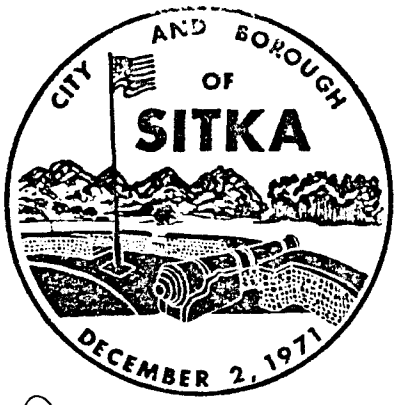
City and Borough of Sitka

ELECTRIC DEPARTMENT
P.O. BOX 79 · SITKA, ALASKA · 99835



Jan copies

February 14, 1978

Artwin Schmidt
Sport Fish Division
Alaska Department of Fish & Game
P. O. Box 499
Sitka, Alaska 99835

RE: Energy Conservation

Dear Art:

Attached is a copy of the Press Release issued to the Daily Sentinel for publication as soon as possible. The two local TV stations and KIFW radio are also to be notified.

The measures outlined in the release are only the first of several options open to us in an effort to conserve energy/water, and this Department will keep you informed.

The Alaska Lumber and Pulp Co. has repaired their valving problems at the filter plant. This should aid in reducing spills at this location. In addition, staff meetings are being held by ALP management people to aid departments in reducing water usage.

If you have any questions or need additional information, please do not hesitate to call.

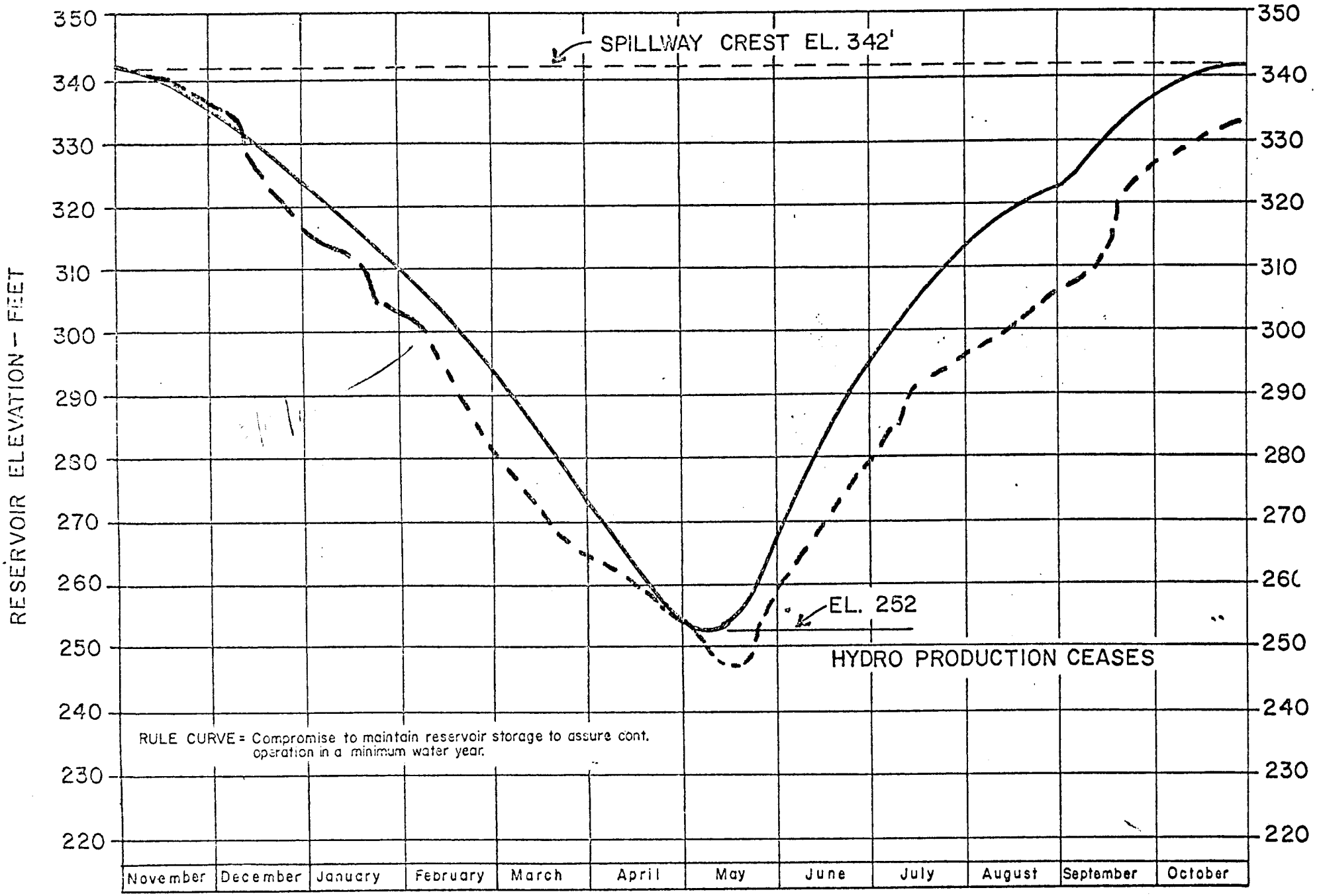
Very truly yours,

James D. Dwyer

James D. Dwyer
Superintendent

cc: Fermin Gutierrez
Bill Hughes, USF&WS

BLUE LAKE RULE CURVE



The residents of the Greater Sitka area are being asked to engage in a voluntary program of energy conservation due to water levels at Blue Lake continuing to lower at a rate paralleling the critical shortages experienced in the winter of 1973-74.

During the calander year of 1977, the Blue Lake Hydro Plant produced 45,423,600 kilowatt hours of electricity--up 35% from 1973. The system peak load was 8795 kilowatts--up 45% from 1973.

The Rule Curve method of operating Blue Lake Reservoir was devised in 1974 by our consulting firm of R. W. Beck and Associates to insure the availability of generation in a minimum water year. In an average water year, Blue Lake is considered to have an inflow of 307,000 acre-feet; water useage by ALP, the fish releases we are required to maintain, and the power generation discharges account for 251,000 acre-feet of this amount. 35,000 acre-feet of this storage is at or below the intake structure and not available for utilization. This leaves 21,000 acre-feet as storage above operations. The situation becomes more critical during a minimum water year due to the fact that the anticipated inflows are limited to 211,000 acre-feet of water and combined demands are again at 251,000 acre-feet resulting in a deficit of 40,000 acre-feet of storage. This has the effect of starting a new generation year at a lower level and compounding the rate of drawdown. It is apparent that this condition will occur more frequently as power consumption increases during the years prior to Green Lake coming on line.

As the graph shows, hopefully, we start out in November with a full lake and because useage exceeds inflows, we lower the water level until mid-May. At this

time, the lake has historically started to refill.

If we receive normal precipiation in the drainage area surrounding the reservoir, we are again at the maximum storage by November. If we are not above the curve, we have in the past asked ALP for aid in supplying additional generation from their steam plant. In prior years, the mill has been most cooperative in coming to our aid, however, new environmental requirements will more fully utilize ALP's generation output, and they will only be able to supply us on an availability basis.

Failing aid from ALP we would normally turn to high cost diesel power to assist in retarding the drawdown of the reservoir, however, because of growth in electrical energy useage, we are now operating our diesel plant on an average of 16 hours Monday through Friday, and 10 hours a day Saturday and Sunday. To add to the seriousness of the situation, on February 6, the loss of our largest diesel unit due to a cracked liner and scored piston, has reduced diesel production to one-third of normal capacity. Parts are on the way and we hope to have the unit back in operation soon. In the meantime, ALP has consented to supply us with 1,000-2,000 Kilowats of power as it is available, accounting for approximately one-fourth of our daily requirements. Units at the diesel plant are producing an additional 1,000 Kilowatts and the remaining energy is being generated at the Blue Lake Plant.

Should Lake levels recede at the present rate, Hydro production would for all practical purposes cease on or about May 16, needless to say, this would have a most adverse effect upon the community.

In an effort to conserve energy and, therefore, water, residents are requested to turn off excess lighting both inside and exterior. Merchants are asked to eliminate outside advertising that requires electrical energy and to hold interior lighting to a minimum. Home owners should utilize their washers and dryers at normal times, but make sure that full loads are processed and use cold water soaps that are available--skip a wash day if possible. In most modern homes the electric hot water heater is the biggest user of energy, followed by conventional ranges and dryers. Get in the habit of turning off light in vacant rooms: portable broilers and ovens use far less energy than build-in ovens of larger areas, a micro-wave oven is a great energy saver.

The Electric Department will be turning off some street lights, but not to the extent of the 1973-74 situation. This will aid in preventing breakins at the boat harbors and business district, as well as, insure residents of home security.

If the measures listed above are not sufficient to raise the reservoir so that we are again on the Rule Curve, the situation can only be alleviated by more drastic measures such as brownouts and the reduction of voltage, and finally by the rotation of power among the various city feeders.