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Storage Report and Reconciliation Report Procedures

The storage report Fortran program calculates carryover for each account (irrigator or canal company) in each reservoir at the end of the irrigation season, October 31. The storage report program is also run after the day of allocation, at the beginning of summer, to estimate storage available in each account during the irrigation season.

The reconciliation report is a spreadsheet used to check the accuracy of the water right accounting and the storage report. The net storage in the reconciliation report should be the same as the net storage in the water right accounting on October 31 and net storage in the storage report at the end of the irrigation season. The reconciliation report is also used on the day of allocation and several times throughout the irrigation season.

This report explains the inputs and outputs to the storage report program followed by a description of how the program works. I will explain the procedure used to create the reconciliation report and the storage report. Finally, I will explain how these numbers are used to restart the water right accounting Fortran program for the next irrigation season.

INPUTS AND OUTPUTS

The storage report Fortran Program for the Payette River is PAYSTO.FOR. The equivalent program is BOISTO.FOR for the Boise River and SNKSTO.FOR for the Upper Snake River. The Upper Snake River Program has additional elements not included in the Payette and Boise programs, but the inputs are the same for each river. The following files are used to run PAYSTO.FOR.

PAYSTO.IND lists for each reservoir the name and ID number, the total storage space, the total storage fill, and the total evaporation from November 1 to October 31. Storage space is the total amount of storage available as provided by the reservoir owner. Storage fill is calculated in the water right accounting Fortran program. This is the maximum amount of water accumulated in each reservoir. It will not equal the actual physical fill calculated by the Bureau of Reclamation. Evaporation is the total daily evaporation calculated by the Bureau of Reclamation and used in the water right accounting.

Last to fill is listed separately for Cascade and Deadwood Reservoirs. Total space is divided between the specific reservoir and the last to fill for the reservoir. Last to fill is water placed in the rental pool in previous irrigation years for out of basin use, generally for flow augmentation for Salmon in the Snake River. Last to fill becomes zero when the reservoir completely refills or spills. If reservoir does not fill, last to fill water is used after all other water is divided between the space holders in each reservoir. If the fill is less than total reservoir space minus last to fill space, the storage fill for last to fill is zero.

Unaccounted for storage is the last item in the storage report. This is the unaccounted for storage in the water right accounting program. Unaccounted for storage includes Little

Payette Lake and Black Canyon in the Payette system. PAYCHGSI.FOR can be used to enter new data or editing the file can enter data.

PAYSTO.CRY is the carryover, rental pool and transfer data. The first two columns are the ID numbers and account names for all the accounts. The next four columns is the carryover storage in acre-feet for Deadwood, Upper Lakes, Payette Lake and Cascade Reservoirs. Carryover is found in table 4 of PAYSTO.RPT at the end of the previous irrigation year.

The next column is transfers. These numbers are provided by the watermaster and are agreements between canal companies. Transfers in are negative. Transfers out are positive. Lake Reservoir Company irrigators often transfer water to Lower Payette to minimize carryover in the Upper Lakes and Payette Lake.

The final column is rental pool transactions. Irrigators who use storage in excess of their space or do not own reservoir space must rent water. This is a positive number is the last column. Irrigators who have more reservoir space than they use may choose to place water in the rental pool. This is a negative number.

The rental pool column and the transfer's column must balance. The total equals zero. If more water is placed in the rental pool than used, the water is returned to the irrigator. The watermaster keeps track of the dates when water is placed in the rental pool. Water is returned to the last irrigator to place water in the rental pool first.

PAYCHGSC.FOR can be used to enter new data for carryover. PAYCHGST .FOR can be used to enter new data for transfers. PAYCHGWB.FOR can be used to enter new data for rental pool transactions. The file may also be edited.

PAYSTO.SPA looks a lot like PAYSTO.CRY. The first two columns are the ID numbers and account names for all the spaceholders. The next six columns are Storage space is in acre-feet for Deadwood Reservoir, Upper Lakes, Payette Lake, Cascade Reservoir, Deadwood Last to Fill and Cascade Last to Fill. The total space does not change unless there is a sediment study, which reduces the space, or the contracts change. The division between Cascade and Cascade Last to Fill and Deadwood and Deadwood Last to Fill changes when reservoirs do not fill.

PAYCHGSS.FOR can be used to change data or the file may be edited. All accounts starting with the numbers 99 need to be added by editing.

PAYSTO.USE lists the storage used for all accounts. This data comes from the water accounting Fortran program. PAYGETSU.FOR selects from the allocations file the storage used by each user entity on the selected date. This data is placed in PAYSTO.USE. The first column is the ID number and date. The second number is the use in acre-feet.

The allocations file is the output data from the water right accounting Fortran program. Storage use for Idaho Power, Deadwood Uncontracted, Cascade Uncontracted, North Fork Users, Little Payette Lake, Flow augmentation, and Unknown Users needs to be added by editing PAYSTO.USE after running PAYGETSU.FOR.

PAYCHGSU.FOR can be used to change the data in PAYSTO.USE.

PAYSTO.RPT is the output. This report is published in the watermasters annual report. The report is 6 tables. Table 1 is the space, fill, evaporation and yield of each reservoir.

Table 2 lists the maximum space each user can use in each reservoir. These numbers are based on the contracts with the reservoir owner. Deadwood and Cascade are owned by the USBR. Lake Reservoir Company owns the space in Payette Lake and the Upper Lakes.

Table 3 lists the reservoir storage fill by user and reservoir. Carryover from the previous irrigation year is listed. Total new fill is calculated based on the current years reservoir fill. The Water Right Accounting program calculates new fill. These two numbers are added to calculate the total storage available for each user for each reservoir. Then a total is calculated for each user in all reservoirs.

Table 4 lists the net storage by user and reservoir. Transfers and rental pool adjust total storage for each user. A total net storage in all reservoirs is calculated for each user. This is reduced proportionally for operational loss. Operational loss is the amount of water passing Letha that is not assigned to a specific user. The USBR sends a lot of water past Letha in most years for Salmon. Idaho Power releases water for power production. Each year some storage water that is not used is sent past Letha. Since all storage water needs to be accounted for and charged to someone, this loss is divided proportionally among the irrigators. The last column of numbers "After Loss" are used as inputs into the water right accounting program at the beginning of summer on the day of allocation. These numbers are used by each irrigator to keep track of how much storage they can use for the irrigation season. The water right accounting program subtracts daily use from this total, so each irrigator knows how much remaining storage is available for the remaining irrigation season.

Table 5 calculates carryover. This table is used only on October 31, not on the day of allocation. It is used as an input to table 3 the following year. Table 5 uses the last column in table 4, After Loss, as beginning storage. Storage Used is imputed from the water right accounting program on October 31. Storage use is subtracted from beginning storage to calculate a balance on October 31. If this balance is negative it is assigned to unused transfers, unused rental pool or excess use if the user did not transfer water or rent water. Usually rental pool and transfers are adjusted on table 4 to zero out all the unused water. Finally carryover is calculated for each user in each reservoir and carryover for each reservoir is totaled.

Table 6 summarizes the results of the storage report and creates the inputs to restart the water right accounting for the following irrigation year. Late fill is added to the carryover for each reservoir to create a total amount in each reservoir and all the water in the system is totaled. Late fill is calculated in the water right accounting program. Fall rains account for late fill. This needs to be added so that the physical amount of water in all the reservoirs equals the total amount of water in all the reservoirs in the water right accounting model.

In the accounting model, reservoirs are filled according to their water rights and released according to demand in the specific reach. In the physical world, water is kept as far upstream as possible and takes into account many rules for operation and flood control. Total physical storage in all reservoirs is set equal to the storage in the accounting model at the beginning of the irrigation season on November 1 and on the day of allocation, but the division of water among the reservoirs will not match the physical water in the reservoirs.

HOW THE STORAGE PROGRAM WORKS

The program calculates yield by subtracting evaporation from the fill for each reservoir. This is the first page in the output.

The second page, 'Payette River Reservoir Space By User', is a table of space allocated to each entity or use in all reservoirs based on completely full reservoirs.

The program computes new fill to each reservoir by subtracting carryover from total fill, then allocating new fill to individual entities and uses within each reservoir proportional to space owned. If the space in the reservoir has entirely filled, the carryover from the previous year is zeroed out.

Black Canyon has preferred space. The program removes preferred Black canyon storage from Cascade fill computation and computes fill to that preferred space before computing fill of remainder of space holders.

Yield after evaporation is computed and storage is allocated to each entity or user in all reservoirs after evaporation with water bank, transfers and operational loss.

Operational loss is calculated using the reconciliation report. A factor is hand calculated and changed in the program to proportionally distribute operational loss among the irrigators.

Finally, the program calculates the end of season storage balances for each user. It takes the net storage by user and subtracts storage used and calculates carryover. The end of season balance is totaled for each reservoir. These numbers are used to restart the accounting for the next irrigation year starting November 1.

OPERATING THE STORAGE REPORT PROGRAM

PAYSTO.COM takes the user step by step through the program. Enter data using the command file or edit the input files first. The command file asks if you want to change reservoir space allocations, carryover storage, storage transfers, or water bank transactions. It asks if you want to get storage use from the latest accounting and if you want to change this use. Then it asks if you want to compute the storage accounts.

Unused transfers, unused pool and excess used on Table 5 should be zero. Transfers, rental pool and the operational loss factor will need to be adjusted to zero out these values. This is an iterative process.

PAYSTO.SPA changes when space is transferred among the users, total space is adjusted by the reservoir owner, or with changes to last to fill. Last to fill for Deadwood and Cascade is calculated at the end of the irrigation season. When reservoirs fill, it is simply the amount of water rented out of basin. If reservoirs do not fill, last to fill can accumulate from previous irrigation years. The total for Deadwood and Deadwood last to fill remains the same for each contractor. The total for Cascade and Cascade last to fill remains the same too.

The water right accounting program calculates fill and evaporation for each reservoir. These numbers are entered into PAYSTO.IND. On the day of allocation, evaporation for the entire year is estimated using the evaporation from a similar year in the past.

Government accounts do not absorb operational loss. To calculate the operational loss factor divide the operational loss calculated in the reconciliation report by the total net storage (Total on Table 4) of all users except the 99999 users. This factor is hard coded into the Fortran program. Change this number in the program to calculated RRTOT(I), RFWB(I) AND EXCS(I). Operational loss is estimated on the day of allocation.

Transfers and Rental Pool activity and the previous irrigation year carryover are entered in PAYSTO.CRY. The carryover is on the previous year's storage report, Table 5. The watermaster provides transfer and rental pool activity. Black Canyon Reservoir evaporation is entered as a transfer.

On the day of allocation, tables 5 and 6 are not used. Once the PAYSTO.SPA and PAYSTO.IND and PAYSTO.CRY have been altered, you can run the program. Transfers and rental pool activity are set to zero. The last column in table 4 is entered into the water right accounting in the file PAYWRA.CAN. These numbers show up on the water right accounting report as AF RMNG (acre-feet remaining). Storage use is subtracted from this number daily by the water right accounting program, so irrigators know how much storage remains in their account.

At the end of the irrigation season answer yes when the command file asks if you wish to get storage use from the latest accounting. Enter October 31 for the date. Edit the

PAYSTO.USE file and add the 999999 users. These are not listed in the water right accounting, but are storage users listed on the reconciliation report.

Balancing the storage report is an iterative process. Excess use and unused pool need to be zero. Adjust rental pool numbers in PAYSTO.CRY to erase excess use and unused pool. Then recalculate the operational loss factor. Total rental pool and transfers need to be zero also.

Finally, run the storage program and add late season fill from the water right accounting. The total storage of all the reservoirs on Table 6 should equal the net storage on the reconciliation report. This total should be close to the total of the physical storage in all the reservoirs. The total storage on October 31 for each reservoir is used to restart the accounting for the new irrigation year.

RECONCILIATION REPORT

The reconciliation report uses data from the water right accounting program. Storage use is subtracted from the supply to calculate net storage. Net storage is compared with actual storage to check the accuracy of the water right accounting. The reconciliation report divides the storage used passing Letha among the users. Below Letha, there is enough return flow to provide enough natural flow for irrigators.

Reservoirs accrue storage in the water right accounting program when natural flow is available in the reservoir's reach, and when the last right for the reach is equal to or later than the date of the reservoir's water right. Daily-accrued storage is accumulated and totaled in the "STORED" column on the lower right side of the first page of the accounting. This total is the accounted for storage.

Unaccounted for storage at the beginning of the irrigation year is Black Canyon Reservoir storage plus 7500 acre-feet in Payette Lake. Additional unaccounted for storage comes from Little Payette Lake (usually 2000 AF) when they contribute to the rental pool. Other unaccounted for storage occurs after the reservoir right is filled. This water may be water stored in another reservoir or a flood release. Unaccounted for storage also shows up as negative "STORED FLOW" in the reaches.

Late season fill occurs in September and October after most canals have shut down and once again reservoirs are accruing natural flow. The "STORED" column is reset to zero; so late season fill can be totaled.

Accounted for storage plus unaccounted for storage plus late season fill is the total storage available. This is the supply.

There are three uses. Canals and pumps is "ABV LETHA STORAGE USED". Total stored passing Letha is "PASSING LETHA STORED". Evaporation is "TOTAL EV". These three values are on page one of the water right accounting. Total storage used is the total of the three uses.

Dividing the stored flow passing Letha requires looking at the accounting each day to see who is using the storage. Prior to March 31, storage is released from Cascade and Deadwood Reservoirs as minimum instream flow for fish. This released storage needs to be subtracted from the respective reservoirs and the accounting restarted with new values. This is storage used in the previous irrigation year.

The storage released from Cascade and Deadwood is easily calculated using the PAYALCLST program. This program lists data from the allocations file. The allocations file is output from running the water right accounting program. The new Cascade and Deadwood values are entered into PAYSYS.IND. The water right accounting program now can be restarted. Answer yes when the program asks if you wish to reset reservoir system totals.

The day of allocation is the day when all the natural flow is used upstream of Letha. The remaining natural flow below the 7-mile slough is zero on this day. If reservoirs are full, then all canal use and evaporation are set to zero. This water would have been released for flood control. If both reservoirs are not full, then each day must be studied to determine who used the water.

On the day of allocation, the unaccounted for storage is reset to equal the actual storage in Black Canyon plus 7500 acre-feet in Payette Lake and water placed in the rental pool for Little Payette Lake. Storage use is adjusted so the net storage is the same. Then the accounting is restarted using PAYSYS.IND.

ARCHIVING THE DATA

After all data is final, use the program PAYLST to create reports for the watermaster report. This program lists all daily diversions, river flows and reservoir storage in USGS format. Check this output for missing or erroneous data.

Create one report for the entire irrigation year starting November 1 and ending October 31. The COPY command can combine reports. Separate the reports you wish to combine with commas. COPY PAYWRA.RTP;1, ;2, ;3 PAYWRA.RPT;4 combines version 1, 2 and 3 and creates version 4.

Copy the following files to create the archived files for the year. This list uses 2001 as an example.

```
COPY PAYWRA.RPT PAYA2001.RPT
COPY PAYWRA.HST PAYA2001.HST
COPY PAYWRA.ALC PAYA2001.ALC
COPY PAYCAN.IND PAYA2001.CAN
COPY PAYDIV.TTL PAYA2001.DIVITTL
COPY PAYWRA.IND PAYA2001.IND
COPY PAYWRA.RTS PAYA2001.RTS
```

COPY PAYWRA.DPL PAYA2001.DPL
COPY PAYSYS.IND PAYA2001.SYS
COPY PAYSTO.RPT PAYA2001.STORPT
COPY PAYSTO.IND PAYA2001.STOIND
COPY PAYSTO.CRY PAYA2001.STOCRY
COPY PAYSTO.USE PAYA2001.STOUSE

Copy these files to [REDACTED] on [REDACTED]. Create a new folder for the year on \\A019\H_Drive\hydrology_section\Accounting Data\Payette. Transfer the data into this new folder. Copy the files to a zip disk and CD. Send the CD off site through the IT section for safe storage.

RESTARTING THE ACCOUNTING ON NOVEMBER 1

At the beginning of the new irrigation year a new history file and a new system file (PAYSYS.IND) need to be created before the accounting program can be run. Re-Start values for the starting storage in all reservoirs are in the reservoir total storage on Table 6 of the storage report. Edit PAYSYS.IND and inset these values.

The new history file takes some data from the previous history file. It starts with October data from the previous year. The program PAYHSTPUR creates a file with only the October data. This is the first step. This program also creates an archive file for the old irrigation year.

The next step is to add estimated data for Upper Lakes, Little Payette Lake and the pumps that are not measured during the irrigation season. Last year's data is our best estimate. These are the steps using 2003 as an example.

1. SEARCH PAYA2003.HST 13238300/OUTPUT=PAYDENT.OUT
2. EDIT PAYDENT.OUT
3. Command S/R2003/R2004/W
4. Command S/R2002/R2003/W
5. save the file (cntr. Z EX)
6. @PAYDENT (use this program to add data to the new PAYWRA.HST)
7. SEARCH PAYA2003.HST 13250999/OUTPUT=PAYDENT.OUT
8. EDIT PAYDENT.OUT
9. Command S/R2003/R2004/W
10. Command S/R2002/R2003/W
11. Save the file (cntr. Z EX)
12. @PAYDENT (use this program to add data to the new PAYWRA.HST)
13. SEARCH PAYA2003.HST D/OUTPUT=PAYDENT.OUT
14. EDIT PAYDENT.OUT
15. Command S/~~R~~2003/R2004/W
16. Command S/~~R~~2002/R2003/W
17. Delete all diversions measured by the watermaster

Daily Water Right Accounting Process

Snake River

Helga King and Tony Olenichak enter all data and run the accounting. Hydrology's role is to provide technical support. All the Fortran programs are located at HYDRO:[PPACE.SNAKE] [REDACTED]. The executables and data files are located at WD:[WRDIST01] [REDACTED].

The history file (SNKWRA.HST) and the allocations file (SNKWRA.ALC) are backed up on the VAX weekly (usually Tuesday by Hydrology. The equivalent files are backed up for the Payette and the Boise. Select Power Term 525 and connect to TELNET (dwr01). The process is:

1. Log on to [REDACTED]
2. FTP [REDACTED]
3. Log on to [REDACTED]
4. GET SNKWRA.HST
5. GET SNKWRA.ALC
6. SET DEF [WRDIST65]
7. GET PAYWRA.HST
8. GET PAYWRA.ALC
9. SET DEF [WRDIST63]
10. GET BOIWRA.HST
11. GET BOIWRA.ALC
12. EXIT
13. LOG

Payette River/Boise River

Payette FORTRAN program and historical data are on HYDRO:[PPACE] for the Payette and HYDRO:[REDACTED] [BOISE] [REDACTED]. The executable and current year data is located on WD:[WRDIST65] for the Payette and WD:[WRDIST63] for the Boise.

The watermaster is Ron Shurtleff for the Payette. The watermaster is Lee Sisco for the Boise. Ron enters data into the history file 2 or 3 times a week. Lee enters data once a week. They call me when they enter new data. I FTP this data into the accounting. Then I get the data from the USBR. I run the accounting and fax or email the results to the watermaster. The process is:

1. Select HSTData.mdb
2. Select Get WD65 Data/Select Get WD63 Data
3. Export file
4. Choose .txt for file type
5. Select fixed format and finish
6. Select WS_FTP95 LE
7. OK to property session

8. Change remote directory WD:[WRDIST65] Change directory remote directory
WD:WRDIST63
9. Change local directory D:DATA\ACCESS
10. Highlight GetHSTData65.txt/Highlight GetHSTData63.txt
11. FTP data by selecting arrow
12. Log on [REDACTED]
13. REN GETHSTDATA65.TXT PAYDENT.OUT/REN GETHSTDATA63.TXT
BOIDLFLW.OUT
14. @PAYDENT/@BOIDENT
15. N (Don't create a new file)
16. N (Don't change hydromet file)
17. Y (Yes, sort new file)
18. Y (Yes, sort old history file)
19. Y (Yes, create back up)
20. 3 (Save 3 files)
21. Y (Yes, add new data to history file)
22. 3 (Save 3 files)
23. Y (Yes, create backup)
24. 3 (Save 3 files)
25. N (No, we don't need a listing)
26. N (No, don't add additional data)
27. N (No, don't run accounting)
28. Go to <http://www.usbr.gov/pn/hydromet/PN6200/idwrdata.html>
29. Select Payette Basin Configuration File/Boise Configuration File
30. Enter the number of days since the accounting was last run
31. Enter yesterday's date (example MAY30) for the last day
32. Enter water year (this is Oct. 1 to Sept. 30)
33. Save as PAYHYDMET.TXT/BOIHYDMET.TXT
34. FTP PAYHYDMET.TXT to WD:[WRDIST65]/FTP BOIHYDMET.TXT to
WD:[WRDIST63]
35. @PAYDENT/@BOIDENT
36. N (Don't create a new file)
37. Y (yes, change hydromet file)
38. Y (Yes, sort new file)
39. Y (Yes, sort old history file)
40. Y (Yes, create back up)
41. 3 (Save 3 files)
42. Y (Yes, add new data to history file)
43. 3 (Save 3 files)
44. Y (Yes, create backup)
45. 3 (Save 3 files)
46. N (No, we don't need a listing)
47. N (No, don't add additional data)
48. Y (Yes, run accounting)
49. Y (Select data)
50. Enter data, overlap one day from last accounting run for beginning date

51. Y (correct first date)
52. Y (More than one day)
53. Last date is yesterday
54. Y (correct last day)
55. N (No, no new storage data)
56. N (No, no new storage data)
57. Y (Yes, run accounting)
58. N (No, this is not the first run of the year)
59. N (Do not list water rights)
60. N (Do not print to screen)
61. Y (Yes, print on Laser)
62. Y (Yes, update allocations)
63. Y (Create backup)
64. 3 (Save 3)
65. Y (Update file)
66. 3 (Save 3)
67. LOG
68. Check printout for missing data. If reservoir data flow data or Emmett Irrigation District and Black Canyon is missing, call Melissa Jayo or Rick Wells at the USBR. If other data is missing call Ron or Lee. Then rerun accounting.
69. FTP printout into word, change font to 8pt, change to landscape and email to Ron waterdist65@fmtc.com./ Fax printout to Lee 378-1274.

→ 383-2283

Transferring files from the USGS to the IDWR Alpha computer

1. Start up Putty.exe
2. Log on to [REDACTED]
3. Create the files in ADAPS
4. EX out of ADAPS to the unix prompt (ls will list your files, cat filename will write file to screen)
5. ftp [REDACTED]
6. *Name:* [REDACTED]
7. *Password:* [REDACTED]
8. *ftp>* cd incoming (This changes the directory to incoming)
9. *ftp>* put filename filename (Put the file from the USGS to the IDWR FTP site)
10. *ftp>* bye
11. exit (If you are finished at the USGS)
12. Log on to [REDACTED]
13. ftp [REDACTED]
14. *Name:* [REDACTED]
15. *Password:* [REDACTED]
16. *ftp>* cd incoming (This changed the directory to incoming)
17. *ftp>* get filename (Get file from IDWR FTP Site and puts it on the Alpha, ls will list the files)
18. *ftp>* del filename (**Important** to delete file out of IDWR FTP directory)
19. *ftp>* bye

Idaho Department of Water Resources Historic Database Snake River Monthly Diversion, River Flow and Reservoir Data Procedures for Annual Updates

SUMMARY

The hydrology section of the Idaho Department of Water Resources (IDWR) maintains a monthly database of river flow, diversion and reservoir data. The database is used to run the IDWR Planning Model and to respond to various requests for data inside and outside IDWR. The database is limited to the Snake River and its tributaries. Attachment A is a list of the data. At the end of the irrigation season when data is checked and considered final, the database is updated with new data. This report outlines the procedures used to update the database.

SOURCES OF DATA

The Watermasters of IDWR collect daily diversion data. The United States Geological Survey (USGS) collects river flow data. The United States Bureau of Reclamation (USBR) collects and publishes reservoir and hydromet data. Hydromet data is real time data from selected diversion, river flow, and reservoir sites. Idaho Power also collects and publishes some river flow and diversion data.

Watermaster Data

Data for the Upper Snake, Payette, and Boise Rivers is extracted from the Water Right Accounting history files. Fortran programs total the daily values, sum small pumps and total the diversions for each reach of the river. The procedure for extracting the diversion data is as follows:

1. Log on to [REDACTED] on the [REDACTED] computer. (Payette data is stored on [REDACTED] Snake data is stored on [REDACTED] SNAKE . Boise data is stored on [REDACTED] BOISE.)
2. @PAYLST PAYA2003.HST (The year will change)
3. YES make a new list of data
4. YES make a water year (September 1 to October 31) not an irrigation year list
5. G list a group
6. D list all diversions
7. 2002-2003
8. YES create a file of monthly totals in acre-feet for each station
9. Q quit. The output file is PAYMON.OUT.
10. REN PAYMON.OUT PAYMON03.OUT (Rename the file and add the year)
11. COPY PAYMON03.OUT HYDRO:[HYDROLOGY.SNAKE]*.* (Copy the file to database directory)
12. SET DEF [REDACTED] BOISE] (change directories)
13. @BOILST BOIA2003.HST (The year will change)
14. Repeat steps 3 to 9
15. REN BOIMON.OUT BOIMON03.OUT (Rename the file and add the year)

16. COPY BOIMON03.OUT HYDRO:[HYDROLOGY.SNAKE]*.* (Copy the file to database directory)
17. SET DEF [██████SNAKE] (change directories)
18. @SNKMONSUMWY
19. YES make a new list of summed data (The program SNKLST does not sum small pumps)2002
20. 2002-2003
21. This will create SNKMON.OUT, SNKMONSUM.OUT, SNKPMPSUM.OUT, SNKPMP.OUT, and SNKSAYSUM.OUT.
22. REN SNKMON.OUT SNKMON03.OUT (Rename the file and add the year)
23. COPY SNKMON03.OUT HYDRO:[HYDROLOGY.SNAKE]*.* (Copy the file to database directory)
24. Rename the other files by adding the year. Print SNKMONSUM.OUT and SNKMPSUM.OUT and put in binders "Upper Snake Diversions".

USGS Data

USBR Data

Idaho Power Data

APPENDING THE DATA INTO THE DATABASE

Data is added to the database using the Fortran programs on HYDRO:HYDROLOGY.SNAKE. the source data must be in the proper format in HYDROLOGY.SNAKE.

The procedure is:

1. GO (List utility programs)
2. Y2KAPEND (Run the program to append the new data)
3. 13 (This is the prefix , the first two USGS ID numbers)
4. BOIMON03.OUT (The name of the source data file)
5. 2003 (The Irrigation year when the data begins)