

# **HIGHLIGHTS AND FUTURE EVENTS**

# ANCHORAGE WATER AND WASTEWATER UTILITY HIGHLIGHTS AND FUTURE EVENTS

## HIGHLIGHTS

**Completion of the Airport Water Project.** The final phases of the project were completed in 1993, including 1.5 miles of 48, 30, and 12-inch diameter water mains and construction of the 5 million gallon Kincaid Water Reservoir. This \$11 million water transmission and storage project will provide the Anchorage International Airport area with sufficient water supply, pressure and fire flows for existing and proposed development.

**AWWU Headquarters Building Remodel.** Initiated the construction of a major remodel to the AWWU Headquarters which will provide 36,000 square feet of space and includes structural upgrades, an elevator, new partitions, upgrade of the mechanical, electrical and roof systems, required Americans with Disabilities Act upgrades, and parking upgrades.

This project will upgrade a 25 year old facility and will provide the necessary space to centralize all remaining remote AWWU administrative functions (Engineering, Customer Service, and MIS) into one location. The project will be complete in early 1995.

**Pt. Woronzof WWTF Incinerator/New EPA Sludge Regulations.** In February 1993, EPA issued new regulations for disposal of wastewater sludge. As required, AWWU has completed performance testing and filed a sludge disposal permit application for the sludge incinerator at the Point Woronzof WWTF. Upgrades to the incinerator and installation of additional monitoring and control equipment will be completed by year end.

**Utility Reorganization Plan.** With expenses increasing at a greater rate than revenues and the commitment to maintain rates at current levels, AWWU implemented a major reorganization in 1993 to decrease labor expenses.

The planning and implementation effort affected every division. Overall, the reorganization: deleted one division; elevated two sections to division level; deleted twenty-three positions; affected forty-one positions through reclassification; downgraded six positions; upgraded four positions and created five positions. Overall, seventy-five positions, or twenty-six percent, of the Utility's employees were affected.

**On-going Maintenance of Existing Plant.** An estimated \$70,000 per year in pump maintenance cost has been saved by replacing two progressive cavity units that handle sludge at the Point Woronzof Treatment Plant with two plunger pumps. Eleven hydraulic valve control systems are being replaced along the Eklutna pipeline to ensure safe, reliable control of mainline valves. The possibility of structurally damaging the pipeline during valve closures will be eliminated.

AWWU successfully completed the scheduled 1993 architectural barrier improvements laid out in the Utility's three-year Americans with Disabilities Act (ADA) transition plan. Full implementation of the plan is still scheduled for completion by January 26, 1995.

**Customer Service.** A customer service survey was mailed in January 1993 to all Utility customers and 20% or 8,573 questionnaires were returned. Of those responding, 90% expressed an overall satisfaction that the Utility is meeting its commitment to water quality and customer service. The comments received will be utilized to further improve our services wherever possible.

Requests for Water and Wastewater permits, inspections, and locates increased significantly in 1993, reflecting the increased construction activity within the Municipality.

**Management Information.** The MIS division developed a six-year data processing and system integration plan that includes a one-year tactical plan which represents the combined vision of both the Utility management and work force.

AWWU has begun implementing Geographical Information Systems (GIS) this year. The first phase is a pilot project on a sub-section of the Anchorage bowl. It uses the Continuing Property Records (CPR) database, converting it to GIS format and avoiding much time and effort required to input the information manually. GIS will be used to replace manually produced hard copy system maps with GIS-based automatic electronic versions. GIS applications are being developed for the pilot project area that will automate assessment calculation, operations/maintenance management scheduling and tracking, hydraulic water and sanitary sewer modeling, and other functions. Application developed for the pilot project will be usable on the entire service area during full GIS implementation next year. The pilot project lays the groundwork for use of electronic imaging for frequently used documents such as engineering record drawings, service connect cards, and fire hydrant cards. During the pilot project, AWWU is also performing the preliminary design to automate the water and wastewater connect permits.

**Financial.** Where beneficial, AWWU restructured debt to more closely match the asset lives of various utility plant categories. The Wastewater Utility issued \$21,770,000 of General Obligation Refunding Bonds at a net effective interest rate of 4.9% to advance refund \$19,805,000 of 1986 G.O. Bonds that had a net interest rate of 7.2%. The refunding resulted in debt service payments which will be approximately \$2.8 million less than those of the refunded bonds over the next 17 years.

The Water Utility has proposed issuing \$19,473,000 of Senior Lien Revenue Refunding Bonds at a net effective interest rate of 4.9% to advance refund \$15,690,000 of 1986 Senior Lien Water Revenue Bonds that have a net effective interest rate of 7.2%. This refunding would result in net present value savings of approximately \$920,000.

**Major Studies.** AWWU initiated the following four major studies and/or plans in 1993, which will put AWWU in a strong position as we move into the next century: a six-year Data Processing and System Integration Plan; a Telemetry and SCADA Master Plan for water and wastewater treatment, water distribution and wastewater collection systems; a long-range Water Master Plan; and a long-range Wastewater Master Plan.

## FUTURE EVENTS

**Environmental Regulation.** In the near future the U.S. Congress is expected to approve comprehensive changes to the Clean Water Act, which regulates our wastewater discharges and treatment levels, and the Safe Drinking Water Act. These changes could have a large operational and financial impact on AWWU as Congress proposes to make the statutes more restrictive and to initiate user fees and new penalties.

**Anchorage Loop Water Transmission Main.** The Anchorage Loop Water Transmission Main (Loop) is a \$52 million dollar project of which approximately \$18 million has been completed. Anchorage has the water supply to serve its needs into the future, however the water distribution system has not kept pace with the growth in South and West Anchorage.

As a result, during record high water demands caused by the hot and dry summer of 1993, water outages were experienced by more than 500 homes in South Anchorage on three separate days for durations of up to 8 hours. The Loop will provide an additional 45 million gallons per day of gravity water supply to South and West Anchorage.

The final design of Phases I, II and III and construction of Phases I & II will be initiated subsequent to receipt of \$9,122,000 of state grants and should be operational by 1996. The remainder will be financed by \$2,774,000 in revenue bonds and an additional state grant of \$7,004,000 will be sought from the 1994 legislature for the construction of Phase III.

**Girdwood Wastewater Treatment Facility Upgrade.** The Girdwood Wastewater Treatment Facility requires an upgrade to the original plant constructed in 1977. Upgrading the facility would include surge lagoon rehabilitation, and improved solids handling through the upgrading of the electrical, heating, and ventilation systems, and expansion of laboratory and operator facilities.

Present development patterns and growth rates in Girdwood have made expansion of this facility essential. Upgrading the facility will increase the hydraulic capacity of major plant components and improve reliability as well as increase labor efficiency. This project is estimated to cost \$2.5 million and will support growth until the year 2000.

**Eagle River Reservoir.** The Eagle River area, though tied into the Eklutna water transmission main, does not have the water storage reserve capacity to support system reliability and fire protection in certain areas of Upper Eagle River Valley. A water storage reservoir at an elevation of 1,000 feet or greater is planned. The reservoir(s) is estimated to cost approximately \$4 million. The update currently under way to the Anchorage Water Master Plan will identify potential acceptable sites for this facility and site acquisition will begin in 1994. A \$4 million state grant was received for the project in 1993.

**Cost-of-Service Studies.** In an effort to ensure that the Utility's costs are equitably allocated between the various customer classes, separate water and wastewater 1992 test-year cost-of-service studies are now being conducted. These studies are scheduled to be completed prior to December 31, 1993. However, implementation of the results of these studies is tentatively scheduled for January 1, 1995, as it is believed that it will take the Alaska Public Utilities Commission (APUC) 9 to 12 months to review and approve them. These studies will result in changes to the various service rates but will not result in an increase in the total amount of revenue generated by the utilities.

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# MUNICIPAL LIGHT AND POWER HIGHLIGHTS AND FUTURE EVENTS

## HIGHLIGHTS

ML&P continues to grow at a steady pace. Several new commercial buildings have been added to the service area including Eagle Hardware, Comfort Inn and the Alaska Railroad headquarters. In addition, WalMart, State Farm, Sears, K Mart, and the Alaska Native Hospital are all in various stages of construction.

In March, ML&P completed a Bond Refinancing in which \$67,300,000 of outstanding revenue bonds, having an average coupon of 7.69%, were refunded and replaced with bonds having a net interest cost of 6.37%. The refinancing provided \$450,000 in short term savings, and will save ML&P \$16.1 million over the life of the bonds.

ML&P's long-term Natural Gas Contracts, combined with a Gas Transportation Agreement with Enstar Natural Gas Company continued to provide significant cost savings to ML&P rate payers. In April, these savings helped ML&P achieve its long-time goal of having the lowest residential rates in the State. An ML&P residential customer using an average of 500 kilowatt hours of electricity would have paid \$49.36 during the second quarter of 1993.

ML&P has installed 1,000 electronic meters in accordance with their plan to replace old and obsolete meters with new electronic meters. The Automatic Meter Reading System (ARM) allows a mobile unit to read the meters at the local posted speed limit, without distortion. During a recent test, the 1,000 installed meters were read in 39 minutes. To read the same meters using current manual reads would have required approximately 24 man hours.

The utility is continuing its program to replace failed underground cable using a new horizontal boring machine method, which has proved very efficient and cost effective. Additionally, this method does not disrupt customers landscaping or asphalt as compared with open trenching approaches to cable replacement.

ML&P is continuing to participate in a research and development project with General Electric on the LOW DRY NOx combustor system used with ML&P's Generation Unit #8. Earlier this year, hardware and software changes were made and the unit is now available for operation using either liquid or gas fuel. Previously, it used gas fuel only. The changes have lowered emissions and made the unit more efficient.

The "TRADE-A-TREE" Program which was implemented in 1992 continues to be a success. Customers that have trees growing in or near ML&P line easements are encouraged to have the trees removed at the Utility's expense and replaced with a tree of their choice from a local nursery. Over 100 certificates for new trees have been issued through mid-year. Studies of utilities that provide this service in other areas show a significant reduction of tree damage during heavy storms.

## FUTURE EVENTS

The State Legislature appropriated \$90 million during the 1993 session for the construction of two major transmission interties. Of the total amount, \$43.2 million was appropriated from the Railbelt interties reserve fund for the benefit

of all the utilities participating in the intertie for design and construction of a power transmission line of at least 138 kilovolts between Healy and Fairbanks. \$46.8 million was appropriated for the intertie between Anchorage and Kenai. There are numerous benefits associated with the new transmission lines. These new lines would provide reliability by replacing the oldest and weakest sections of the grid. In addition to preventing some power outages, the new interties would help keep electricity cost down by allowing utilities to generate power at the lowest cost locations and transfer it to other areas.

ML&P has been selected by the federal government, the U.S. Army Corps of Engineers and the Air Force to provide normal and alternate electric power to the new Composite Medical Facility (CMF) to be constructed on Elmendorf Air Force Base. The CMF will consist of a 110 bed hospital, an outpatient medical center and a dental clinic, designed to serve as the major medical facility for military personnel in Alaska. ML&P will construct a substation adjacent to Bartlett High School to provide electrical service to the new hospital and to reduce ML&P's existing electrical power losses that are caused by the existing long electrical circuits. Construction of the substation is scheduled for 1994 with completion in 1995.

On July 23, 1993, ML&P and Babcock & Wilcox (B&W), a major defense contractor and utility generation equipment manufacturer, submitted a joint proposal to the federal government under the Technology Reinvestment Program (TRP) for a grant towards the cost of Superconducting Magnetic Energy Storage (SMES) device to be installed in ML&P's system. SMES stores energy and supplies it as needed to enhance system reliability, allowing greater utilization of hydro and slower responding generation, reducing loadshed outage events to customers and reduction of fuel costs to ML&P by cutting back on the on-line (spin) reserves supplied by combustion turbines. ML&P has projected annual fuel cost savings up to \$800,000 and direct customer outage savings of \$1,200,000. The pay back on the project cost is about 5-10 years. The federal government will have a decision on the grant award by year end 1993. There are other alternate government programs under DOE, DOD, NSF, etc., that could also be approached by ML&P and B&W if the TRP proposal does not succeed.

## **SOLID WASTE SERVICES HIGHLIGHTS AND FUTURE EVENTS**

**DECEMBER 1992** - Construction of Cell three at the Anchorage Regional Landfill was completed and filling operations began. This \$4.5 million project was constructed without the use of bonds and was \$1.3 million lower than engineers' estimates.

**MARCH 1993** - A gas extraction system was installed at the former Merrill Field Landfill in order to protect adjacent properties from the effect of migrating landfill gases caused by the decaying waste. An analysis to determine if the gases being generated might have an economical beneficial use was started and will be completed in 1993.

**JUNE 1993** - The Anchorage Regional Landfill Comprehensive Plan was completed and printed.

**AUGUST 1993** - A study of the Merrill Field leachate collection system was started in 1993 and is expected to be completed in 1994. After the study is completed, the design and construction of a new and improved leachate collection system will begin.

**SEPTEMBER 1993** - The Girdwood Transfer Station construction was completed and began operation. This project was constructed using State of Alaska DEC matching capital grant monies.

**1994** - Design for cells four and five will be completed in early 1994. After the design work is complete construction of cells 4 and 5 will commence with completion expected to be in early 1995.



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# PORT OF ANCHORAGE HIGHLIGHTS AND FUTURE EVENTS

## LATE 1992

Acquired patent from the State of Alaska to 1,300 acres of tideland located north of and adjacent to the Port.

## LATE 1992

Anchorage was Host Port for the annual 1992 AAPA Convention. This three year Port project brought over \$1 million into the Anchorage economy at a cost to the Port of only \$8,600.

## FEBRUARY 1993

Completed Port Area Transportation Analysis to identify Port access problems and potential solutions.

## JUNE 1993

The Port of Anchorage successfully marketed itself to ARCO Alaska, Inc. as one of the logistical support bases for Upper Cook Inlet oil exploration.

## JULY 1993

Cargo flow through the Port increased significantly during the first half of 1993. 1.2 million tons is the highest mid-year tonnage total since the Trans-Alaska pipeline construction boom in the mid-1970's. Year-to-date petroleum tonnage increased 42% and total tonnage increased 15% over 1992.

## July 1993

The Port of Anchorage received two legislative grants from the State of Alaska:

\$4,000,000	Port Dock Fendering System
\$4,154,000	Port Land Development

## AUGUST 1993

The Port of Anchorage Petroleum Users Group (PUG) completed a Risk Assessment Feasibility Study to determine the level of contamination cleanup required in the Port area.

## AUGUST 1993

Completion of the Dock Pile/Cathodic Protection Renovation Project. This was a multiple year project which cost \$6.2 million.

## OCTOBER 1993

Completion of a major dock deck renovation project involving repair of deck delamination and rail keyways.

## SPRING 1994

Commence construction on New Port Fendering System Project.

SPRING 1994

Commence construction on "A" & "EE" Land Development Project.

MAY - SEPTEMBER 1994

Significant increase in the utilization of the Port as a logistical support base for Upper Cook Inlet oil exploration.

# **MERRILL FIELD AIRPORT HIGHLIGHTS AND FUTURE EVENTS**

## **FEBRUARY 1993**

Merrill Field Airport received a Certificate of Commendation from the Federal Aviation Administration in recognition of the outstanding contribution management staff made in reducing runway incursions and improving airport safety. Completion of an Airport Improvement Project, which included security fencing and remote control capabilities for vehicle access gates, was primarily responsible for reducing runway incursions.

## **DECEMBER 1992 & FEBRUARY 1993**

The Airport acquired two land parcels located in the runway clear zones. These acquisitions will alleviate flight safety hazards and ensure compatible land use in accordance with Master Plan Update recommendations. A large monetary donation by the Eastridge III Homeowners Association provided the initiative in acquiring one of the parcels.

## **MARCH 1993**

The Airport compiled its Storm Water Pollution Prevention Plan in accordance with the Environmental Protection Agency National Pollutant Discharge Elimination System (NPDES) General Permit. The plan was prepared by Airport staff which resulted in a large cost savings. Staff also provided assistance to the leaseholders to ensure their compliance with storm water discharge regulations.

## **JULY 1993**

Successfully completed the demolition/removal of a large structure located within the runway clear zone thereby improving operational safety of the Airport.

## **SUMMER 1993**

Through a joint Municipal effort between Solid Waste Services (SWS), Anchorage Water & Wastewater Utility (AWWU) and the Airport, approximately 30,000 cubic yards of material was placed in a problem drainage area over the closed landfill. The Airport coordinated the disposal of AWWU soils that were not usable for utility trench backfill while SWS graded the site to properly drain after the material was placed on site. The result was quality work at minimum cost for a project required to meet Federal storm water discharge regulations.

## **FALL 1993**

A Pilot Controlled Lighting and an Automated Surface Observing System are being installed at the Airport as a result of the relocation of the Anchorage Flight Service Station from Merrill Field Airport to Kenai Airport. These improvements will provide pilots with information previously provided by the Anchorage Flight Service Station.

### ROADWAY VEHICLE TRAFFIC COUNTS

5,000/Weekday; 3,000/Saturday; 2,000/Sunday. 90% for Airport activities and 10% for pass-through to surrounding streets.

### AIRCRAFT OPERATIONS

Up 8% for January 1 thru June 30 (123,882 operations).

### TOWER FREQUENCY CHANGE

A higher frequency was commissioned to eliminate FM radio interference from tower/aircraft communications.

### UNIVERSITY OF ALASKA ANCHORAGE, PHASE II

UAA is planning an addition to the Merrill Field Aviation Complex in order to provide a more comprehensive aviation education program for domestic and international students.