

**ISS
DATABASE
USER
MANUAL**
for
Field Version

Introduction

The ISS database was developed to simplify and improve the process of inputting and summarizing juvenile trapping and tagging data. Since much of the information we collect is entered into the Pittag3 tagging program, it does not make sense to re-enter that data into a spreadsheet (like has been done in the past). The ISS database incorporates data from the Pittag3 database and allows entry of additional data from non-PIT tagged fish as well as trap operation data. Summary data are automatically generated for all fish in the tag files and non-tagged fish that are entered separately into the ISS database. These summaries give breakdowns of total numbers of fish (by species/run/rear) for each capture and disposition scenario. For example, the total number of Chinook captured, tagged, released upstream, and subsequently recaptured. Summaries are generated for specific days and also groups of days (date ranges) specified by the user. All fish that are not associated with a Pittag code can be entered directly into the ISS database with or without biological data associated with them. All corrections and edits made to PIT tag files will automatically be updated in the ISS database. This ensures that data within the PTAGIS regional database will be identical to data within the ISS database. Data transfer tools are included to transfer data from field computers to office and regional computers where data from multiple field laptops and traps can be combined.

The ISS database has a three-tiered design. At the first tier (field version), the PITTAG3 and ISS databases are linked together but are functionally separate. The PIT tag data you see in the ISS database is merely a view of the data in the PITTAG3 database. Due to this linking, any data that is edited within a PIT tag file will automatically be updated in the ISS database. A transfer tool enables the user to transfer the data from the field laptop to an office computer (second tier) where data from several different field computers can be combined into a single database. At this level (second tier), the ISS and PITTAG3 databases are joined together into a single database. *Data may not be transferred from the second tier to the first tier.* Any changes to any of the data should be made at the first tier. Changes made at the first tier subsequent to a data transfer will be reflected at the second tier when the data is transferred the next time. The third tier is a regional database that will accept transfers from the second tier. At the end of the trapping season and all data has been transferred to the coordinator version (tier 2), edits can be made at the second tier. When starting up trapping the following year, make sure that you start with a clean P3 mdb and a clean ISS database, otherwise corrections to previous data will be overwritten.

Please Read Before Using this Program

Like any database, it is important for all users to enter data consistently. This user manual is designed to provide all necessary information for proper data entry, editing, and transfer. This database uses a series of codes to track the capture and disposition of all fish (both tagged and non-tagged) some of which are text strings added to the Conditional and/or Textual comment fields of the PIT tag file. All of the summaries that this program generates are based on the text strings from the individual tag records within the PIT tag file. Failure to use the proper codes will result in erroneous data summaries. Instructions for coding PIT tagged fish are in the "Entering PIT Tagged Fish Data" section of this

manual. In addition, for fish that are not PIT tagged, there is a pick list of disposition codes to choose from in the Non-PT2 page of the ISS database. These codes are defined in the “Entering Non-Tagged Fish Data” section of this manual. If there are any questions or concerns, please contact Brian Leth at the Nampa Research Office (208-465-8404 ext 236) or email at bleth@idfg.state.id.us

Installing the ISS Field Version Database Program to your Laptop

The ISS database comes packaged on a CD-Rom with an install program. In order to install the program you will need to do the following:

1. If you have any previous versions of the ISS database installed on your machine, make sure you have saved a copy of the ISSTrapOps.mdb in a different location and then uninstall the program using the unwise.exe file in the program folder.
2. Before installing the program, close all Windows applications.
3. To install the FIELD version, click on the **JTFInstall.exe** program icon from the CD-Rom provided. An install program will begin and guide you through the installation. It will prompt you to install the program in a default directory (C:\Program Files\ISSJF2004). You may edit the drive path if you wish to install it in another directory.
4. Once the program is installed you can create a shortcut for the **ISSTrapOps.exe** file and drag it to your desktop. This is the file used to run the database program for the field version.
5. When starting the program for the first time, you need to set the database “Options” (see below).

Setting Database Options

After starting the FIELD program, click on the “File” menu option (Figure 1) in the upper left hand corner of the screen and select “Options”.

1. **Computer Identification Number**- this number will be associated with data as it is transferred from one computer to the next, so it must be a unique number. Type in your agency acronym, and the computer property number or last five characters of the serial number (eg. IDFG12345)
2. **Attach Pit Tag 3 Database** – You need to specify the location of the Pittag3 database so it can be linked with the ISS database. Use the Browse tool to specify the location.
3. **Data Transfer Directory** – You need to specify where you would like your data transfer files stored. You will use these files to transfer the field data to an office computer via e-mail or a floppy disk. The default is C:\Temp.
4. **E-Mail Setting** – This tool was designed to automate the transfer process by automatically attaching the zip transfer file to an email and sending to a specified recipient. However, we have had some trouble with this option so ***I would highly recommend not using this tool.*** To disable this option, deselect the Outlook2000 check box
5. **Default Units for Sill Depth** – You need to specify the default unit of measurement you will use for your sill depth or staff guage reading (centimeters, inches or feet). If you have multiple trap sites, the default unit will apply to all trap sites.

Once you have made these selections, click the Save button. You do not need to set the options again unless you wish to change one or more of the settings.

Entering Daily Trap Data

Now that you have installed the ISS Database program and have established the link to the P3 database, you are ready to start entering data.

Note: Once you have started your trapping season, it is important to create a PIT tag file every day, even if you don't catch any fish or even if your trap is not operating. All of the front end data like date, trap location, and water temp etc. all come from the PIT tag file. Without having this header information from the PIT tag file, you will not be able to enter any of your trap operations data. By filling this information out, you will have a trap record for every day from the first day of trapping to the last. This will let you know which days your trap was fishing and for the days it was not fishing, you will know why.

Entering Trap Operations Data

After you have created a PIT tag file for the day, you can open up the ISS Database program and the header information and PIT tag data for that day will be there. To access the data, click on “Daily Operations” from the main menu (Figure 1) and then select the “Trap” (Figure 2). Click the gray box on the left hand side of the day you would like to enter data for (Figure 2). Once you have opened the daily summary page you will be able to see the daily header information and PIT tagged fish summary (Figure3). Much of the header information found in the tag file will be displayed on this summary table. The only data to be entered on this page are the four fields in the **Operations** section (operations, trap speed, sill depth, and notes)



Figure1.

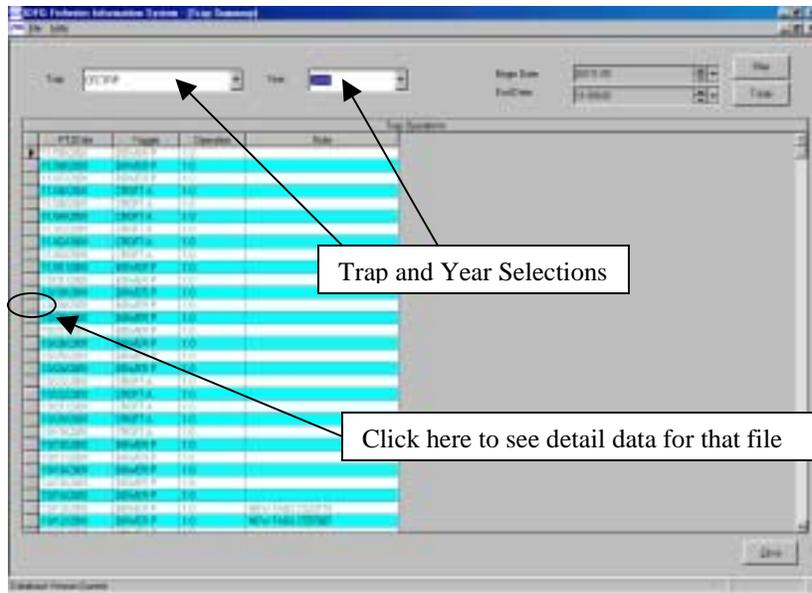


Figure 2. Selecting Trap, Year, and daily trap data summary

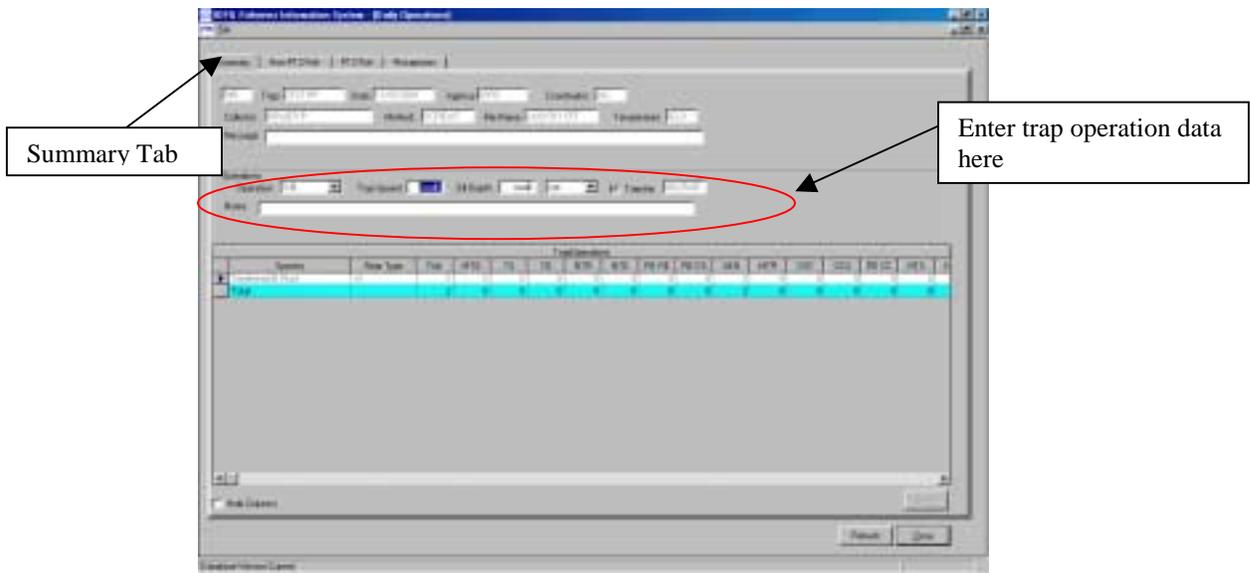


Figure 3. Daily Trap summary

Operations- This is a numeric field to show if the trap had operated the previous 24 hour period since the trap had been worked the previous day. Enter a 1 (one) if the trap fished continuously and a 0 (zero) if it was not fishing when the trap was checked. You have the option to enter a 0.5 if the trap fished part of the 24-hour period.

Trap Speed- This is the speed (RPM) at which the trap was fishing when it was checked that morning.

Sill Depth- This is the sill depth measurement taken at or near the trap site (the default for the sill depth units can be changed to inches, feet or centimeters).

Notes- This is a text field for notes relative to the trap operation only. Notes relative to the tagging operation should be put in the message field in the PIT tag file header.

Entering PIT-Tagged Fish Data

All PIT tagged fish data is entered through the P3 tagging program. You enter the data just as you would if you were just going to PIT tag fish without using the ISS datagbase. Because the ISS database and the P3 database are linked, everything that is entered into a P3 tag file will show up in the ISS database. The difference here is that you need to add specific text strings to the Conditional and Textual Comment Fields in the PIT tag file as you tag the fish so the ISS database can assign dispositions to all of the PIT tagged fish. The codes to be inserted into the conditional and textual comment fields of the PIT tag file are listed below. Figures 4, 5 and 6 are examples of how codes are to be entered in a PIT tag file for: a fish tagged and released upstream (Fig. 4), a trap efficiency recapture (Fig. 5), and a tagging mortality (Fig. 6)

The following table lists the conditional and textual comments to be used for the various capture and disposition situations you will encounter. **Every tag record in every tag file must contain one of the following text strings in the Conditional and/or Textual Comment fields.** A conditional comment is not required for newly captured fish. Only fish with tags codes associated with them should be included in the tag file. All other fish (both target and non target) should be entered directly into the ISS Database.

Codes for Conditional and Textual Comments in PIT Tag File

Capture and Disposition	Conditional Comment	Textual Comment
Newly Captured		
Tagged and Released Upstream		TU
Tagged and Released Downstream		TD
<i>For YOY chinook tagged prior to 7/1, include a 0 in Conditional Comment field</i>	0	TU or TD
Recaptured		
Trap Efficiency Recapture	RE	RC
Non-Efficiency Recapture	RE	RE
Downstream Recapture	RE	DS
<i>For YOY recaptures prior to 7/1, include a 0 after the RE</i>	RE 0	RC, RE, or DS
Mortality		
Tag Mortality	M	TG
Recapture Mortality (trap efficiency)	M RE	RC
Recapture Mortality (non trap efficiency)	M RE	RE
<i>For YOY mortalities with PIT tags, include a 0 after the M or RE</i>	M RE 0	TG, RC, or RE

Note: In most locations, young of the year chinook are not large enough to PIT tag prior to July 1. If however you are PIT tagging young of the year fish before July 1, you will need to include a 0 (zero) in the conditional comments filed of the PIT tag file

Capture and Disposition of PIT Tagged Fish

There are basically three types of captured fish: newly captured, recaptured and mortalities. Within each of these, there are various dispositions.

Newly Captured Fish- these are fish captured in the trap that were not previously tagged or marked. Only newly captured and tagged fish are released upstream of the trap. All previously tagged fish are released downstream of the trap.

Tagged and Released Upstream (TU) – newly captured fish that are tagged and released upstream for trap efficiency

Tagged and Released Downstream (TD) – newly captured fish that are tagged and released downstream. These fish are not used for estimating trap efficiency.

Recaptured Fish – These are fish that have been previously tagged or marked.

Trap Efficiency Recapture (RE RC) – these are fish that were tagged and released above the trap for efficiency. There is almost always a visible tag scar. Original tag date can be verified through the ISS database.

Non-Efficiency Recapture (RE RE) – these are fish that were tagged in a previous season or by another group and are not used to calculate trap efficiency. Original tagger and date to be verified through PTAGIS (one fish history)

Downstream Recapture (RE DS) – these are recaptured fish that have been released downstream and subsequently swam back upstream and were recaptured a second time. These fish are not used to calculate trap efficiency. These need to be verified through the ISS database.

Mortalities – These are fish that are either found dead or died due to handling and/or tagging.

Tag Mortality (M TG) – These are newly captured fish that are tagged and found dead prior to release the same day.

Recapture Mortality (M RE or M RC) – These are recaptured fish that are found dead in the trap box or recaptured fish that died prior to re-release

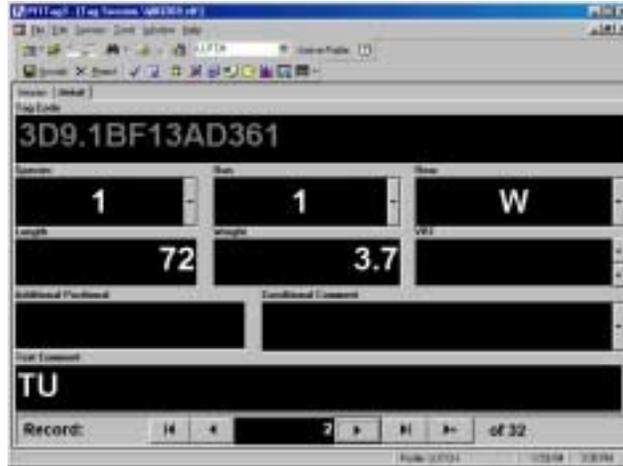


Figure 4. Text Comment for a chinook tag and released upstream

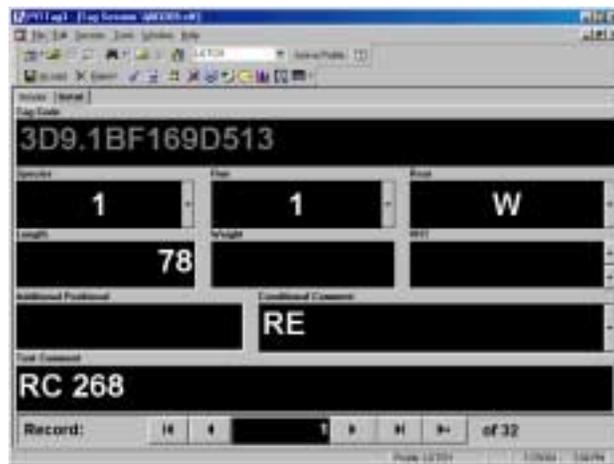


Figure 5. Conditional and Text Comment for a trap efficiency recapture

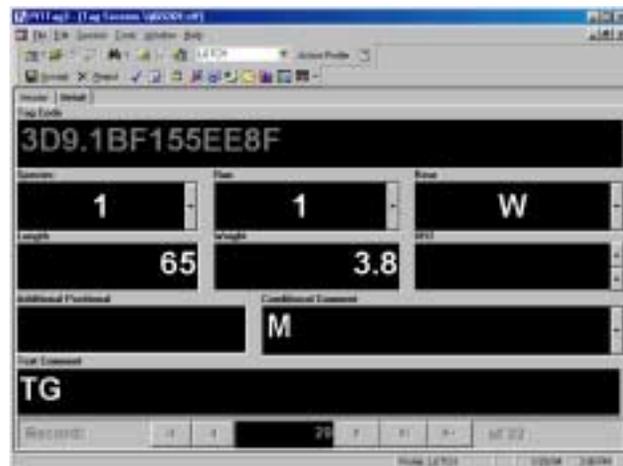


Figure 6. Conditional and Text Comments for a tagging mortality

Entering Non-PIT Tagged Fish Data

In addition to summarizing data from the tag files, this program allows the user to input non-PIT tagged fish data. This can include both target and non-target fish that do not have PIT tag codes associated with them. You can either input length and/or weight data or just individual fish numbers by species.

To enter non-tagged fish data, open the ISS database program, click on Tagging Details (Fig. 1), click on the trap you want, click on the day you want, and then click on the **Non-PT2 Fish** tab (Figure 7).

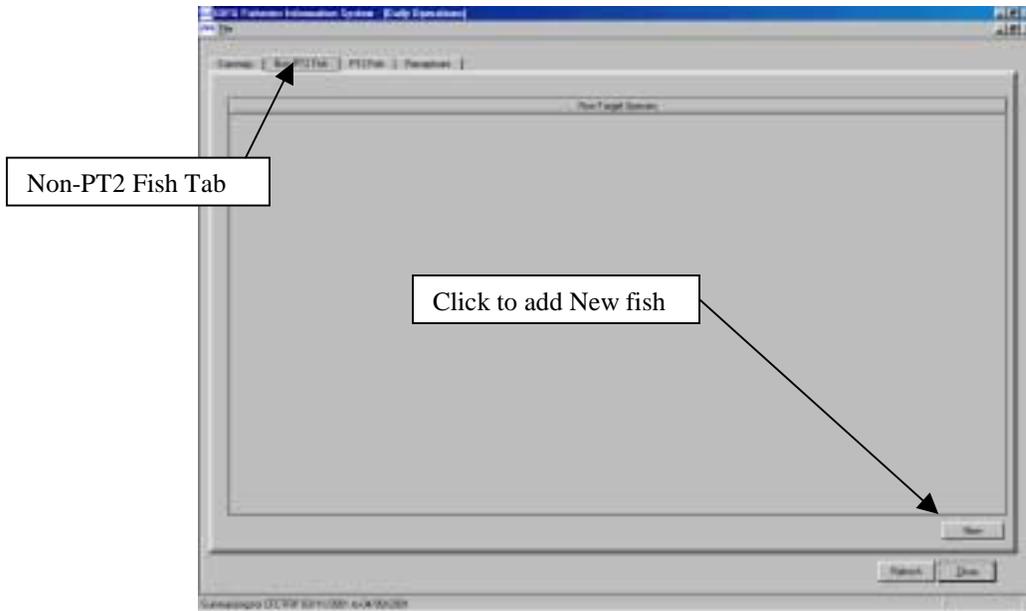
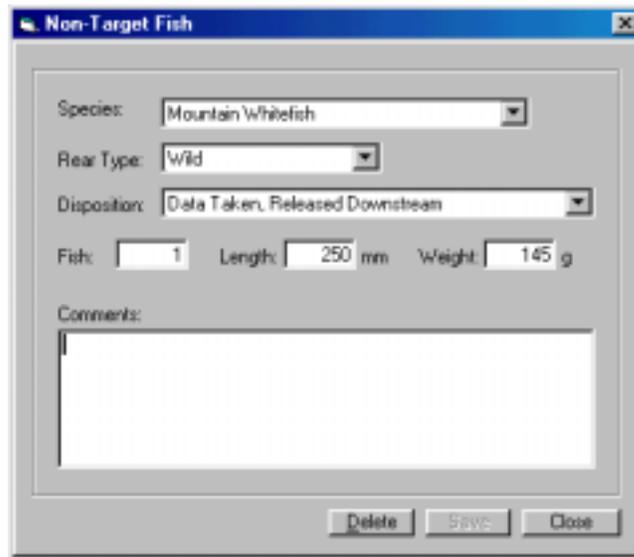


Figure 7. Entering non-tagged fish data

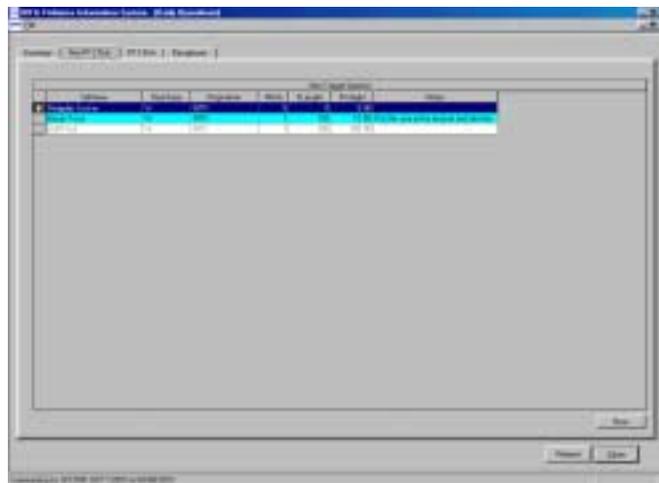
1. Click the **New** button at the lower right hand corner of the screen.
2. Click on the **Species** drop-down box to bring up the list of species (Figure 8). Select the desired species. You may customize the drop-down list to only display the species you wish to be available (see Customizing Pick Lists on page 14).
3. Tab over to the **Rear Type** box (wild is the default) and click near drop-down box to display the list of acceptable rear types.
4. Tab to the **Disposition** box and click the drop-down box and select the proper disposition code. This drop-down list may also be customized to display only the codes you wish to have available (see Customizing Pick Lists on page 14). Descriptions for the disposition codes of non-PIT tagged fish are displayed in Table 1.
5. Tab to the **Fish** box and type in the number of fish that record represents (1 is the default). If you have taken data on that fish, the number must be 1 unless you have more than one fish with the same length and/ weighth. If you merely counted a group of fish (same species) then the number can be more than one.
6. Tab to the **Length** box and enter the fork length in mm. If fish were only counted, then leave this field blank.

7. Tab to the **Weight** box and enter the weight in grams. If fish were only counted, then leave this field blank.
8. The **Notes** box is optional. It is intended for additional pertinent information about that fish or group of fish.
9. When that record is complete, click on the **Save** button
10. To enter the next record, select the new species and enter the associated data. After you save a record, the next record will by default have the same species, rear type and disposition as the fish you just entered.
11. Once you are done entering data, click on the **Save** button. Click the **Close** button and all of the fish you entered will be displayed in tabular format (Figure 9).



The screenshot shows a window titled "Non-Target Fish" with a blue title bar. Inside the window, there are several input fields: "Species" with a dropdown menu showing "Mountain Whitefish", "Rear Type" with a dropdown menu showing "Wild", and "Disposition" with a dropdown menu showing "Data Taken, Released Downstream". Below these are three text boxes: "Fish:" containing the number "1", "Length:" containing "250 mm", and "Weight:" containing "145 g". At the bottom of the form is a large empty text area labeled "Comments:". At the very bottom of the window are three buttons: "Delete", "Save", and "Close".

Figure 8. Entering Non-tagged fish records



The screenshot shows a window titled "WFS Fish Data Administration System - WFS Fish Data" with a blue title bar. The main area of the window is a table with a grid of data. The table has several columns, including "Species", "Rear Type", "Disposition", "Fish", "Length", and "Weight". The first row of data is highlighted in blue and contains the following information: "Mountain Whitefish", "Wild", "Data Taken, Released Downstream", "1", "250 mm", and "145 g". Below the table are several buttons, including "New", "Save", and "Close".

Figure 9. Tabular summary of non-tagged fish

Table 1. Disposition codes used for entering non-PIT tagged fish into the ISS database.

ID	Acronym	Description of Disposition Codes for Non-PIT Tagged Fish
3	NTR	Not PIT tagged and no data was taken; only enumerated and released downstream of the trap
4	NTD	Not PIT tagged but length and/or weight data was taken and released downstream of the trap
8	MTR	This is a trapping mortality for a non PIT tagged fish that was found dead in the trap or died as a result of handling
10	CCU	This is a fish that was given a caudal clip and released upstream of the trap for trapping efficiency
11	RE CC	This is a recaptured fish with a caudal clip and used for trap efficiency
12	NTS	Not pit tagged and less than 60mm; relesead downstream
13	NTT	Not pit tagged and greater than 60mm
15	RE RC	These are trap efficiency recaptures for PIT tagged fish
17	ADULT	This if for adults captured in the trap (you can include the sex of the fish in the notes field)
18	Y	This represents either tagged or untagged yearling chinook (use this code whether data is taken or not)
19	PR	This represents tagged or untagged precocial chinook (use this code whether data is taken or not)
20	YOY	This if for non-tagged young of the year chinook captured prior to July 1 (use this code whether data is taken or not)
21	YOYMT	Trapping/handling mortality for young of the year chinook prior to July 1
22	YOYCU	Used for young of the year fish caudal clipped and released upstream for trap efficiency proior
23	YOYRC	Used for young of the year fish that are recaptured with a caudal clip and used for trap efficiency

Viewing Summary and Detail Data

Once data has been entered, you can view individual fish records, daily summary records, or summaries of multiple days. To view summary and detail data, click on the **Daily Operations** button (Figure 10). Select a trap that you want to view data for from the pull down list on the upper left hand side of the screen (Figure 11). The program will select the year by default. This will bring up a table with all of the tag files that are currently in your Pittag database. If any of the data rows are red, then the Trap Operations fields have not been filled out completely (See Entering Trap Operations Data).

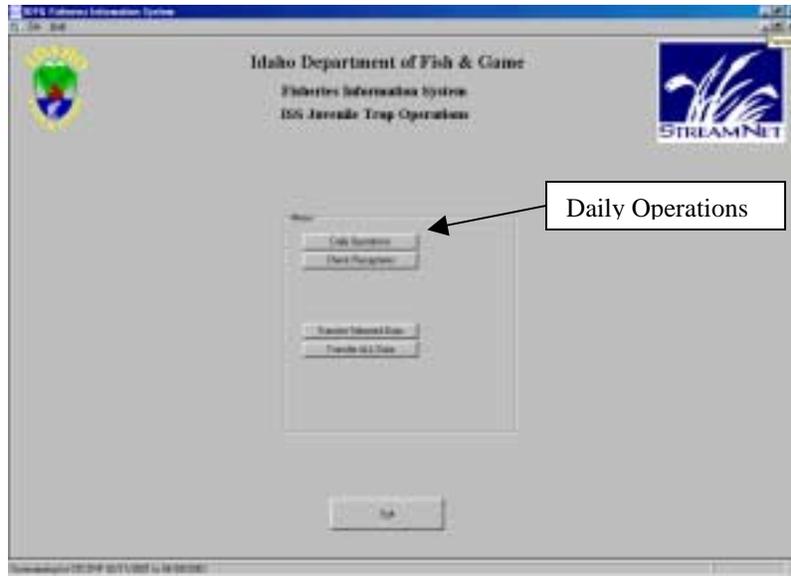


Figure 10.

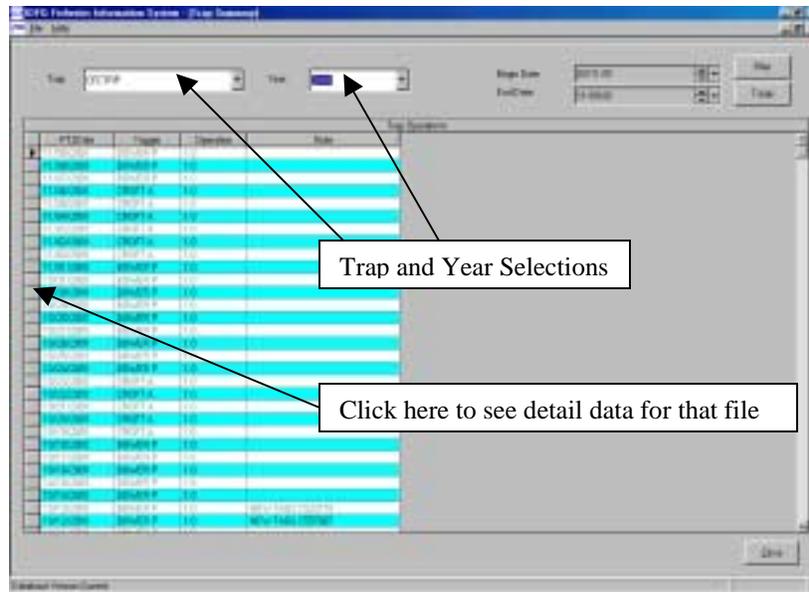


Figure 11

To view detail and summary data from an individual tag file, simply click on the row that contains the file you want (*may take a few seconds several seconds on larger files*). A summary table with all of the fish contained in that file will be displayed (Figure 12). The fish are grouped by species, and rear type, which are broken out by each capture and disposition type (eg. RE RC, TU, TD etc.). If you check the **Hide Columns** Box in the lower left hand corner, disposition codes with zeros will not be displayed. If there are any fish with **UKN** as the disposition, then it is likely that the text string in the Text or Conditional comments fields is incorrect. To correct these errors, you would need to open the PIT tag file using the Pittag3 program and insert the proper text strings. After accepting changes to the tag file, you can then click the refresh button on the ISS database and the changes will be reflected in the ISS database.

You can view the PIT tag detail data by clicking on the PT2 Fish Tab (Figure 13)

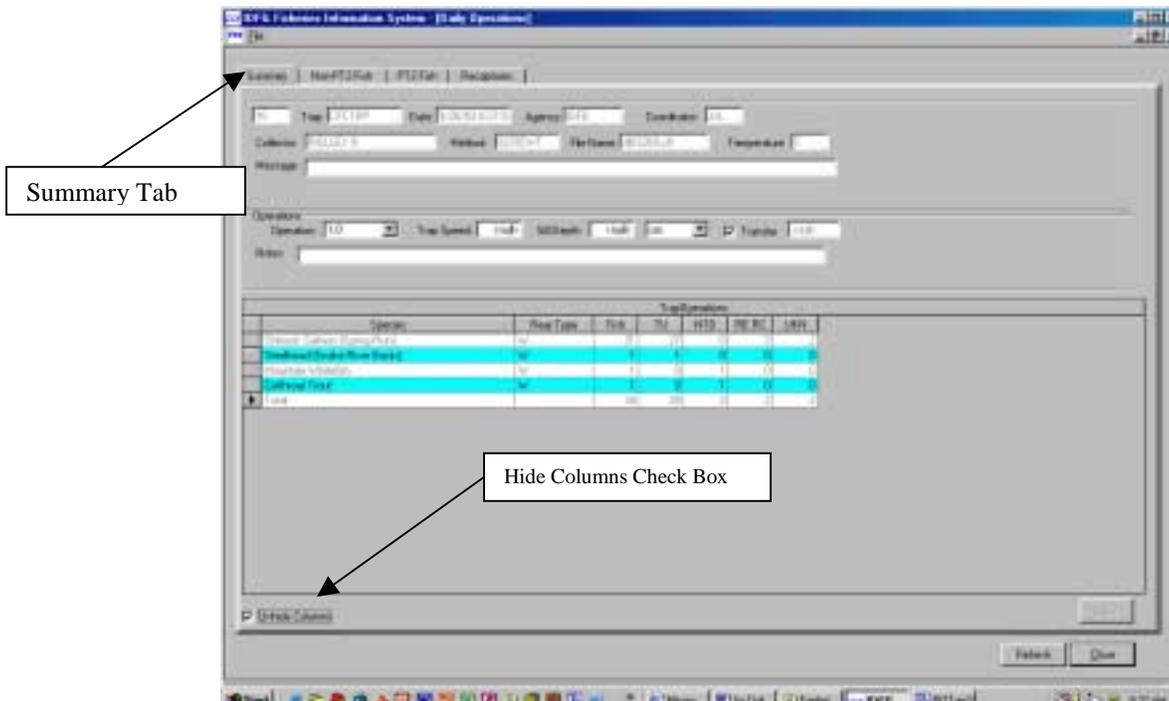


Figure 12. Summary of daily trap data

Viewing the PIT Tag File Detail Data

To view the individual tag records in the PIT tag file, click on the **PT2Fish** tab near the top of the screen (Figure 13). The tag records will be displayed in tabular format. put the TU comment in the textual comment field.

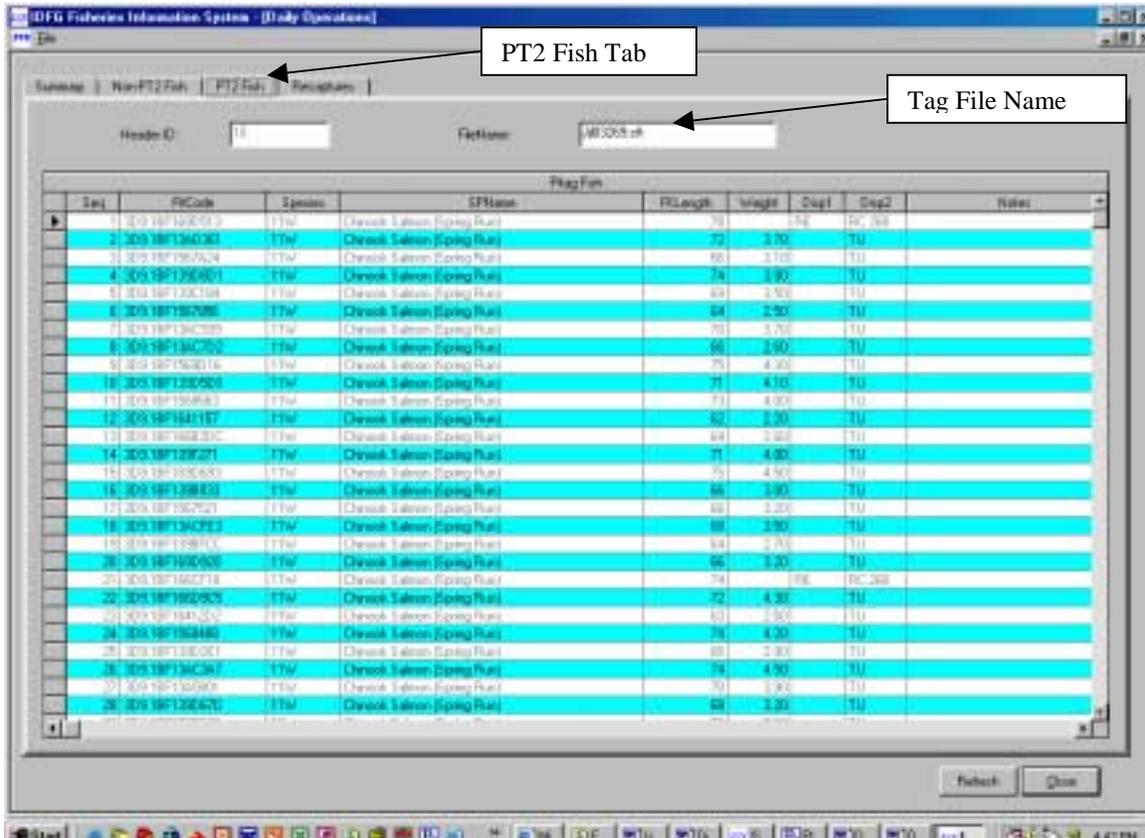


Figure 13. PIT tag file detail data in the ISS database

Viewing Tag File Recapture Data

This program runs queries to look for duplicate tag codes within the database. In the past, one of the most common tag file errors has been the omission of the RE flag in the conditional comment field for recaptured fish. To verify if you have flagged all of your recaptures, click on the **Recaptures** tab (Figure 14). All of the tag codes in the current tag session that are previously in the database are displayed and are sorted by tag code and tagfile so you will know the original tag date and the recapture date (Figure 14).

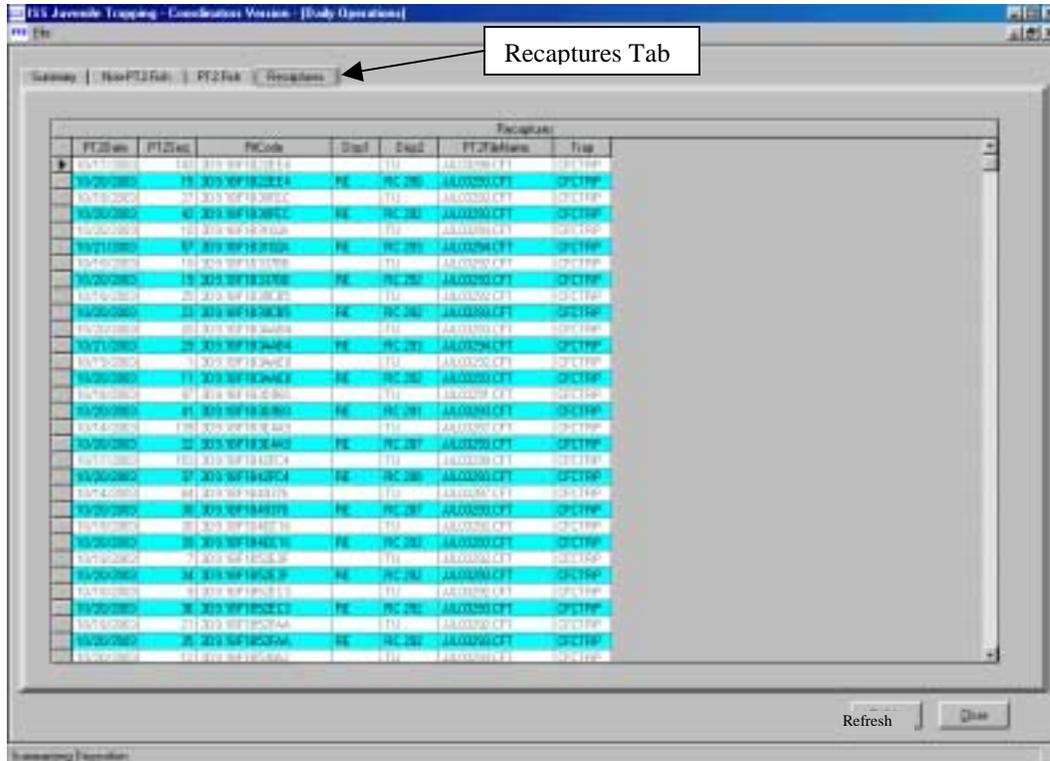


Figure 14. Recapture Data Page

As you go down the table you will see if the second occurrence of the tag code has been labeled with the RE comment. In Figure 14, all of the recaptures have been flagged properly. *Note: this program will only pick up the original tag code if it is located within your local database. It will not pick it up if it was tagged in a previous season or by someone else using a different computer.* In order to correct the errors, you will need to go back into the tag file and make the change. Click on the **Refresh** button and the changes will be reflected in the **Recaptures** table.

You can also check the entire database to verify that all of your recaptures have been flagged properly. To run this query, close the current tag file summary by clicking on the **Close** button on the bottom right hand side of the screen. Click on **Close** again and you will be back to the main Program page (Figure 1). Click the **Check Recaptures** button and all of tag codes which are duplicated within your local database will be displayed and

sorted by tag code and date (Figure 15). You can scroll down through the table and look for missing RE flag codes.

DFG Fisheries Information System - [Recaptures]

Tag ID	Sequence	Tag Code	Dup1	Dup2	H_date	H_tag_code
520	1	200 9878C12862	RE	RC 338	11/5/93	FA01TRP
521	23	200 9878C12862			11/26/93	FA01TRP
526	1	200 9878C12862	RE	RC 333	11/25/93	FA01TRP
525	8	200 9878C12821			12/1/93	FA01TRP
527	1	200 9878C1286D	RE	RC 338	12/2/93	FA01TRP
528	48	200 9878C1287F			12/2/93	FA01TRP
528	27	200 9878C1287F	RE	RC 338	12/4/93	FA01TRP
529	7	200 9878C1287G			12/5/93	FA01TRP
529	8	200 9878C1287G	RE	RC 338	12/4/93	FA01TRP
529	11	200 9878C1286A			12/5/93	FA01TRP
529	21	200 9878C1286A			12/4/93	FA01TRP
527	19	200 9878C1286A			12/2/93	FA01TRP
528	1	200 9878C1286A	RE	RC 337	12/2/93	FA01TRP
529	39	200 9878C1286A			12/2/93	FA01TRP
528	8	200 9878C1286D	RE	RC 338	12/4/93	FA01TRP
587	28	200 9878C0394E			10/22/93	FA01TRP
588	28	200 9878C0394E	RE	RC 297	10/24/93	FA01TRP
591	18	200 9878C01282			10/22/93	FA01TRP
588	4	200 9878C01282	RE	RC 297	10/24/93	FA01TRP
541	88	200 9878C0393C			9/5/93	FA01TRP
541	21	200 9878C0393C	RE	RC 253	9/10/93	FA01TRP
541	98	200 9878C0393C			9/5/93	FA01TRP
543	7	200 9878C0393D	RE	RC 253	9/10/93	FA01TRP
581	8	200 9878C0393D			11/6/93	FA01TRP
581	41	200 9878C0393D			11/6/93	FA01TRP

Figure 15. Recaptures for entire field database.

You can see in Figure 15 that one of the tag codes in the middle of the screen has not been flagged with an RE comment. This error will need to be corrected by editing the tag file. If you re-run the **Check Recaptures** tool, the changes will be reflected in the table.

Viewing Summary Data for a Group (date range) of Days

This program has the capability to summarize data within a user defined date range for a given trap. To view summary data for a date range you need to close the current tag file summary by clicking on the **Close** button on the lower right hand side of the screen. This will take you back to the screen that displays the individual tag files (Figure 16). In the upper right hand corner of this screen there is a **Begin Date** and **End Date** text box. To define a date range, click on the month, day, or year and use the up and down arrow boxes to adjust the dates. Once you have the desired date range, click on the **Totals** button. This will bring up a screen that displays the trap name, number of days in the

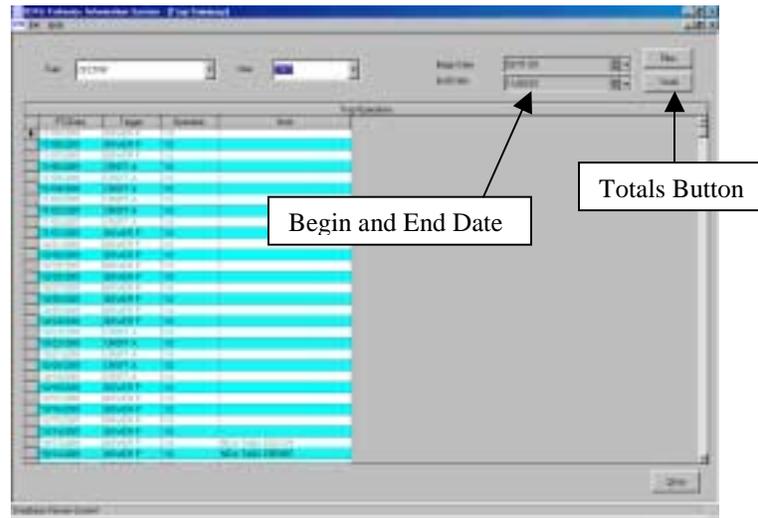


Figure 16. Selecting a date range for data summary

period, specified date range, and the summary data for that date range (Figure 17). This tool is handy for determining numbers of fish captured, tagged, recaptured within a specific time period.

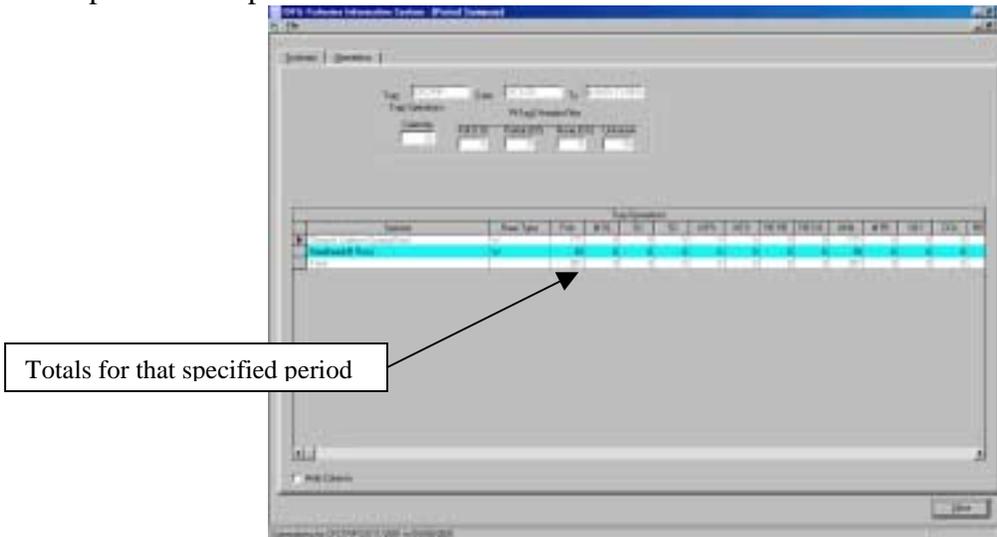


Figure 17. Summary of specified date range

Editing Data in the ISS Database

Editing the PIT Tagged Fish Data

If any of the PIT tag data needs to be edited, it needs to be done so through the P3 PIT tag program. All changes made to the PIT tag files will automatically be updated in the ISS database. This will ensure that all of the data submitted to the PTAGIS regional database will be the same as the ISS database.

Editing the Non-PT2 Fish Page

If any of the data in the Non-PT2 Fish page needs to be edited, you can click on the data row to be edited and a data box will appear (Figure 18). You can then edit any of the individual fields by clicking on the field and typing in the correction or you can delete the entire record by clicking on the **Delete** button (Figure 19). Once you have edited a field, make sure to click on the Save Button

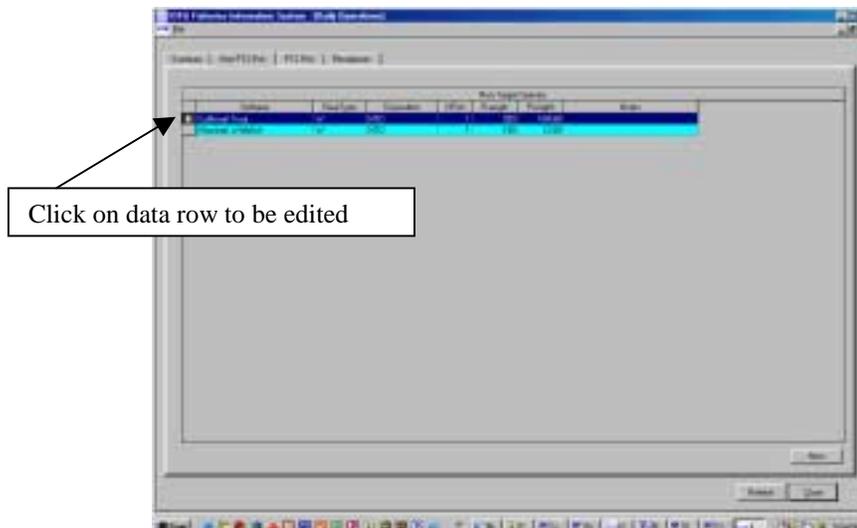


Figure 18. Selecting non-tagged fish record to edit

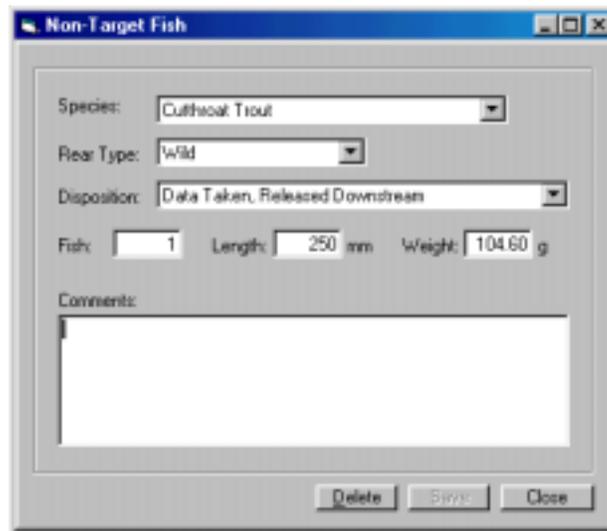


Figure 19. Editing non-tagged fish records

Transferring Data

Data can be transferred from the field laptops to the office computers. To transfer data from the field laptop:

1. Start the ISS database program by double clicking on the program icon.
2. There are two options for transferring data.
 - a. The first option is to transfer only the data that has been added or changed since the last transfer. You can do this by clicking on the **Transfer Selected Data** button (Figure 13)
 - b. The second option is to transfer the entire data set. You can do this by clicking on the **Transfer All Data** button (Figure 13).

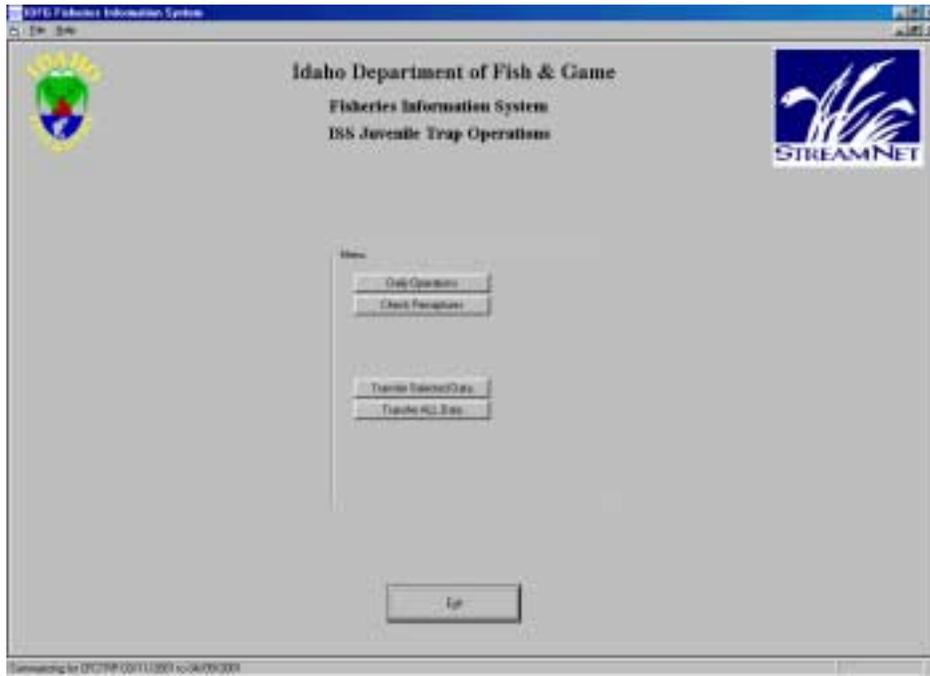


Figure 13

The first option will allow you to only transfer new or changed data since the last transfer, thereby making a smaller data file. For either choice, XML data files are created and stored in a predetermined directory as a “Zipped” or compressed file. From there, you can either attach the ZIP file to an e-mail or copy it to a floppy disk for transfer to the office computer.

Customizing Species and Disposition Pick Lists

As mentioned earlier, the user is able to customize the Species and Disposition pick lists to suit their particular needs. *Note: if you need to add species or dispositions that are not currently in the tables, you will need to submit a request to the Nampa Research Office. This will ensure that all cooperators using the program will have the same pick lists.*

To customize the lists you will need to open the ISSTrapOps.mdb database using Microsoft Access. This file is located in the directory you specified when you installed the program (the default directory is C:\ProgramFiles\ISSJTF2004). Double click on the **IssTrapOps.mdb** file. This will open the Iss_TrapOps database window (Figure 14). Under the Objects menu, click on **Tables**.

To edit the Species list, double click on the **ISS_Species** table. This will open the table (Figure 14). For species you do not want to appear on the list, type a zero(0) in the **Display** column for that species. You can see in Figure 14 that only the “Unknown Species” has been deselected.

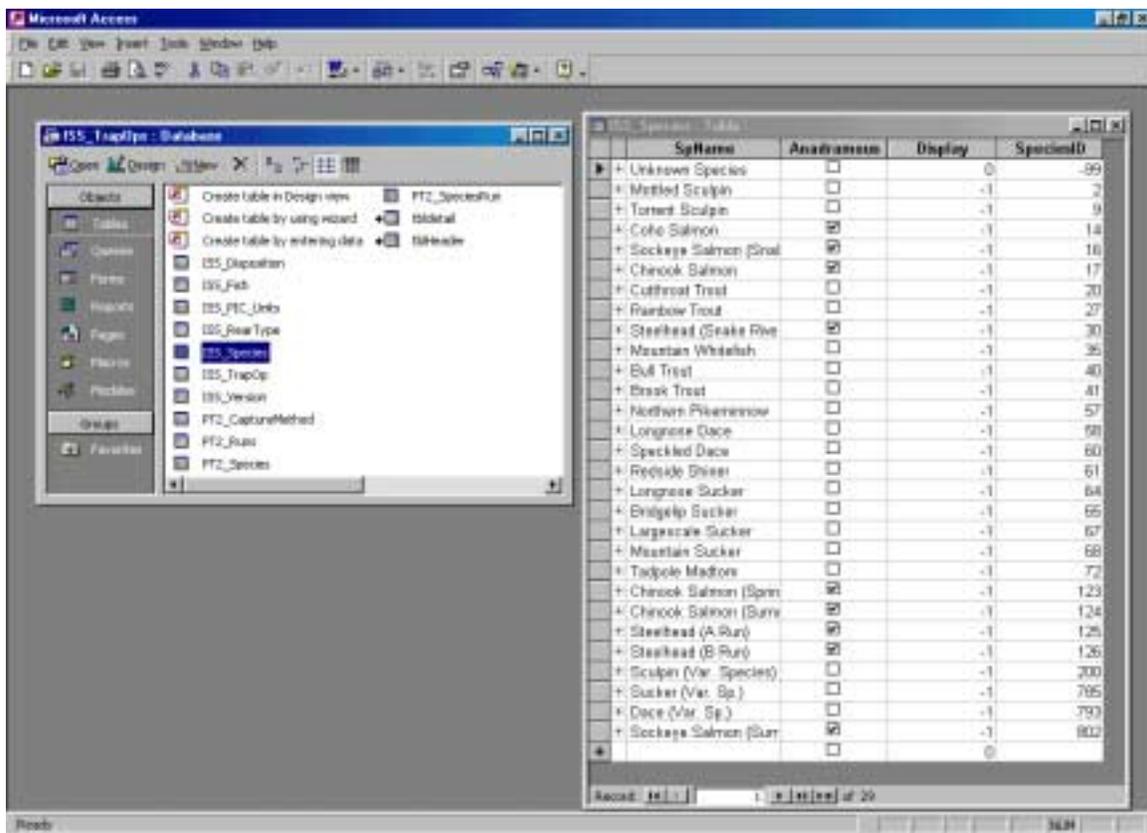


Figure 14

To edit the Disposition pick list, double click on the **ISS_Disposition** table. This will open the table (Figure 15). If you want a disposition to appear on the list, click on the check box in the **flgDispNT** column

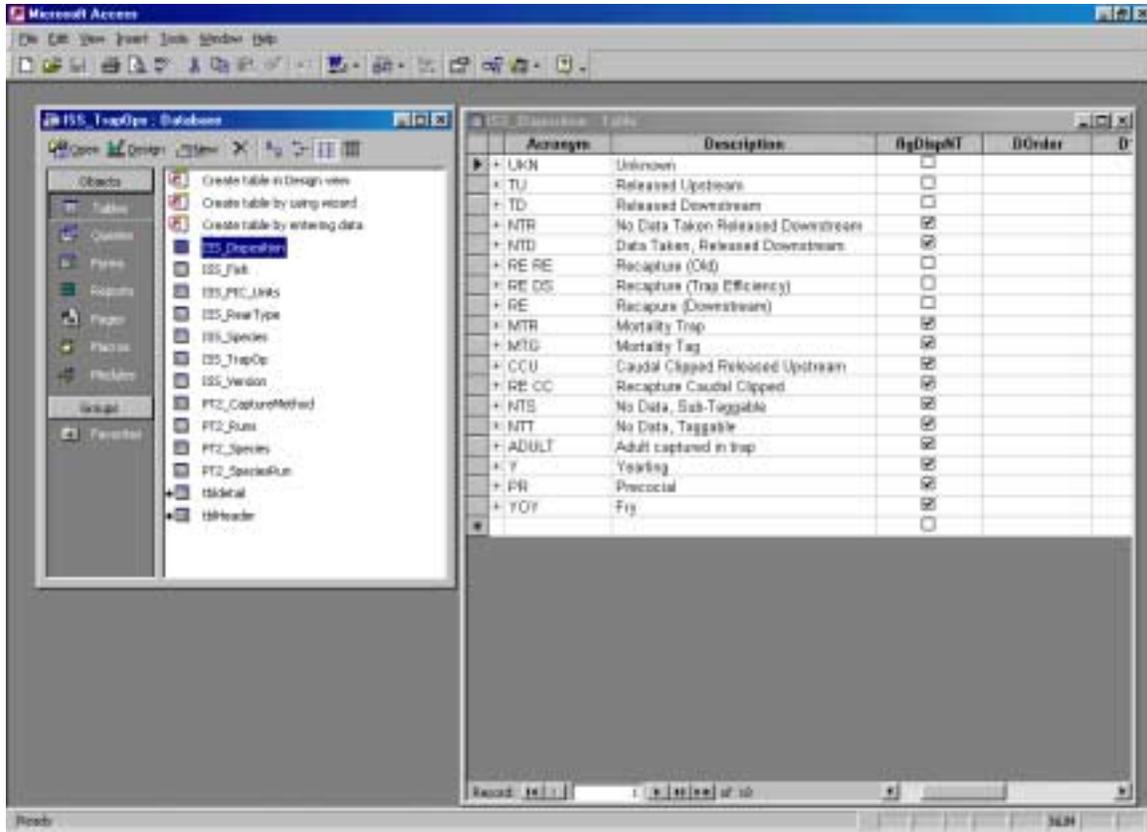


Figure 15