



998 Hunters Trail Anderson, SC 29625
Phone: 864-332-6534 Fax: 864-224-6116

BOARD AGENDA

Board of Commissioners' Meeting August 20, 2008

Information

1. Minutes of June 18, 2008
2. Financial Report
3. Administration Report
4. Operations and Maintenance Report
5. Engineering Report

Notes: The Board will not meet in August.

Monthly status reports and information are being provided. Commissioners with specific questions on this month's informational items should contact the Joint Water System.

Due to scheduling conflicts with a state water conference, the next Regular Board meeting is tentatively scheduled for 10:00 am, Tuesday, September 23, 2008 at the Anderson Regional Joint Water System Headquarters building located at the 998 Hunters Trail (WTP).



Your Community-Owned and Operated System
998 Hunters Trail
Anderson, SC 29625

**MINUTES OF THE
ANDERSON REGIONAL JOINT WATER SYSTEM
July 16, 2008**

LET THE MINUTES SHOW THAT THE MEDIA WERE NOTIFIED OF THIS MEETING IN ACCORDANCE WITH THE SOUTH CAROLINA FREEDOM OF INFORMATION ACT.

COMMISSIONERS PRESENT: Charlie Gibson, Sandy Springs; Rick Cotton, City of Clemson; Norb Steeber, Powdersville; Douglas Locke, Broadway; Toddy Hopkins, West Anderson; Frank Turner, Hammond; Tim Hood, Town of Williamson; Duane Rogers, Big Creek; David Davis, Belton-Honea Path; Phillip Mishoe, Town of Central; Leo Treadaway, Starr-Iva; Jeff Caldwell, City of Anderson; Larry E. Harrell, Homeland Park, Richard Bork, Town of Pendleton

OTHERS PRESENT: Eddie Makison, ARJWS; Chris Eleazer, City of Anderson; Phil Parkins, CDM; Connie Finger, ARJWS; Ann Gates, ARJWS; Scott Willett, ARJWS; Jennifer Barrington, ARJWS; Tommy Phillips, Broadway; Belton Zeigler, Pope Zeigler Attorneys; Gary Pope, Pope Zeigler Attorneys; Frankie McClain, City of Anderson; Frank Gibbs, Attorney for City of Anderson, City of Clemson; Keith Overstreet, Design South; Chuck Joye, Design South; Jerry Cox, Broadway; Trey Burns, ARJWS; Benjie McGill, City of Clemson; William McCoy, West Anderson/Hammond; Dyke Spencer, Powdersville; David Hall, Homeland Park; Steve Wilson, West Anderson

Chairman Jeff Caldwell called the meeting of Anderson Regional Joint Water System to order at 10:00 a.m. on July 16, 2008.

Chairman Caldwell opened the meeting with the Pledge of Allegiance.

There were no additions to the agenda.

Under Commissioners' Comments, Chairman Caldwell presented past Chairman Steeber with a plaque and thanked him for his dedication and hard work for the past year.

Rick Cotton had a proposal he wanted to bring before the Board. Mr. Cotton apologized for not having the proposal ready for the Board package so everyone could look it over ahead of time. At this time before presenting the proposal, Mr. Cotton had Attorney Frank Gibbs speak to the Board and attendees. Mr. Gibbs addressed the differences between Design South and CDM estimates and proposals. There was a considerable difference in the proposal for the transmission system improvements between the two engineering firms.

Mr. Cotton presented the outlined proposal, which is attached to the file copy of these minutes. This proposal would need to be approved by both city councils and drawn up legally. In this proposal, using Design South to provide the engineering services to establish final design, develop engineering plans and specifications, advertise and bid the lake crossing solution and pump station improvements, the City of Clemson and the City of Anderson would cover any and all costs over the \$5.3 million total estimated construction cost. They would also pay future debt service amounts for any said excess costs.

Belton Zeigler, Attorney for ARJWS, spoke under the Public Comments and said the proposal from Mr. Cotton for the Cities was a legal proposal. Mr. Zeigler noted the trouble with this proposal would be documentation at the front-end.

Norb Steeber made a motion and David Davis seconded to approve the minutes of the June 18, 2008 board meeting. Motion carried.

I. Information

1. Financial Report

Scott Willett, Executive Director, went over some of the items on the June profit and loss which showed the end of the fiscal year budget. Mr. Willett also told the board that in June Standard and Poor had changed the rating of ARJWS from an A- to A+. A copy of this report is attached to the file copy of these minutes.

2. Administration Report

Report attached.

3. Operations and Maintenance Report

In addition to the attached report, Mr. Willett reported on the lightning damage to the plant on July 8th. The antenna at the plant took a direct hit from lightning, which took out our radios and communication and the plant had to be operated manually for a couple of days. The plant was back in operation by Thursday afternoon.

4. Engineering Report

Jennifer Barrington, System Engineer, reported under Transmission System Improvements that soil borings were complete and the application had been submitted to the railroad. We have begun the loan application to Budget & Control Board and submitted the SRF application to DHEC.

Mrs. Barrington also complimented Trey Burns, our co-op student, on the fine job he has done with the GIS Implementation. Trey will be going back to Clemson in August and our new co-op, Ben Lanz, will start at that time.

Mrs. Barrington requested a meeting with the Emergency Generator Committee for July 22, 10:30 a.m. at ARJWS.

A copy of the engineering report is attached to the file copy of these minutes.

II. Discussion and Possible Action

1. Drought Ordinance Implementation

On June 30, 2008 the SC Drought Response Committee declared that Anderson County was in a SEVERE DROUGHT situation. Member agencies are asked to initiate or intensify water conservation messages to their customers. There was no action taken. A copy of this report is attached to the file copy of these minutes.

2. Raw Water Pump Policy

Under the Raw Water #3 and Pump Procurement Policy, in September 2005 the Board of Commissioners directed that Raw Water Pump #3, manufactured by Patterson Pumps not be accepted. The Board also directed that the Joint Water System would specify the exclusive use of Worthington/Ingersoll Dresser pumps, resulting in a sole source vendor selection of Pumps, Parts and Service, their exclusive area vendor. The recommendation of management is to approve retention of Raw Water Pump #3 and rescind Sole Sourcing Policy for larger pump procurement. After some discussion, Frank Turner made a motion and Charlie Gibson seconded to accept the recommendation. Motion carried.

3. Approve Transmission System Improvements, Phase 1B as a Project

Mr. Willett responded to the opening presentation, the proposal by the Cities, and said the proposal deserves consideration. The comparison of cost on the improvements is the major concern. Chuck Joye, of Design South, gave an overview of the pump power cost when comparing the two designs. A handout of this comparison is attached to the file copy of these minutes.

Mr. Cotton suggested a nonbinding straw poll vote to see if the Cities should proceed with taking the proposal to their city council.

It was suggested at this time to adjourn for 10 minutes to let the board members discuss the proposal. Mr. Davis made a motion to adjourn and Phillip Mishoe seconded. Motion carried.

The board meeting was called back to order at 12:00 p.m.

Mr. Turner made a motion to approve Phase 1B with the option to rescind if the proposal by the Cities, with approval of their councils, was a better plan. The motion was to approve Phase 1B of the transmission improvements as a project as such term is used in Section 6-25-110 of the Code of Laws of South Carolina, 1976, as amended and authorize the Executive Director to direct final design, ROW acquisition negotiations and preliminary debt issuance planning to construct Phase 1B of the transmission improvements. This phase consists of a 20" transmission line from Clemson Boulevard to Hwy 81/Concord Road Pump Station, Concord Road Pump Station and an 18" line from the proposed Concord Road Pump Station to the Highview Pump Station. Implement and evaluate the proposed operating protocol to defer the need for the Broadway Jumper – and 18" line extending the shared transmission main on Hwy 28 to the Bolt Drive service area.

Duane Rogers seconded the motion made by Mr. Turner.

Mr. Cotton wanted it clarified if this was a 3.09 or 3.10 action and was it 45 MGD or 48 MGD. Mr. Willett stated the motion made was a 3.09 based on 45 MGD.

Mr. Cotton made a motion to amend stating that this is for the 45 MGD only and any potential future upgrading be kept under the ownership of the ARJWS for future flexibility and working with cities and water districts as they reach their capacity limits.

Richard Bork seconded and the motion carried with one no vote from Powdersville.

The motion made by Mr. Turner and seconded by Mr. Rogers carried with no votes from City of Anderson, City of Clemson, Town of Central and with Town of Pendleton abstaining.

4. Approve Cost Allocation of Transmission System Improvements, Phase 1B

Mr. Turner made a motion to approve differing Cost Allocation methodology for Phase 1B of the transmission improvements and Mr. Steeber seconded. Motion passed with no votes from City of Anderson, City of Clemson, Town of Central and with Town of Pendleton abstaining.

Mr. Cotton asked to be put on record stating they disputed the 3:09 project and reserved the right to litigate.

There will be no meeting in August.

III. Adjournment

With no further business, Mr. Davis made a motion and Mr. Cotton seconded to adjourn the meeting at 12:46 p.m. Motion carried.

Respectfully Submitted,

David A. Davis
Belton-Honea Path



ANDERSON REGIONAL

JOINT WATER SYSTEM

998 Hunters Trail
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Anderson, SC 29625
Fax: 864-224-6116

BOARD MEMORANDUM

August 8, 2008

Subject

July 2008 Financial Report

Discussion

The attached tables identify July spending, encumbrances and deposits to the Pumped Repair and Replacement Account and the System Repair and Replacement Account. At the end of July, the Pumped R&R Account had an available balance of \$238,780.88 net of encumbrances. The System R&R Account had an available balance of \$336,013.41 net of encumbrances. Note that \$354,900 of the System R&R has been encumbered to advance the final design of the Phase 1A Transmission Improvements and will be reimbursed from loan proceeds. The Operating Fund had a balance of \$626,470.66. Reserves of \$300,000 are invested in secured notes. Total unrestricted cash available is \$1,760,415.20 corresponding to 84.53 days of cash based on the adopted Budget.

| | Balance (6/30/2008) | Balance (7/31/2008) |
|-------------------------|---------------------|---------------------|
| Pumped R&R | \$339,423.49 | \$238,780.88 |
| System R&R | \$500,029.64 | \$336,013.41 |
| Operating Fund | \$475,627.85 | \$626,470.66 |
| Rate Stabilization fund | \$4,513.31 | \$259,150.25 |
| Reserves | \$200,000.00 | \$300,000.00 |
| TOTAL Unencumbered Cash | \$1,519,594.29 | \$1,760,415.20 |
| FY Op Budget | \$6,854,183.00 | \$7,601,307.00 |
| Days of Cash | 80.92 | 84.53 |

A review of the July Profit and Loss Statement shows that actual expenses were under budget projections for the month due to a series of one-time adjustments- a partial 2002 debt service payment (portion paid during previous budget year), final close-out of MIOX lease purchase contract resulting in crediting for interest earnings. As expected, actual costs for Chemicals and Energy exceeded monthly budget estimate due to increased seasonal sales.

Approved by: Scott Willett, Executive Director

Attachments: Pumped Repair and Replacement Account Summary
System Repair and Replacement Account Summary
Profit and Loss Budget vs. Actual

PUMPED REPAIR & REPLACEMENT ACCOUNT

July 31, 2008

| <u>DATE</u> | <u>PAYEE</u> | <u>DEPOSIT</u> | <u>AMOUNT</u> | <u>BALANCE</u> |
|-------------|---|----------------|---------------|-------------------|
| 7/1/08 | BALANCE BROUGHT FORWARD | | | 339,423.49 |
| 07/21/08 | HAYES & LUNSFORD ELECTRIC MOTOR REPAIR | | 7,722.00 | 331,701.49 |
| 07/22/08 | TRANSFER FROM O & M | 6,799.33 | | 338,500.82 |
| 07/31/08 | DEPOSIT (INTEREST) | 280.06 | | 338,780.88 |
| 07/31/08 | REGIONS BANK (TO PURCHASE 2 CD'S @ \$50,000 EACH) | | 100,000.00 | 238,780.88 |
| | LESS ENCUMBERED FUNDS | | | - |
| | BALANCE UNENCUMBERED FUNDS | | | <u>238,780.88</u> |

SYSTEMS REPAIR & REPLACEMENT ACCOUNT

July 31, 2008

| <u>DATE</u> | <u>PAYEE</u> | <u>DEPOSIT</u> | <u>AMOUNT</u> | <u>BALANCE</u> |
|-------------|--|----------------|---------------|--------------------------|
| 07/01/08 | BALANCE BROUGHT FORWARD | | | 1,024,053.32 |
| 07/07/08 | CDM | | 149,058.00 | 874,995.32 |
| 07/11/08 | TRANSFER TO RATE STABILIZATION ACCOUNT | | 254,486.69 | 620,508.63 |
| 07/14/08 | WALKER PROCESS EQUIPMENT | | 68,962.00 | 551,546.63 |
| 07/14/08 | GOOD WATER | | 15,716.00 | 535,830.63 |
| 07/21/08 | CARSON'S NUT-BOLT & TOOL, INC | | 1,470.48 | 534,360.15 |
| 07/21/08 | CDM | | 6,871.38 | 527,488.77 |
| 07/21/08 | GENERAL MACHINE | | 1,533.15 | 525,955.62 |
| 07/22/08 | TRANSFER FROM O & M | 100,303.81 | | 626,259.43 |
| 07/28/08 | DEPOSIT (BB&T/MIOX) | 35,000.00 | | 661,259.43 |
| 07/28/08 | MIOX CORPORATION | | 35,000.00 | 626,259.43 |
| 07/31/08 | DEPOSIT (INTEREST FROM CD'S REGIONS) | 3,301.70 | | 629,561.13 |
| 07/31/08 | DEPOSIT (INTEREST) | 646.28 | | 630,207.41 |
| | LESS ENCUMBERED FUNDS | | | <u>294,194.00</u> |
| | BALANCE UNENCUMBERED FUNDS | | | <u>336,013.41</u> |

| <u>ENCUMBERENCES</u> | <u>BUDGET</u> | <u>BALANCE</u> |
|---|---------------|--------------------------|
| HYDRAULIC MODELING PROJECT TASK #5 | 54,428.00 | - |
| WTP ELECTRICAL SYS ENGINEERING REPORT | 24,800.00 | 3,720.00 |
| FINAL DESIGN OF PHASE 1 TRANSMISSION IMPROVEMENTS | 354,900.00 | 191,253.00 |
| REBUILD CLARIFIER #2 | 247,500.00 | 99,221.00 |
| | | <u>294,194.00</u> |



Profit & Loss Budget vs. Actual
July 2008 through June 2009

| | Year to Date | | | | 1 + 12 Budget Forecast | |
|---------------------------------------|-------------------|-------------------|-------------------|---------------------|------------------------|---------------------|
| | Jul 08 | Budget | YTD | Budget | Actuals | Budget |
| Ordinary Income/Expense | | | | | | |
| Income | | | | | | |
| 6000 · FEES O & M + CAP | | | | | | |
| 6001 · FEES O & M -TOTAL | | | | | | |
| 6001.1 · Base O & M Subtotal | 0.00 | 290,717.70 | 0.00 | 3,488,612.00 | | |
| 6001.2 · Pumped O & M Subtotal | 0.00 | 20,865.66 | 0.00 | 250,388.00 | | |
| Total 6001 · FEES O & M -TOTAL | 0.00 | 311,583.36 | 0.00 | 3,739,000.00 | | |
| 6000 · FEES O & M + CAP - Other | 643,349.77 | | 643,349.77 | | | |
| Total 6000 · FEES O & M + CAP | 643,349.77 | 311,583.36 | 643,349.77 | 3,739,000.00 | | |
| 6010 · FEES- MISC. INCOME | 3,075.15 | 3,760.00 | 3,075.15 | 45,000.00 | | |
| 6015 · TRANSFERS FROM RSF | 21,583.33 | 21,583.33 | 21,583.33 | 259,000.00 | | |
| 6020 · FEES - DEBT SERVICE COVERAGE | 0.00 | 318,108.91 | 0.00 | 3,817,307.00 | | |
| Total Income | 668,008.25 | 655,025.60 | 668,008.25 | 7,860,307.00 | 8,016,099.00 | 7,873,289.85 |
| Expenses | | | | | | |
| 8010 · SALES TAX ACCRUAL | 413.76 | 366.66 | 413.76 | 4,400.00 | 4,965.12 | 4,447.02 |
| 8050 · ADVERTISING - | 0.00 | 208.33 | 0.00 | 2,500.00 | 0.00 | 2,291.63 |
| 8060 · OFFICE SUPPLIES/EXPENSES | 1,052.31 | 875.01 | 1,052.31 | 10,500.00 | 12,627.72 | 10,677.42 |
| 8065 · DUES/SUBSCRIPTIONS | 145.80 | 658.33 | 145.60 | 7,900.00 | 1,747.20 | 7,387.23 |
| 8070 · BANK SERVICE CHARGES | 0.00 | 33.33 | 0.00 | 400.00 | 0.00 | 366.63 |
| 8080 · DEBT SVC 2002 Bond Series | 174,719.64 | 330,271.25 | 174,719.64 | 3,963,255.00 | 2,096,635.68 | 3,807,703.39 |
| 8081 · DEBT SVC 2005 Bond Series | 27,105.88 | 27,105.83 | 54,211.76 | 325,270.00 | 650,541.12 | 352,375.69 |
| 8090 · AUTO/TRUCK EXPENSE | 2,700.73 | 2,468.69 | 2,700.73 | 29,800.00 | 32,408.78 | 29,834.32 |
| 8110 · LICENSES/PERMITS | 1,650.00 | 2,783.33 | 1,650.00 | 37,700.00 | 19,800.00 | 32,266.63 |
| 8120 · Lease/Purchase Mix Gen. Equip | -58,544.52 | 7,333.33 | -58,544.52 | 88,000.00 | -702,534.24 | 22,122.11 |
| 8130 · STATIONARY/PUBLICATIONS | 0.00 | 25.00 | 0.00 | 300.00 | 0.00 | 275.00 |
| 8140 · SEMINARS & CONVENTIONS | 0.00 | 483.33 | 300.00 | 5,800.00 | 3,600.00 | 5,616.63 |
| 8150 · POSTAGE/FREIGHT | 42.07 | 225.00 | 42.07 | 2,700.00 | 504.84 | 2,517.07 |
| 8160 · FILM & PROCESSING | 0.00 | 8.33 | 0.00 | 100.00 | 0.00 | 91.63 |
| 8175 · METER REPAIR | 0.00 | 758.32 | 0.00 | 9,100.00 | 0.00 | 8,341.52 |
| 8180 · SECURITY | 0.00 | 66.66 | 58.99 | 800.00 | 683.88 | 790.25 |
| 8200 · PUMP MAINT./REPAIR | 4,022.86 | 2,999.99 | 4,522.68 | 36,000.00 | 54,272.16 | 37,522.57 |
| 8220 · PROFESSIONAL FEES | 16,200.29 | 39,999.98 | 16,200.29 | 480,000.00 | 194,403.48 | 456,200.07 |
| 8300 · INSURANCE | 9,060.90 | 7,224.99 | 9,060.90 | 86,700.00 | 108,730.80 | 88,535.79 |
| 8400 · LABORATORY | 4,285.70 | 4,699.98 | 4,285.70 | 56,400.00 | 51,428.40 | 55,985.48 |
| 8500 · WATER TREATMENT | 12,464.70 | 3,425.01 | 12,464.70 | 41,100.00 | 149,576.40 | 50,139.81 |
| 8600 · PAYROLL EXPENSES | 81,157.05 | 106,608.37 | 132,656.25 | 1,279,300.00 | 1,591,875.00 | 1,305,348.32 |
| 8700 · TELEPHONE | 5,219.98 | 3,549.99 | 5,219.98 | 42,600.00 | 62,639.76 | 44,269.87 |
| 8800 · MISCELLANEOUS | 1,372.41 | 1,624.99 | 1,413.52 | 19,500.00 | 16,962.24 | 19,288.41 |
| 8820 · CUSTODIAL CARE | 348.02 | 766.66 | 696.04 | 9,200.00 | 8,352.48 | 9,129.52 |
| 8830 · REPAIRS/MAINTENANCE | 2,975.49 | 2,891.69 | 3,582.28 | 34,700.00 | 42,987.36 | 35,390.87 |
| 8840 · CHEMICAL SUPPLIES | 43,082.20 | 27,275.00 | 43,082.20 | 327,300.00 | 516,986.40 | 343,107.20 |
| 8850 · TANKS/STANDPIPES/RESEVOIRS | 4,256.26 | 11,358.33 | 4,256.26 | 136,300.00 | 51,075.12 | 129,197.89 |
| 8860 · UTILITIES | 97,600.32 | 80,974.99 | 97,600.32 | 971,700.00 | 1,171,203.84 | 988,325.21 |
| 8870 · TRAVEL | 1,230.08 | 350.00 | 1,230.08 | 4,200.00 | 14,760.96 | 5,080.08 |
| 8871 · MANAGER'S EXPENSE | 0.00 | 100.00 | 0.00 | 1,200.00 | 0.00 | 1,100.00 |
| 8872 · BOARD EXPENSE | 0.00 | 150.00 | 0.00 | 1,800.00 | 0.00 | 1,650.00 |
| 8873 · STAFF INCENTIVE PROGRAM | 0.00 | 50.00 | 0.00 | 600.00 | 0.00 | 550.00 |
| 8874 · TRAINING & EDUCATION REIMBURSE | 1,993.51 | 683.33 | 1,993.51 | 8,200.00 | 23,922.12 | 9,510.14 |
| 8875 · MEALS/ENTERTAINMENT | 266.97 | 200.00 | 266.97 | 2,400.00 | 3,203.64 | 2,466.97 |
| Total Expense | 434,822.21 | 668,602.05 | 515,280.02 | 8,027,525.00 | 6,183,360.24 | 7,669,902.57 |



ANDERSON REGIONAL

JOINT WATER SYSTEM

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BOARD MEMORANDUM

August 8, 2008

Subject

July Administration Report

Discussion

Billing

All payments for the month of June have been received. Meters were read on July 31st, with usage down approximately 3.6% from last month (for the same number of days), and up about 7.5 % for the same period/same number of days last year. July bills were mailed on August 5th.

| AGENCY | PREV.YR SAME MONTH | LAST MONTH | CURRENT |
|--------------------------|-------------------------------|--------------------|--------------------|
| # of Billing Days | 31 | 32 | 31 |
| Anderson | 177,450,134 | 158,487,706 | 192,035,697 |
| Big Creek | 32,000,000 | 44,800,000 | 36,000,000 |
| Broadway | 21,460,000 | 29,308,500 | 25,580,000 |
| Clemson | 54,500,000 | 82,600,000 | 78,700,000 |
| Clemson Univ | 31,400,000 | 41,400,000 | 37,500,000 |
| Hammond | 81,700,000 | 112,000,000 | 96,000,000 |
| Homeland Park | 20,149,000 | 22,262,000 | 21,964,000 |
| Pendleton | 11,690,000 | 13,450,000 | 12,730,000 |
| Powdersville | 22,910,000 | 32,590,000 | 26,020,000 |
| Sandy Springs | 63,676,000 | 88,758,000 | 71,131,000 |
| Starr-Iva | 33,800,000 | 42,200,000 | 36,800,000 |
| West Anderson | 42,910,000 | 67,145,000 | 52,457,000 |
| Williamston | 25,700,000 | 31,600,000 | 29,300,000 |
| TOTALS: | 619,345,134 | 766,601,206 | 716,217,697 |

Seasonal Surplus Charges for the month of July were \$3,425.30 for 2,740,000 gallons.

Drought

At its August 5, 2008 meeting the SC Drought Response Committee elevated Anderson County to the extreme drought classification based on stream flows, recent precipitation and the forecasted precipitation levels. At present, the entire upstate is now categorized as in extreme

drought. The committee continues to strongly encourage voluntary water conservation, but has deferred imposition of mandatory restrictions to the local water agencies. The committee will meet again in 1 month to review its recommendations. Local agencies are to review their supply status and make necessary decisions.

In order to recharge groundwater to levels sufficient to maintain normal stream flows, a long period of normal to above normal precipitation or the heavy rain potential of an onshore tropical storm or depression would be required. Local short-term forecasts continue to call for little precipitation. However, NOAA now projects an 85 percent probability of an above-normal season – up from 65 percent in May. The outlook includes a 67 percent chance of 14 to 18 named storms, of which seven to 10 are expected to become hurricanes before the end of the season. At present, five storms have formed thus far. For comparison, the May outlook called for 12 to 16 named storms, including six to nine hurricanes and two to five major hurricanes. An average Atlantic hurricane season has 11 named storms, including six hurricanes and two major hurricanes. Following the November 1 end of hurricane season, the upstate enters its wetter season that usually provides increased chances of sustained precipitation.

While supply conditions in the Lake Hartwell are stressed, adequate storage remains for the Joint Water System to continue recommending aggressive voluntary water conservation. As of August 8, Lake Hartwell contains approximately 1.9 million acre-feet of water in storage, or about 53.9%. The Joint Water System has storage rights for 24,620 acre-ft (8,023 million gallons), of which 13,270 ac-ft (4,324 million gallons) remain. Storage alone corresponds to approximately 220 days of supply at present use levels. In addition, despite lack of recent precipitation, 120 day average inflow levels are sufficient to sustain existing demand levels.

The Joint Water System encourages continued emphasis on avoiding unnecessary water use, especially the use of water to wash down streets and sidewalks and spray irrigation of turf during the hotter parts of the day. Avoiding daytime irrigation provides immediate savings in water needed as well as being less stressful on the plants (and the water system infrastructure). To date, the community's voluntary water conservation efforts have resulted in an approximate 3% reduction in the peak day demands (about 7% when adjusted for increased number of customers).

Prepared by: Connie Finger, Business Manager
Approved by: Scott Willett, Executive Director



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BOARD MEMORANDUM

August 8, 2008

Subject

July 2008 Operations and Maintenance Report

Discussion

Operations

As of August 4, 2008 Lake Hartwell was at 647.50 ft above mean sea level. This is 12.50 feet below full pool. Raw water is being taken from the second gate of the intake structure. There is 12.50 feet of water above the middle intake gate. Water temperature at the second gate is eighty-five degrees. As water temperatures rise, processes with respect to settled water turbidity goals are easier to achieve. The Joint Water System reached 100% settled water turbidity goal for the month of July. Raw water quality remains generally good. Raw water turbidity is normal. Raw water, settled water, and finished water pH levels are normal. The maximum day for July was 63.9% of finished water capacity.

Weather Data

| | Minimum | Maximum | Total |
|-------------|----------|----------|----------|
| Rainfall | 0.00 | 0.75in. | 1.70 in. |
| Temperature | 59 deg.F | 98 deg.F | N/A |
| Humidity | 20% Rh | 100% Rh | N/A |

Water Production Data

| | Average | Minimum | Maximum | Total |
|-----------------------|------------|------------|------------|-------------|
| Raw Water (MG) | 23,513,000 | 19,794,000 | 30,086,000 | 730,447,000 |
| Finished Water (MG) | 22,915,000 | 19,753,000 | 27,333,000 | 709,905,000 |
| Finished Max Capacity | 53.50% | 46.20% | 63.90% | 53.50% |

NOTE: Percentages are finished water capacities.

ARJWS has completed twenty- four months of Long Term 2 Enhanced Surface Water Treatment Rule testing. Results for the twenty-third month are negative for Cryptosporidium and Giardia. The Long Term 2 testing period has been completed. With absence of Cryptosporidium and Giardia in all samples taken, no additional treatment techniques should be required.

Water Quality Data

| | Raw | Settled | Finished |
|-----------------------------|------------|--------------|--------------|
| pH | 7.09 | 6.53 | 7.21 |
| Turbidity (NTU) Range | 1.3 to 3.6 | 0.34 to 0.69 | 0.05 to 0.07 |
| Turbidity (NTU) Average | 2.50 | 0.51 | 0.06 |
| Turbidity (NTU) Exceedance | N/A | 0.0% | 0% |
| Residual Disinfectant (ppm) | N/A | 0.91 | 1.20 |

NOTE: Area Wide Optimization Program Goal equals 1.0 NTU or less for settled water turbidity 95% of the time. Regulations require 1.0 NTU or less for finished water.

In addition to quality sampling for the Lake Hartwell Water Treatment Plant, Joint Water System staff processed 147 total coliform samples for local entities. Two Member agencies, West Anderson and Williamston have taken advantage of the offer to have DBP stage 2 samples taken by ARJWS laboratory staff.

Power Consumption

Operations staff continues to optimize energy consumption at the Water Treatment Plant. Efforts for the last year have resulted in a 12.7% decrease in on-peak power consumption resulting in a 6.3% decrease in unit power costs (\$ per million gallons produced) all while producing 4.7% more water than the previous year.

| Month | On Peak Kw | Off Peak Kw | Total Kw | Finished Water MG | \$/MG |
|--------|------------|-------------|-----------|-------------------|----------|
| Jul-06 | 331,600 | 1,100,400 | 1,432,000 | 715.8 | \$112.95 |
| Sep-06 | 282,400 | 866,400 | 1,148,800 | 545.6 | \$95.92 |
| Nov-06 | 242,400 | 744,400 | 986,800 | 498.3 | \$92.09 |
| Jan-07 | 223,600 | 858,000 | 1,091,600 | 493.2 | \$101.97 |
| Mar-07 | 210,800 | 890,800 | 1,101,600 | 530.3 | \$75.15 |
| May-07 | 238,400 | 1,138,000 | 1,376,400 | 682.6 | \$82.78 |
| Jul-07 | 224,000 | 1,187,200 | 1,411,200 | 777.3 | \$91.16 |
| Sep-07 | 223,200 | 1,040,800 | 1,264,000 | 639.9 | \$82.42 |
| Nov-07 | 204,400 | 820,400 | 1,024,800 | 467.3 | \$86.63 |
| Jan-08 | 215,600 | 834,200 | 1,050,400 | 453.9 | \$113.98 |
| Mar-08 | 176,400 | 803,400 | 979,600 | 502.2 | \$76.95 |
| May-08 | 254,400 | 1,220,440 | 1,474,840 | 765.8 | \$82.82 |

Maintenance

- Work continues on Raw Water Pump #5. The base should be completed by August 5th and installation of the pump itself will begin soon after.
- Blower # 1 on the MIOX system has failed. Repair will be covered by warranty. Operation of the back-up blower system has resulted in no operational interruptions.
- Extensive damage was done by last month's lightning strike. Most, if not all damages will be filed on insurance. Over a week was required to get all systems back into operation.
- Highview Booster Station pump # 2 has failed and the spare pump installed. Quotes on a rebuild are being obtained.
- Backup cards for our PLC's have been ordered. One spare card for each application will be obtained as backup. This should speed up return to service in the event of future lightning strikes.
- Additional surge protectors are being installed on the PLC's.
- A new sample pump for finished water has been installed.
- HVAC for the electric building has been repaired.
- Clemson Booster Station is nearly maxed out as far as pumping capacity. All three pumps have been running continuously during the day, only seeing some relief at night. CDM is evaluating a piping change on the 500 hp pump which discharges into a 14" section of the header. Currently pump #3 (350 hp) delivers more than the 500. It discharges into a 16" section. Enlarging the discharge on #2 could possibly allow more water through this pump and increase efficiency. More to follow when the study is completed.
- Spare drive parts from clarifier #2 have been installed on clarifier #1 which was on the verge of failure. It is operating satisfactorily at this time.
- Work continues on the variable speed drives for the flash mixers.

Prepared by: Eddie Makison, Maintenance Manager
David Melton, WTP Superintendent

Approved by: Scott Willett, Executive Director



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BOARD MEMORANDUM

August 8, 2008

Subject

July Engineering Update

Discussion

Transmission System Improvements

SCDHEC issued ARJWS a formal approval of the Preliminary Engineering Report submittal for the Phase IA Transmission System Improvements. Final Design plans and specs will be complete the end of August for staff review. CDM is currently working on updating the cost estimate for Phase IA to reflect the 100% design. The final cost estimate will be used to pass a Board Resolution authorizing issuance of an SRF loan. Staff continues to work on the Budget and Control Board application with an anticipated submission September 2008. All soil borings are complete except along Clemson Boulevard. Staff is working with SCDOT on issuing an Encroachment Permit for work within state right-of-way. The appraiser, attorney, and right-of-way agent have begun work on easement acquisition. Staff is also working with CDM to develop a cost estimate for engineering services for Phase IB. This will be ready to bring before the Board at the September Board Meeting.

Lake Hartwell WTP

SCDHEC approved the abbreviated high-rate filter study early July 2008. The study commenced on August 1, 2008 and will be complete February 28, 2009.

GIS Implementation

Trey continued performing a QA/QC review of data collected. He also assisted with the installation of sampling lines at the water plant, the clarifier #2 refurbishment, and the data collection for the instrumentation study. His last day with the ARJWS will be August 8, 2008.

Reservoir No. 1

ARJWS has purchased the pressurized plugs for the upcoming dive in Reservoir No. 1. The diving was rescheduled for August 12, 2008.

Comprehensive Electrical Study

A meeting was held with the Emergency Generator Committee July 22, 2008 to discuss the findings of the Comprehensive Electrical Study. The committee requested that cost estimates be developed for two or three different phasing options regarding equipment upgrades and replacement. The estimates will help Staff determine a proper schedule and financing

recommendation to achieve these improvements. Each of the phasing options will focus on initially providing a dual feed power supply from Duke, new generators, and new switchgear. Safety, vulnerability, reliability, and redundancy will be addressed in the recommendations.

Clarifier No. 2

The drives and related appurtenances were installed July 2008 with an anticipated start-up date August 12, 2008. Assuming the equipment functions well during start-up, clarifier #2 should be back in service mid-August.

Residuals Program

ARJWS will be making contact with the local Cattleman's Associations in Pickens, Anderson, and Oconee Counties to see if anyone who is renovating their pastures may want to plow soil from the stockpile into their fields.

Clemson House Tank

Utility Service Co. completed the lead removal and tank maintenance July 2008.

Remote Communications Study

Staff issued a contract to MR Systems to complete a study of ARJWS' current instrumentation and telemetry system. Work commenced on July 21, 2008. MR Systems will use the information they collected to develop recommendations for radio upgrades throughout the ARJWS system. The recommendations will address reliability and provide a cost estimate for these upgrades.

Prepared by: Jennifer H. Barrington, P.E., System Engineer

Approved by: Scott Willett, Executive Director