15). Fish was taken as brood stock for 2007 hatchery program (female #2). Fish released at km 135 on June 1st and migrated downstream to km 89 (Stuart confluence, June 15th) and into the Stuart Lake (km 104, June 26th).
- Rated end of tag life is January 2012.

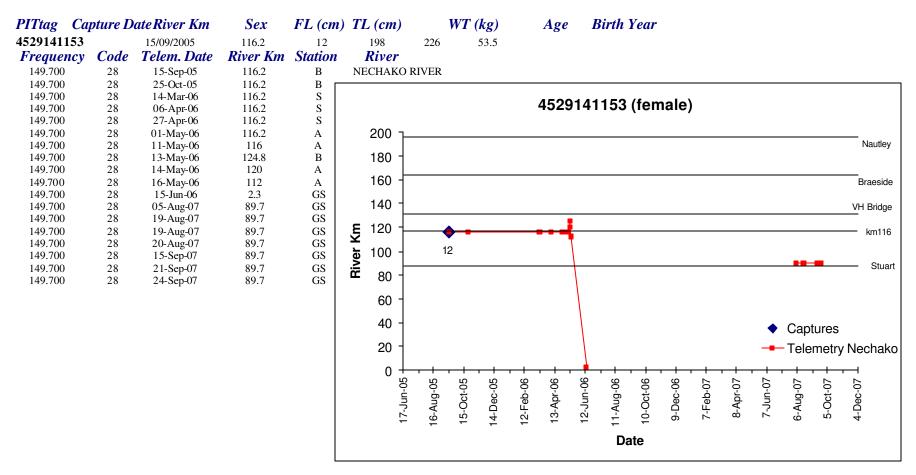


- Captured at km 114.9 in May 2007 and assessed as ripe (code 5).
- Fish migrated to VH spawning area on June 2nd and remained to the 4th. On June 13th, fish was identified at km 159.6 near the Braeside congregation location. Fish then returned to km 135 and began to migrate downstream.
- On Sept 18th, fish was identified at km 89 (Stuart confluence).
- Rated end of tag life is December 2011.

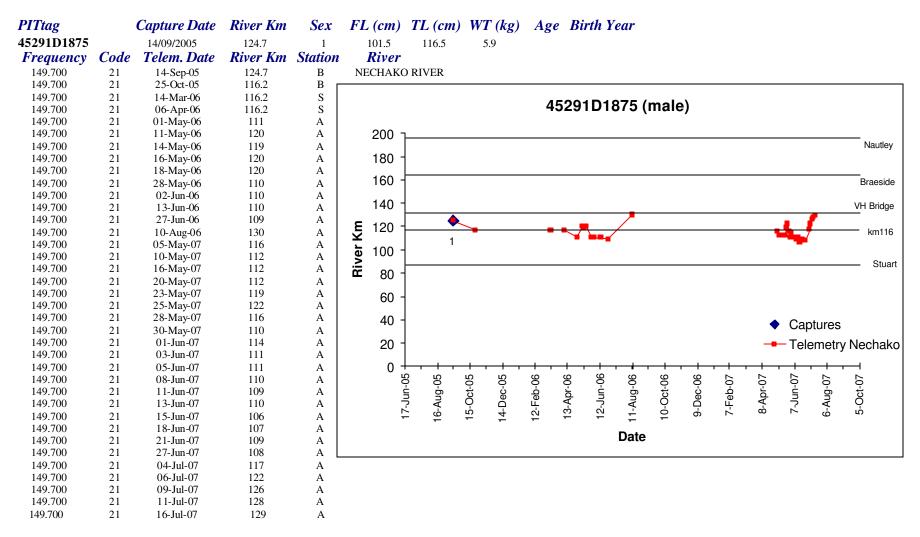


- Fish captured at km 116 in Sept 2005 and assessed as code 3 male.
- In 2006 fish migrated to km 134 but was not identified at VH spawning area during observed congregation.
- In 2007, fish migrated to VH spawning area on May 10th, 11th, and 29th but moved upstream prior to observed spawning at that location.
- By June 5th, fish was at km 175.9 and returned to km 95 on June 8th. However, this may be a data entry error as neither basestation at km 135 detected passage of fish. Should be 195.
- Fish remained at km 192.5 (Nautley River confluence) through August likely for rearing and was detected at km 135.7 on Sept 4th.

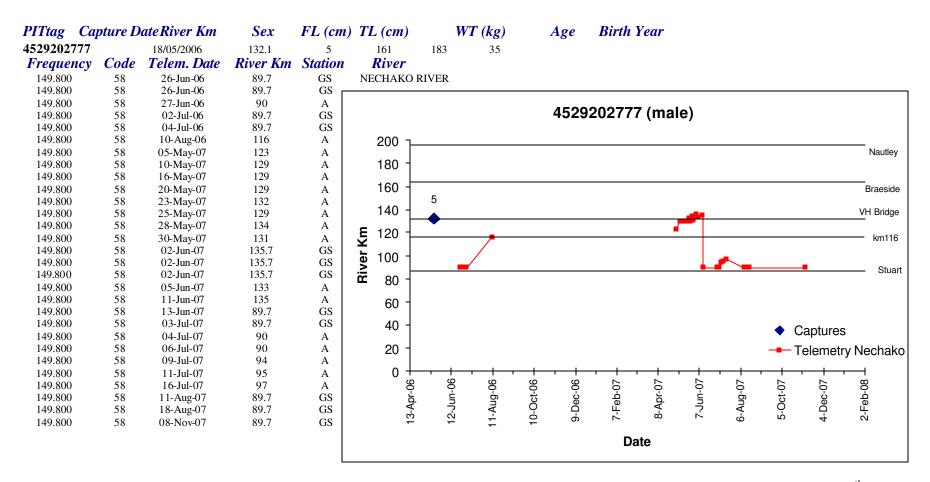
• Rated end of tag life is April 2010.



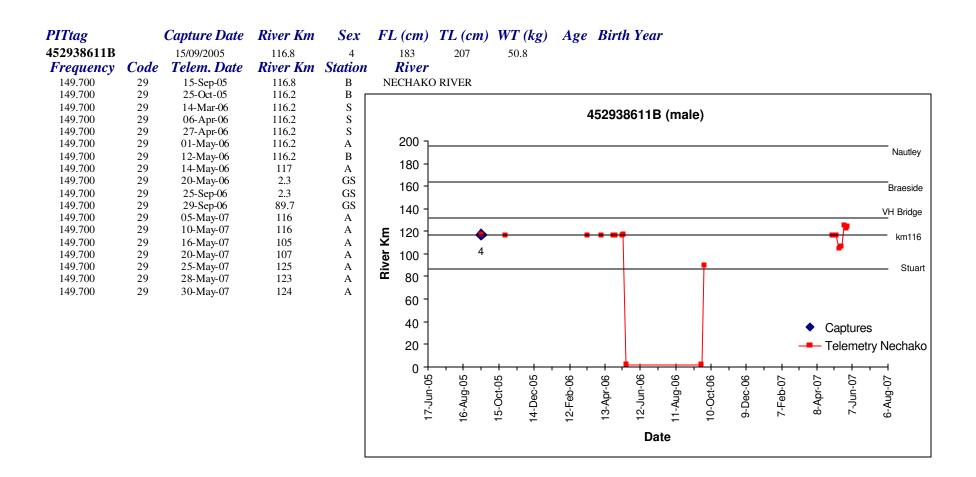
- Fish was originally captured at km 116 in Sept of 2005 and assessed as a code 12 female. Through majority of 2005/2006 fish remained at km 116 and was not identified at the VH spawning area.
- In mid May 2006, fish showed short rearing migrations to km 124 and 120 and then migrated downstream to the Nechako confluence (June 15th). Fish does not appear again until Aug 2007 (Stuart Confluence) and entered the Fraser River.
- Rated end of tag life is April 2010.



- Fish originally captured at km 124 in Sept 2005 and assessed as a non-reproductive male (code 1). In 2005/2006 fish overwintered at km 116.
- In 2006, fish migrated between km 111 and 120 presumably for rearing and was not identified at VH spawning site. On August 10th fish was identified at km 130.
- In 2007, fish remained at rearing habitats such as km 116, 110 and 126 and was not identified upstream of km 129.
- Rated end of tag life is April 2010.



- Fish was originally captured at km 132 in May 2006 and assessed as a ripe male (code 5). No telemetry records exist between capture and June 26th (km 89.7) and fish was not used for brood stock (no milt on external exam). As a result it is unclear where the fish was during the 2006 spawning event.
- In 2007, fish migrated to the VH spawning area on June 2nd and remained in general area until June 11th. Fish likely spawned during this period.
- Following spawning, fish migrated downstream to km 89.7 (Stuart Confluence).
- Rated end of tag life is December 2010.

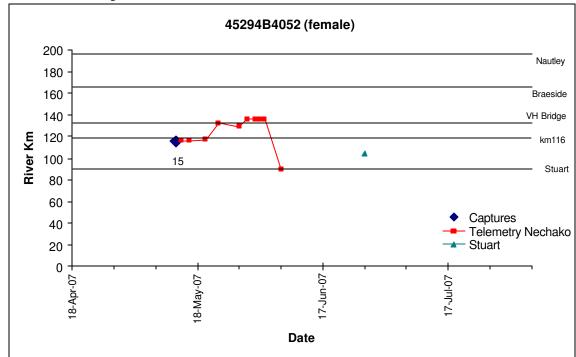


- Fish originally captured at km 116 in Sept 2005 and assessed as a code 4 male suggesting it may be ready to spawn in 2006.
- Telemetry data from 2006 show it remained at km 116 until May 20th when it was identified at the Nechako confluence. Fish entered Fraser until Sept 25th when it was again detected at the confluence. Fish then migrated upstream to the Stuart confluence (Sept 29th).
- In 2007, fish was located at km 116 with short rearing migrations to km 105 and 124.
- Fish has not been identified at VH spawning area and therefore may be ripe in 2008.
- Rated end of tag life April 2010.

PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year
45294B4052		13/05/2007	115.3	15	214.5	239	73.6		
Frequency	Code	Telem. Date	River Km	Station	River				
149.700	49	14-May-07	116.2	В	Nechako Riv	ver			
149.700	49	16-May-07	116	A					
149.700	49	20-May-07	117	A					
149.700	49	23-May-07	132	A					
149.700	49	28-May-07	129	A					
149.700	49	30-May-07	135.7	GS					
149.700	49	30-May-07	135.7	GS					
149.700	49	30-May-07	136	A					
149.700	49	01-Jun-07	135.7	GS					
149.700	49	02-Jun-07	135.7	GS					
149.700	49	03-Jun-07	135.7	GS					
149.700	49	07-Jun-07	89.7	GS					
149.700	49	27-Jun-07	104.2	GS	STUART	RIVER			

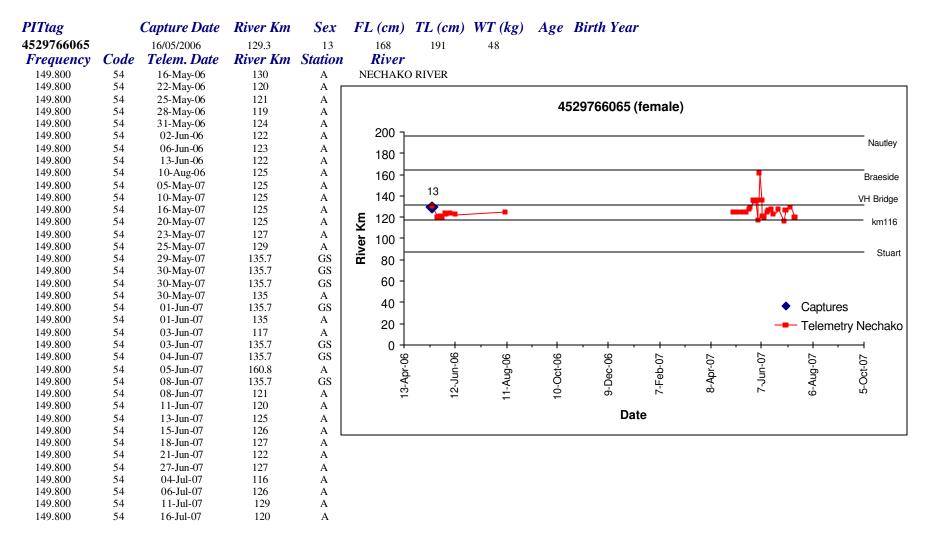
- Fish was originally tagged at km 115 in May 2007 and assessed as a ripe female (code 15).
- Fish migrated to VH spawning area and remained there from May 8th to 11th. It then migrated back to rearing habitats (km 116 and 129) from May 14th to 30th presumably as a result of conditions (i.e. temperature) being not yet appropriate for spawning.

 Fish returned to VH spawning area on May 30th and remained till June 3rd, therefore is assumed to have spawned during observed congregation (June 2nd).
- Following spawning fish moved downstream to the Stuart and was identified at km 104 in the Stuart on June 27th. Fish moved into Stuart Lake.
- Rated end of tag life is December 2011.

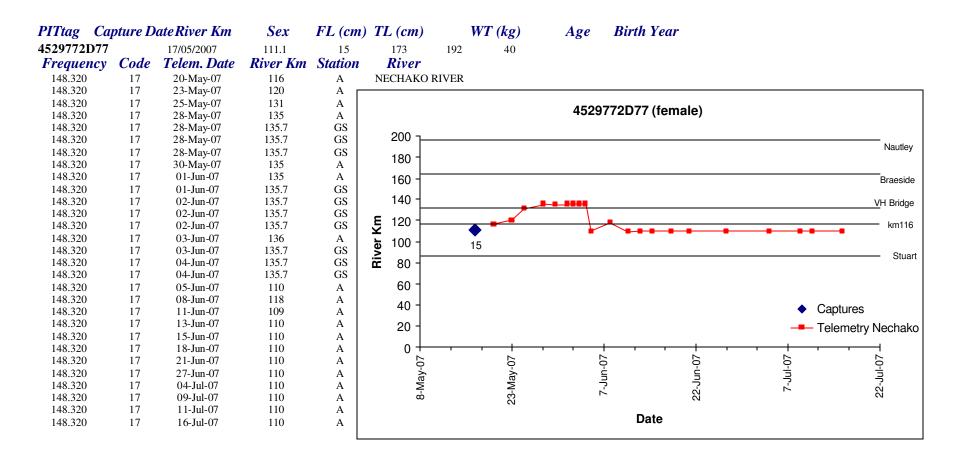


PITtag 45296A4B00 Frequency 149.700	Code 35	Capture Date 16/09/2005 Telem. Date 16-Sep-05	116.2 River Km 116.2	Station B		(cm) 142 River ECHAKO	TL (cm) 160 PRIVER	WT (kg) 20.9) Age	Birth Y	'ear						
149.700 149.700 149.700 149.700	35 35 35 35	25-Oct-05 06-Apr-06 01-May-06 11-May-06	116.2 116.2 117 108	B S A A					45	5296A4E	300 (fem	nale)					
149.700 149.700 149.700 149.700	35 35 35 35	14-May-06 16-May-06 22-May-06 08-Jul-06	100 105 105 2.3	A A A GS		180											Nautley
149.700	35	03-Sep-07	89.7	GS	_	160 -											Braeside VH Bridge
					River Km	120 - 100 - 80 -	12	•		1							km116 Stuart
						60 - 40 -									•	o apra.	
						20 -			 		 	, 	- 	, 		Stuart	
						17-Jun-05	16-Aug-05 15-Oct-05	14-Dec-05	12-Feb-06 13-Apr-06	12-Jun-06	11-Aug-06 10-Oct-06	9-Dec-06	7-Feb-07	8-Apr-07	7-Jun-07	6-Aug-07	4-Dec-07
											Date						

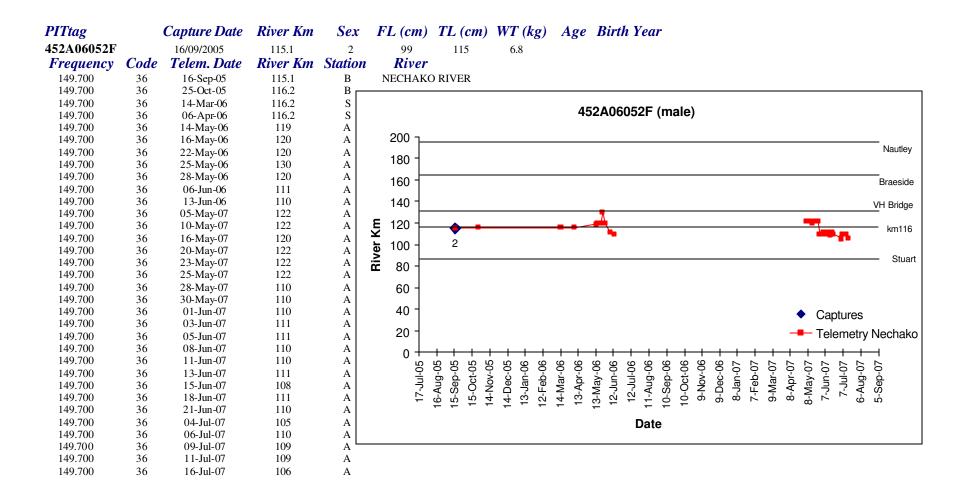
- Fish was tagged at km 116 in Sept 2005 and assessed as a code 12 female. Fish remained at km 116 till May 11th 2006 and migrated downstream to the Nechako confluence (July 8th, 2006). Fish entered the Fraser and was not detected again until Sept 3rd 2007 at the Stuart confluence. Fish has not been identified at the VH spawning area.
- Rated end of tag life is April 2010.



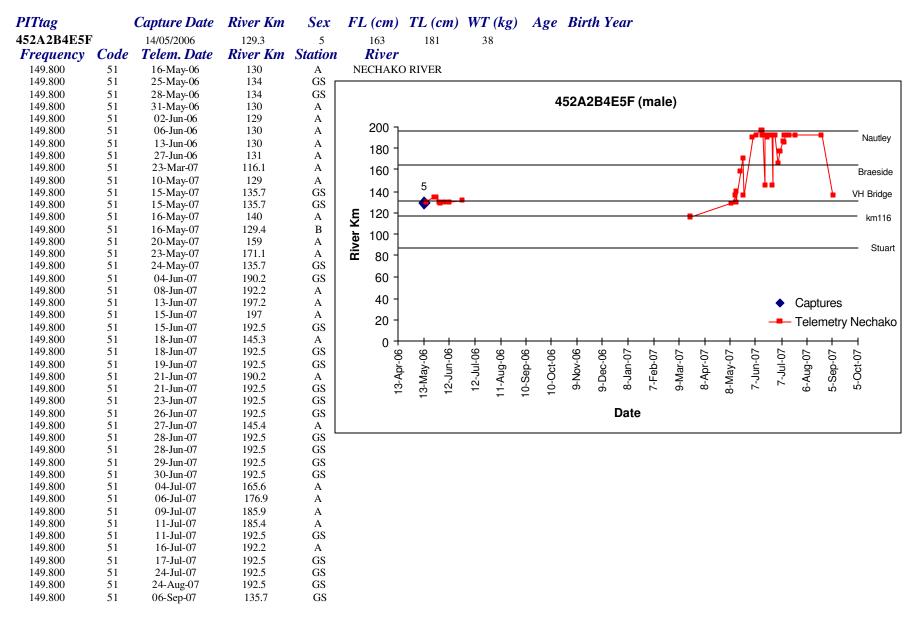
- Fish was originally captured at km 129 in May 2006 and assessed as a code 13 female. Through 2006 fish remained at km 125 and did not migrate to the VH spawning area.
- In 2007, fish migrated to the VH spawning area on May 29th and remained through June 8th, which corresponds to the period where spawning was observed at that location. On June 5th it made a migration to the Braeside area (km 162) where a smaller congregation was observed. Based on this data it is likely that the fish spawned in 2007. Following spawning fish returned to rearing habitats at km 116 and 125.
- Rated end of tag life is December 2010



- Fish was originally captured at km 111 in May 2007 and assessed as a ripe female (code 15). Following tagging fish migrated to the VH spawning area on May 28th and remained until June 4th, which corresponds to the period when spawning was observed at that location. As a result fish likely spawned.
- Following spawning fish migrated to rearing habitat at km 110.
- Rated end of tag life is December 2011.

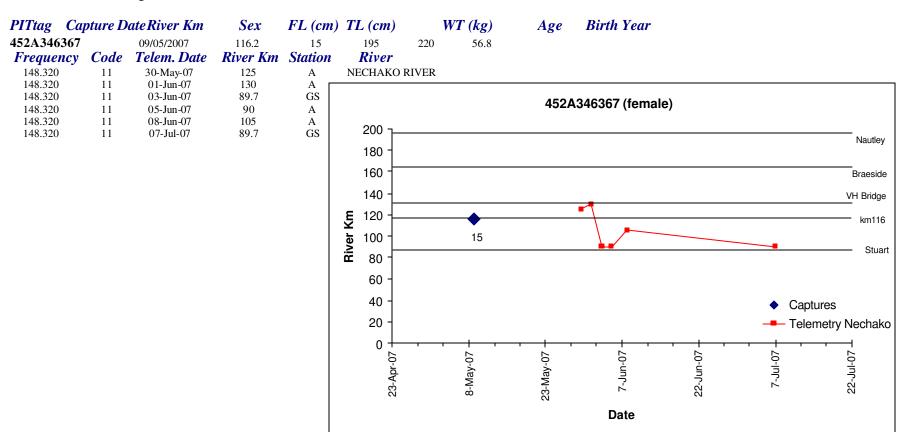


- Fish was originally captured at km 115 in Sept 2005 and assessed as a code 2 male. Likely overwintered at km 116 in 2005/2006.
- Telemetry data shows the fish has primarily been found at rearing habitats such as km 105, 110, and 122. All migrations are thought to be for rearing and feeding purposes.
- Fish has not been identified at the VH spawning area.
- Rated end of tag life is April 2010.



• Fish originally captured at km 129 in May 2006 and assessed as a ripe mak (code 5). However, telemetry shows it moved to km 134 but did not migrate

- to the VH spawning area. As a result it likely did not spawn in 2006.
- In 2007, fish was identified at the VH spawning area on May 15th and 24th but migrated upstream to km 192 (Nautley confluence) on June 4th. Fish was not detected at VH on June 2nd when spawning was observed and therefore likely did not spawn at that location.
- Fish remained upstream of Braeside but made migrations to km 145 on June 18th and 27th and to km 165 on July 4th likely for rearing.
- Fish may have briefly entered Fraser Lake but returned to km 135 on Sept 6th suggesting it did not overwinter upstream.
- Rated end of tag life is December 2010.



- Fish captured at km 116 in May 2007 and assessed at a ripe female (code 15). Taken as brood stock for 2007 hatchery program (female #1).
- Following release fish moved downstream to the Stuart confluence.
- Rated end of tag life is January 2012.

PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year
452A4D4A58		18/05/2006	132.1	15	230	262	100		
Frequency	Code	Telem. Date	River Km	Station	River				
149.440	10	13-Jun-06	110	Α	NECHAKO	RIVER			
149.440	10	10-Aug-06	98	A					
149,440	10	28-Jun-07	104.2	GS	STUART	RIVER			

- Fish captured at km 132 in May 2006 and assessed as a ripe female (code 15). Taken as brood stock for 2006 hatchery program (female #2).
- Following release fish moved downstream to the Stuart River (km 104, June 28th) and may have moved into Stuart Lake.
- Rated end of tag life is June 2008.

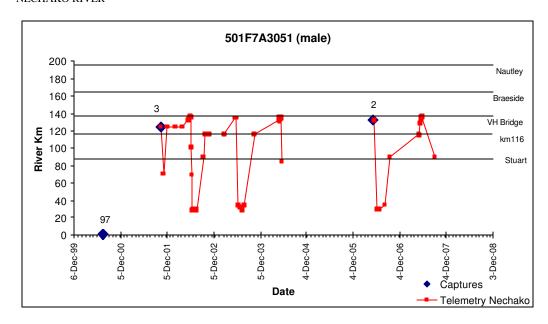
PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year
501F635709		09/09/2004	Stuart Lake	3	173	196	37.053	30	1974
Frequency	Code	Telem. Date	River Km	Station	River				
148.420	15	07-Sep-04	110	В	STUART	LAKE			
148.420	15	24-Jun-05	104.2	GS	STUART	RIVER			
148.420	15	24-Jul-05	104.2	GS	STUART	RIVER			
148.420	15	04-Jul-07	104.2	GS	STUART	RIVER			
148.420	15	02-Aug-07	89.7	GS	NECHAKO	RIVER			
148.420	15	03-Aug-07	89.7	GS					
148.420	15	21-Aug-07	135.7	GS					
148.420	15	22-Aug-07	135.7	GS					

- Fish captured in Stuart Lake in Sept 2004 and assessed as a code 3 male. Telemetry shows it moved out of Stuart Lake in June 2005 and back into Stuart lake July 2005 where it remained until July 2007 when it moved into the Nechako (km 104) by July 24th, 2005.
- No telemetry data exists for 2006 and fish may have returned to Stuart Lake as it was detected in the Stuart River (km 104) on July 4th, 2007. In August 2007 fish moved into the Nechako and migrated upstream to the VH spawning area on August 21st. As this is outside of the normal spawning window, migration is assumed to be associated with rearing.
- Rated end of tag life is April 2009.

PITtag	Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year
501F7A3051	17/07/2000	0.5	97	138	154	20.025		
	13/10/2001	124.7	3	147.5	163	24		
	10/05/2006	132.1	2	165	186	36		

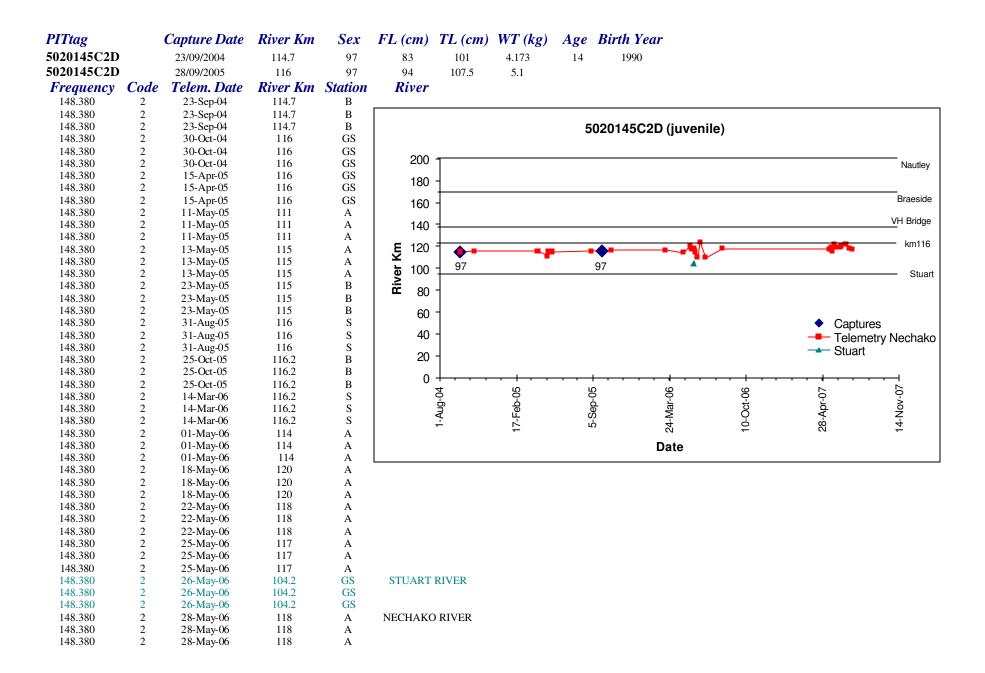
Frequency	Code	Telem. Date	River Km	Station
149.700	6	13-Oct-01	124.7	S
149.700	6	10-Nov-01	70	A
149.700	6	07-Dec-01	124.7	A
149.700	6	06-Feb-02	125	A
149.700	6	30-Mar-02	124.7	S
149.700	6	18-May-02	132.5	A
149.700	6	28-May-02	134.9	A
149.700	6	07-Jun-02	137	A
149.700	6	10-Jun-02	135.7	В
149.700	6	11-Jun-02	134.6	В
149.700	6	12-Jun-02	100.5	A
149.700	6	14-Jun-02	69.8	В
149.700	6	18-Jun-02	28.7	A
149.700	6	22-Jun-02	28.7	A
149.700	6	25-Jun-02	29.4	GS
149.700	6	25-Jun-02	29.4	A
149.700	6	28-Jun-02	28.8	A
149.700	6	17-Jul-02	28.8	A
149.700	6	18-Jul-02	29.3	В
149.700	6	19-Jul-02	28.4	В
149.700	6	25-Jul-02	28.6	A
149.700	6	18-Sep-02	90	GS
149.700	6	18-Sep-02	90	В
149.700	6	28-Sep-02	116	S
149.700	6	09-Oct-02	116	S
149.700	6	05-Nov-02	116	S
149.700	6	25-Feb-03	116	A
149.700	6	26-May-03	135	A
149.700	6	28-May-03	135	A
149.700	6	19-Jun-03	33.6	A
149.700	6	19-Jun-03	33.6	GS
149.700	6	03-Jul-03	31.9	A
149.700	6	14-Jul-03	28.8	A
149.700	6	31-Jul-03	33.8	A
149.700	6	20-Oct-03	116	GS
149.700	6	28-Apr-04	132	В
149.700 149.700	6 6	28-Apr-04	132 136	A GS
	6	03-May-04	130.9	
149.700 149.700	6	04-May-04 04-May-04	130.9	A B
149.700 149.700	6	04-May-04 12-May-04	130.9	B A
149.700	6	12-May-04 14-May-04	136	GS
149.700	6	14-May-04 16-May-04	136	GS
149.700	U	10-May-04	130	GS

River NECHAKO RIVER



Frequency	Code	Telem. Date	River Km	Station	River
149.700	6	18-May-04	134	A	
149.700	6	25-May-04	85	A	
149.800	45	18-May-06	132	A	
149.800	45	13-Jun-06	30	A	
149.800	45	27-Jun-06	30	A	
149.800	45	10-Aug-06	35	A	
149.800	45	21-Sep-06	89.7	GS	
149.800	45	05-May-07	116	A	
149.800	45	10-May-07	114	A	
149.800	45	16-May-07	129	A	
149.800	45	20-May-07	128	A	
149.800	45	23-May-07	133	A	
149.800	45	25-May-07	135.7	GS	
149.800	45	25-May-07	134	A	
149.800	45	26-May-07	135.7	GS	
149.800	45	26-May-07	135.7	GS	
149.800	45	26-May-07	135.7	GS	
149.800	45	27-May-07	135.7	GS	
149.800	45	28-May-07	135	A	
149.800	45	28-May-07	135.7	GS	
149.800	45	28-May-07	135.7	GS	
149.800	45	30-May-07	137	A	
149.800	45	01-Jun-07	135	A	
149.800	45	07-Sep-07	89.7	GS	

- In 2002, 2003 and 2006 fish was identified in the vicinity of km 30 for several weeks each time. This suggests rearing and feeding habitats may exist in this area.
- In 2002, 2003, 2004, 2006 and 2007 fish was identified in the vicinity of the known VH spawning location in May and June. In particular, for 2004-2007, the fish was identified close to the spawning site (i.e. km 132-135) either on the day of spawning or the day before spawning was observed.
- Very active fish that should therefore be targeted for continued telemetry.
- Estimated end of tag life is December 2010.



2	31-May-06	115	A
2		115	Α
2		115	Α
2	•	110	Α
2			A
2			A
2			A
2			A
2			A
2			A
			A
2			A
			A
2			A
	2		
2			A
2			A
2			A
2			A
2			A
2	•		A
2	•		A
2			Α
2	23-May-07		A
	23-May-07		A
	28-May-07	122	A
2	28-May-07	122	Α
2	28-May-07	122	Α
2	03-Jun-07	119	A
2	03-Jun-07	119	Α
2	03-Jun-07	119	Α
2	08-Jun-07	119	Α
2	08-Jun-07	119	Α
2	08-Jun <i>-</i> 07	119	Α
2			A
$\frac{1}{2}$			A
$\frac{1}{2}$			A
			A
2			A
2			A
2			A
2			A
2			A
2			A
2			A
2			A
2			A
			A
2			A
2			A
2			A
2	06-Jul-07	118	Α
		2 31-May-06 2 31-May-06 2 06-Jun-06 2 06-Jun-06 2 06-Jun-06 2 13-Jun-06 2 13-Jun-07 2 13-May-07 2 13-May-07 2 13-May-07 2 23-May-07 2 13-Jun-07 2 03-Jun-07 2 03-Jun-07 2 03-Jun-07 2 03-Jun-07 2 11-Jun-07	2 31-May-06 115 2 06-Jun-06 110 2 13-Jun-06 124 2 13-Jun-06 124 2 13-Jun-06 124 2 13-Jun-06 110 2 27-Jun-06 110 2 27-Jun-06 110 2 10-Aug-06 118 2 10-Aug-06 118 2 10-Aug-06 118 2 10-Aug-07 117 2 16-May-07 117 2 16-May-07 117 2 20-May-07 119 2 20-May-07 119 2 20-May-07 119 2 23-May-07 116 2 23-May-07 116 2 23-May-07 116 2 23-May-07 116 2 23-May-07 112 2 28-May-07 122 2 28-May-07 122 2 28-May-07 122 2 28-May-07 119 2 03-Jun-07 119 2 03-Jun-07 119 2 03-Jun-07 119 2 03-Jun-07 119 2 11-Jun-07 119 2 11-Jun-07 119 2 11-Jun-07 119 2 11-Jun-07 119 2 13-Jun-07 119 2 13-Jun-07 119 2 15-Jun-07 119 2 15-Jun-07 120 2 15-Jun-07 120 2 15-Jun-07 120 2 15-Jun-07 120 2 15-Jun-07 121 2 18-Jun-07 122 2 27-Jun-07 122

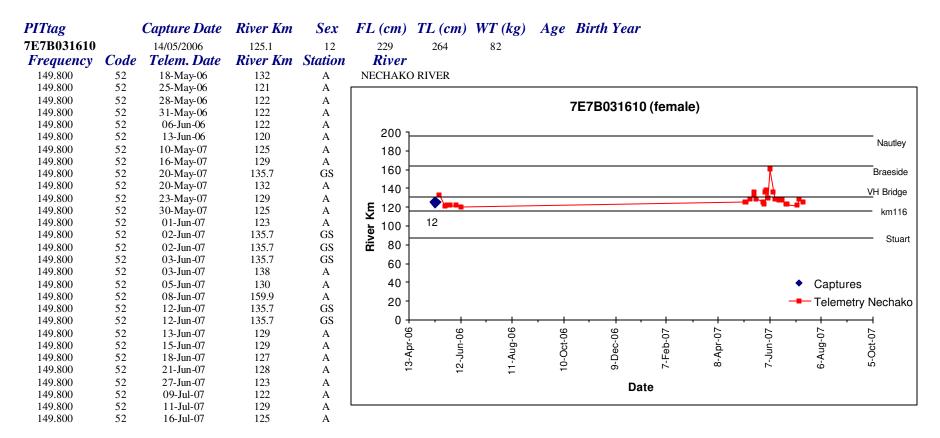
148.380	2	16-Jul-07	117	A
148.380	2	16-Jul-07	117	A
148.380	2	16-Jul-07	117	A

- Juvenile fish that has never been identified in the vicinity of the VH spawning area.
 Has been identified briefly in the Stuart River (May 26, 2002).
- Estimated end of tag life is April 2009.

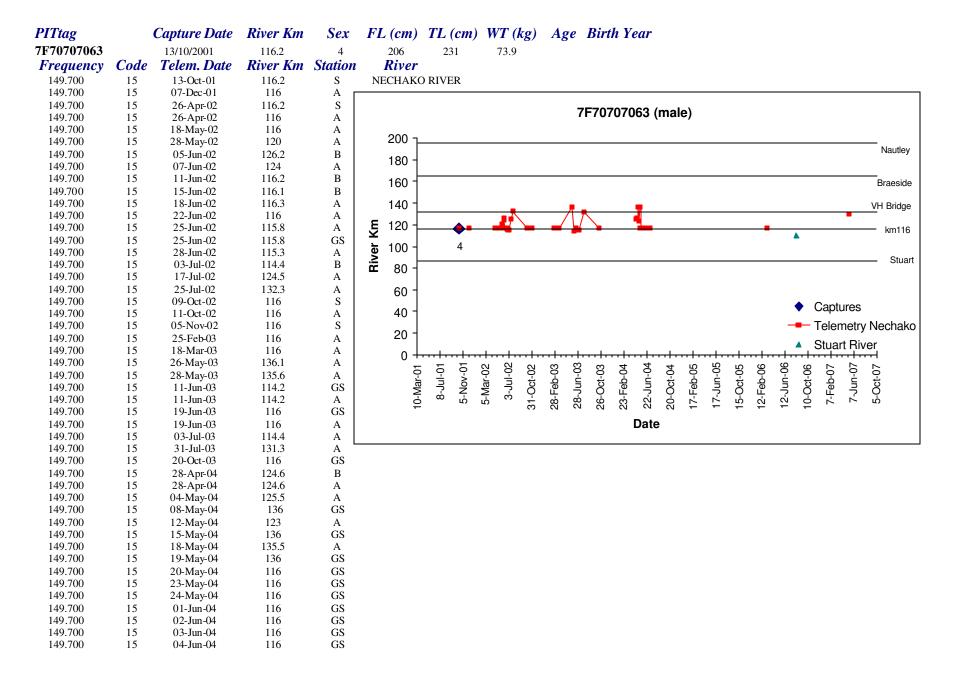
PITtag	Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year
5020243915	29/08/2004	110.1	98	85	97	3.765	10	1994
5020243915	01/09/2006	114.8	97	97	109.5	5.645		
PITtag	Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT (kg)	Age	Birth Year
5027512B12	15/07/2000 21/07/2001	0.4 0.3	97 97	93	107 113.5	6.075 7.2	15	1985

PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth	Year	r										
5028040133		27/09/2004	Stuart Lake	12	179	204	57.142														
		17/09/2005	115.1	97	176.5	202.5	44.5														
Frequency	Code	Telem. Date	River Km	Station	River																
148.420	14	17-Sep-05	115.1	В	NECHAKO	RIVER															
148.420	14	17-Sep-05	115.1	В																	
148.420	14	25-Oct-05	116.2	В				50	28040 ⁻	133 (1	iemal	e/iu\	venil	e)							
148.420	14	25-Oct-05	116.2	В						(-,,-		-,							
148.420	14	06-Apr-06	116.2	S	200	7															
148.420	14	06-Apr-06	116.2	S																Nau	ıtley
148.420	14	27-Apr-06	116.2	S	180	1															
148.420	14	27-Apr-06	116.2	S	160	-														— Brae	side
148.420	14	01-May-06	116.2	Α																	
148.420	14	01-May-06	116.2	A	140	1														VH Br	idge
148.420	14	01-May-06	116.2	A	₹ 120	-													_	kn	1116
148.420	14	01-May-06	116.2	A					07	_									V_	KII	1110
148.420	14	05-Jul-06	89.7	GS	80 E	1			97												
148.420	14	05-Jul-06	89.7	GS	1 80	-														_ 5	tuart
148.420	14	16-May-07	116.2	В																	
148.420	14	16-May-07	116.2	В	60	1											•	Capt	uroc		
148.420	14	20-May-07	106	A	40	4												-			
148.420 148.420	14 14	20-May-07 28-May-07	106 118	A A	20	1	(0)										_	Tele	metry	/ Necl	nako
148.420	14	28-May-07	118	A	20	12	(Stuart La	ke)									•	Stua	rt riv	er	
146.420	14	20-Way-07	110	A	0	+ + + ++		+ + +	, ,	+		. 	-			. +	. 		 	<u></u>	
						04 04 04	04 05	05	16-Aug-05	05	90	90	90	90	90	90	07	07	07	07	
						22-Jun-04 21-Aug-04 20-Oct-04	19-Dec-04 17-Feb-05	18-Apr-05	-br	15-Oct-05	12-Feb-06	13-Apr-06	2-Jun-06	1-Aug-06	10-Oct-06	9-Dec-06	7-Feb-07	8-Apr-07	7-Jun-07	6-Aug-07	
						₹ P	۾ ٻ [ِ]	¥. →	Ψ̈́	\circ	ž Ļ	8-A	<u> </u>	Ψ̈́	Ò	Ä	Ψ̈́	۸- ۲-	Ş	Ā.	
						22 22	19	₩ 1	16	= =	1 2	+	5	Ξ	=	6	7	ω	^	9	
											Date										
148.420	14	31-May-07	104.2	GS	STUART	RIVER															
148.420	14	31-May-07	104.2	GS																	

- Fish was originally captured in Stuart Lake, however, telemetry data is from the Nechako predominantly with the exception of records from Stuart River on May 31st, 2007 which suggest it returned to Stuart Lake.
- Potential issue with biological data since length, weight, and sexual maturity stage all decrease between first and second capture.
- Never identified at the known VH spawning area.
- Rated end of tag life is May 2009.



- In 2006 fish was assessed as code 12 female and was not identified in vicinity of VH spawning area.
- In 2007, fish was identified at the VH spawning area between June 2nd and 5th (period when eggs were collected) and was also identified at the Braeside location on June 8th.
- Following the spawning period in 2007, fish migrated to km 125 area for rearing and potentially overwintering.
- Rated end of tag life is December 2010.

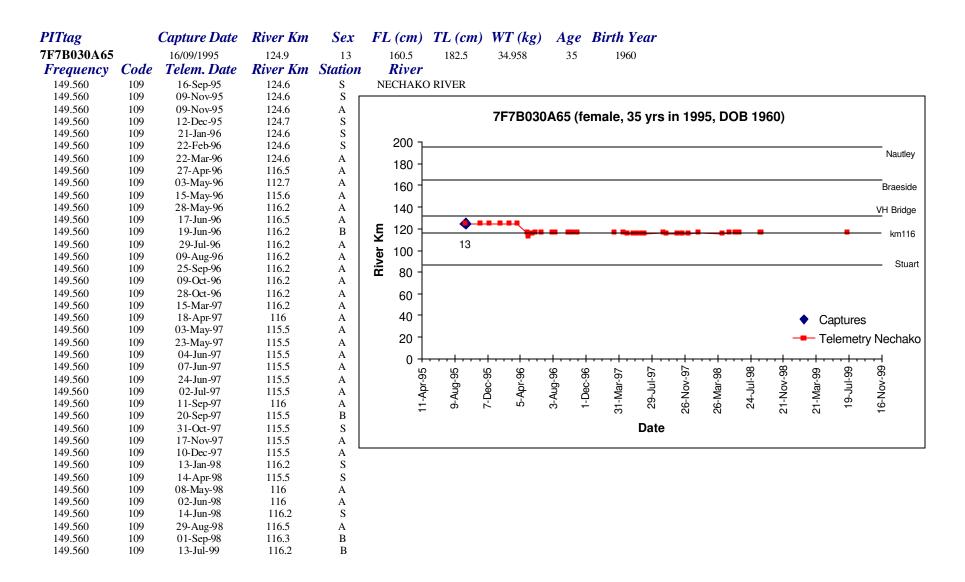


Frequency	Code	Telem. Date	River Km	Station	River
149.700	15	05-Jun-04	116	GS	
149.700	15	06-Jun-04	116	GS	
149.700	15	07-Jun-04	116	GS	
149.700	15	10-Jun <i>-</i> 04	116	GS	
149.700	15	11-Jun-04	116	GS	
149.700	15	11-Jun-04	116	GS	
149.700	15	16-Jun-04	116	GS	
149.700	15	17-Jun-04	116	GS	
149.700	15	19-Jun-04	116	GS	
149.700	15	20-Jun-04	116	GS	
149.700	15	21-Jun-04	116	GS	
149.700	15	22-Jun-04	116	GS	
149.700	15	24-Jun-04	116	GS	
149.700	15	10-Jul-04	116	GS	
149.700	15	13-Jul-04	116	GS	
149.700	15	14-Mar-06	116.2	S	
149.700	15	10-Aug-06	110	A	STUART RIVER
149.700	15	16-May-07	130	A	NECHAKO RIVER

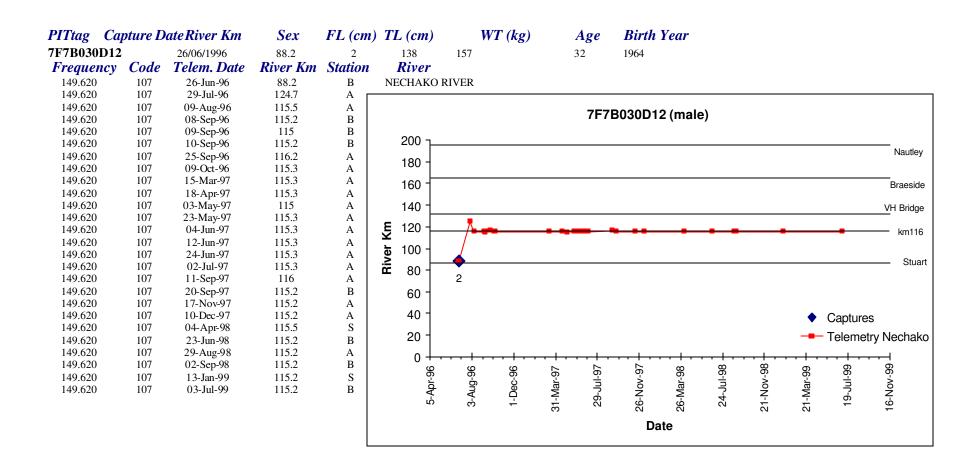
- Fish was captured at km 116 in Oct 2001 and assessed as a code 4 male suggesting it would be ready to spawn in 2002.
- Telemetry records show the fish mainly located at km 116 however, was in the vicinity of the VH spawning area on May 26th-28th, 2003 and May 18th, 2004. The 2004 date corresponds to an observed spawning congregation and therefore the fish likely spawned that time at least.
 In 2006 it was identified at km 116 (Mar 14th) and in the Stuart River (km 110 Aug 10th). It was not identified at the VH spawning area and likely did
- In 2006 it was identified at km 116 (Mar 14th) and in the Stuart River (km 110 Aug 10th). It was not identified at the VH spawning area and likely did not spawn that year.
- In 2007 it was identified back in the Nechako at km 130 on May 16th but was not identified at the VH spawning area during the observed spawning event on June 2nd.
- Rated end of tag life was Nov 2003 so it is possible tag died following May 2007 ID.

<i>PITtag</i> 7F7B03057D	•	Capture Date 12/09/1996 14/09/1999 14/09/2001	90.2 72.7 74.9	Sex 1 98 98	90 108 116.5	TL (cm) 103 122 132.5	6.8 9.5 9.545	Age 13	Birth Year 1983
Frequency 149.480 149.480 149.480 149.480	Code 56 56 56 56	Telem. Date 12-Sep-96 25-Sep-96 04-Oct-96 09-Oct-96	River Km 92 107 90 70.5	Station B A GS A	River NECHAK	O RIVER	7F	7B030	057D (male/juvenile, 13 yrs in 1996, DOB 1983)
149.480 149.480 149.480 149.480 149.480 149.480 149.480	56 56 56 56 56 56 56	28-Oct-96 29-Nov-96 15-Mar-97 18-Apr-97 03-May-97 08-May-97 09-May-97 23-May-97	69 68 67 66.5 74 90 0.1 92.5	A A A A GS A	STUAF NECHA!	200			Nautley Braeside VH Bridge km116
149.480 149.480 149.480 149.480 149.480 149.480 149.480	56 56 56 56 56 56	04-Jun-97 07-Jun-97 12-Jun-97 24-Jun-97 02-Jul-97 14-Jul-97 13-Aug-97	103.2 103.5 103.5 103 103 103.5	A A A A A		100 - 80 - 60 - 40 - 20 -	1		98 98 Captures Telemetry Nechako
149.480 149.480 149.480 149.480 149.480 149.480 149.480 149.480	56 56 56 56 56 56 56 56	11-Sep-97 17-Nov-97 10-Dec-97 08-May-98 02-Jun-98 15-Jun-98 03-Jul-98 29-Aug-98 12-Jun-99	103 104 104 103.9 103 103.3 103.3 103.4	A A A B A A B		0 +	3-Aug-96 + 2-Oct-96 + 1-Dec-96 + 30-Jan-97 + 31-Mar-97 + 1-	30-May-97 = 29-Jul-97 = 27-Sep-97	27-Sep-97 7 26-Nov-97 26-Nov-97 26-Nov-97 26-Nov-97 26-Nov-97 26-Nov-98 22-Sep-98 22-Nov-98 22-Sep-98 20-Nov-98 20-Nov-99 19-Jul-99 19-Jul-99 11-Sep-99 11-Sep-99 11-Sep-99 11-Sep-90 11-Sep-90 9-Nov-00 11-Sep-90 9-Nov-00 9-Nov-00 10-Nov-00 9-Nov-00 10-Nov-00 9-Nov-00 10-Nov-00 9-Nov-00 10-Nov-00

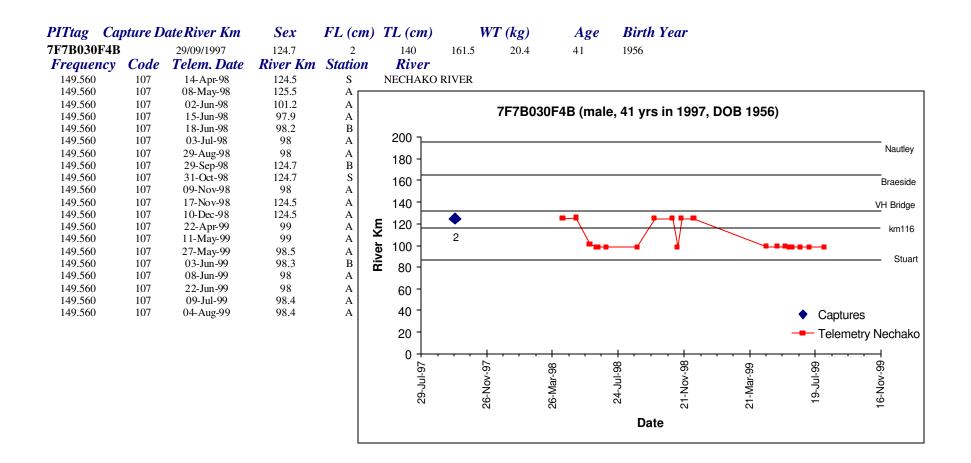
- Fish has been captured twice in the vicinity of km 72 and once near the confluence of the Stuart River.
- All telemetry records were limited to the area upstream and downstream of the Stuart River confluence from km 66 to 104.
- Fish appears to have overwintered at km 104 in 1997, however, there is the possibility the tag was shed at that location.
- Fish was never identified in the vic inity of the known spawning area at VH.



- Fish was tagged at km 124.9 in Sept 1995 and assessed as a code 13 female. Telemetry shows fish remained at km 124.6 that winter but moved to km 116 in Apr. After a brief migration to km 112 (feeding) fish returned to km 116 on May 28th and remained at that location. Due to lack of movement tag likely shed.
- Fish was never identified at the VH spawning area.



- Fish was originally tagged at km 88 in June 1996 and assessed as a code 2 male. After migrating to rearing habitats at km 124 (July 29th) and then to km 116 (Aug 9th) fish did not show any other movements. Tag likely shed.
- Fish was not identified at VH spawning area.



- Fish tagged at km 124 in Sept 1997 and assessed as code 2 male. Telemetry data shows the fish at km 125 in May 1998 but migrated to km 98 in June and remained there through August; presumably for feeding.
- Fish returned to km 124 and likely overwintered there. In 1999 fish was located at km 98.
- Fish was never identified at VH spawning area.

PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year
7F7B031511		03/09/1998	114.9	4	183	204	46.8	47	1951
Frequency	Code	Telem. Date	River Km	Station	River				
149.740	15	03-Sep-98	114.9	В	NECHAKO	RIVER			
149.740	15	04-Sep-98	116.2	В					
149.740	15	09-Nov-98	116.2	A					
149.740	15	22-Apr-99	116	A					
149.740	15	27-May-99	116.2	A					
149.740	15	08-Jun-99	116.2	A					
149.740	15	22-Jun-99	116.2	A					
149.740	15	09-Jul-99	116.2	A					
149.740	15	04-Aug-99	116.2	A					

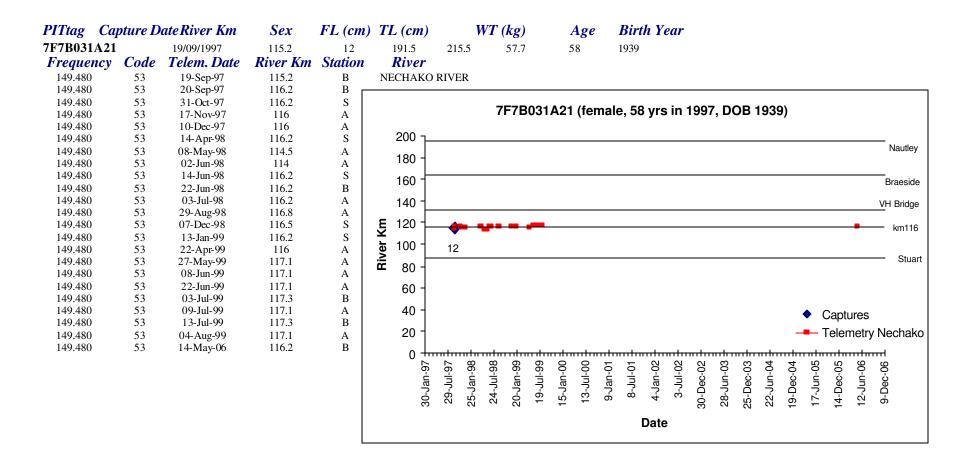
- Fish was tagged at km 114 in Sept 1998 and assessed as a code 4 male suggesting it may have matured (code 5) in 1999.
- Telemetry data never left km 116 and as a result tag is suspect to have been shed.

PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth	Year								
7F7B031610		20/08/1995	126.5	97	215.5	247	77.18	88	190									
		14/09/1995	125	4	215.5	247	80.358	88	190	07								
Frequency	Code	Telem. Date	River Km	Station	River													
149.620	106	14-Sep-95	124.6	S	NECHAKO	RIVER												
149.620	106	09-Nov-95	124.4	S														
149.620	106	09-Nov-95	124.6	S			767	D02161	0 (male	e, 88 yrs	in 10	005		1007	^			
149.620	106	12-Dec-95	124.8	S			767	503101	U (IIIai	e, oo yis	>	990, I	ООВ	1907	,			
149.620	106	21-Jan-96	124.6	S	200	_												
149.620	106	22-Feb-96	124.6	S	200	1												Nautley
149.620	106	22-Mar-96	124.6	A	180	4												radacy
149.620	106	20-Apr-96	124.6	Α	160													<u> </u>
149.620	106	27-Apr-96	124.6	A	160	1												Braeside
149.620	106	03-May-96	124.6	A	140	- 97												VH Bridge
149.620	106	15-May-96	124.6	Α	E 120					-	-							
149.620	106	28-May-96	124.6	A	토 120	1												km116
149.620	106	17-Jun-96	124.6	A	ъ 100	- 4												
149.620	106	18-Jun-96	124.7	S	80 Biver													Stuart
149.620	106	19-Jun-96	124.8	В														
149.620	106	27-Jun-96	124.7	В	60	4												
149.620	106	29-Jul-96	124.7	Α	40	_										Ca		_
149.620	106	09-Aug-96	124.7	A		1									`	V Ca	apture	S
149.620	106	05-Sep-96	124.7	В	20	=									-	- Te	lemet	ry Nechako
149.620	106	19-Sep-96	124.7	В	0		1 1		ı	1 1								
149.620	106	20-Sep-96	124.7	В			6 5	9 9	9	- 9	_	_	_	ω	ω.	ω	ω	8
149.620	106	25-Sep-96	124.6	GS		6-6	6-0	<u>୍</u>	6-0	6-7	6- 5	9-9	6-1	6-	6-	6-1	6-6	6-/
149.620	106	09-Oct-96	124.6	A		:0-Jun-95 6-Sep-95	3-Nov-95 9-Feb-96	27-Apr-96 14-Jul-96	ЭeE	7-Dec-96 5-Mar-97	Ä	8-Aug-97	ဝိ	Jar	Ma	Ju	2-Sep-98	9
149.620	106	18-Oct-96	124.6	A		20-Jun-95 6-Sep-95	23-Nov-95 9-Feb-96	27-Apr-96 14-Jul-96	30-Sep-96	17-Dec-96 5-Mar-97	22-May-97	6	25-Oct-97	11-Jan-98	30-Mar-98	16-Jun-98	2.5	20-Nov-98
149.620	106	28-Oct-96	124.6	A		CV.	CA	••	က	•			.,	_	(1)	_		N
149.620 149.620	106 106	29-Nov-96 15-Mar-97	124.6 124.6	A						Date	9							
149.620	106		124.6 124.6	A														
		18-Apr-97		A														
149.620	106	07-Sep-98	124.6	В														

- Tag likely shed.
- Fish was assessed as code 4 in Sept of 1995 therefore was likely ripe (code 5) in 1996.

<i>PITtag</i> 7F7B031824		Capture Date 19/09/1997 10/04/2007	River Km 110 Fraser River	Sex 2 2/3	FL (cm) 211 219.5	<i>TL (cm)</i> 239 274	WT (kg) 73.5 78.9	Age 67	Birth Year				
Frequency	Code	Telem. Date	River Km		River								
149.480	52	19-Sep-97	110	В	NECHAK	O RIVER							
149.480	52	20-Sep-97	116.1	В									
149.480	52	17-Nov-97	117	A			7575004	004/		4007 D	OD 4000)		
149.480	52	08-May-98	123	A			/F/B031	824 (m	ale, 67 yrs i	n 1997, DC	OB 1930)		
149.480	52	22-Apr-99	175.5	A	000								
149.480	52	11-May-99	175.5	A	200 —								Nautley
149.480 149.480	52 52	27-May-99 08-Jun-99	176 175.7	A	180 -								ivadiley
149.480	52 52	22-Jun-99	175.7	A A									
149.480	52	09-Jul-99	175.7	A	160 -								Braeside
149.480	52	04-Aug-99	175.8	A	140								VII Deidera
		Č											VH Bridge
					토 120 十								km116
						•							
					100 - 80 -	2							Stuart
					E 80 -								Stuart
					60 -								
					40 -							Captures	
					20 -	Note: Fish in	lentified in Fr	aser Riv	er in Oct. 2007.			Telemetr	y Nechako
						14010. 1 1011 10	1	4501 1111	U III OOL 2007.	1	1	ı	´ ,
					0 +		· · · · ·	, ,	- 		-		0
					6-1	6->	ģ	5	6-1	6->	9,	6-	6->
					29-Jul-97	26-Nov-97	26-Mar-98	2	24-Jul-98	21-Nov-98	21-Mar-99	19-Jul-99	16-Nov-99
					53	26-	6	3	57	21-	21-	15	16-
									Date				
									Date				

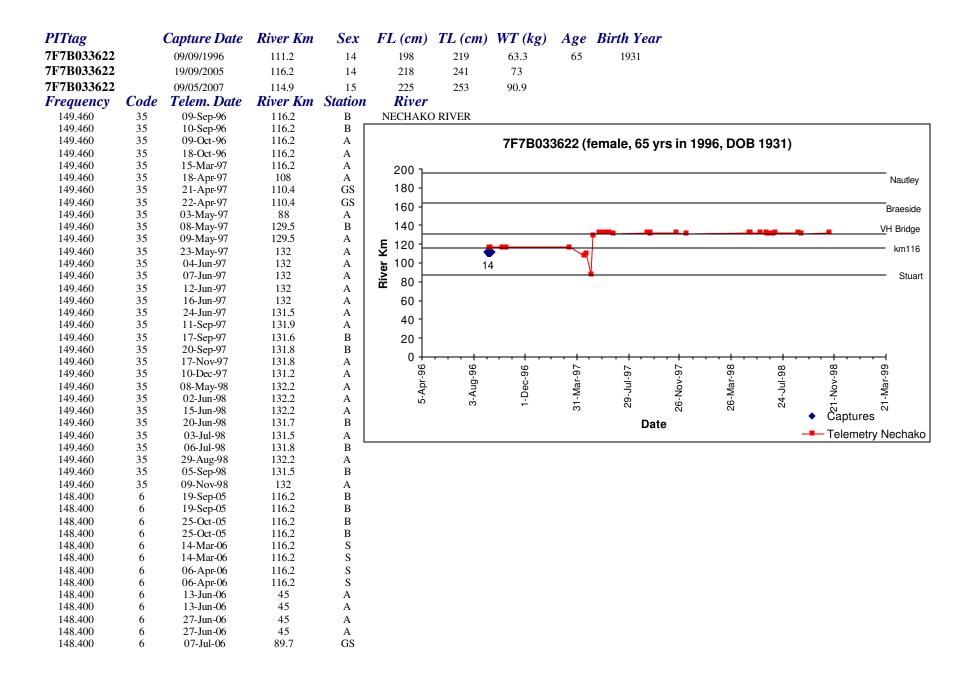
- Fish was originally captured in Sept 1997 at km 110 and assessed as a code 2 male. Fish was recaptured in Oct 2007 in the Fraser (10.553994.6006890) and assessed as a code 2 or 3 male.
- Telemetry data shows fish migrated to km 175 in April 1999 and remained there through the summer (rearing habitat most likely).
- Fish tagged in 2007 with 148.400 code 54.

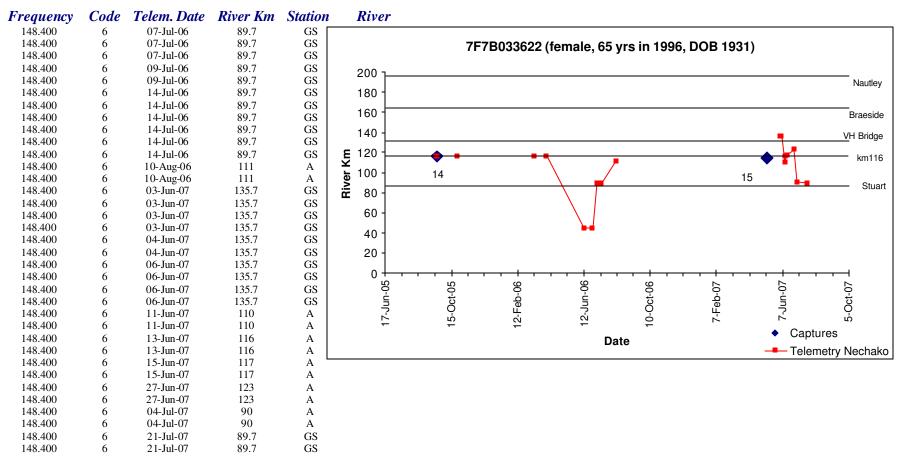


• Fish was tagged at km 115 in Sept 1997 and assessed as a code 12 female. However, tag likely shed as fish did not move from that location.

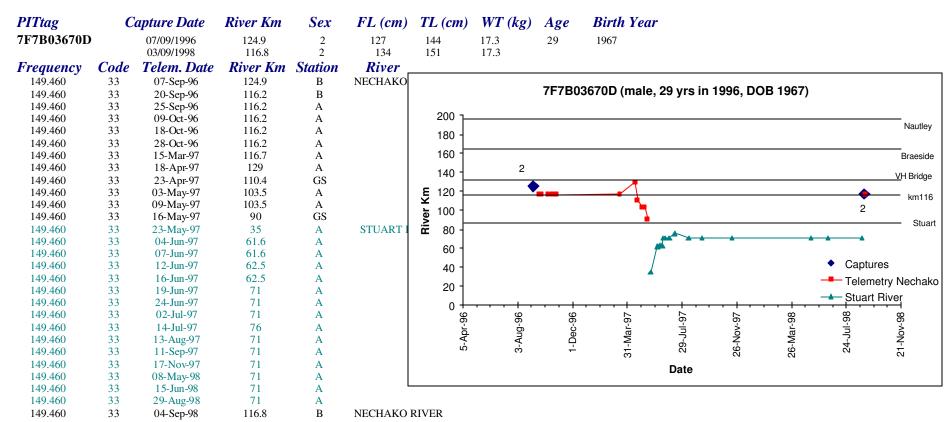
PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year				
7F7B033461		19/06/1998	96.4	3	158	178	29.51	41	1957				
7F7B033461		20/09/2001	111.2	3	171.5	194	40.8						
7F7B033461		16/09/2005	116.2	4	185	210.5	44.9						
Frequency	Code	Telem. Date	River Km	•	River	210.5	77.7						
149.700			116.2		NECHAKO	DIVED							
149.700	34 34	16-Sep-05 25-Oct-05	124.7	B B	NECHARC	KIVEK							
149.700	34	23-0ct-05 14-Mar-06	116.2	S									
149.700	34	01-May-06	124.6	A			7F7B0	033461	(male, 41 yrs	in 1998, D	OB 1957))	
149.700	34	14-May-06	112	A					, ,	•	•		
149.700	34	16-May-06	116	A	200 7								
149.700	34	31-May-06	112	A	180 -								Nautley
149.700	34	02-Jun-06	110	A	100								
149.700	34	13-Jun-06	110	A	160 -							·	Braeside
149.700	34	10-Aug-06	110	Α	140 -								
149.700	34	05-May-07	116	A	l F								VH Bridge
149.700	34	10-May-07	114	A	E 120 -	•							km116
149.700	34	16-May-07	125	A	± 100 -	4							
149.700	34	28-May-07	128	Α									Stuart
149.700	34	30-May-07	129	A	€ 80 -								Oldari
149.700	34	01-Jun-07	135.7	GS	60 -								
149.700	34	01-Jun-07	135.7	GS									
149.700	34	01-Jun-07	129	A	40 -								
149.700	34	02-Jun-07	135.7	GS	20 -	Noto: Ale	an anturad in	1000 on	d 2001 (maturity 3	hoth cocca	monto)		
149.700	34	02-Jun-07	135.7	GS		Note. Al	so aptureu iri	1990 an	iu 2001 (maturity c		inenis).		
149.700	34	02-Jun-07	135.7	GS	0 +		 			- 	- 	, , , , ,	
149.700	34	02-Jun-07	135.7	GS	-0-		90	o-	-06	90	-07	-07	-07
149.700	34	03-Jun-07	137	A GS	17-Jun-05		15-Oct-05	2-Feb-06	12-Jun-06	10-Oct-06	7-Feb-07	7-Jun-07	5-Oct-07
149.700 149.700	34 34	04-Jun-07 04-Jun-07	135.7 135.7	GS	- 2		5	2-F	7-	0	7-F	7-	2-6
149.700	34	04-Jun-07 05-Jun-07	157	A	1		_	÷	-	-		Captı	ires
149.700	34	08-Jun-07	105	A					Date			•	
149.700	34	09-Jun-07	135.7	GS								I elen	netry Nechako
149.700	34	13-Jun-07	134	A									
149.700	34	21-Jun-07	130	A									
149.700	34	04-Jul-07	115	A									
149.700	34	06-Jul-07	112	A									
149.700	34	09-Jul-07	112	A									
149.700	34	11-Jul-07	112	A									
149.700	34	16-Jul-07	119	A									

- Fish assessed as code 4 in Sept of 2005 however was not identified at the spawning area in VH during the observed spawning event in 2006 (May 19-22nd).
 In 2007, fish was identified at the VH spawning area from June 2nd-4th which coincides with the period when eggs were collected. In addition, the fish was identified at km 157, downstream of Braeside on June 5th.
- By the middle of July, the fish had moved downstream to km 119 and could potentially be overwintering at km 116 (which is where it was captured in 2005).
- Rated end of tag life is April 2010.

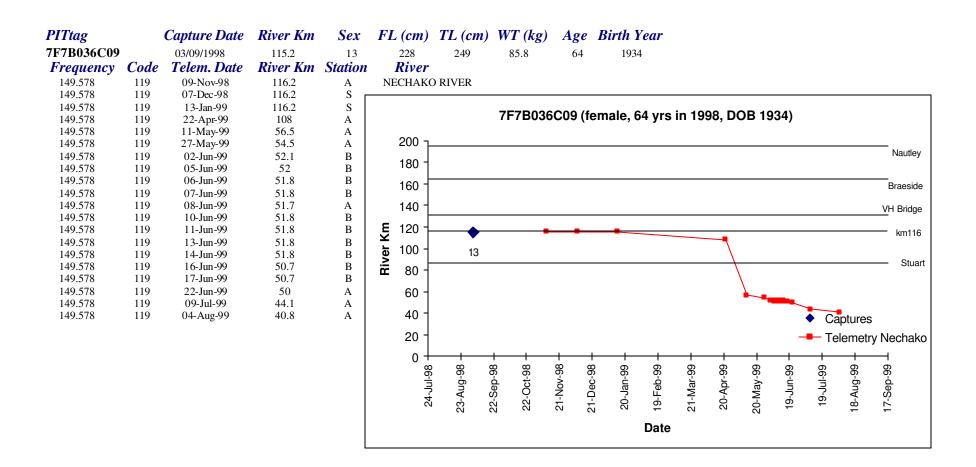




- Fish was assessed as code 14 in Sept of 1996 and telemetry in 1997 identified it at km 132 (approximately 4 km d/s of the VH spawning area) beginning May 23rd. However tag is recorded at that same location until Nov 1998 and there is the possibility that it was shed. The initial movement of the fish from overwintering/rearing habitat at km 116 and 110 in the spring of 1997 to km 132 suggests a spawning migration however, the potential date of spawning cannot be confirmed from the data.
- Fish was recaptured in Sept of 2005 and again assessed as code 14. However, telemetry did not identify it at the VH spawning area in 2006 suggesting fish may not have reached maturity that year. Records from km 45 from June 13-27th, 2006 suggest this area may provide rearing habitat.
- Fish was captured a third time in May 2007 and assessed as being ripe (code 15). Taken as brood stock for 2007 hatchery program (female 4).
- •Telemetry identify it at the VH spawning area from June 3-6th which coincides with the time when eggs were collected however due to being used as brood stock it is unlikely it spawned. Following release, the fish moved downstream to km 116 and as of July 21st was located at the Stuart River Confluence.
- Rated end of tag life is October 2007 therefore tag may be dead in 2008.



- Fish has never been identified at the known spawning area at VH.
- From May 23rd, 1997 to August 29th, 1998 fish was located in the Stuart River predominantly at km 71.
- Fish was most recently captured in Sept 1998 at km 116 and was assessed as code 2.



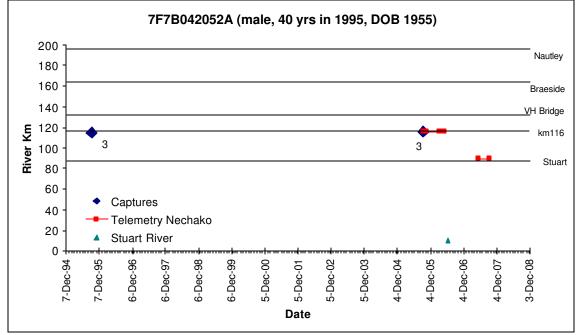
- Fish originally tagged at km 115 in Sept 1998 and assessed as code 13 female. Telemetry shows it remained at km 116 through Jan 1999 before migrating downstream.
- From June 6th to Aug 4th 1999 fish was located between km 51 and 40 where summer feeding/rearing habitat is found.
- Fish was never identified at the VH spawning area.

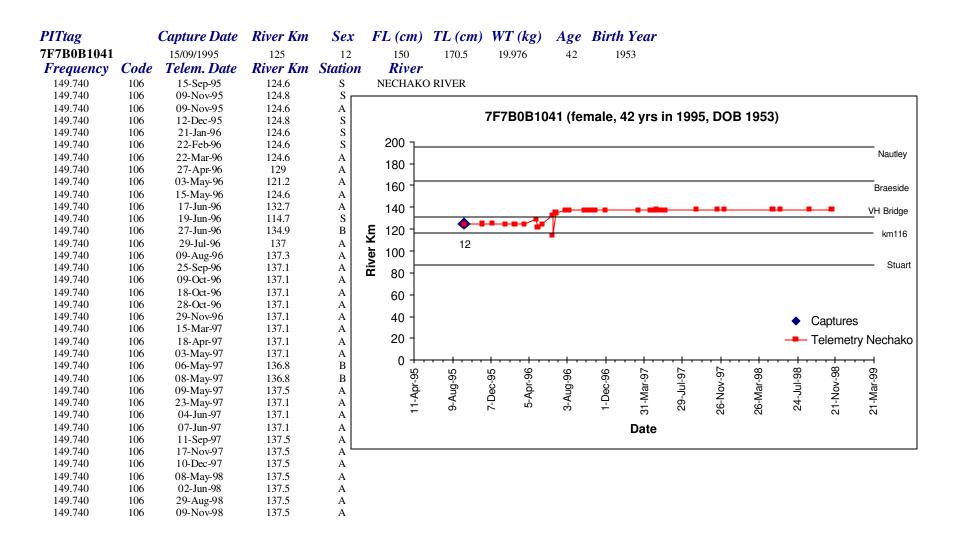
PITtag 7F7B03784D Frequency	Code	Capture Date 28/08/1998 Telem. Date	River Km 66.1 River Km	Sex 3 Station	FL (cm) 150.5 River	TL (cm) 167	WT (kg) 23.2	Age 35	Birth Year 1963				
149.578 149.578 149.578 149.578 149.578 149.578 149.578 149.578 149.578 149.578	117 117 117 117 117 117 117 117 117	28-Aug-98 31-Aug-98 04-Sep-98 09-Nov-98 07-Dec-98 22-Jun-99 03-Jul-99 09-Jul-99 13-Jul-99 04-Aug-99	66.1 90 116.2 116.2 116.2 116.2 116.2 116.2 116.2	B B B A S A B A B A	200 180 160 140 B 120 100 80 60 40 20 0	3	+		7F7B03784D (m		- 66 -	Captures Telemetr	y Nechako
						24-Jul-98	12-Sep-98	38-70N-1	21-Dec-98 Date	31-Mar-99	20-May-6	96-lnL-99	28-Aug-99

- Fish was tagged at km 66 and assessed as code 3 but all telemetry data from km 116. Tag likely shed at that location.
- Fish never identified at VH spawning area.

PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year
7F7B04052A		16/09/1995	115.2	3	153	187	35.866	40	1955
7F7B04052A		17/09/2005	116.2	3	188	214	54.4		
Frequency	Code	Telem. Date	River Km	Station	River				
149.700	39	17-Sep-05	116.2	В	NECHAKO	RIVER			
149.700	39	25-Oct-05	116.2	В					
149.700	39	14-Mar-06	116.2	S					
149.700	39	01-May-06	116.2	A					
149.700	39	13-Jun-06	10	A	STUART	RIVER			
149.700	39	11-May-07	89.7	GS	NECHAKO	RIVER			
149.700	39	14-Sep-07	89.7	GS					

- Fish has been captured twice at km 116 (Sept 1995 and 2005) and was assessed as code 3 both times.
- Has never been identified at the known spawning area at VH and has been located either within the Stuart River (June 13, 2006) or near the confluence (May and Sept, 2007).
- Rated end of tag life is April 2010.





- Fish tagged at km 125 in Sept 1995 and assessed as a code 12 female. Telemetry shows it overwintered at km 124 that year and moved to km 137 by July 29th 1996. Tag was likely shed at that location as it did not move through November 1998.
- Original migration to km 135 is not considered a spawning migration due to the timing being outside the observed spawning window.

PITtag 7F7B0B1504 Frequency	Code	Capture Date 13/09/1998 Telem. Date	River Km 68.2 River Km	Sex 12 Station	FL (cm) 158.5 River	TL (cm) 178.5	WT (kg) 26.3	Age 33	Birth Yes 1965	ar				
149.658	114	13-Sep-98	68.2	В	NECHAKO	RIVER								
149.658	114	13-Jan-99	124.9	S	TUECHNIKO	RIVER								
149.658	114	22-Apr-99	122	A			757000	1504	famala 2	2 in	1000 DO	D 1065\		
149.658	114	10-May-99	110.4	GS			/ / / 606	1504 ((iemaie, 3	3 yrs in	1998, DO	D 1900)		
149.658	114	11-May-99	108	A										
149.658	114	17-May-99	10.4	GS	200									Mautley
149.658	114	21-May-99	110.3	GS	180									,
149.658	114	22-May-99	110.3	GS	100									
149.658 149.658	114 114	23-May-99 27-May-99	110.3 157	GS	160	4						•		Braeside
149.658	114	08-Jun-99	160.2	A A										VH Bridge
149.658	114	22-Jun-99	160.2	A	140	7								- VI I Bridge
149.658	114	09-Jul-99	160.2	A	토 120	+			_					km116
149.658	114	04-Aug-99	160.2	A	¥									
					100 80	‡								Stuart
					≅ 80	_								
							•							
					60	=								
					40	-	12						Captures	
												,	Telemetr	v Nechako
					20	7								,
					0	 	 		. 	. 	 	 	. , 	-
						<u>စ</u> ္	စ္တ	3	86	66	6	66	9-Jul-99	66
						Ė	2-Sep-98	2	9	ep	<u> </u>	a-	ja	-ɓn
						24-Jul-98	12-Sep-98	_	21-Dec-98	9-Feb-99	31-Mar-99	20-May-99	တ်	28-Aug-99
						•	-		N		က	ŏ		Ñ
										Date				

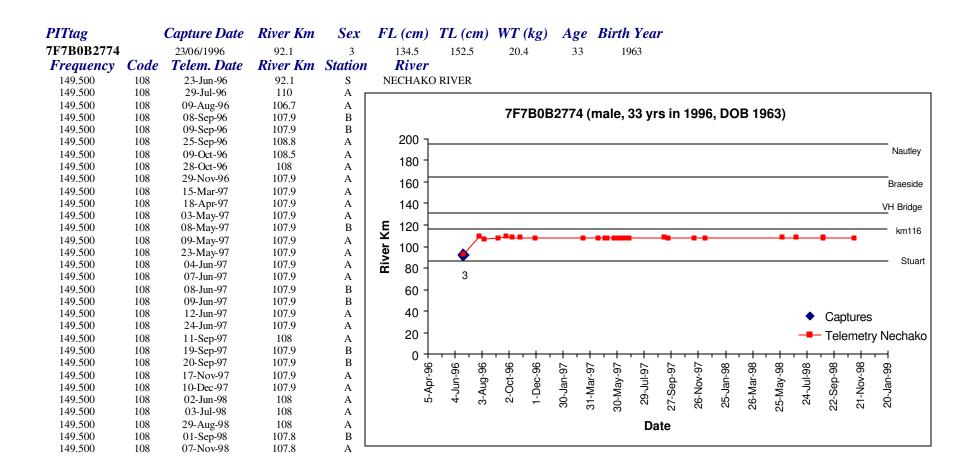
- Fish originally captured at km 68 in Sept 1998 and was assessed as a code 12 female. In January 1999 fish was identified at overwintering habitat at km 124. One record places the fish at km 10.4 on May 17th however, this may be a data entry error as the records before and after are from km 110.
 On May 27th fish migrated upstream to km 157 and was located at km 160 from June to August 1999.

PITtag 7F7B0B1974 Frequency	Code		125.1 River Km		16 R	9.5 iver	TL (cm 191) WT 28.		Age 39	Birth 195								
149.578 149.578	121 121	07-Sep-98 09-Nov-98	124.9 124.9	В А г	NEC.	нако	RIVER												
149.578	121	22-Apr-99	130.5	A				757	DAD4	074/5		20	: 400	00 D	OD 40	\E0\			
149.578	121	17-May-99	110.4	GS				/ [/	BUBIS	974 (16	emale, :	39 yrs	ın 198	98, DC	OB 18	159)			
149.578 149.578	121 121	27-May-99 08-Jun-99	141.5 141.5	A A	2	00													
149.578	121	22-Jun-99	141.5	A															Nautley
149.578	121	09-Jul-99	141.3	A	1	80 -													
149.578	121	04-Aug-99	141.5	A	1	60 -													Braeside
					1	40 -									- -				VH Bridge
						_	•							_					
					×	20 –	12								$\overline{}$				km116
					5 1	00 -													
					River 1	80 -													— Stuart
						60 -													
						40 -											Ca	ptures	
						20 -										_			Nechako
						0 +			+										
							86	86	86		8 8	66	66	66	66	66	66	66	66
						24-Jul-98	-bn	d eb		5	a E	ė.	<u>a</u> -	p-	lay-	'n	Ϊ'n	-bn	e e b
						45	23-Aug-98	22-Sep-98	22-Oct-98	21-Nov-98	20-Jan-99	19-Feb-99	21-Mar-99	20-Apr-99	20-May-99	19-Jun-99	19-Jul-99	18-Aug-99	17-Sep-99
							C/I	.4	•	٠- (١	u -		.,		CA			_	₽-
												Date							

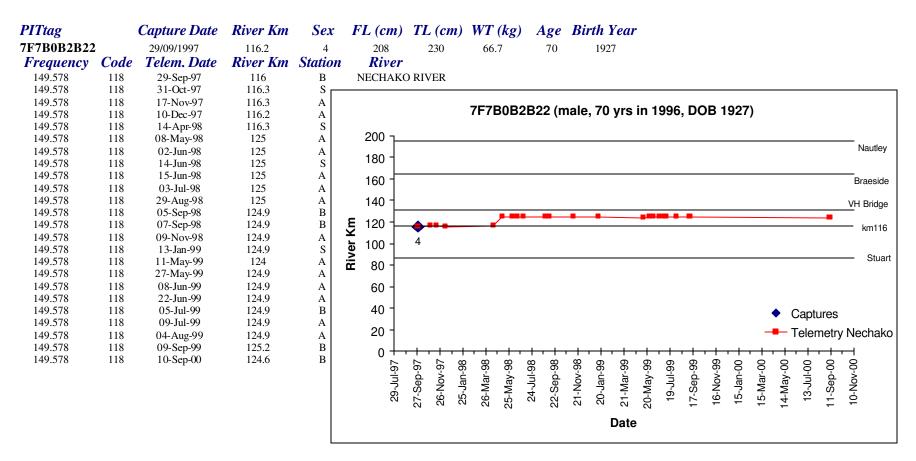
- Fish was originally tagged at km 125 in Sept 1998 and assessed as a code 12 female. Telemetry data shows it remained at km 125 following tagging and may have overwintered at that location.
- In 1999, fish migrated to km 141 on May 27th and remained there through August 4th. The motivation for the migration is unclear but could potentially be associated with spawning (based on time of year) or rearing. Tag likely shed at that location.

PITtag 7F7B0B1A3A		Capture Date 15/09/1995 18/06/1997	River Km 116.2 65.8	Sex 98 2	FL (cm) 139.5 139	TL (cm) 159.5 158	WT (kg) 25.424 23.6	Age 37	Birth Year			
PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT (kg)	Age	Birth Year			
7F7B0B200A		16/09/1995	116.2	2	129	149	18.16	29	1966			
7F7B0B200A		15/09/2005	116.2	4	154	178.5	27.2					
Frequency	Code	Telem. Date	River Km	•	River	170.5	27.2					
149.700	25	15-Sep-05	116.2	В	NECHAKO	DIVER						
149.700	25	25-Oct-05	124.7	В	NECHARC	KIVLK						
149.700	25	14-Mar-06	124.6	S								
149.700	25	06-Apr-06	124.6	S			7F7B0	B200A	A (male, 29 yrs in 199	5, DOB 1966)		
149.700	25	13-May-06	129.1	В						,		
149.700	25	14-May-06	130	A	200 7							
149.700	25	16-May-06	133.5	A	100						N	Nautley
149.700	25	18-May-06	132	A	180 -							
149.700	25	25-May-06	134	GS	160 -						Bı	raeside
149.700	25	13-Jun-06	134	GS							Di	lacsiac
149.700	25	27-Jun-06	133	A	140 -						VH	Bridge
149.700	25	10-May-07	130	A	E 120 -				•			
149.700	25	23-May-07	132	Α	×	-						km116
149.700	25	28-May-07	135.7	GS	- 00 Biver		4					
149.700	25	29-May-07	135.7	GS	≅ 80 −							Stuart
149.700	25	29-May-07	135.7	GS	L 80							
149.700	25	01-Jun-07	136	A	60 -							
149.700	25	03-Jun-07	126	A	40							
149.700	25	05-Jun-07	134	A	40 -						Captures	
149.700	25	08-Jun-07	130	A	20 -	Note: Origi	inally capture	d in 199	5 (maturity 2).		Telemetry Ne	ahaka
149.700	25	11-Jun-07	131 137	A	_						relementy ive	echako
149.700 149.700	25	11-Jul-07		A	0 +	 	10 .5 .0 .5		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		 	
	25	29-Aug-07	135.7	GS	Ö) 승 승 승	5 8 8 8	99	9 9 9 9 9 9 9 9	, (O O O O O O O O O O O O O O O O O O O	6 6 6 6	
149.700 149.700	25 25	30-Aug-07 31-Aug-07	135.7 135.7	GS GS	17-111-05		è a e è	Λar Pr	lun Jul Joy Jec Joy Jec Joy	8-Jan-07 7-Feb-07 9-Mar-07 8-Apr-07	7-Jun-07 7-Jul-07 6-Aug-07 5-Sep-07 5-Oct-07 4-Nov-07	
149.700	25 25	31-Aug-07 31-Aug-07	135.7	GS	17-	6-Aug-05 5-Sep-05 15-Oct-05	14-Nov-05 4-Dec-05 3-Jan-06 2-Feb-06	14-Mar-06 13-Apr-06	13-May-06 12-Jun-06 12-Jul-06 11-Aug-06 10-Sep-06 10-Oct-06 9-Dec-06	8-Jan-07 7-Feb-07 9-Mar-07 8-Apr-07	7-Jun-07 7-Jul-07 6-Aug-07 5-Sep-07 5-Oct-07 4-Nov-07	
177.700	23	31-Aug-07	155.7	O.S		= = =		- -	5 5 0	. 5, ω	2 4,	
									Date			
											4	

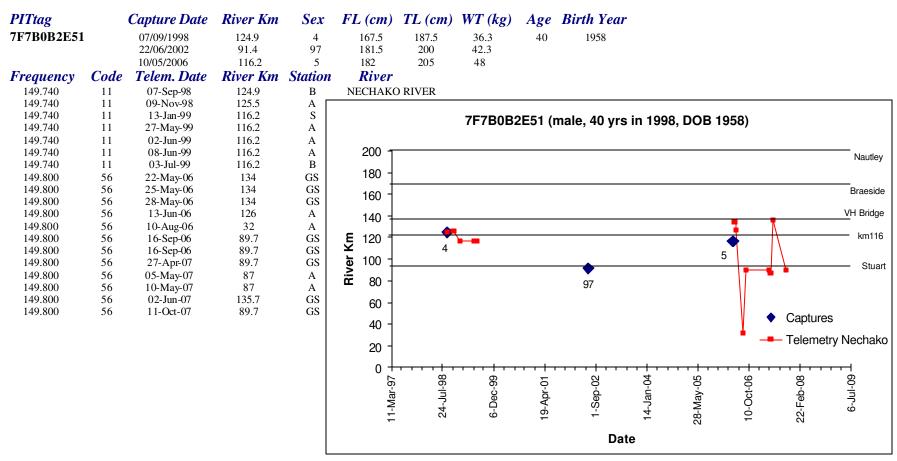
- Fish assessed as code 4 in Sept 2005 but was not identified at the VH spawning area during the observed spawning event in 2006 (May 19-22nd). During that period the fish was close (km132-134) and therefore spawning cannot be ruled out.
- In 2007, fish was identified at the VH spawning area prior to the period when eggs were collected and may have taken part in spawning event that resulted in eggs being collected on June 2nd. Following the spawning event, the fish moved d/s to km 130 and then returned to the spawning area at the end of August.



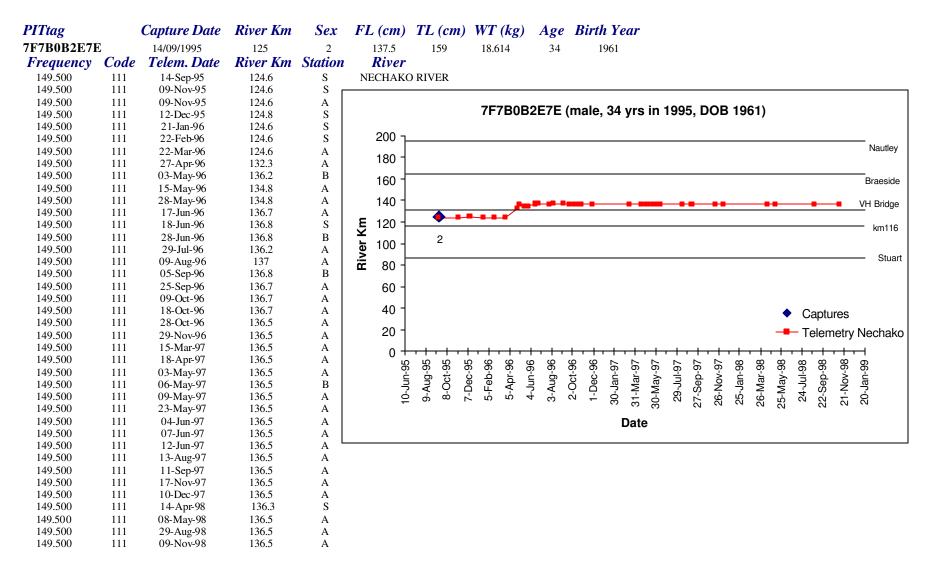
- Fish was originally captured at km 92 in June of 1996 and assessed as a code 3 male. Telemetry data shows it moved upstream to km 107 by Sept 8th but tag was likely shed at that location and no other movements were identified.
- Fish was never identified at VH spawning area.



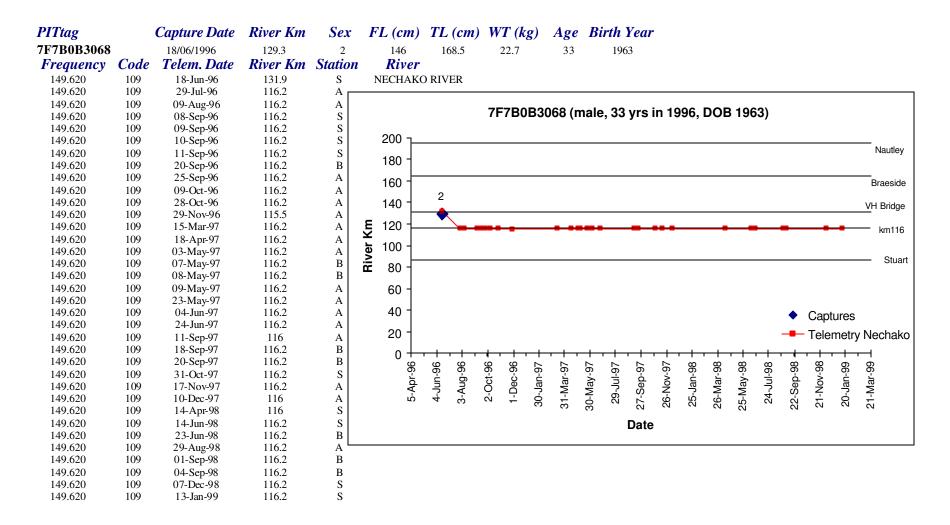
- Fish originally captured at km 116 in Sept 1997 and was assessed as a code 4 male suggesting it may be mature (code 5) the following year.
- Telemetry date shows it overwintered at km 116 and migrated to km 125 on May 8th. The tag was likely shed at that location as it never moved. Based on the time of year the fish may have continued upstream to the VH spawning area and spawned but cannot be confirmed.



- Captured at km 124 in 98 (code 4) and overwintered at km 116.
- Tag likely shed at km 116 as no telemetry records exist fromother locations.
- Fish recaptured in June 2002 at km 91.4.
- Assessed as code 5 in May 2006. Fish was taken as brood stock for 2006 hatchery program (male 5). Fish was released at km 134 on May 22nd, which was the end of the observed spawning congregation.
- In 2007 fish was also identified at VH spawning area on June 2 which corresponds to when eggs were collected.
- Fish has been identified near the Stuart confluence (Sept 2006 to May 2007) and may be overwintering in that area.
- Fish has also been identified at km 32 in Aug 06 suggesting a potential rearing/feeding habitat in that area.
- Rated end of tag life is December 2010.



- Fish originally captured at km 125 in Sept 1995 and was assessed as a code 2 male. Telemetry shows it remained at km 124 through the winter and migrated to km 132 on April 27th 1996.
- Fish moved to the vicinity of the VH spawning area on May 3rd but tag likely shed at that location (possibly around June 17th). Migration likely associated with spawning although based on maturity of the fish it may have been responding to the spawning cues but not actually spawning.

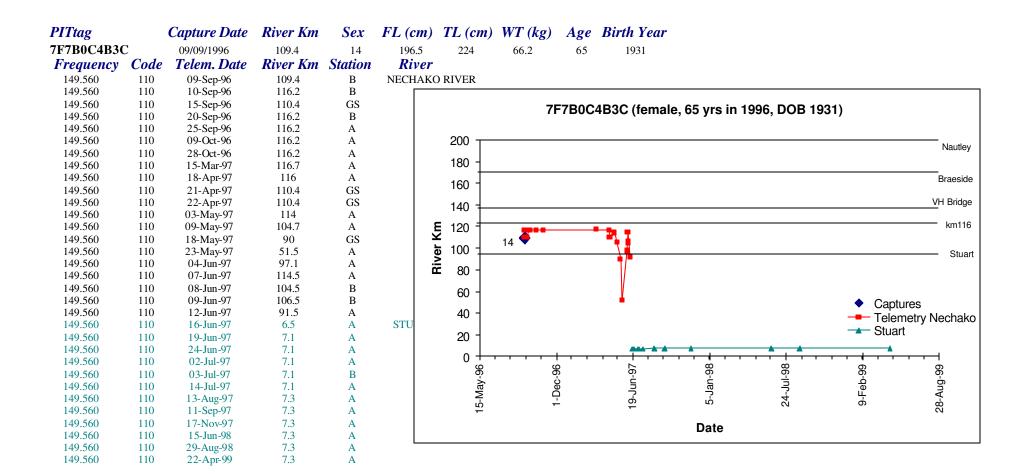


• Fish originally captured at km 129 in June of 1996 and assessed as a code 2 male. Telemetry shows it moved to km 116 on July 29th and tag was likely shed at that location.

<i>PITtag</i> 7F7B0C3010	Capture Date 16/09/1995 13/07/2002	River Km 114.9 0.3	Sex 3 97	FL (cm) 175.5 193	TL (cm) 198 217	WT (kg) 50.394 57.7	Age 42	Birth Year
PITtag	Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT (kg)	Age	Birth Year
7F7B0C3231	10/06/1995 14/09/1999 28/09/2001	92.4 66.2 125.2	98 97 97	130.5 145 151.5	147 164 170.5	16.783 22.7 24.9	31	1964
PITtag	Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT (kg)	Age	Birth Year
7F7B0C4A13	22/06/1998 04/09/1998	117.3 116.8	97 3	192.5 192.5	217.5 217.5	56.3 55.8	46	1952

<i>PITtag</i> 7F7B0C4A60		Capture Date 14/07/1996 22/06/1998 13/07/2002	River Km 47.6 115.2 88.7	Sex 3 14 14	FL (cm) 163 170.5 178	TL (cm) 184 192.5 201	WT (kg) 36.4 40.4 45.4	Age 41	Birth Year 1955	ur
Frequency	Code	Telem. Date	River Km	Station	River					
149.658	115	22-Jun-98	115.2	В	NECHAKO	RIVER				
149.658	115	23-Jun-98	116.2	В						
149.658	115	29-Aug-98	116.2	A			7E7B(C4 A 6	0 (fomale /	41 yrs in 1996, DOB 1955)
149.658	115	01-Sep-98	116.2	В			11100	JC4A0	o (leillale, 4	41 yrs iii 1990, DOB 1993)
149.658	115	02-Sep-98	116.2	В	200	_				
149.658	115	04-Sep-98	116.2	В	200					Nautley
149.658	115	07-Dec-98	116.2	S	180	-				,
149.658	115	13-Jan-99	116.2	S	400					
149.658 149.658	115 115	22-Apr-99 11-May-99	116 116	A	160	1				Braeside
149.658	115	27-May-99	116.2	A	140	4				VH Bridge
149.658	115	08-Jun-99	116.2	A A						- VIT Blidge
149.658	115	22-Jun-99	116.2	A	E 120	1				km116
149.658	115	03-Jul-99	116.2	В	<u></u>	4		14		14 / /
149.658	115	13-Jul-99	116.2	В	×					Stuart
149.658	115	04-Aug-99	116.7	Ā	ਛ 80	1				¥ 4
149.320	24	13-Jul-02	88.7	В	60	_				
149.320	24	14-Jul-02	88.6	В						
149.320	24	17-Jul-02	88.1	A	40	-				•
149.320	24	18-Jul-02	87.5	В	20	3				Captures
149.320	24	25-Jul-02	88.3	A	20	1				Telemetry Nechako
149.320	24	30-Jul-02	90	GS	0	 	I I I I .	alada	. 	 -
149.320	24	09-Oct-02	116	S		96	97 97 97	98 98	86 66	00 00 00 00 00 00 00 00 00 00 00 00 00
149.320	24	18-Mar-03	116	Α		5 d b	\$ = 3	<u>_</u> =	9 <u>-</u> 9	
149.320	24	26-May-03	76.1	A		7-Dec-95 5-Apr-96 3-Aug-96	1-Dec-96 31-Mar-97 29-Jul-97 26-Nov-97	26-Mar-98 24-Jul-98	21-Nov-98 21-Mar-99 19-Jul-99 16-Nov-99	15-Mar-00 13-Jul-00 10-Nov-00 10-Nov-01 5-Mar-02 3-Jul-02 3-Jul-02 3-Jul-02 28-Feb-03 28-Feb-03 28-Jun-04
149.320	24	01-Jun-03	89.7	GS		, η φ .	31 29 26	56 26	21 21 15 16	23. 10. 10. 10. 10. 10. 10. 10. 10. 10. 10
149.320	24	17-Jun-03	38.8	Α						Date
149.320	24	03-Jul-03	73.6	A						Date
149.320	24	14-Jul-03	73.3	A						
149.320	24	20-Oct-03	116	GS						

- Fish originally captured at km 47 in July of 1996 and assessed as a code 3 male. Subsequent captures have identified the fish as a female (code 14).
- Fish was re-captured in June 1998 and assessed as code 14 female. Fish moved to km 116 following tagging and it is suspected that the tag was shed as it remained at that location until Aug 1999.
- Fish was captured a third time in July of 2002 d/s of the Stuart River confluence (km 88) and was assessed as code 14. Fish remained at km 88 following tagging and overwintered at km 116.
- In 2003 fish could potentially have been nearing spawning maturity, however was not identified at the known spawning area at VH. Instead fish was at km 76 on May 26th (date congregation observed) and was also identified at km 38 on June 17, 2003 (likely rearing/feeding migration).
- Tag has likely expired as fish has not been detected since October 2003 (km 116 overwintering hole).



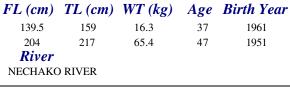
- Fish was originally captured at km 109 in Sept 1996 and assessed as a code 14 female suggesting it may be ripe (code 15) in 1997). Telemetry shows it moved to km 116 after tagging and remained there till April 21st 1997.
- In May it began to move downstream and on the 23rd was identified at km 51.5. On June 4th it was located at km 97.1. This is the period when spawning would likely occur so there is the possibility that spawning habitat exists between km 51 and 97.
- On June 16th the fish was identified in the Stuart River (km 6.5) and tag may have been shed at that location.

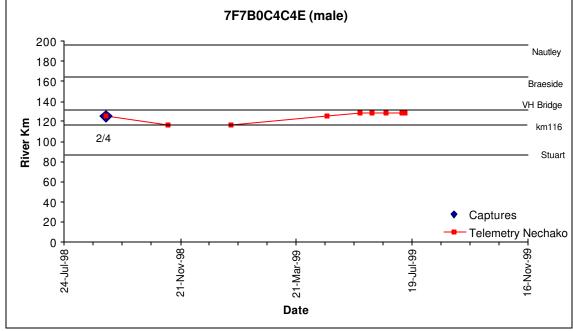
PITtag	Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year
7F7B0C4C09	07/09/1998	124.7	3	143	159	21.8	39	1959
	09/09/1999	125	98	146	163	23.1		
	01/10/2001	116.2	3	151.5	169	26.8		
	17/09/2005	116.8	3	165	186	34.9		

- Fish captured twice at km 125 and twice at 116.
- Maturity of code 3 in 2005 (estimated age of 46) suggests fish likely nearing reproductive age and could be a good candidate for a radio tag if captured again.

PITtag		Capture Date	River Km	Sex
7F7B0C4C41	E	05/09/1998	124.9	2
7F7B0C4C41	E	05/09/1998	124.9	4
Frequency	Code	Telem. Date	River Km	Station
149.740	14	05-Sep-98	124.9	В
149.740	14	09-Nov-98	116.2	A
149.740	14	13-Jan-99	116.2	S
149.740	14	22-Apr-99	125	A
149.740	14	27-May-99	128.5	A
149.740	14	08-Jun-99	128.5	A
149.740	14	22-Jun-99	128.5	A
149.740	14	09-Jul-99	128.3	A
149.740	14	13-Jul-99	128.3	A

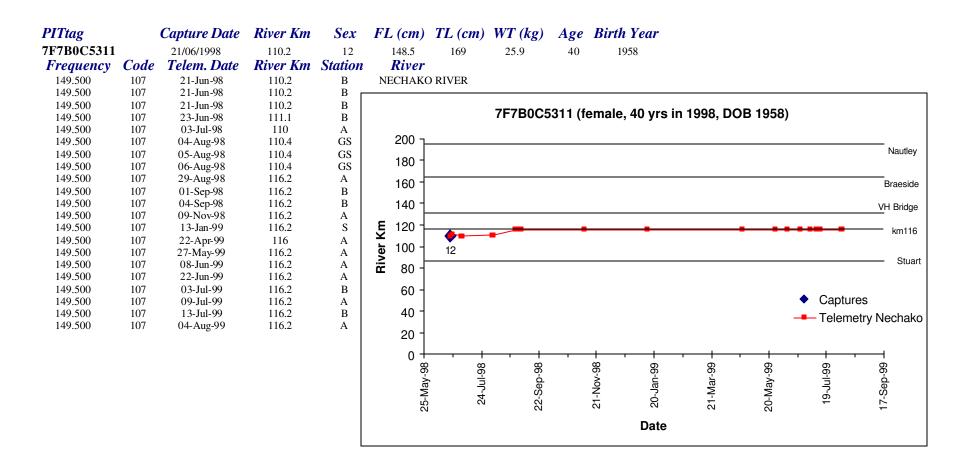
- •Database issue. Two records of same tag on same day with different length, weight etc.
- •Telemetry did not identify fish at VH spawning area.
- •Fish was identified at km 128 May July 1999.





PITtag 7F7B0C4E1E		Capture Date 15/09/1995 04/09/1998 04/10/2001 15/09/2005	River Km 124.5 116.2 116.2 116.8	Sex 3 20 97 12	FL (cm) 162.5 168 167.5 172	TL (cm) 190 196 193 200	WT (kg) 35.866 32.7 31.751 35.8	Age 43	Birth Yea	r				
Frequency	Code	Telem. Date	River Km	Station	River									
149.700 149.700 149.700 149.700 149.700 149.700	23 23 23 23 23 23 23	15-Sep-05 25-Oct-05 14-Mar-06 13-Jun-06 27-Jun-06 10-Aug-06	116.8 124.7 124.6 72 80 110	B B S A A	NECHAKO 200	RIVER	7F7B0	C4E1D) (female, 4	3 yrs in	1995, DOI	 3 1952)		
149.700	23	25-May-07	132	A										Nautley
149.700	23	28-May-07	107	A	180	1								
149.700	23	30-May-07	107	A	160	=								
149.700	23	03-Jun-07	110	Α										
149.700	23	08-Jun-07	116	A	140	1						_		VH Bridge
149.700	23	11-Jun-07	121	A	E 120	-	_							- km116
149.700 149.700	23 23	13-Jun-07 15-Jun-07	122 120	A A	\mathbf{x}	12			•			₽ \		KIIIIO
149.700	23	18-Jun-07	120	A	Biver 80	1		`					—	- Stuart
149.700	23	21-Jun-07	119	A	2 80	-								— Sluari
149.700	23	27-Jun-07	120	A	60				•					
149.700	23	21-Jul-07	89.7	GS	00									
149.700	23	06-Sep-07	89.7	GS	40	=								
					20	1							Captures	
													Telemetry	Nechako
					0	Т т т т	10 (· · · · · ·	- 	- 	- -	, , , , , , , , , , , , , , , , , , , 	_
						Ö	÷	Š	ō-	t-0	-0-0	.0-	t-0 <u>.</u>	80-0
						17-Jun-05	15-Oct-05	12-reb-06	2-Jun-06	10-Oct-06	7-Feb-07	7-Jun-07	5-Oct-07	2-Feb-08
						17.	<u>÷</u>	2	12.	-0		7	Ċ	ά
										Date				

- Fish has been captured 4 times and was most recently assessed as a code 12 female (Sept 2005). Has never been identified at the known spawning area at VH although was at km 132 on May 25th, 2007. However, by June 3rd it had moved down to km 107 and therefore was not likely part of the 2007 spawning event.
- In July and Sept of 2007 it was identified at the Stuart River confluence and may be overwintering in that area.
- Rated end of tag life is April 2010.

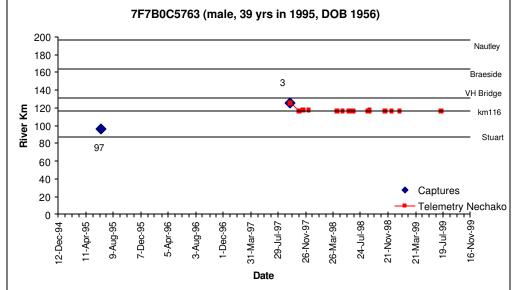


• Fish was originally captured at km 110 in June 1998 and was assessed as a code 12 female. Telemetry shows it moved to km 116 on August 29th and tag was likely shed at that location.

PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Ye	ear								
7F7B0C5763		15/09/1995	116.2	4	215	243.5	77.634	71	1924									
		30/09/2001	116.8	97	219	248.5	71.2											
Frequency	Code	Telem. Date	River Km	Station	River													
149.740	111	15-Sep-95	116.2	S	NECHAKO	RIVER												
149.740	111	09-Nov-95	116.2	S														
149.740	111	09-Nov-95	116.2	S														
149.740	111	12-Dec-95	116.2	S			7F7	B0C576	3 (male, 1	71 yrs in	1995,	DOE	3 192	4)				
149.740	111	21-Jan-96	116.2	S														
149.740	111	22-Feb-96	116.2	S	200	7												
149.740	111	22-Mar-96	116.2	A	180													Nautley
149.740	111	20-Apr-96	116.2	A	100													
149.740	111	27-Apr-96	116.2	A	160	-												Braeside
149.740	111	03-May-96	116.2	Α														
149.740	111	15-May-96	116.2	A	140	1	P#-10											VH Bridge
149.740	111	28-May-96	131.7	A	E 120	-												
149.740	111	17-Jun-96	135.8	A	×	4												km116
149.740	111	18-Jun-96	136.2	S	80 Biver 100	1 4											97	
149.740	111	27-Jun-96	136.2	В	≧ 80													— Stuart
149.740	111	29-Jul-96	134.9	A	L 00													
149.740 149.740	111 111	09-Aug-96	136.5	A	60	4												
149.740 149.740	111	25-Sep-96 09-Oct-96	135.5 135.2	A	40													
149.740	111	18-Oct-96	135.2	A A	40											0-		_
149.740	111	28-Oct-96	135.2	A	20	4									•		ptures	
149.740	111	29-Nov-96	136	A												- Tel	emetr	y Nechako
149.740	111	15-Mar-97	136	A	0			 	 		-111-1	- 1 -		 	 	HTT		
149.740	111	18-Apr-97	136	A		11-Apr-95 9-Aug-95 7-Dec-95	5-Apr-96 3-Aug-96	1-Dec-96 31-Mar-97	29-Jul-97 26-Nov-97 26-Mar-98	24-Jul-98 21-Nov-98	21-Mar-99 19-Jul-99	6-voN-9	15-Mar-00	13-Jul-00	10-Nov-00	J-IMIAR-U1	5-Nov-01	5-Mar-02
149.740	111	03-May-97	136	A		Apr Lug	√pr .ug	a ec	Jel Jar	크	la Lu	₫	्र जू	⋚.	§ Ş		3 0	lar
149.740	111	09-May-97	136.5	A		1-4 A-6 O-7	5- <i>4</i>	<u> </u>	-62 -6-7 -6-7	4 -	<u>-</u> 6	<u>-</u> -	2	<u> </u>		ځ ۵ٰ	2 4	<u>-</u>
149.740	111	23-May-97	136	A		- 0, 1	(1)	ြက်	i i ii	(4 (4	ώ _Γ	Ŧ	=	- ;		=		47
149.740	111	04-Jun-97	136	A						Date								
149.740	111	07-Jun-97	136	A														
149.740	111	12-Jun-97	136	A														
149.740	111	02-Jul-97	136	A														
149.740	111	14-Jul-97	136	A														
149.740	111	13-Aug-97	136	A														
149.740	111	11-Sep-97	136	A														
149.740	111	17-Nov-97	136	A														
149.740	111	10-Dec-97	136	A														
149.740	111	09-Nov-98	136.5	A														

- Fish has been captured twice at km 116 (Sept 1995 and 2001). Was assesses as code 4 in Sept 1995 suggesting it may be mature (code 5) in 1996.
 Telemetry data from 1996 show the fish migrating to the vicinity of the VH spawning area on May 28th and remaining there.
- Tag may have been shed at km 136.

PITtag 7F7B0C5E50	C	Capture Date 18/09/1997 11/09/1999	River Km 116.2 116.7	Sex 97 4	FL (cm) 186.5 194.5	TL (cm) 210 217	WT (kg) 55.8 59.4
PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)
7F7B0C6578		18/06/1995 17/09/1997	96.5 125.2	97 3	150 158.5	169 179.5	29.03 33.1
Frequency	Code	Telem. Date	River Km	Station	River		
149.500	114	17-Sep-97	125.2	В	NECHAKO	RIVER	
149.500	114	20-Sep-97	124.7	В			
149.500	114	31-Oct-97	116.1	S			
149.500	114	17-Nov-97	117	A			
149.500	114	10-Dec-97	116.6	Α		200	1
149.500	114	14-Apr-98	116.2	S		100	
149.500	114	08-May-98	116	A		180	1
149.500	114	02-Jun-98	116	A		160	+
149.500	114	14-Jun-98	16.2	S		140	4
 Suspe 	cted data	entry error. Graphed	l as km 116.2.			5 400	
149.500	114	23-Jun-98	116.2	В		E 120	1
149.500	114	29-Aug-98	116.2	A		ъ 100	-
149.500	114	01-Sep-98	116.2	В		100 E 80	
149.500	114	04-Sep-98	116.5	В		L 00	97
149.500	114	09-Nov-98	116.2	A		60	†
149.500	114	07-Dec-98	116.2	S		40	
149.500	114	13-Jan-99	116.2	S		-	
149.500	114	13-Jul-99	116.2	В		20	1
Tag like	ly shed	at km 116.				0	
•	•	996 and Sept 199	97 fish matur	ed from co	ode 97 to 3.		ec-94 pr-95 ug-95



Age Birth Year

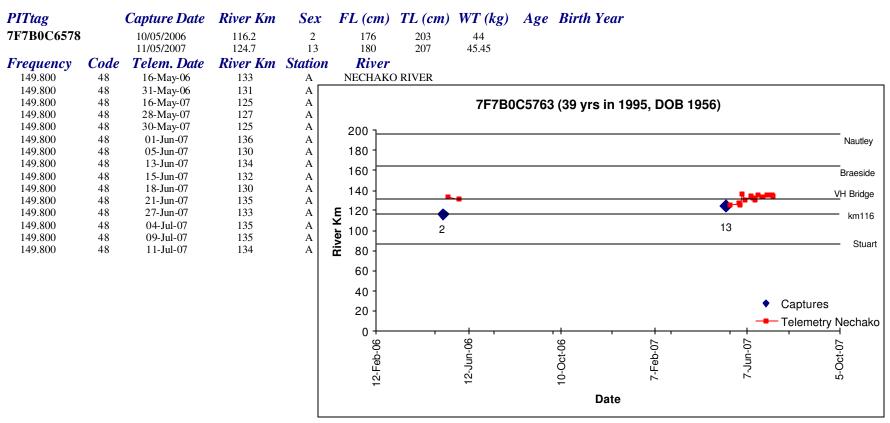
Age Birth Year

1946

1956 1956

51

39 41



- Fish was originally assessed as a code 2 (male) in May 2006 but changed to a code 13 (female).
- In 2006, fish was identified at km 133 on May 16th, 3 days prior to the congregation being observed. However, fish was not identified by the VH base station and therefore was not likely part of the spawning congregation.
- In 2007, the fish was at km 136 on June 1st (day before eggs were collected) and could potentially have been involved in spawning but was not identified by basestation.
- Fish remained in vicinity of VH until last telemetry record on July 11th.

PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Ye	ear						
7F7B0C6725		17/09/1997	124.7	2	129.5	148	16.8	36	1961							
		01/09/1998	116.2	2	137.5	154	18.6									
		25/09/2001	125.2	97	151	171	24.5									
		16/09/2005	116.8	4	161.5	182.5	29									
Frequency	Code	Telem. Date	River Km	Station	River											
149.700	32	16-Sep-05	116.8	В	NECHAKO	RIVER										
149.700	32	25-Oct-05	125	В												
149.700	32	14-Mar-06	124.6	S			7F	7B0C6	6725 (36 y	rs in 1	997. D	OB 196	31)			
149.700	32	06-Apr-06	124.6	S						,	, -		,			
149.700	32	01-May-06	124.6	A	200	٦										
149.700	32	12-May-06	125.6	В												Nautley
149.700	32	27-Jun-06	87	A	180	1										
149.700	32	08-Jul-06	89.7	GS	160											<u> </u>
149.700	32	09-Aug-06	89.7	GS	100											Braeside
149.700	32	10-Aug-06	90	A	140	4									_	VH Bridge
149.700	32	10-Aug-06	89.7	GS	- 400					,					/	
149.700	32	16-Aug-06	89.7	GS	E 120	1 ·								_	/ 1	km116
149.700	32	16-Aug-06	89.7	GS	<u>ត</u> 100	2	2		97				4	1/	/ 🚹	
149.700	32	05-May-07	132	A	5		2									Stuart
149.700	32	10-May-07	122	A	ਛ 80	-										Otaari
149.700	32	16-May-07	128	A	00											
149.700	32	20-May-07	122	A	60	1										
149.700	32	23-May-07	125	A	40	4										
149.700	32	25-May-07	132	A										•	Captures	S
149.700	32	28-May-07	129	A	20	1								_	•	
149.700	32	30-May-07	125	A	0	 	1	ı	1 1			1			relemetr	y Nechako
149.700	32	01-Jun-07	117	A			ω (၈ (O —	Ø	က	4	-	9	~	8
149.700	32	03-Jun-07	109	A		3-Aug-96 29-Jul-97	24-Jul-98	19-Jul-99	13-Jul-00 8-Jul-01	3-Jul-02	28-Jun-03	22-Jun-04	17-Jun-05	12-Jun-06	7Jun7	1-Jun-08
149.700	32	05-Jun-07	116	A		ji j	₹.	글 .	쿠 쿠	亨	Ϊ	ď	Ϊ	ΪŊ	Σ̈́	Jr
149.700	32	08-Jun-07	105	A		3-7	24	19	. ø	က်	ထ်	ά	<u>-</u>	ď	۲,	÷
149.700 149.700	32 32	11-Jun-07 13-Jun-07	121 122	A								.,	•	-		
149.700	32	15-Jun-07 15-Jun-07	116	A A						Date						
149.700	32	13-Jun-07 18-Jun-07	118	A A												
149.700	32	21-Jun-07	111	A												
149.700	32	21-Jun-07 27-Jun-07	102	A A												
149.700	32	27-Juli-07 04-Jul-07	99	A A												
149.700	32	09-Jul-07	102	A												
149.700	32	11-Jul-07	103	A												
149.700	32	12-Aug-07	89.7	GS												

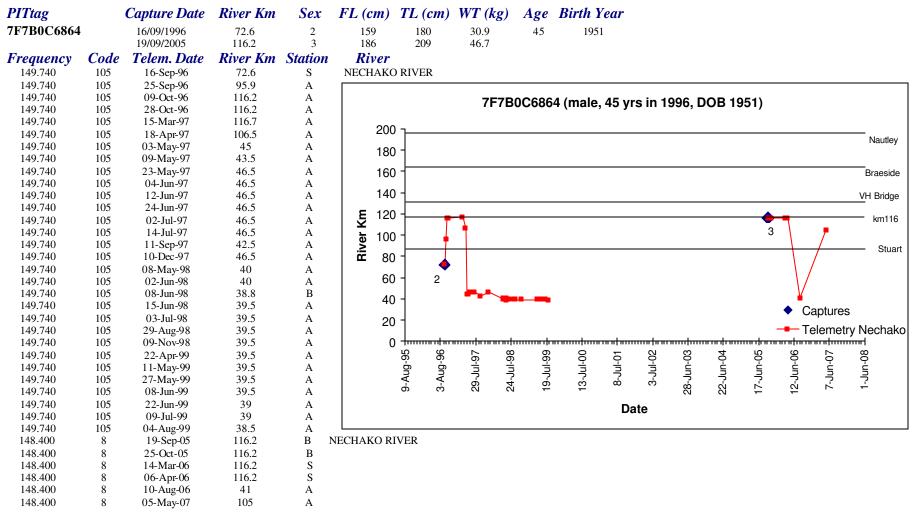
- Fish has been captured 4 times (twice each at km 116 and 125). In Sept 2005 fish was assessed as being code 4 suggesting it may be ready to spawn in 2006 or 2007.
- In 2006 the fish was identified at km 125 on May 12th, 7 days prior to the observed spawning event at VH. The fish was not identified by the basestation or from aerial surveys of the congregation and therefore is assumed to not have spawned. In August, fish migrated to km 89 and may have overwintered in that area.
- In 2007 fish was identified at km 132 on May 5th but subsequent telemetry data suggest it began moving downstream eventually ending up at the Stuart confluence on Aug 12th.

- During the period in 2007 when eggs were collected at VH, the fish was located in the vicinity of km 116 suggesting it did not spawn.
- Potential spawner in 2008.
- Rated end of tag life is April 2010.

<i>PITtag</i> 7F7B0C6856		Capture Date 08/09/1996	River Km 116.2	Sex 12	FL (cm) 168.5	<i>TL (cm)</i> 192.5	WT (kg) 35.5	Age 45	Birth 195								
		28/09/2002	Stuart Lake	12	182	210.5	95.681										
		18/09/2005	115	12	187	218	44										
Frequency	Code	Telem. Date	River Km	Station	River												
148.380	3	28-Sep-02	SL	S	STUART	LAKE											
148.380	3	28-Sep-02	SL	S													
148.380	3	14-May-04	SL	GS													
148.380	3	14-May-04	SL	GS													
148.380	3	08-Jul-04	104.2	GS	STUART	RIVER											
148.380	3	08-Jul-04	104.2	GS													
148.380	3	19-Jul-04	89.7	GS	NECHAKO	RIVER											
148.380	3	19-Jul-04	89.7	GS													
148.380	3	21-Jul-04	116	GS			7F7R0	C6856	(femal	م 45 v	re in	1996	DOR	1051\			
148.380	3	21-Jul-04	116	GS			71750	,00030	(iciliai	c, 45 j	y 1 3 111	1330,	DOD	1331)			
148.380	3	22-Jul-04	116	GS	200	=											
148.380	3	22-Jul-04	116	GS													Nautley
148.380	3	30-Oct-04	116	GS	180	4											,
148.380	3	30-Oct-04	116	GS	100												
148.380	3	15-Apr-05	116	GS	160	1											Braeside
148.380 148.380	3	15-Apr-05	116 124.5	GS	140	4											VH Bridge
		16-May-05		В													vii blidge
148.380 148.380	3	16-May-05 18-May-05	124.5 115	B B	E 120	 								-1			km116
148.380	3	18-May-05	115	В	¥ 100	10							4	1:	0	•	
148.380	3	20-May-05	125	В	9 100	12								14	2		Stuart
148.380	3	20-May-05	125	В	Biver 80	-											Stuart
148.380	3	23-May-05	125	В		◆ Ca	aptures										
148.380	3	23-May-05	125	В	60	1 Te	elemetry Ned	chako									
148.380	3	23-May-05	125	В	40		•										
148.380	3	23-May-05	125	В		▲ St	uart River						_				
148.380	3	31-Aug-05	116	S	20	☐ ⊠ St	uart Lake				12		×				
148.380	3	31-Aug-05	116	S	0	1	1 1	1	į	1	12	1	1		1	1	
148.380	3	18-Sep-05	115	В		ιο (O	7	ေ	0	-	2	က	4	2	9	7	ω
148.380	3	18-Sep-05	115	В		<u> </u>	<u>କ୍</u>	<u>6</u>	으	으	9	٥-ر	٥-	٥-ر	0-ر	٥-	٥-ر
148.380	3	25-Oct-05	116.2	В		on on	29-Jul-97 24-Jul-98	亨	亨	8-Jul-01	3-Jul-02	Σ	٦	Ţ	Σ	70-un7	1-Jun-08
148.380	3	25-Oct-05	116.2	В		9-Aug-95 3-Aug-96	29-Jul-97 24-Jul-98	19-Jul-99	13-Jul-00	ώ	က်	28-Jun-03	22-Jun-04	17-Jun-05	12-Jun-06	7	-
148.380	3	14-Mar-06	116.2	S						_		C Q	C.	_	_		
148.380	3	14-Mar-06	116.2	Š						Da	ite						
148.380	3	06-Apr-06	116.2	S													
148.380	3	06-Apr-06	116.2	S													
148.380	3	27-Apr-06	116.2	S													
148.380	3	27-Apr-06	116.2	S													
148.380	3	01-May-06	116.2	A													

Frequency	Code	Telem. Date	River Km	Station	River
148.380	3	01-May-06	116.2	Α	
148.380	3	13-May-06	116.2	В	
148.380	3	13-May-06	116.2	В	
148.380	3	14-May-06	116.2	В	
148.380	3	14-May-06	116.2	В	
148.380	3	17-May-06	116.2	В	
148.380	3	17-May-06	116.2	В	
148.380	3	27-Jun-06	116	A	
148.380	3	27-Jun-06	116	A	
148.380	3	10-Aug-06	118	A	
148.380	3	10-Aug-06	118	A	
148.380	3	16-May-07	125.1	В	
148.380	3	16-May-07	125.1	В	
148.380	3	23-May-07	125	A	
148.380	3	23-May-07	125	A	
148.380	3	30-May-07	125	A	
148.380	3	30-May-07	125	A	
148.380	3	11-Jun-07	121	A	
148.380	3	11-Jun-07	121	A	
148.380	3	27-Jun-07	105	A	
148.380	3	27-Jun-07	105	A	
148.380	3	11-Jul-07	93	A	
148.380	3	11-Jul-07	93	A	
148.380	3	16-Jul-07	95	A	
148.380	3	16-Jul-07	95	A	
148.380	3	23-Jul-07	89.7	GS	
148.380	3	23-Jul-07	89.7	GS	
148.380	3	28-Jul-07	104.2	GS	STUART RIVER
148.380	3	28-Jul-07	104.2	GS	

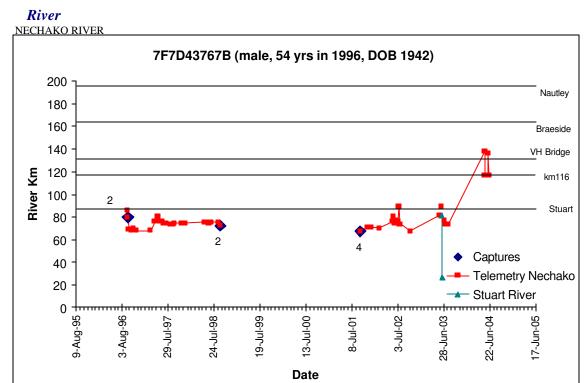
- Fish has been captured 3 times (Sept 1996, 2002 and 2005). It was assessed as code 12 each time. In 1996 it was located in the Nechako at km 116 but from 2002 to May 2004 it was located in Stuart Lake. In July 2004 the fish moved into the Stuart and by July 19th was back in the Nechako.
- Fish remained in the Nechako from July 2004 to July 2007, predominantly at km 116 or 125. It was never detected at the spawning area at VH.
- On July 28th the fish was once again in the Stuart River at km 104 and may have returned to Stuart Lake.
- Rated end of tag life was May 2007 therefore tag has already surpassed its rated lifespan.



- Fish was originally captured in Sept of 1996 at km 72 and was assessed as a code 2 male. Fish appears to have overwintered at km 116 in 1996 and from May 3 1997 to Aug 4 1999 fish was identified between km 39 and 46, although tag may have been shed at that location. This area is suspected to provide rearing and potentially overwintering habitat.
- Fish was re-captured in Sept of 2005 at km 116 and assessed as code 3. Telemetry data suggests it overwintered at km 116 but was identified at km 41 in August of 2006.
- Fish was only identified once in 2007 at km 105 on May 5, 2007.

PITtag	Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year
7F7D43767B	16/09/1996	79.1	2	191	218.5	54.1	54	1942
	13/09/1998	72.4	2	198.5	225	63.6		
	15/09/2001	67	4	203	226	68.182		

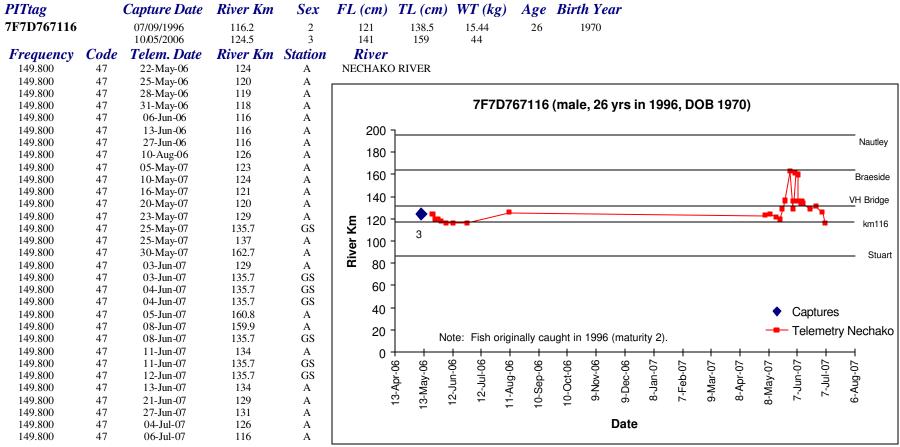
Frequency	Code	Telem. Date	River Km	Station
149.620	105	16-Sep-96	79.1	S
149.620	105	17-Sep-96	85.9	В
149.620	105	25-Sep-96	68.7	Α
149.620	105	09-Oct-96	68	A
149.620	105	28-Oct-96	69.5	A
149.620	105	29-Nov-96	68	Α
149.620	105	15-Mar-97	68	Α
149.620	105	18-Apr-97	75.5	A
149.620	105	03-May-97	80	Α
149.620	105	06-May-97	80.2	В
149.620	105	09-May-97	80.2	Α
149.620	105	23-May-97	76	Α
149.620	105	04-Jun-97	76	Α
149.620	105	12-Jun-97	76	Α
149.620	105	24-Jun-97	74.2	Α
149.620	105	02-Jul-97	74.2	A
149.620	105	14-Jul-97	74.2	Α
149.620	105	13-Aug-97	74	Α
149.620	105	11-Sep-97	74	Α
149.620	105	14-Sep-97	74.4	В
149.620	105	17-Nov-97	74.4	Α
149.620	105	10-Dec-97	74.4	Α
149.620	105	08-May-98	75	A
149.620	105	02-Jun-98	75	Α
149.620	105	13-Jun-98	74.2	В
149.620	105	03-Jul-98	75	A
149.620	105	29-Aug-98	75	A
149.620	105	13-Sep-98	72.4	В
149.700	1	15-Sep-01	67	S
149.700	1	10-Nov-01	70.5	A
149.700	1	07-Dec-01	70.6	Α
149.700	1	06-Feb-02	70.2	A
149.700	1	18-May-02	76	A
149.700	1	28-May-02	79.8	A
149.700	1	12-Jun-02	74.5	A
149.700	1	14-Jun-02	76.1	В
149.700	1	18-Jun-02	74.7	A
149.700	1	19-Jun-02	75	В
149.700	1	22-Jun-02	76.2	A
149.700	1	25-Jun-02	76.2	A
149.700	1	25-Jun-02	76.2	GS



149.700	1	29-Jun-02	75.1	В	
149.700	1	01-Jul-02	75	В	
Frequency	Code	Telem. Date	River Km	Station	River
149.700	1	03-Jul-02	75.7	В	
149.700	1	11-Jul-02	89.7	В	
149.700	1	17-Jul-02	73.6	A	
149.700	1	18-Jul-02	73.3	В	
149.700	1	25-Jul-02	74	A	
149.700	1	11-Oct-02	67.5	A	
149.700	1	26-May-03	81.6	A	
149.700	1	11-Jun-03	81	A	STUART RIVER
149.700	1	11-Jun-03	89.7	GS	NECHAKO RIVER
149.700	1	13-Jun-03	89.7	GS	
149.700	1	19-Jun-03	26.9	A	STUART RIVER
149.700	1	19-Jun-03	26.9	GS	
149.700	1	03-Jul-03	76.2	A	NECHAKO RIVER
149.700	1	14-Jul-03	73.3	A	
149.700	1	31-Jul-03	73.2	A	
149.700	1	18-May-04	138	В	
149.700	1	18-May-04	116	GS	
149.700	1	20-May-04	116	GS	
149.700	1	22-May-04	116	GS	
149.700	1	05-Jun-04	116	GS	
149.700	1	08-Jun-04	116	GS	
149.700	1	13-Jun-04	136	GS	
149.700	1	16-Jun-04	116	GS	
149.700	1	20-Jun-04	116	GS	

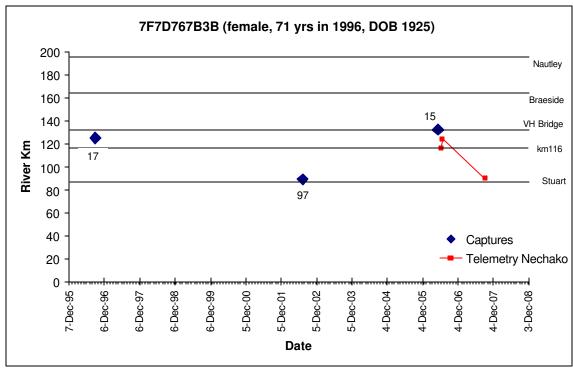
- Fish has been captured 3 times between km 67 and 79 (Sept 1996, 1998 and 2001).
- In 1996 and 1998 the fish was assessed as a code 2 male and telemetry data shows that it remained downstream of the Stuart River confluence between km 68 and 80. In particular it appears to have overwintered at km 74.4 in 1997.
- In Sept 2001 the fish was assessed as a code 4 male suggesting it would be ripe (code 5) in subsequent years. Telemetry data shows that in spring 2002 it remained in the vicinity of km 79 during the period when spawning would be expected to occur. No obvious spawning migrations were observed.
- In 2003 the fish migrated between km 81 in the Nechako (May 26th) and km 81 in the Stuart River (June 11). On June 19th the fish was located at km 26.9 in the Stuart River and by July 3rd had returned to the Nechako (km 76.2). The level of movement is consistent with what has been observed of fish nearing sexual maturity, however spawning cannot be confirmed with the data in hand.
- In 2004, the fish was identified at the VH spawning area during the observed spawning congregation (May 18th). Based on this, it took the fish approximately 32 months to mature from code 4 (Sept 2001) to code 5 (Aug 2004).
- The rated end of tag life was April 2006 and as a result the tag is likely dead.

PITtag	Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year
7F7D4F521F	12/09/1996	91.5	2	133	148.5	18.2	30	1966
	08/09/1998	116.2	2	137.5	154.5	17.3		
	02/08/2004	0	97	147	163.5	24.107	38	1966

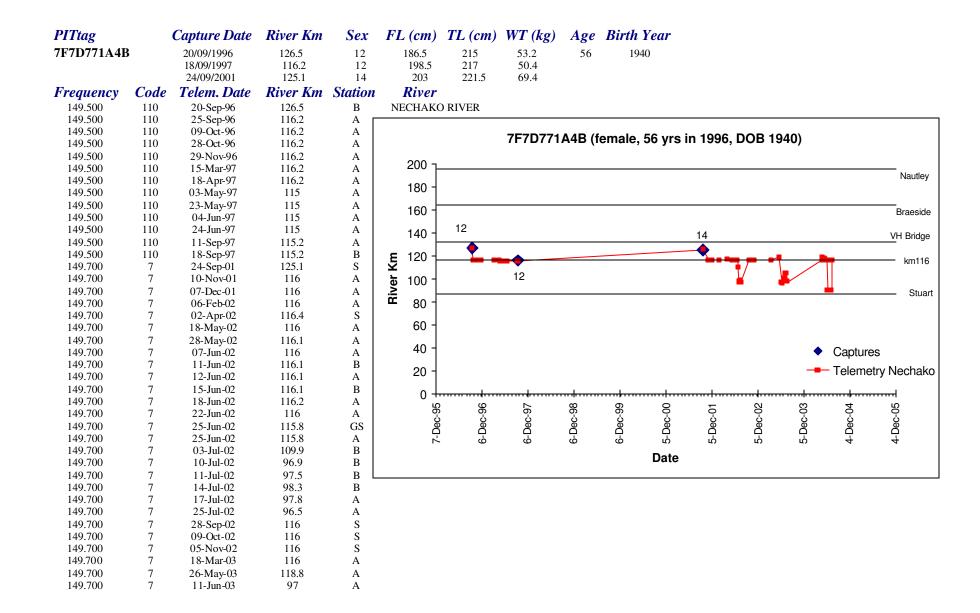


- Fish was originally captured at km 116 in Sept of 1996 and assessed as code 2.
- In May of 2006 the fish was recaptured at km 124 and assessed as code 3. Telemetry data from 2006 shows that the fish moved between km 116 and 124 making use of both rearing locations but did not migrate to the VH spawning area.
- In 2007, the fish was quite active making several migrations between km 135 (VH spawning area) and km 162 (Braeside) during the period when eggs were collected at VH. The movements are typical of mature fish during the spawning period and suggest the fish may have spawned in 2007. Alternatively, the fish may not have been quite mature enough to spawn but was nonetheless responding to spawning cues. Following the spawning period the fish moved back to km 116.
- Capture and assessment in 2008 may be able to confirm if the fish likely spawned in 2007.
- Rated end of tag life is December 2010.

PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year
7F7D767B3B	1	06/09/1996 13/07/2002	125.1 88.7	17 97	230.5 232	264 262	100.9 94	71	1925
F	C- 1-	11/05/2006	132.1	15	223	267	109		
Frequency	Coae	Telem. Date	Kiver Km	Station	River				
149.440	1	13-Jun-06	116	A	NECHAKO	RIVER			
149.440	1	27-Jun-06	124	Α					
149.440	1	12-Sep-07	89.7	GS			7F7D70	7D0D	/f1- 7 4



- Fish was captured in Sept 1996 at km 125 and assessed as code 17. Fish was recaptured in July 2002 at km 88.7 and assessed as code 97. Radio tags were not implanted during either capture.
- In May 2006, fish was captured at km 132 and was assessed as being ripe (code 15). Fish was used as brood stock in 2006 (Female #1) and was released back into the river at km 116 on June 13th.
- In 2007, the only telemetry record collected from at km 89 from Sept 12th. This suggests that the fish had moved out of the study area for the 2007 Spawning Monitoring Program, which surveyed the Nechako between the confluences of the Stuart and Nautely Rivers.

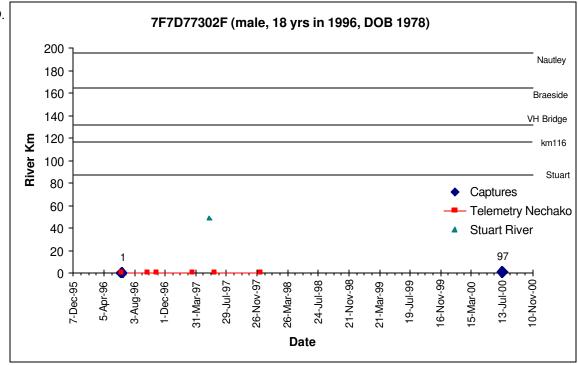


149.700	7	11-Jun-03	97	GS
149.700	7	17-Jun-03	96.3	A
149.700	7	03-Jul-03	100.4	A
149.700	7	14-Jul-03	104.4	A
149.700	7	31-Jul-03	97.7	Α
149.700	7	28-Apr-04	116.2	В
149.700	7	04-May-04	118.8	A
149.700	7	04-May-04	118.8	В
149.700	7	12-May-04	117.5	A
149.700	7	15-May-04	116	GS
149.700	7	18-May-04	118.5	A
149.700	7	19-May-04	116	GS
149.700	7	22-May-04	116	GS
149.700	7	25-May-04	117	A
149.700	7	25-May-04	116	GS
149.700	7	26-May-04	116	GS
149.700	7	28-May-04	116	GS
149.700	7	29-May-04	116	GS
149.700	7	03-Jun-04	116	GS
149.700	7	06-Jun-04	116	GS
149.700	7	08-Jun-04	116	GS
149.700	7	09-Jun-04	89.7	GS
149.700	7	10-Jun-04	89.7	GS
149.700	7	14-Jul-04	89.7	GS
149.700	7	17-Jul-04	116	GS
149.700	7	18-Jul-04	116	GS
T: 1		11 0 . 01006	1 1007 (1	100

- Fish was captured in Sept of 1996 and 1997 (km 126 and 116, respectively) and assessed as code 12. Telemetry data shows that the fish remained at km 116/115 through Sept 1997.
- Fish was recaptured in Sept 2001 at km 125 and assessed as code 14. Telemetry data through July 2004 identified several movements between km 116 in spring and fall and kms 97 and 89 in June and July (presumably for rearing/feeding).
- Fish has never been identified at the known VH spawning area and tag has not been detected since July 2004 (rated end of tag life was May 2006).

PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year
7F7D77302F		13/06/1996	0.1	1	119	136	15.9	18	1978
		05/09/1999	Fraser	97	138	156	24.9		
		15/07/2000	0.4	97	138.5	159	24.525		
Frequency	Code	Telem. Date	River Km	Station	River				
149.500	109	13-Jun-96	0.1	S	NECHAKO	RIVER			
149.500	109	25-Sep-96	0.1	A					
149.500	109	28-Oct-96	0.1	Α					
149.500	109	15-Mar-97	0.1	A					
149.500	109	23-May-97	48.7	A	STUART	RIVER			
149.500	109	10-Jun-97	0	В	NECHAKO	RIVER			
149.500	109	10-Dec-97	0	A					

- •Fish identified in Fraser River (km 826.6) on Sept. 5, 1999.
- •One record from Stuart River (May 23, 1997).
- •River km locations of 0 and 0.1 from RL&L Report.
- •Juvenile fish, never identified in known spawning areas.



PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT (kg)	Age	e Birth Year
7F7D775A36		10/06/1995	93.1	98	114	132	10.886	29	1966
		22/06/1998	115.2	2	123	142	14.074		
		17/09/2005	124.6	4	148	169	24.5		
Frequency	Code	Telem. Date	River Km	Station	River				
149.700	40	17-Sep-05	124.6	В	NECHAKO	RIVER			
149.700	40	25-Oct-05	124.7	В					
149.700	40	14-Mar-06	116.2	S					
149.700	40	06-Apr-06	116.2	S			7F7D7	75A36	36 (male, 29 yrs in 1995, DOB 1966)
149.700	40	11-May-06	116	A					(·····································
149.700	40	14-May-06	130	A	200 -	7			
149.700	40	16-May-06	118	Α					Nautley
149.700	40	17-May-06	133.7	В	180 -	1			, i
149.700	40	18-May-06	133	Α					
149.700	40	22-May-06	134	GS	160	1			Braeside
149.700	40	25-May-06	134	GS	1.10	4			
149.700	40	28-May-06	134	GS	140				VH Bridge
149.700	40	02-Jun-06	120	A	E 120				T
149.700	40	06-Jun-06	125	A	×				km116
149.700	40	13-Jun-06	116	A	100 · 60 · 60 · 60 · 60 · 60 · 60 · 60 ·	1			•
149.700	40	27-Jun-06	116	A	.≥				Stuart
149.700	40	10-Aug-06	110	A	E 80	1			
149.700 149.700	40 40	05-May-07	110 111	A	00				
149.700	40	10-May-07 14-May-07	110	A B	60 -				
149.700	40	14-May-07 16-May-07	110	A A	40				
149.700	40	20-May-07	113	A A	40	Note: Fiel	h aanturad in	100E /la	//cm 00.1 maturity 00) and 1000
149.700	40	23-May-07	110	A	20 -			1995 (KI	(km 93.1, maturity 98) and 1998
149.700	40	25-May-07	112	A		(KM 115.2	, maturity 2).		
149.700	40	28-May-07	110	A	0	 	 	++-	
149.700	40	30-May-07	109	A		1 / -Jul-05 6-Aug-05 5-Sep-05 15-Oct-05	14-Nov-05 · 14-Dec-05 · 13-Jan-06 ·	12-Feb-06 14-Mar-06	13-Apr-06 - 13-May-06 - 12-Jun-06 - 11-Aug-06 - 10-Sep-06 - 9-Nov-06 - 9-Nov-06 - 9-Mar-07 - 7-Feb-07 - 9-Mar-07 - 7-Jun-07 - 7-Jun-07 - 7-Jun-07 - 7-Jun-07 - 5-Sep-07 - 5-Sep-
149.700	40	01-Jun-07	110	A		ng de to		eb Ja	Aprilary and any and any and any and any and any
149.700	40	03-Jun-07	110	A		4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	2 4 2 2	7 1 5 .	3-4- 2-1-2-1-4-1-4-1-4-1-4-1-4-1-4-1-4-1-4-1-
149.700	40	05-Jun-07	111	A		4 4 4		÷ ÷	
149.700	40	08-Jun-07	108	A					Date ◆ Captures
149.700	40	11-Jun-07	108	A					Telemetry Nechako
149.700	40	13-Jun-07	107	A					reiement y reemane
149.700	40	15-Jun-07	104	A					
149.700	40	18-Jun-07	108	A					
149.700	40	21-Jun-07	110	A					
149.700	40	27-Jun-07	106	A					
149.700	40	06-Jul-07	128	A					
149.700	40	09-Jul-07	128	A					
149.700	40	11-Jul-07	128	A					

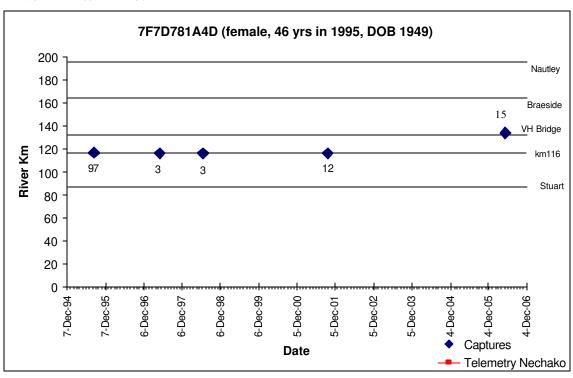
^{149.700 40 11-}Jul-07 128 A
•Code 4 in fall of 2005, therefore likely ripe (code 5) in 2006.

- •Was identified at the spawning congregation in 2006 (May 19).
- •Was not involved in 2007 spawning event at VH (was located at km 110 during spawning event).
- •Estimated end of tag life is April 2010.

PITtag 7F7D776F3B Frequency	Code		116.8 River Km	Station 12	FL (cm) 147 River	167	WT (kg) 24.5	Age 36	Birth Yeo 1962	ar					
149.658 149.658	111 111	03-Sep-98 05-Sep-98	116.8 124.9	B B	NECHAKO) RIVER									
149.658	111	07-Sep-98	124.6	В											
149.658	111	13-Jan-99	124.9	S			7F7D77	6F3B (female, 30	6 yrs in	1998, D	OB 19	(62)		
149.658	111	22-Apr-99	125	A	200	=									
149.658 149.658	111 111	11-May-99 27-May-99	107 108	A A	200										Nautley
149.658	111	08-Jun-99	108	A	180	1									,
149.658	111	22-Jun-99	108	A	160										Braeside
149.658	111	09-Jul-99	107.3	Α											Diacolac
149.658	111	04-Aug-99	107.7	A	140										VH Bridge
					E 120	-									km116
					X 100	12						_			KIIIIO
					100 Bi										Stuart
					E 80										Otaart
					60										
					40								4	Capture	s
					20								-	Telemet	ry Nechako
					0	<u> </u> 	. 		. 		 			 .	
						24-Jul-98 23-Aug-98	22-Sep-98 22-Oct-98	21-Nov-98	21-Dec-98 20-Jan-99	19-Feb-99	20-Apr-99	20-May-99	19-Jun-99	19-Jul-99 18-Aug-99	17-Sep-99
						24. 3-A	2-S	Ż.	C	H-6	A-0:	₩-	ე-6	19- ₋	7-S
						Ŋ	o o	Ø		_	1 (1	ŏ	_	÷	-
										Date					

- Fish originally captured at km 116 in Sept 1998 and assessed as a code 12 female. Telemetry shows it moved to km 124.9 after tagging and likely overwintered at that location.
- In May 1999 fish moved to km 107 and remained in that are through August 4th 1999. This area likely provides rearing and feeding habitat.

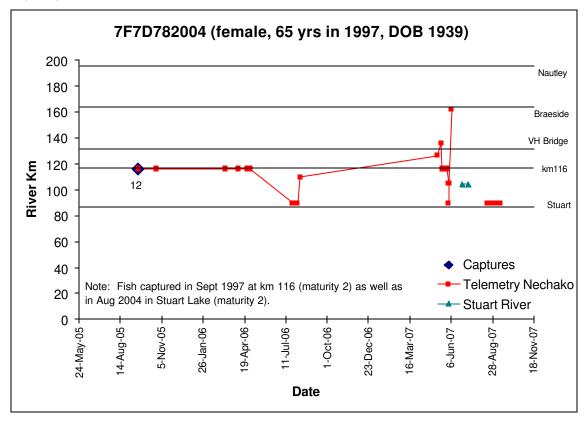
PITtag	Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year
7F7D781A4D	21/08/1995	116.5	97	155	177	34.5	46	1949
	08/05/1997	116.2	3	158	179	34.5		
	22/06/1998	116.2	3	163	185	37.2		
	21/09/2001	116.2	12	167	190	36.79		
	17/05/2006	134	15	178	200	50		



PITtag	Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year
7F7D782004	18/09/1997	116.9	2	189.5	218	54.5	58	1939
	01/08/2004	Stuart Lake	2	209.5	240	62.946	65	1939
	19/09/2005	116.2	12	212.5	242.5	58.5		

Frequency	Code	Telem. Date	River Km	Station
149.700	43	19-Sep-05	116.2	В
149.700	43	19-Sep-05	116.2	В
149.700	43	25-Oct-05	116.2	В
149.700	43	25-Oct-05	116.2	В
149.700	43	14-Mar-06	116.2	S
149.700	43	14-Mar-06	116.2	S
149.700	43	06-Apr-06	116.2	S
149.700	43	06-Apr-06	116.2	S
149.700	43	27-Apr-06	116.2	S
149.700	43	27-Apr-06	116.2	S
149.700	43	01-May-06	116.2	A
149.700	43	01-May-06	116.2	Α
149.700	43	26-Jul-06	89.7	GS
149.700	43	26-Jul-06	89.7	GS
149.700	43	27-Jul-06	89.7	GS
149.700	43	27-Jul-06	89.7	GS
149.700	43	27-Jul-06	89.7	GS
149.700	43	27-Jul-06	89.7	GS
149.700	43	27-Jul-06	89.7	GS
149.700	43	27-Jul-06	89.7	GS
149.700	43	01-Aug-06	89.7	GS
149.700	43	01-Aug-06	89.7	GS
149.700	43	02-Aug-06	89.7	GS
149.700	43	02-Aug-06	89.7	GS
149.700	43	04-Aug-06	89.7	GS
149.700	43	04-Aug-06	89.7	GS
149.700	43	10-Aug-06	110	A
149.700	43	10-Aug-06	110	A
149.700	43	10-May-07	126	A
149.700	43	10-May-07	126	A
149.700	43	18-May-07	135.7	GS
149.700	43	18-May-07	135.7	GS
149.700	43	18-May-07	135.7	GS
149.700	43	18-May-07	135.7	GS
149.700	43	20-May-07	116	A
149.700	43	20-May-07	116	A
149.700	43	23-May-07	117	A
149.700	43	23-May-07	117	A
149.700	43	28-May-07	116	A

River NECHAKO RIVER



149.700	43	28-May-07	116	A	
149.700	43	30-May-07	116	A	
149.700	43	30-May-07	116	Α	
149.700	43	01-Jun-07	105	A	
Frequency	Code	Telem. Date	River Km	Station	River
149.700	43	01-Jun-07	89.7	GS	
149.700	43	01-Jun-07	105	A	
149.700	43	01-Jun-07	89.7	GS	
149.700	43	03-Jun-07	105	A	
149.700	43	03-Jun-07	105	A	
149.700	43	08-Jun <i>-</i> 07	162.1	A	
149.700	43	08-Jun <i>-</i> 07	162.1	A	
149.700	43	30-Jun-07	104.2	GS	STUART RIVER
149.700	43	30-Jun-07	104.2	GS	
149.700	43	11-Jul-07	104.2	GS	
149.700	43	11-Jul-07	104.2	GS	
149.700	43	19-Aug-07	89.7	GS	NECHAKO RIVER
149.700	43	19-Aug-07	89.7	GS	
149.700	43	23-Aug-07	89.7	GS	
149.700	43	23-Aug-07	89.7	GS	
149.700	43	24-Aug-07	89.7	GS	
149.700	43	24-Aug-07	89.7	GS	
149.700	43	01-Sep-07	89.7	GS	
149.700	43	01-Sep-07	89.7	GS	
149.700	43	02-Sep-07	89.7	GS	
149.700	43	02-Sep-07	89.7	GS	
149.700	43	13-Sep-07	89.7	GS	
149.700	43	13-Sep-07	89.7	GS	

- Fish was captured in Sept 1997 at km 116 (code 2) as well as in Aug 2004 in Stuart Lake (code 2).
- Fish was re-captured in Sept 2005 at km 116 and assessed as a code 12 (female). A radio tag was implanted and telemetry data shows the fish overwintered at km 116 in 2005.
- In 2006, the fish migrated to the Stuart River confluence (km 89) in the summer and then to km 110 (rearing/overwintering location) in August 2006.
- On May 18th, 2007 the fish was identified at the VH spawning area however, returned to km 116 on May 20th. On June 1st and 3rd the fish was located at kms 89 (Stuart River confluence) and 105 and therefore was not present at VH at the time when eggs were first collected (June 2nd) and spawning is assume to have occurred. However, by June 8th the fish had migrated upstream to km 162 (Braeside) where a secondary congregation of fish was observed. No eggs were collected from that area and as a result spawning cannot be confirmed.
- On June 30th the fish had migrated to km 104 of the Stuart River and may have entered Stuart Lake, presumably for feeding. Between August 19th and the last record (Sept 13th) the fish was located at km 89 (Stuart River confluence).

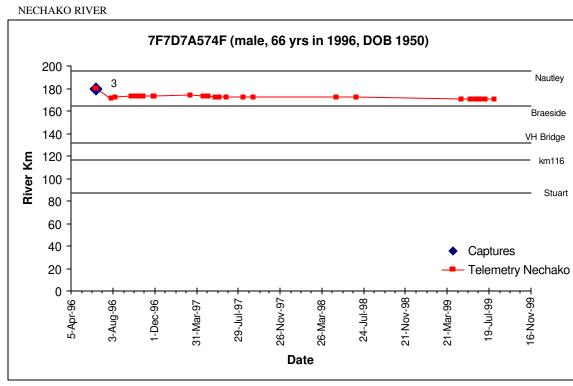
PITtag 7F7D784059 7F7D784059		Capture Date 07/09/1996 11/05/2006	River Km 116.2 124.5	Sex 3 5	FL (c	2	TL (cm) 171 204	WT (kg) 34.05 57	Age 36		h Year 1960	ŗ.					
Frequency	Code	Telem. Date	River Km	Station	Ri	ver											
149.480	57	07-Sep-96	116.2	В	NECH	IAKO	RIVER										
149.480	57	08-Sep-96	116.3	В													
149.480	57	09-Sep-96	116.2	В				7F7D78	4050 /	mala	26	in 100)	D 1060\			
149.480	57	10-Sep-96	116.3	В				111010	4059 (ıııaı e ,	JO yrs	5 111 133	90, DO	D 1900)			
149.480	57	20-Sep-96	116.2	В	00												
149.480	57	25-Sep-96	116.2	Α	20	ν _Έ											Nautley
149.480	57	09-Oct-96	116.2	Α	18	n _											Nauliey
149.480	57	28-Oct-96	116.2	Α	10	00											
149.480	57	15-Mar-97	116.2	Α	16	so -⊢											Braeside
149.480	57	18-Apr-97	111	Α	10	,,											Diaeside
149.480	57	19-Apr-97	110.4	GS	14	- 0											VH Bridge
149.480	57	20-Apr-97	110.4	GS												_	- Vi Briage
149.480	57	03-May-97	105.5	A	E 12	20 -											km116
149.480	57	08-May-97	106	В	\succeq											5	MIIIIO
149.480	57	09-May-97	106	Α	10 Biver	00 -	3	_								·	
149.480	57	23-May-97	105	Α	. ≩	_ -											Stuart
149.480	57	04-Jun-97	105.5	Α	ш 8	80 -											
149.480	57	07-Jun-97	105.5	Α	_												
149.480	57	12-Jun-97	105.5	A	б	0 -											
149.480	57	24-Jun-97	105.5	Α	1	0 -										_	
149.480	57	02-Jul-97	105.5	Α	4	·U									•	Captures	;
149.480	57	14-Jul-97	104.7	Α	2	20 -										Talamatr	y Nechako
149.480	57	13-Aug-97	105.5	Α	_	.0									_	relettiett	y i vechano
149.480	57	11-Sep-97	105.5	Α		o +			 	 	 	 		 	 	 	
149.480	57	19-Sep-97	105.3	В		ൂഗ	90	<u>></u>	<u></u>	စ္ဆ	0	Ξ	Ø	က္က	4	2	9
149.480	57	20-Sep-97	105.3	В		7-Dec-95	9-Dec-96	9-Dec-97	5-Dec-98	9-Dec-99	5-Dec-00	5-Dec-01	5-Dec-02	5-Dec-03	4-Dec-04	4-Dec-05	4-Dec-06
149.480	57	17-Nov-97	105	Α		8	8	ے گ	<u> </u>	<u> </u>	8	B	8	8	<u>6</u>	Ö	<u>B</u>
149.480	57	10-Dec-97	105	Α		7	6	ф d	<u>ن</u>	မ	rγ	ď	rγ	ďς	4	4	4
149.480	57	08-May-98	105.2	A							Da	te					
149.480	57	02-Jun-98	105.2	A							Da						
149.480	57	15-Jun-98	105.2	A													
149.480	57	03-Jul-98	105.2	A													
149.480	57	29-Aug-98	105.2	A													
149.480	57	31-Aug-98	105.2	В													
149.480	57	01-Sep-98	105.2	В													

- Fish originally captured in Sept 1996 at km 116 (maturity code 3). Telemetry records show the fish moved from km 116 to km 105 between April and May 1997, presumably for rearing. Tag may have been shed at km 105 as it did not move from that location.
- Fish was recaptured in May 2006 an assessed a ripe (code 5) male. Fish was used as brood stock for the hatchery program (male #2).

PITtag	Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year
7F7D7A574F	15/06/1996	179.6	3	186.5	212		46	1950
7F7D7A574F	18/09/2005	114.9	3	191.5	220	46.3		

River

Frequency	Code	Telem. Date	River Km	Station
149.680	108	15-Jun-96	179.6	S
149.680	108	16-Jun-96	179.6	S
149.680	108	29-Jul-96	171.2	A
149.680	108	09-Aug-96	172.6	A
149.680	108	25-Sep-96	173.4	A
149.680	108	09-Oct-96	173.4	A
149.680	108	18-Oct-96	173.4	A
149.680	108	28-Oct-96	173.4	A
149.680	108	29-Nov-96	173.4	A
149.680	108	15-Mar-97	173.8	A
149.680	108	18-Apr-97	173	A
149.680	108	03-May-97	173	A
149.680	108	23-May-97	172.5	A
149.680	108	04-Jun-97	172.5	A
149.680	108	24-Jun-97	172.5	A
149.680	108	13-Aug-97	172.5	A
149.680	108	11-Sep-97	172.5	A
149.680	108	08-May-98	172.5	A
149.680	108	03-Jul-98	172.5	A
149.680	108	01-May-99	170	A
149.680	108	27-May-99	170	A
149.680	108	08-Jun-99	170	A
149.680	108	22-Jun-99	170	A
149.680	108	09-Jul-99	170	A
149.680	108	04-Aug-99	170	A
149.700	42	18-Sep-05	114.9	В
149.700	42	14-Mar-06	116.2	S
149.700	42	01-May-06	124.6	A
149.700	42	18-May-06	133	A
149.700	42	06-Jun-06	125	A
149.700	42	13-Jun-06	178	A
149.700	42	06-Jul-06	192.5	GS
149.700	42	24-Jul-06	192.5	GS
149.700	42	27-Jul-06	192.5	GS
149.700	42	10-Aug-06	185	A
149.700	42	05-May-07	186.6	A
149.700	42	10-May-07	186.6	A
149.700	42	16-May-07	186.6	A
149.700	42	20-May-07	188	A
149.700	42	23-May-07	186.8	A

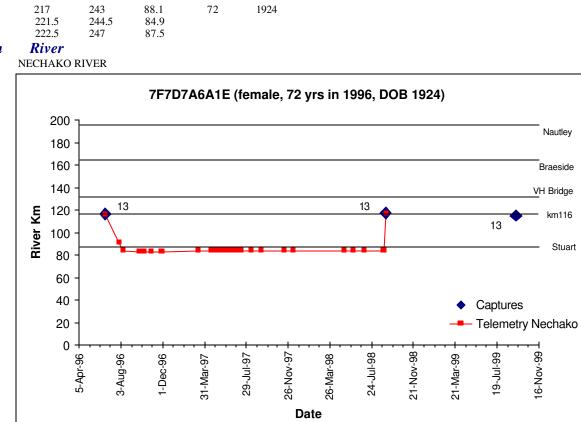


149.700	12	25-May-07	186.8	A										
	12	28-May-07	185.5	A										
	12	02-Jun-07	185.7	GS										
	12	05-Jun-07	185.7	A			7F7D7A5	7/E /mal	0 16 vrs	in 1006	DOR 10	50\		
	42	13-Jun-07	180.7	A			II I DI AS	741 (IIIai	c, 40 yıs	111 1990	, DOD 19	30)		
	12	15-Jun-07	179.7	A										
	12	18-Jun <i>-</i> 07	179.7	A	200 ⊤									Nautley
	12	21-Jun-07	179.7	A		3							7	rvadiley
	12	27-Jun-07	180.3	A	180 -	9		_					•	
	12	04-Jul-07	180.3	A	100]									Braeside
	42 42	06-Jul-07	180.9	A	160 -									
	42 42	09-Jul-07 16-Jul-07	185.9 180.9	A A	140 -									VH Bridge
149.700	+2	10-Jul-07	100.9	Α									⊼	
					E 120							A		km116
					×							3		
					ভূ 100 									Stuart
					80 -									
					60 -								_	
					40							•	Captures	
					40 -								 Telemetry 	/ Nechako
					20 -								Stuart	
					0 +		 		 			 	 	-
					95	26-	8	66-	P	-Sep-02	ģ	05	90	89
					ļ ģ	<u> </u>	≒	Ġ	ġ	Ġ	ਡੁਂ	a Ś	jc j	Ġ
					28-Oct-95	11-Mar-97	24-Jul-98	6-Dec-99	19-Apr-01	1 -S	14-Jan-04	28-May-05	10-Oct-06	22-Feb-08
					Š	ı ÷	.,	w w	_	-	-	28	Ē	Ñ
									Da	ite				

- Fish was originally located upstream of Braeside at km 179 (maturity code 3) and remained at approx km 170 through Aug 1999 (although tag may have been shed.
- Fish was recaptured in Sept 2005 at km 114.9 (code 3). Fish overwintered at km 116 and was identified in the vicinity of the spawning congregation in 2006. Fish then moved upstream to km 192 to just downstream of the Nautley confluence, likely for feeding and rearing.
- In 2007, fish was located in the vicinity of km 186. Rated end of tag life is May 2010.

PITtag	Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year
7F7D7A6647	13/09/1998	69.3	3	158	180	27.7	44	1954
	14/09/1999	74.2	97	160	182	28.6		

PITtag		Capture Date	River Km	Sex
7F7D7A6A1	\mathbf{E}	20/06/1996	116.2	13
		03/09/1998	116.8	13
		11/09/1999	114.9	13
Frequency	Code	Telem. Date	River Km	Station
149.620	110	20-Jun-96	116.2	S
149.620	110	20-Jun-96	116.2	S
149.620	110	29-Jul-96	91.2	Α
149.620	110	29-Jul-96	91.2	A
149.620	110	09-Aug-96	84	A
149.620	110	09-Aug-96	84	Α
149.620	110	25-Sep-96	83.2	A
149.620	110	25-Sep-96	83.2	A
149.620	110	09-Oct-96	83	A
149.620	110	09-Oct-96	83	A
149.620	110	28-Oct-96	83	A
149.620	110	28-Oct-96	83	A
149.620	110	29-Nov-96	83	A
149.620	110	29-Nov-96	83	A
149.620	110	15-Mar-97	83.5	A
149.620	110	15-Mar-97	83.5	A
149.620	110	18-Apr-97	83.5	A
149.620	110	18-Apr-97	83.5	A
149.620	110	03-May-97	83.5	A
149.620	110	03-May-97	83.5	A
149.620	110	06-May-97	83.5	В
149.620	110	06-May-97	83.5	В
149.620	110	09-May-97	83.3	A
149.620	110	09-May-97	83.3	A
149.620	110	23-May-97	83.5	Α
149.620	110	23-May-97	83.5	A
149.620	110	04-Jun-97	83.5	Α
149.620	110	04-Jun-97	83.5	A
149.620	110	12-Jun-97	83.5	A
149.620	110	12-Jun-97	83.5	A
149.620	110	24-Jun-97	83.5	A
149.620	110	24-Jun-97	83.5	A
149.620	110	02-Jul-97	83.5	A
149.620	110	02-Jul-97	83.5	A
149.620	110	14-Jul-97	83.5	A
149.620	110	14-Jul-97	83.5	A
149.620	110	13-Aug-97	83.5	A
149.620	110	13-Aug-97	83.5	A
149.620	110	11-Sep-97	83.5	A
149.620	110	11-Sep-97	83.5	A



Age Birth Year

72

1924

FL (cm) TL (cm) WT (kg)

243 244.5

217

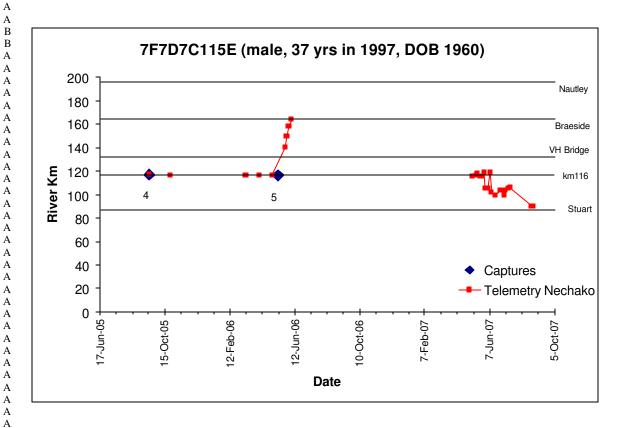
221.5

149.620	110	17-Nov-97	83.5	A	
149.620 149.620	110 110	17-Nov-97 10-Dec-97	83.5 83.5	A A	
149.620	110	10-Dec-97	83.5	A	
149.620	110	08-May-98	83.5	A	
Frequency	Code	Telem. Date	River Km	Station	River
149.620	110	08-May-98	83.5	A	
149.620	110	02-Jun-98	83.5	A	
149.620	110	02-Jun-98	83.5	A	
149.620	110	03-Jul-98	83.5	A	
149.620	110	03-Jul-98	83.5	A	
149.620	110	29-Aug-98	83.5	A	
149.620	110	29-Aug-98	83.5	A	
149.620	110	04-Sep-98	116.8	В	
149.620	110	04-Sep-98	116.8	В	

- Fish has been captured 3 times in the vicinity of km 116 and was assessed as code 13 each time (June 1996, Sept 1998 and 1999).
- Fish has never been identified at the known spawning area in VH.
- Predominantly located approximately 6.5 km downstream of the Stuart River confluence.
- Has not been captured since 1999.

PITtag 7F7D7A6A66 PITtag		Capture Date 16/09/1995 17/09/1997	River Km 114.9 124.9	Sex 3 3	FL (cm) 178 183.5	TL (cm) 202 208.5	WT (kg) 51.302 55.4	Age 44	Birth Year
PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT(kg)	Age	Birth Year
7F7D7C115F	C	18/09/1997	116.2	97	167.5	190.5	36.8	37	1960
7F7D7C115F	C	16/09/2005	116.8	4	181.5	208	46.3		
7F7D7C115F	C	11/05/2006	116.2	5					
Frequency 140 700	Code		River Km		River				
149.700 149.700	33 33	16-Sep-05	116.8	В	NECHAKO	RIVER			
149.700 149.700 149.700	33 33	16-Sep-05 25-Oct-05 25-Oct-05	116.8 116.2 116.2	B B B					
149.700	33	14-Mar-06	116.2	S					
149.700	33	14-Mar-06	116.2	S					
149.700	33	06-Apr-06	116.2	S					
149.700	33	06-Apr-06	116.2	S					
149.700	33	01-May-06	116.2	A					
149.700	33	01-May-06	116.2	A					
149.700	33	25-May-06	140	A					

149.700	33	25-May-06	140	Α
149.700	33	28-May-06	150	Α
149.700	33	28-May-06	150	Α
149.700	33	31-May-06	158	Α
149.700	33	31-May-06	158	Α
149.700	33	02-Jun-06	158	A
149.700	33	02-Jun-06	158	Α
149.700	33	06-Jun-06	164	A
149.700	33	06-Jun-06	164	A
149.700	33	05-May-07	116	Α
149.700	33	05-May-07	116	A
149.700	33	14-May-07	116.2	В
149.700	33	14-May-07	116.2	В
149.700	33	16-May-07	118	Α
149.700	33	16-May-07	118	A
149.700	33	20-May-07	116	Α
149.700	33	20-May-07	116	Α
149.700	33	23-May-07	116	Α
149.700	33	23-May-07	116	Α
149.700	33	25-May-07	116	Α
149.700	33	25-May-07	116	A
149.700	33	28-May-07	119	Α
149.700	33	28-May-07	119	A
149.700	33	30-May-07	105	A
149.700	33	30-May-07	105	A
149.700	33	01-Jun <i>-</i> 07	105	Α
149.700	33	01-Jun-07	105	A
149.700	33	03-Jun-07	105	A
149.700	33	03-Jun-07	105	A
149.700	33	05-Jun-07	105	A
149.700	33	05-Jun-07	105	A
149.700	33	08-Jun-07	119	A
149.700	33	08-Jun-07	119	A
149.700	33	11-Jun-07	102	A
149.700	33	11-Jun-07	102	A
149.700	33	18-Jun-07	100	A
149.700	33	18-Jun-07	100	A
149.700	33	27-Jun-07	104	A
149.700	33	27-Jun-07	104	A
149.700	33	04-Jul-07	100	A
149.700	33	04-Jul-07	100	A
149.700	33	06-Jul-07	104	A
149.700 149.700	33 33	06-Jul-07	104 105	A
149.700		11-Jul-07		A
149.700 149.700	33 33	11-Jul-07 16-Jul-07	105 106	A A
149.700	33	10-Jui-0/	100	A



149.700	33	16-Jul-07	106	A
149.700	33	24-Aug-07	89.7	GS
149.700	33	24-Aug-07	89.7	GS
149.700	33	25-Aug-07	89.7	GS
149.700	33	25-Aug-07	89.7	GS
149.700	33	26-Aug-07	89.7	GS
149.700	33	26-Aug-07	89.7	GS
149.700	33	27-Aug-07	89.7	GS
149.700	33	27-Aug-07	89.7	GS

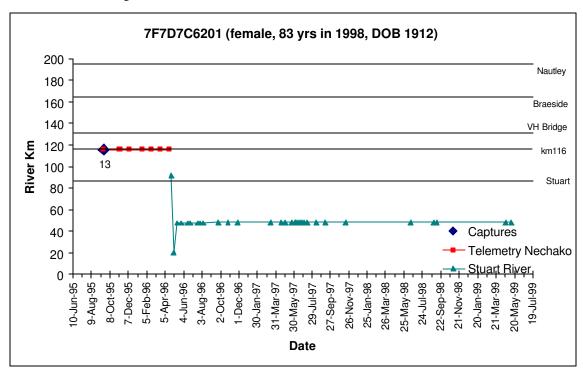
- Assessed as "ripe" May 11th, 2006 at km 116. Was taken as brood stock for 2006 hatchery program (male 3).
- Migrated upstream following capture to Braeside location by end of May.

 Was not identified upstream of km 116 in 2007 (not part of spawning event).

PITtag		Capture Date	River Km	Sex	FL (cm)	TL(cm)	WT(kg)	Age	Birth Year
7F7D7C6201		16/09/1995	116.2	13	206	232	72.64	83	1912
Frequency	Code	Telem. Date	River Km	Station	River				
149.500	105	16-Sep-95	116.2	S	NECHAKO	RIVER			
149.500	105	09-Nov-95	116.2	S					
149.500	105	09-Nov-95	116.2	A					
149.500	105	12-Dec-95	116.1	S					
149.500	105	21-Jan-96	116.2	S					
149.500	105	22-Feb-96	116.2	S					
149.500	105	22-Mar-96	116.2	A					
149.500	105	20-Apr-96	116.2	A					
149.500	105	27-Apr-96	91.5	A	STUART	RIVER			
149.500	105	03-May-96	20.4	A					
149.500	105	15-May-96	48.1	A					
149.500	105	28-May-96	48.1	A					
149.500	105	17-Jun-96	48.1	A					
149.500	105	26-Jun-96	48.1	В					
149.500	105	21-Jul-96	47.9	В					
149.500	105	29-Jul-96	47.8	A					
149.500	105	09-Aug-96	48.1	A					
149.500	105	25-Sep-96	48.7	A					
149.500	105	28-Oct-96	48.7	A					
149.500	105	29-Nov-96	48.7	A					
149.500	105	15-Mar-97	48.7	A					
149.500	105	18-Apr-97	48.7	A					
149.500	105	03-May-97	48.7	A					
149.500	105	23-May-97	48.7	A					
149.500	105	04-Jun-97	48.7	A					
149.500	105	07-Jun-97	48.7	A					
149.500	105	12-Jun-97	48.7	A					
149.500	105	19-Jun-97	48.7	A					
149.500	105	24-Jun-97	48.7	A					

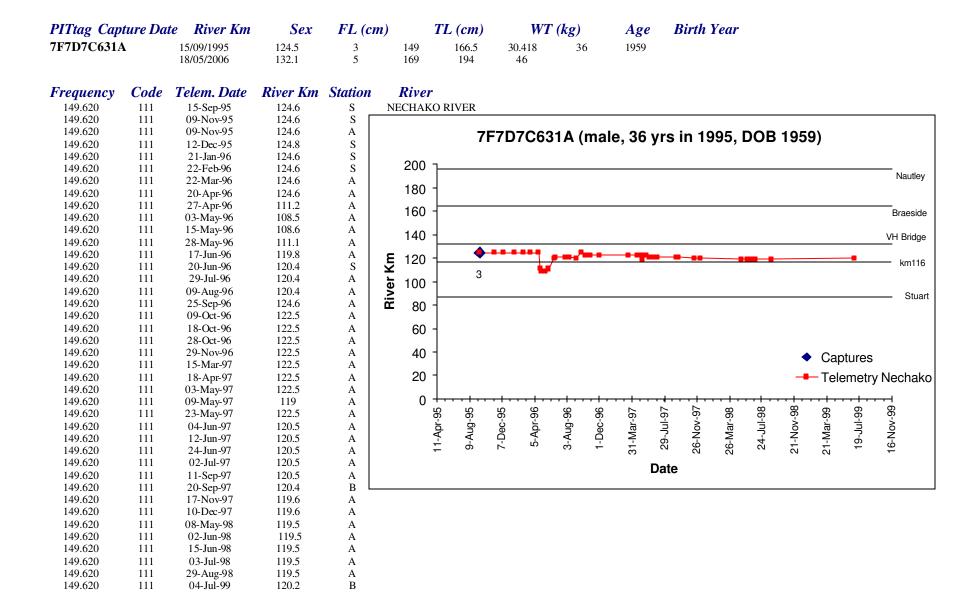
```
02-Jul-97
149.500
               105
                                           48.7
                                                          Α
                         14-Jul-97
                                           48.7
149.500
               105
                                                          A
                         13-Aug-97
149.500
               105
                                           48.7
                                                          A
149.500
               105
                         11-Sep-97
                                           48.7
                                                          Α
                         17-Nov-97
                                           48.7
149.500
               105
                                                          Α
                         15-Jun-98
149.500
               105
                                           48.7
                                                          A
149.500
               105
                         29-Aug-98
                                            48.7
                                                          A
                         10-Sep-98
149.500
               105
                                           48.7
                                                          A
149.500
               105
                         22-Apr-99
                                           48.7
                                                          A
                         11-May-99
                                           48.7
149.500
               105
                                                          A
```

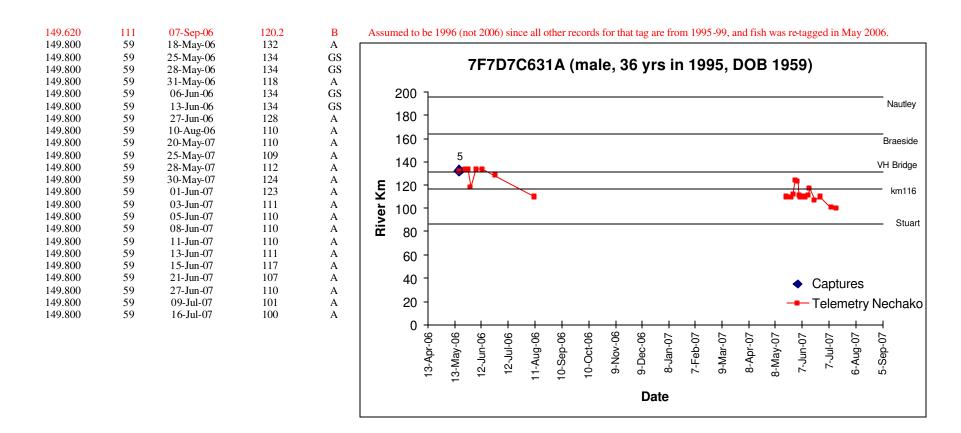
• Fish captured at km 116 in Sept 1995 and assessed as code 13 fe male. Telemetry shows is overwintered at that location and then migrated into the Stuart River on April 27th, 1996. Tag was likely shed at km 48.7 around August 9th.



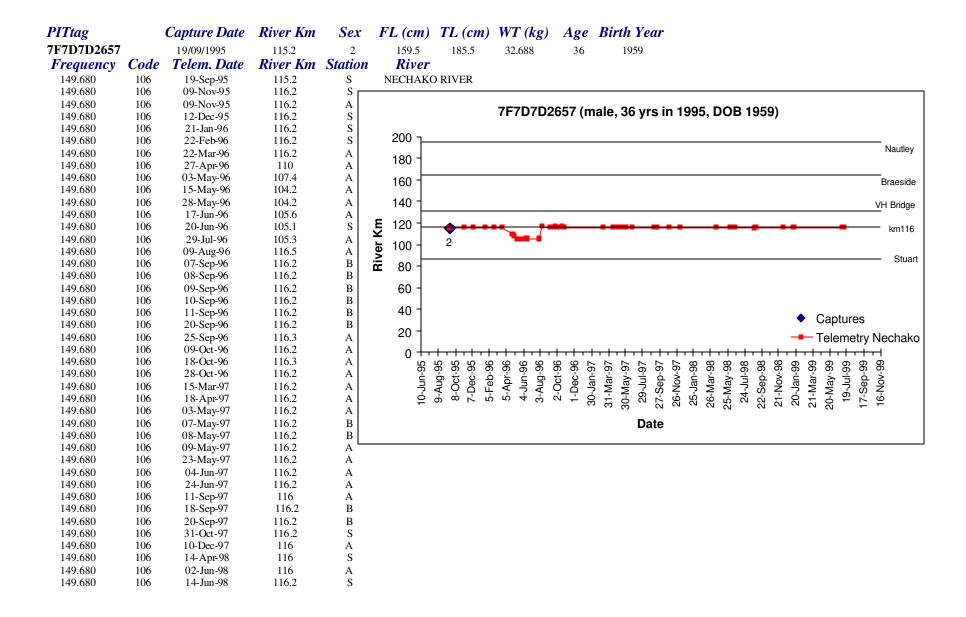
PITtag 7F7D7C5033		Capture Date 01/09/1998 23/09/2001	River Km 111.2 116.2	Sex 12 97	1	(cm) 153.5 157	<i>TL (cm)</i> 173.5 178	WT (kg		ge 40	Birth Y 1958							
<i>Frequency</i> 149.740	Code 13	Telem. Date 01-Sep-98	River Km 111.2	Station B		River) RIVER											
149.740 149.740 149.740 149.740 149.740	13 13 13 13 13	04-Sep-98 04-Sep-98 09-Nov-98 07-Dec-98 27-May-99 08-Jun-99	116.2 116.2 116.2 116.2 116.2	B A S A A				7D7C5	033 (1	fem	nale, 4	0 yrs	in 19	98, D	OB 1	1958)		
149.740	13	22-Jun-99	116.2	A		200 - 180 -												Nautley
						160 -												Braeside
						140 -												VH Bridge
					Κ	120 -	•		-	-							•	km116
					River Km	100 -	12										97	Stuart
					ш	80 - 60 -												
						40 -										▲ Ca	anturoo	
						20 -											aptures elemetry	/ Nechako
						0 -	· · · · · · · · · · · · · · · · · · ·	- 	+	 	
						00,000	24-Jul-98	21-Nov-98	21-Mar-99	19-Jul-99	16-Nov-99	15-Mar-00	13-Jul-00	10-Nov-00	10-Mar-01	8-Jul-01	5-Nov-01	5-Mar-02
												Date						

- Fish captured at km 111 (Sept 1998) and km 116 (Sept 2001) and was assessed as code 12 and 97, respectively.
 Telemetry suggests fish overwintered at km 116.





- Between Sept 1995 and July 1999, fish did not migrate upstream of km 124 and was likely not mature enough to spawn during any events that may have taken place during that period.
- By 2006, fish had sexually matured and was identified within the 2006 spawning congregation at VH and had returned to the km 116 hole by mid-August.
- In 2007, fish did not migrate upstream of km 124 and was therefore did not spawn at VH during recorded event.



106	23-Jun-98	116.2	В
106	29-Aug-98	115.2	A
106	01-Sep-98	116.2	В
106	04-Sep-98	116.2	В
106	07-Dec-98	116.2	S
106	13-Jan-99	116.2	S
106	03-Jul-99	116.2	В
106	13-Jul-99	116.2	В
	106 106 106 106 106 106	106 29-Aug-98 106 01-Sep-98 106 04-Sep-98 106 07-Dec-98 106 13-Jan-99 106 03-Jul-99	106 29-Aug-98 115.2 106 01-Sep-98 116.2 106 04-Sep-98 116.2 106 07-Dec-98 116.2 106 13-Jan-99 116.2 106 03-Jul-99 116.2

- Fish originally captured at km 115 in Sept 1995 and was assessed as a code 2 male. Telemetry shows it likely overwintered at that location. On May 3rd 1996 it migrated to km 107 and remained in that general area until August 9th when it returned to km 116. The rationale for the migration could be associated with spawning but most likely is associated with rearing and feeding due to maturity of the fish.
- Tag was likely shed at km 116 as it remained at that location.

PITtag 7F7D7D3365 Frequency	Code		76.4 River Km	Sex 3 Station	River	52.5	WT (kg) Ag o		rth Ye 1954	ear									
149.740	107	26-Jun-96	76.4	В	NECHAKO RIV	ER														
149.740	107	29-Jul-96	118.4	Α																
149.740	107	09-Aug-96	110	Α					757	יחקחי	365 (ı	mala)								
149.740	107	07-Sep-96	116.2	В					<i>,,,</i>	יטיט	,303 (I	iliai c)								
149.740	107	08-Sep-96	116.2	В	200 ¬															
149.740	107	09-Sep-96	116.2	В	200														Nautle	
149.740	107	10-Sep-96	116.2	В	180 -														INaulie	У
149.740	107	11-Sep-96	116.2	В	100															
149.740	107	20-Sep-96	116.2	В	160 -													E	Braesio	de
149.740	107	25-Sep-96	116.2	A																
149.740	107	09-Oct-96	116.2	A	140 -													VH	H Bridg	je
149.740	107	28-Oct-96	116.2	A	E 120 -	_							_							
149.740	107	15-Mar-97	116.2	A	Y		-					-	_		-				km11	6
149.740	107	18-Apr-97	116.2	A	100 - 80 -	/														
149.740	107	03-May-97	116.2	A	<u>×</u>														Stu	art
149.740	107	07-May-97	116.2	В	ল্ল 80 -	4														
149.740	107	08-May-97	116.2	В	00	•														
149.740	107	09-May-97	116.2	A	60 -	3														
149.740	107 107	23-May-97	116.2	A	40 -															
149.740 149.740	107	04-Jun-97 24-Jun-97	116.2 116.2	A A	40										•	Car	otures	6		
149.740					20 -										_				ام مام م	1
149.740	107 107	11-Sep-97	116 116.2	A												– Tele	emetr	y ine	ecna	10
149.740	107	18-Sep-97 20-Sep-97	116.2	B B	0 + 1	- -	++++		+ + +	- -	. 	- - 		 	-	+ -	 	_		
149.740	107	31-Oct-97	116.1	S	5-Apr-96	3-Aug-96	2-Oct-96 1-Dec-96	30-Jan-97 31-Mar-97	30-May-97 29-Jul-97	27-Sep-97	26-Nov-97 25-Jan-98	26-Mar-98 25-May-98	24-Jul-98	21-Nov-98	20-Jan-99	21-Mar-99	20-May-99 19-Jul-99	17-Sep-99		
149.740	107	17-Nov-97	116.1	A	ġ ġ	ġ		<u> </u>	i a	g d	ä Ś	<u>a</u> .	\(\dag{\dag{\dag{\dag{\dag{\dag{\dag{	<u> </u>	ä	<u>ă</u>	ङंचं	Θ	-	
149.740	107	10-Dec-97	116.1	A	4-5- <u>-</u>	4	۲ - -		> წ	Ņ	Z 7	ŠΣ	4. 0	? <u>?</u>	7	≥ :	<u> გ</u>	Ϋ́		
149.740	107	14-Apr-98	116	S	47	(1)	., – ,	9 E	8	27	N N	26 25	(4)	7 2	Ø	2 2	7 50	17		
149.740	107	14-Apr-98	116.2	S							Date									
149.740	107	29-Aug-98	110.2	A							Date									
149.740	107	01-Sep-98	116.5	В																
149.740	107	04-Sep-98	116.2	В																
149.740	107	09-Nov-98	116.2	A																
149.740	107	07-Dec-98	116.2	S																
149.740	107	13-Jan-99	116.2	S																
149.740	107	13-Jul-99	116.2	В																

- Fish originally captured at km 76.4 in June of 1996 and assessed as a code 3 male. Telemetry shows it migrated to km 116 by Sept for rearing/overwintering habitat.
- Tag likely shed at that km 116.

PITtag Capi	ture Dat	e River Km	Sex	FL (cm))	TL	(cm)		W	r (kg)	Agc	e	Birth Y	ear							
7F7D7D2A64	ļ	16/09/1997	98.2	3	1	58	179	3	33.6	4	45	1952	2									
		14/08/2004	Stuart Lake	97	1	83	208.5	4.	3.75	:	52	1952	2									
Frequency	Code	Telem. Date	River Km			iver																
149.680	109	16-Sep-97	98.2		NEC	HAKO R	IVER															
149.680 149.680	109 109	20-Sep-97 31-Oct-97	124.9 116.2	B S							_	_		_			_		_			
149.680	109	17-Nov-97	116.2	A				7F7[D7D2	2A64	1 (ma	ale, 4	√5 yr	's in 19	997,	DO	B 1	952)			
149.680	109	10-Dec-97	116.5	A									_									
149.680	109	14-Apr-98	116	S		200 7																
149.680	109	08-May-98	114	A		400															Nautle	Эy
149.680	109	02-Jun-98	114	A		180 -																
149.680	109	14-Jun-98	116.2	S		160															Braesic	de
149.680	109	03-Jul-98	116.2	A																	Diacoic	10
149.680	109	29-Aug-98	115	A		140 -															VH Bridg	ge
149.680 149.680	109 109	04-Sep-98 13-Jan-99	116.2 116.2	B S	_																	
149.680	109	22-Apr-99	116.2	A	Α̈́	120 -	\rightarrow	•		-		_		-	_	-	_		_	-	km11	6
149.680	109	11-May-99	115	A	-	100 -		^														
149.680	109	27-May-99	116.2	A	River	100	•	3													— Stua	art
149.680	109	08-Jun-99	116.2	A	$\overline{\mathbf{x}}$	80 -															5100	ait
149.680	109	22-Jun-99	116.2	A																		
149.680	109	09-Jul-99	115.3	A		60 -																
149.680	109	13-Jul-99	116.2	В		40																
149.680	109	07-Dec-99	116.2	S		40 -												•	Capt	ures		
						20 -		- · .			000					• \		_	Tele	metrv	Nechal	ko
							Note:	risn c	capture	a in A	ug. 200	J4 IN Stl	uart La	ake (matu	rity 97).				, ,		
						0 +			ω.	ω.	ω .	 	o a	• • •	6	6	-		- 6		—	
						<u>6</u>	-6	6->	36-L	ج 9	õ-,	6-1	กั ว	9, 9,	9	6	<u>6-</u>	6	6->	9-ر	Ģ.	
						29-Jul-97	Sek	2	25-Jan-98	Ma	ďaÿ	24-Jul-98		20-Jan-99	Ma	ďa	19-Jul-99	Ser	16-Nov-99	15-Jan-00	Ma	
						8	27-Sep-97	26-Nov-97	25	26-Mar-98	25-May-98	24-Jul-98	į č	20-	21-Mar-99	20-May-99	9	17-Sep-99	16-	45	15-Mar-00	
							• • •				CA		-	nto.		CA		•				
													Da	ue								

- Tag was potentially shed as it was located at km 116 for a 2 year period. One database record (June 14, 1998) has it located at km 16.2, however, this is thought to be a data entry error that should be km 116.2.
- Fish was captured in August 2004 in Stuart Lake.
- Fish has never been identified at a known spawning area.

<i>PITtag</i> 7F7D7D3401		Capture Date 07/09/1996 27/09/2001	River Km 124.5 116.2	Sex 3 3		(cm) 162 174	TL (cm) 185.5 198		7.7		ze 1		h Ye 1957	ar									
Frequency	Code	Telem. Date	River Km	Station	j	River																	
149.460	32	07-Sep-96	124.5	В	NE	CHAKC	RIVER																
149.460	32	20-Sep-96	116.2	Вг																			
149.460	32	25-Sep-96	116.2	Α							,								40	、			
149.460	32	09-Oct-96	116.2	A			/1	F7D7	/D3 4	1U1 ((ma	ile,	39 y	yrs	ın '	1990	6, D	OB	19	5/)			
149.460	32	18-Oct-96	116.2	Α																			
149.460	32	15-Mar-97	116.2	Α		200 -																	
149.460	32	18-Apr-97	116.2	A																			Nautley
149.460	32	03-May-97	116.2	Α		180 -																	
149.460	32	07-May-97	116.2	В		100																	
149.460	32	08-May-97	116.2	В		160 -																	Braeside
149.460	32	09-May-97	116.2	A		140	3																
149.460	32	23-May-97	116.2	A		140 -																	VH Bridge
149.460	32	04-Jun-97	116.2	A	⊑	120 -	•																
149.460	32	24-Jun-97	116.2	A	Æ	120			_	•	-												km116
149.460	32	11-Sep-97	116	A	River	100 -																3	
149.460 149.460	32 32	18-Sep-97	116.2 116.2	B B	Š	100																	Stuart
149.460	32	20-Sep-97 31-Oct-97	116.2	S	盃	80 -																	Otaart
149.460	32	10-Dec-97	116.2																				
149.460	32	14-Apr-98	116.2	A S		60 -																	
149.460	32	14-Jun-98	116.2	S																			
149.460	32	23-Jun-98	116.2	В		40 -														• (Captu	ıres	
149.460	32	29-Aug-98	116.2	A		00																	
149.460	32	01-Sep-98	116.2	В		20 -													_	-	lelen	netry	Nechako
149.460	32	04-Sep-98	116.2	В		0 -																	
149.460	32	09-Nov-98	116.2	Α			ာ မ မ	· -	_	<u>~</u>	ω	ω	8	6	6	6	0	0	0	· -	_	Ξ	8
149.460	32	07-Dec-98	116.2	S		,	9 6	6-7	6-	5->	မှ	<u>-</u>	<u>-</u>	<u>-</u>	6-	<u>-</u>	<u>-</u>	으	<u>۷</u>	<u>۔</u>	2	<u>-</u>	Ō.
						, c	3-Aug-96	31-Mar-97	29-Jul-97	26-Nov-97	26-Mar-98	24-Jul-98	21-Nov-98	21-Mar-99	9-Jul-9	16-Nov-99	15-Mar-00	13-Jul-00	10-Nov-00	0-Mar-01	8-Jul-01	5-Nov-01	5-Mar-02
						L	ρ ⁶ , ±	<u> </u>	53	-56-	9	24	7	-	19	9	rγ	13	<u>0</u>	0	ω	5	5
								(-)		.,	.,					•	_		•	_			
														Date	•								

- Tag potentially shed as fish was only located at km 116. Assessed at maturity code 3 in 1996 and 2001. Fish never identified at known spawning areas.

PITtag 7F7D7D3D18	Capture Date 06/09/1998 22/06/2002	River Km 124.9 93.2	Sex 12 97	FL (cm) 164.5 167.5	TL (cm) 184 186	WT (kg) 28.6 30.2	Age 35	Birth	Year 963							
Frequency Code 149.500 115 149.500 115 149.500 115 149.500 115 149.500 115 149.500 115 149.500 115 149.500 115 149.500 115 149.500 115 149.500 115 149.500 115		River Km 124.9 124.7 124.7 124.9 82 92 92.6 94.5 92 92.2) RIVER	7D7D3D	18 (fe		+ 00-ln-61	in 1	10-Mar-01	8-Jul-01	•	Сар	97 ◆ otures emetry	Nautley Braeside VH Bridge km116 Stuart Nechako
					7 7	ν. Σ	Ψ-	÷	Date	÷	7			•,		က

- Fish has not been identified at the known spawning area in VH.
- Following tagging in Sept 98, fish remained at km 125 overwintering hole but migrated downstream to vicinity of Stuart River confluence where it remained from April to July 1999. This area likely provides suitable feeding/rearing habitat.
- In 2002 it was re-captured in the same general area (km 93.2 based on UTM coordinates). This area likely provides suitable rearing habitat.

<i>PITtag</i> 7F7D7D4271		Capture Date 23/06/1996 08/09/1996	River Km 92.1 117.2	Sex 2 2	FL (cm) 139.5 139	TL (cm) 157.5 158.5	WT (kg) 20.9 19.98	Age 36	Birth Year	
PITtag		Capture Date	River Km	Sex	FL (cm)	TL (cm)	WT (kg)	Age	Birth Year	
7F7D7D4E08		08/09/1996	116.2	12	183	205	47.3	46	1950	
Frequency	Code	Telem. Date	River Km	Station	River					
149.460	31	08-Sep-96	116.2	В	NECHAKO	RIVER				
149.460	31	10-Sep-96	116.2	В						
149.460	31	11-Sep-96	116.2	В						· · · · · · · · · · · · · · · · · · ·
149.460	31	25-Sep-96	116.2	A			7F7D7D	4E08 ((male, 46 yrs	in 1996, DOB 1950)
149.460	31	09-Oct-96	116.2	A						
149.460	31	18-Oct-96	116.2	Α	200 7					
149.460	31	28-Oct-96	116.2	Α	400					Nautley
149.460	31	15-Mar-97	116.2	Α	180 -					
149.460	31	18-Apr-97	116.2	A	160					Braeside
149.460	31	22-Apr-97	110.4	GS	100					Diaeside
149.460	31	03-May-97	87	A	140 -					VH Bridge
149.460	31	06-May-97	86.3	В	-					
149.460	31	09-May-97	86.3	A	E 120		_			km116
149.460	31	23-May-97	87	Α	×	12		•		
149.460	31	04-Jun-97	87	Α	ਲਂ 100 - 80 -	12		7		'
149.460	31	12-Jun-97	87	A	É 80 -			_		Stuart
149.460	31	24-Jun-97	87	A	— 00					
149.460	31	02-Jul-97	87	Α	60 -					
149.460	31	14-Jul-97	87	Α						
149.460	31	11-Sep-97	86.5	Α	40 -					A Combine
149.460	31	17-Nov-97	87	A						Captures
149.460	31	10-Dec-97	87	Α	20 -					Telemetry Nechako
149.460	31	08-May-98	87	Α	0 +				 	
149.460	31	02-Jun-98	87	A		9 9	9 /		<u> </u>	
149.460	31	17-Jun-98	86.8	В	-4-Jun-96	3-Aug-96 2-Oct-96	1-Dec-96 30-Jan-97	r-9	6-7 6-6-0	:6-Nov-97 :5-Jan-98 :6-Mar-98 5-May-98 2-Sep-98 :1-Nov-98
149.460	31	03-Jul-98	87	A	<u> </u>) A O	Jar	Ma	∕la. Ju-	No May No Jan No Jan No Jan No Jan No Jan
149.460	31	29-Aug-98	87	A	4	3-Aug-96 2-Oct-96	1-Dec-96 30-Jan-97	31-Mar-97	30-May-97 29-Jul-97 27-Sep-97	26-Nov-97 25-Jan-98 26-Mar-98 25-May-98 22-Sep-98 21-Nov-98
149.460	31	09-Nov-98	87	A			(,)	က	ö α	
									Date	•
				L						

- Fish originally captured at km 116 in Sept 1996 and assessed as a code 12 female. Telemetry shows it overwintered at km 116 in 1996/1997 and migrated to km 87 by May 23rd 1997. Migration could have been due to spawning (based on time of year) but more likely was for rearing and feeding as that location is not known to provide spawning habitat.
- Tag likely shed at km 87.

PITtag 7F7D7D4F70	C	Capture Date 19/09/1995 18/09/2005	River Km 116.2 117.3	Sex 12 12	FL (cm) 148 181.5	TL (cm) 172 209	WT (kg) 24.97 42.2	Age 40	Birth	Year 955						
Frequency	Code		River Km	Station	River											
149.560	111	19-Sep-95	116.2	S	NECHAKO	O RIVER										
149.560	111	09-Nov-95	116.2	S												
149.560	111	09-Nov-95	116.2	Α		7F	7D7D4F	-7C (f	emale	40 vrs	in 19	995. Г	OB:	1955)		
149.560	111	12-Dec-95	116.2	S				. • (, j.c				,		
149.560	111	21-Jan-96	116.2	S	200	-										
149.560	111	22-Feb-96	116.2	S	200											Nautley
149.560	111	22-Mar-96	116.2	A	180	4										· idalio)
149.560	111	20-Apr-96	116.2	A	100											
149.560	111	27-Apr-96	116.2	A	160	_										Braeside
149.560	111	03-May-96	116.2	A	100											Bracolac
149.560	111	15-May-96	116.2	A	140	4										VH Bridge
149.560	111	28-May-96	116.2	A												
149.560 149.560	111 111	17-Jun-96 29-Jul-96	116.2 116.2	A	E 120	-									•	km116
149.560	111	29-Jul-96 09-Aug-96	116.2	A A		12									12	1411110
149.560	111	07-Sep-96	116.2	В	100 Bi.	- 12									12	
149.560	111	08-Sep-96	116.2	В	.≧											Stuart
149.560	111	09-Sep-96	116.2	В	≖ 80	1										
149.560	111	10-Sep-96	116.2	В												
149.560	111	11-Sep-96	116.2	В	60	1										
149.560	111	20-Sep-96	116.2	В	40											
149.560	111	25-Sep-96	116.2	A	40									Ca	aptures	;
149.560	111	09-Oct-96	116.2	A	20									To	lomotr	y Nechako
149.560	111	15-Mar-97	116.2	A	20									16	iemeu	y Nechako
149.560	111	18-Apr-97	116.2	A	0	 				 						
149.560	111	03-May-97	116.2	A	١	<u>4</u> το	9	· ·	20 g	D O	Ξ	ġ			ď	
149.560	111	07-May-97	116.2	В		7-Dec-94 7-Dec-95	96-Dec-96	6-Dec-97	6-Dec-98	6-Dec-39	5-Dec-01	5-Dec-02	5-Dec-03	4-Dec-04	4-Dec-05	4-Dec-06
149.560	111	08-May-97	116.2	В		ě ě	Φ	ن و	ع و		Ğ	Ğ	ē	ΘĒ	Ğ	Ď
149.560	111	09-May-97	116.2	A		- '-	9	9	ب ط	γ ή	5	5	5	4	4	4
149.560	111	23-May-97	116.2	A						Date						
149.560	111	04-Jun-97	116.2	A						Date						
149.560	111	24-Jun-97	116.2	A												
149.560	111	02-Jul-97	116.2	Α												
149.560	111	11-Sep-97	116	A												
149.560	111	18-Sep-97	116.2	В												
149.560	111	20-Sep-97	116.1	В												
149.560	111	31-Oct-97	116	S												
149.560	111	17-Nov-97	116.2	A												
149.560	111	10-Dec-97	116	A												
149.560	111	13-Jan-98	116.2	S												

149.560	111	14-Apr-98	116.2	S
149.560	111	14-Jun-98	116.2	S
149.560	111	23-Jun-98	116.2	В
149.560	111	29-Aug-98	116.5	Α
149.560	111	01-Sep-98	116.2	В
149.560	111	09-Nov-98	116.2	Α
149.560	111	07-Dec-98	116.2	S
149.560	111	03-Jul-99	116.2	В
149.560	111	13-Jul-99	116.2	В

- Tag likely shed as fish was only ever identified at km 116.
 Fish re-captured in Sept 2005 at km 117 suggesting it likely overwinters at that location.

PITtag 7F7D7D7063		Capture Date 18/06/1996 07/06/1997 09/05/2007	River Km 126.5 110.2 124.5	Sex 5 3 2	FL (cm) 193 193 213	TL (cm) 218 218 244	WT (kg) 59.9 61.3 87.3	Age 62		year 934							
Frequency	Code	Telem. Date	River Km	Station	River												
149.740	109	18-Jun-96	126.5	S	NECHAKO	RIVER											
149.740	109	19-Jun-96	127	В	112011111												
149.740	109	29-Jul-96	110.5	A													
149.740	109	09-Aug-96	132.7	A		7 F	7D7D70	63 (m	ا جاد	62 vr	e in '	1996	DO	R 191	241		
149.740	109	25-Sep-96	133.2	A		, ,	101010	00 (111	aic,	02 yı.	3 111	1330	, 50	D 130	<i>,</i>		
149.740	109	09-Oct-96	133.9	Α	000 -												
149.740	109	18-Oct-96	133	A	200 -												Nautley
149.740	109	28-Oct-96	132.5	A	100												rvaduey
149.740	109	29-Nov-96	132.9	Α	180 -												
149.740	109	15-Mar-97	132.5	A	100												
149.740	109	18-Apr-97	132.5	A	160 -												Braeside
149.740	109	03-May-97	132.5	A	110	5											
149.740	109	06-May-97	133.2	В	140 -	5											VH Bridge
149.740	109	08-May-97	133.2	В	- 100	•	7									4	•
149.740	109	09-May-97	133.2	A	도 120 - 노	<u> </u>										<u>`</u>	km116
149.740	109	23-May-97	132.5	A	x	•	•									2	
149.740	109	04-Jun-97	132.5	A	- 001 River		3										
149.740	109	11-Sep-97	132.5	A	چ د												— Stuart
149.740	109	20-Sep-97	133	В	~ 80 -												
149.740	109	17-Nov-97	133	A	00												
149.740	109	10-Dec-97	124.5	A	60 -												
149.740	109	14-Apr-98	124.5	S	40												
149.740	109	20-Jun-98	124.5	В	40 -										Car	otures	
149.740	109	03-Jul-98	124.5	A	00												N111 -
149.740	109	29-Aug-98	124.5	A	20 -									_	- i ei	emetry	/ Nechako
149.740	109	07-Sep-98	124.7	В	0												
149.740 149.740	109 109	09-Nov-98 13-Jan-99	124.7 124.7	A S	0 -		···	··············					······		 	·····	" " "
149.740	109	05-Jul-99	124.7	B	à	i gi	96 6	ဓို	6	Š	Ö	9	Š	ģ	ŏ	õ	0
149.740	109	03- J ul-99	124.7	ь	20	7-Dec-94	6-Dec-96 6-Dec-97	6-Dec-98	6-Dec-99	5-Dec-00	5-Dec-01	5-Dec-02	5-Dec-03	4-Dec-04	4-Dec-05	4-Dec-06	4-Dec-07
						•		_	_					•	•	•	•
										Da	te						

- Fish was assessed as being ripe (code 5) on June 18, 1996 at km 126.5 and was recorded at the same approximate location (km 127) on June 19th. No additional telemetry data is available until July 29th when the fish was identified at km 110.

- The data from this fish suggests that spawning may have occurred at the VH site in 1996. The event may have occurred prior to June 18th or between June 19th and July 29th, however no data exists for either period. The later possibility seems unlikely based on the timing of known spawing events being earlier in the year, however, in an unusually cold year spawning could be delayed. A review of temperature data from the Burrard Bridge may help narrow down the potential spawning period.
- In 1996, the fish appears to have overwintered at km 132, as it was located there on Nov 29th, 1996 and Mar 15th, 1997. However, it is also possible that it migrated downstream to km 124 following the Nov 29th record and returned before Mar 15th. This is similar to what was observed in 1997 when the fish migrated from km 133 to km 124 between Nov 17th and Dec 10th, however the fish did not return to km 133.
- In 2007 the fish was captured at km 124 and assessed as code 2 suggesting it will not be mature enough to spawn in 2008.

Appendix 4. Maps

- 1. Capture and telemetry March and April
- 2. Capture and telemetry May and June
- 3. Capture and telemetry July to October
- 4. Capture and telemetry November to February
- 5. Sample Locations Nechako/Stuart
- **6.** Sample Location Fraser

