

ALASKA POWER AUTHORITY

SUSITNA HYDROELECTRIC PROJECT

PROGRESS REPORT

FOR

JULY 1981

ACRES AMERICAN INCORPORATED  
1000 Liberty Bank Building  
Main at Court  
Buffalo, New York 14202  
Telephone: (716) 853-7525

ALASKA POWER AUTHORITY  
SUSITNA HYDROELECTRIC PROJECT  
MONTHLY PROGRESS REPORT

Report No. 18

Period: July, 1981

Progress Report No. 18 covers the activities on the Susitna Hydroelectric Project for the month of July, 1981.

Task 1, Power Studies, is complete.

Task 2, Survey and Site Facilities, continued with logistical support and re-supply of all field camp activities. Approximately 75 personnel were engaged in field activities, exclusive of the ADF&G camps. Work continued indirectly on the access roads while the construction fleet size is established. Access road capital cost estimates are being revised. CIRI/H&N continued its camp operation and resolved minor problems with the camp's sewage effluent quality. R&M initiated aerial photography of the northern alternate access corridor and the transmission corridor from Point McKenzie to Willow and Healy to Fairbanks.

Task 3, Hydrology, continued with the approval of MRI to process the 1980 climate data cassettes. The regional flood studies report has been reviewed by Dr. Carlson of the University of Alaska and his comments are being reviewed by R&M. Revised SSARR model runs are being made to estimate the maximum flood in the basin. Calibration continued on the HEC-2 open water model and the ice simulation model. The work plan formulated by R&M for morphological studies is being finalized. R&M updated the Field Data Index to include data from the past eight months and distributed same to those on the mailing list. Crest stage data was recorded at Gold Creek for a 50,000 cfs flood. Almost daily readings were taken on the Denali staff gage. The first bedload sampling trip was conducted by USGS and R&M. All climatic stations and stream gages are operating satisfactorily.

Task 4, Seismic Studies, continued with finalization of WCC's 1981 scope of work and budget. This will be discussed at the site in early August with the field personnel. Alternative approaches to the network monitoring program were submitted to Acres for review; a final approach will be determined in early August. Final updating and review of information on deep, very deep and very long reservoirs was completed. The Quaternary geology field program was completed this month. A preliminary Quaternary geology map and interpretation summary was prepared. Mapping is being conducted primarily along the Talkeetna-Broxson Gulch thrust fault, the Susitna feature and the "Fins" features. The field geophysics program is complete and the LSA-CIR photography was completed and interpreted with linear features being field checked.

Task 5, Geotechnical Investigations, continued by maximizing the flow of field information and its reduction for use in geologic interpretation. Acres and Mr. Rivard's review of R&M's photo interpretation report is complete and the comments will be forwarded to R&M in early August. Work on completing the materials testing program's design was emphasized during July.

The exploration program at Devil Canyon was completed as borehole BH-3 was finalized. At Watana, borehole BH-12, 800 feet deep, was drilled to delineate a major discontinuity on the south abutment. Boreholes BH-1 and BH-13 are to be drilled next. Geologic mapping at the Devil Canyon site was completed and only a few specific areas outside the specific dam site are to be completed at the Watana site. Auger drilling in Watana's Borrow Area H was completed with a total of eight holes being drilled. Auger drilling was started at Borrow Area D, with three holes being completed. The seismic refraction surveys scheduled for this year were completed. Eight lines were made at Watana and one at Devil Canyon. A draft of the report will be available in late August. Test pitting was completed at Devil Canyon in the alluvial four area.

The Final Geotechnical Report - 1981 Activities was returned to the printers for improvement in printing quality on some pages and will be distributed at the end of the month.

Task 6, Design Development, continued with design criteria being revised due to more detailed design work at the site. An updated design criteria summary was to be produced this month. However, in light of these revisions a more fully detailed version will be produced next month. Spillway alternatives are being reviewed to alleviate nitrogen supersaturation and cost estimates are being finalized. Preliminary camp population loading and durations were established. Work commenced on the Watana and Devil Canyon diversion schemes by establishing the height of the cofferdam required for various tunnel diameters. Work commenced on the capital cost estimates of the tunnels and associated cofferdams required to optimize the diversion schemes.

Task 7, Environmental Studies, continued with the annual reports for all sub-tasks being delivered to FERC for their comments. During in-house discussions a schedule of formal work products for the remainder of Phase I was developed. Acres participated in the formation of a Fisheries Mitigation Task Force. Discussions were held with ADF&G fisheries regarding reporting requirements and schedules. A response was prepared to APA's concerns regarding coordination between the wildlife and habitat studies' programs.

TES continued work during the month by making recommendations to Acres concerning the environmental acceptability of disposing overburden from the Watana dam abutments directly into the river. Also, the status of the escalation report was discussed with Acres and other subcontractors. Discussions were held between TES, FOA, Acres and APA concerning development of a non-Susitna power scenario. Testing for the presence of cultural resources was conducted in 45 of 56 1981 survey locales. Two additional cultural resource sites were located bringing the total to 84 discovered to date. The final Land Use Annual Report was issued. TES personnel met with University of Alaska personnel to field study potential recreation sites. This field study was hampered by poor weather. The TES procedures manual for Transmission Line Corridor Environmental Studies was finalized for in-house review. The fish ecology study team continued a literature search pertaining to their respective study subjects. The TES group leaders of the various study areas met to discuss the preparation of the wildlife habitat analysis for access route evaluations. Field operations continued to monitor bird and nongame mammals habitat and to monitor radio collared foxes during the period. Plant ecology teams continued vegetation mapping and searches for endangered plant species. A draft outline for the Abstract, Feasibility Report, and License Application Exhibit E was developed and sent to Acres for review.

Stephen R. Braund & Associates commenced work in late June on the sociocultural study by attending numerous meetings with Tom Lonner regarding strategy, organization, work plan and progress. A review of APA's correspondence files and public testimony related to the Talkeetna Susitna Hydroelectric meeting was accomplished during the month. Two field trips were held to interview local residents was held during the month.

Task 8, Transmission, continued with the first draft of the planning memorandum entitled, "Preliminary Transmission System Analysis" was prepared during the month. This memorandum will review all work in the electric system studies completed to June 15, 1981. A letter was sent to APA summarizing the results of the transmission alternatives studies. Transmission line routing was identified on USGS maps and cooperation was maintained with other subtasks concerning this task.

Task 9, Construction Cost Estimates and Scheduling, continued with Acres requesting FMA to assemble data concerning labor costs, material and equipment costs, transportation alternatives and the like for the final costing of the project. A field trip will be held in early August to discuss these items.

Task 10, Licensing, continued with discussion with several State of Alaska agencies to determine the efforts of recent changes in regulatory programs. A draft outline for the March 1981 feasibility report is being prepared.

Task 12, Public Participation, continued with Acres providing information to Jean Buchanan regarding the damsite selection process. An outline was prepared for the October public meetings.

Task 13, Administration, continued by monitoring and updating the project schedule to August 3, 1981. During July additional funding allocations were approved by APA. Acres' insurance broker reviewed Acres' subcontractors' insurance policies and confirmed they are in accordance with their contracts.

Task 14, ADF&G Support, continued with routine functions continuing during the report period.

## TASK 1 - POWER STUDIES

Task complete.

## TASK 2 - SURVEY AND SITE FACILITIES

### ACRES ACTIVITIES

#### Subtask 2.02 - Provision of Field Camps and Associated Logistic Support

Logistical support and resupply of all field camp activities continued throughout the month with the Watana Camp and High Lake Lodge fully occupied and with the 15-man archaeology field camp and the avian ecology field camp in operation. Total personnel in the field reached approximately 75, exclusive of the ADF&G camps.

Logistical support was provided to the resident and juvenile ADF&G group in the form of helicopter moves only.

#### Subtask 2.05 - Land Acquisition Analysis

Initial discussions were held with CIRI/H&N on initiation of work for this subtask.

#### Subtask 2.10 - Access Roads

Work continued indirectly on the access roads. Under Task 9, work continued to firm up the construction equipment fleet required for Watana and Devil Canyon. When the construction equipment fleet is established, work can proceed on final evaluation of the logistics cost for the access alternatives. Work has proceeded on revising capital construction costs of the access alternatives. Environmental data gathering and assessments on the access alternatives are continuing under Task 7.

Meetings were held in Anchorage with the recreation planning group from the University of Alaska to coordinate access planning with recreation planning.

### CIRI/H&N ACTIVITIES

CIRI/H&N continued its regular operation, maintenance, and related inspection of camp facilities. Minor problems have been encountered with the camp's sewage effluent quality during this period. However, continued monitoring and mechanical adjustments of selected aspects of the treatment plant operations are gradually improving these effluent characteristics.

### R&M ACTIVITIES

#### Subtask 2.08 - Aerial Photography and Photogrammetric Mapping

Aerial photo was initiated for the northern alternate access corridor and the transmission corridor from Point McKenzie to Willow and Healy to Fairbanks.

## TASK 3 - HYDROLOGY

### ACRES ACTIVITIES

#### Subtask 3.03 - Field Data Collection and Processing

Routine monitoring of R&M field work and processing of data continued. Processing of 1980 climate data cassettes by MRI has been approved. Relocation of several snow courses for this winter's observations were finalized.

#### Subtask 3.05 - Flood Studies

The regional flood studies report prepared by R&M has been reviewed by Acres' consultant, Professor R. Carlson of the University of Alaska. His comments are being discussed with R&M. Data collection for reevaluation of PMF is complete. Detailed analyses have been performed to estimate the PMF and associated dew point values. Historical storms have been analyzed for revised flood reconstitution studies and revised SSARR model runs are being made to estimate the probable maximum flood in the basin.

#### Subtask 3.06 - Hydraulic and Ice Studies

Computer runs were continued for the river reach between Chulitna confluence and Portage Creek to calibrate the HEC-2 open water model. Work continued on data input and calibrating of the ice simulation model. Results of temperature modeling of reservoirs are being reviewed to assess if further refinements are needed.

#### Subtask 3.07 - Sediment Yield and River Morphology

The work plan formulated by R&M for morphological studies is being finalized. Acres is exploring possible involvement of leading experts on the subject to review R&M work.

#### Subtask 3.10 - Lower Susitna Studies

Several hydrologic analyses of historical river flows required for environmental assessment of pre-project conditions are currently being carried out by R&M and USGS under Acres' direction. The information package on pre and post-project flow conditions is being assembled for TES.

### R&M ACTIVITIES

#### Subtask 3.02 - Field Data Index and Distribution System

The Field Data Index was updated to include data from the past eight months, and distributed to those on the mailing list.

#### Subtask 3.03 - Field Data Collection and Processing

All stream gages operated by USGS and R&M are operating satisfactorily. Crest stage data was recorded at Gold Creek from a 50,000 cfs flood. Almost daily

readings were taken on the Denali staff gage. Several snow course markers were relocated. Data was gathered for a rising and falling hydrograph at Gold Creek and Vee. The first bedload sampling trip was conducted by USGS and R&M. Suspended sediment samples were collected for the settling column studies. All climatic stations are operating satisfactorily. A purchase order was issued to MRI to process all data tapes collected through June 1981. R&M is programming its computer to accept the edit program.

Daily readings were taken at the Watana Camp evaporation pan. Velocity points on Susitna Basin glaciers were surveyed and thermocouple readings were taken. The draft report of all ice studies to date in the Susitna River was completed.

#### Subtask 3.05 - Flood Studies

Dr. R. Carlson's comments on the draft close-out report were transmitted to Acres for review.

#### Subtask 3.06 - Hydraulic and Ice Studies

Calibration of the HEC-2 water surface profile model continued.

#### Subtask 3.07 - Sediment Yield and River Morphology Studies

A scope of work for river morphology studies was drafted. Studies are being coordinated with the instream flow studies group.

### TASK 4 - SEISMIC STUDIES

#### ACRES ACTIVITIES

The final scope of work and budget of the 1981 activities has been finalized with Woodward-Clyde Consultants. A field trip to the site is scheduled for early August at which time the Task Supervisor will view and discuss the field program with WCC personnel at the site. Acres is continuing to provide coordination and logistic support of WCC's field activities.

#### WCC ACTIVITIES

##### Subtask 4.08 - Preliminary Dam Stability Analysis

This task is included as part of Subtask 4.13.

##### Subtask 4.09 - Long-term Seismologic Monitoring Program

A letter describing alternative approaches to preparation of the network monitoring manual was sent to Acres for review and comment. We expect to agree on an approach early in August 1981 and commence work on the manual at that time.

Records of historic events in Alaska are being received, and WCC expects to receive available records by early August 1981. Analysis of the records will commence at that time.





Data on Benioff Zone's seismicity for Japan and South America are being received, and WCC expects to receive all appropriate data by early August 1981. Analysis of the records will commence at that time.

#### Subtask 4.10 - Reservoir Induced Seismicity

Final updating and interpretation of the information available on deep, very deep, and very large reservoirs was completed. Statistical modeling of the relationship between reservoir induced seismicity and in-site, noninduced seismicity will be undertaken during August 1981.

#### Subtask 4.11 - Seismic Geology Field Studies

The Quaternary geology field mapping program was completed this month. A preliminary Quaternary geology map has been prepared along with a summary of key interpretations. A total of 10 samples of organic material have been sent to Geochron in Cambridge, Massachusetts for radiometric age dating. Age dates are expected to be available in late August or early September 1981. Dr. Norm Ten Brink of Grand Valley State College, Michigan, conducted a week long field review of the Quaternary field work. His review comments were incorporated into the final two weeks of the Quaternary field studies.

Mapping has been conducted primarily along the Talkeetna-Broxson Gulch thrust fault, the Susitna feature, and the "Fins" feature. This mapping should be completed in early August 1981. Mapping has been initiated along virtually all of the lineaments in the Devil Canyon site area and will continue through August 1981.

The field geophysics program has been completed. A total of 12 magnetic traverses totalling 72,550 feet in length were conducted across the Talkeetna-Broxson Gulch thrust faults and the Susitna feature. One seismic refraction line, 2,200 feet long, was conducted across the Talkeetna Broxson Gulch thrust fault.

Low sun-angle, color near infrared (LSA-CIR) photography was received and has been interpreted. Linear features observed on the LSA-CIR have been field checked along the Talkeetna-Broxson Gulch thrust fault and Susitna features.

Based on the work conducted to date, a trench site was selected along the Talkeetna-Broxson Gulch thrust fault. The trench site is located south of Fog Creek and east of Stephan Lake (approximate coordinates are 62 degrees 42 feet north latitude and 148 degrees 42 feet west longitude). The trench was scheduled to be excavated on July 22, 1981. However, logistical complications developed during shipment of shoring. Based on current projection, WCC expects to start trenching on August 1, 1981.

Phil Birkhahn and Jon Lovegreen of WCC met with Warren Knokleberg of the U. S. Geological Survey in Menlo Park, California, on July 1, 1981. Dr. Knokleberg's mapping of the Broxson Gulch thrust fault and the fault's relationship to the Talkeetna thrust fault were discussed. This information has been incorporated into the 1981 field studies.

#### Subtask 4.12 - Evaluation and Reporting - 1981

A request was received from Acres for price and time estimates to produce an additional 251 copies of the 1980 Task 4 Interim Report and 300 copies of the 1981 report. An estimate for both reports was given to Lance Duncan by phone on July 10, 1981.

A question and answer format for the APA newsletter discussion of the seismic geology studies was reviewed by Jon Lovegreen. Review comments were forwarded to Jim Gill of Acres for review and transmittal to Nancy Blunck of the APA.

#### Subtask 4.13 - Ground Motion Studies

The revised schedule received from Acres in June 1981 was discussed. It was agreed that preliminary ground motion data could be estimated and presented to Acres on September 15, 1981, provided results from geologic, seismologic, and reservoir induced seismicity studies are available by September 5, 1981.

### TASK 5 - GEOTECHNICAL INVESTIGATIONS

#### ACRES ACTIVITIES

Acres' emphasis on Task 5 for the month of July has been maximizing the return of information from the field and reduction and summarization of this information for use in geologic interpretation. Intensive effort has been concentrated on production of engineering data summaries for use in generation of design criteria.

#### Subtask 5.02 - Photo Interpretation

Review of R&M's draft report was completed. Mr. A. L. Rivard has provided his review of this report, and combined Acres' comments will be transmitted to R&M for finalization in early August. R&M was authorized to proceed with the air photo interpretation of the northern access corridor realignment as well as photo interpretation on the north and south intertie.

#### Subtask 5.05 - Exploratory Program Design (1981)

Following the July exploration program design finalization, emphasis was placed on completing the materials testing program's design. A careful evaluation of test requirements is being conducted to ensure optimal return of information, both for estimating and design information needs.

#### Subtask 5.06 - Exploratory Program (1981)

The exploration program continued at full speed with Devil Canyon boring BH-3 (upper left abutment near centerline) being the fourth and last hole at the site. Between the 1980 and 1981 programs, two deep boreholes were drilled in the right abutment and proposed powerhouse areas, two in the valley at river

elevation (including one under the river from north to beyond the south side), one on the upper left abutment, and two under the saddle dam and lake.

At Watana, BH-12 was drilled on the south abutment to delineate a major discontinuity detected by a seismic line. The hole was drilled a full 800 feet intersecting a severely altered zone in its lower half. Interpretation and detailed logging was continuing at the end of July, but from preliminary results, the hole appears to have fulfilled its intended purpose. The next scheduled holes are BH-1 to investigate the seismic line anomaly downstream of the centerline on the right abutment, followed by BH-13 across the "The Fins" structure.

Geologic mapping at the Devil Canyon site was completed and only a few detailed areas outside of the specific dam site at Watana remain to be completed in August and September.

Auger drilling in Watana's Borrow Area H was completed with a total of eight holes being drilled. These holes indicated the area to be overlain by a layer of glacial till about 25 to 40 feet in thickness, which could provide an alternate source of core material. Samples collected from the drilling have been returned to Anchorage for lab testing. Auger drilling was started in Watana's Borrow Area D, with approximately three holes being completed.

A total of eight seismic lines were completed at the Watana site, and one line was completed at the Devil Canyon site during the month. This completes the seismic refraction surveys scheduled for this year. It is expected that a draft report will be available by the end of August.

These seismic lines were designed to further define the limits of the relict channel, determine overburden thickness, locate low-velocity zones in the bedrock to assist in siting some of the diamond drill holes, and to check thickness of borrow materials.

Test pitting was completed at Devil Canyon in the alluvial fan area. Due to the extent of the deposit and the steep side slopes, two angled trenches were excavated down the slope thereby exposing a good lateral and vertical exposure of borrow material. Field logs indicate the material is as anticipated; several auger holes are to be drilled in August. Lab testing is underway.

Summary drill and test pit logs are being finalized in Buffalo for final typing in September and October. Geologic logging of the 1980 cores is completed, and summary logging of the COE cores has commenced.

#### Subtask 5.08 - Data Compilation

The Final Geotechnical Report - 1980 Activities was returned to the printers for improvements in printing quality on some pages and will be distributed at the end of the month.

Data reduction of all COE and Acres' geological mapping has been put on base sheets, and interpretation and production of rough geologic layouts is underway. Preparation of extensive cross-sections and analysis of subsurface data is being conducted to aid in the data reduction.

Discussions continued with the USGS and USBR to locate the original field data from the 1950's Devil Canyon investigations. One USBR report has been transmitted, and it contained a limited additional amount of information on boreholes. However, the data did allow approximate correlation of the USBR and state plane coordinate systems, thereby correcting location plans for explorations. Receipt of further data is dependent on locating the USBR files.

## TASK 6 - DESIGN DEVELOPMENT

### ACRES ACTIVITIES

#### Subtask 6.09 - Design Criteria for the Watana Development

#### Subtask 6.10 - Design Criteria for the Devil Canyon Development

Design criteria has been reassessed and expanded in light of more detailed design work at the site. It was intended to produce an updated copy of the criteria this month but, with the closer understanding of the final arrangement concepts, it is anticipated that the draft criteria will be fully documented next month in expanded form.

#### Subtask 6.11 - Preliminary Design of Watana Dam

Development of design criteria for the Watana Dam is continuing.

#### Subtask 6.15 - Watana Spillway Alternatives

#### Subtask 6.16 - Devil Canyon Spillway Alternatives

Spillway alternatives are being examined to alleviate nitrogen supersaturation from the downstream discharges. Costing of alternative spillways is almost complete, and the modifications resulting from the most recent alternatives are being incorporated.

#### Subtask 6.20 - Access and Camp Facilities

Work continued on the camp facilities during the report period. Preliminary population loadings and durations for the camps were established. Typical camp designs and drawings for two previous projects were obtained and are currently being evaluated.

#### Subtask 6.21 - Watana Diversion Schemes

#### Subtask 6.22 - Devil Canyon Diversion Schemes

Work continued on development of the Watana and Devil Canyon diversion schemes. Maximum water surface elevations were established for the various tunnel diameters, thus establishing the height of cofferdam required. Work commenced on the capital cost estimates of the tunnels and associated cofferdams required to optimize the diversion schemes.

#### Subtask 6.23 - Optimize Watana Power Development

Optimization of installed capacities has continued, and alternative types of powerhouses are being examined.

#### Subtask 6.25 - Optimize Dam Heights

The optimum height of the Watana dam has been determined.

### TASK 7 - ENVIRONMENTAL STUDIES

#### ACRES ACTIVITIES

##### Subtask 7.01 - Administration

Annual reports for all subtasks were delivered to FERC for their preliminary review and comment. In-house discussions were held concerning documentation of the formal agency coordination process. A schedule of formal work products was developed for the remainder of Phase I. This schedule was discussed with TES.

Continued environmental input into Task 6 was provided.

##### Subtask 7.05 - Socioeconomic Analysis

Continuing discussions were held with APA and FO&A regarding contents of the final work product. Dr. Hayden attended a meeting to coordinate socioeconomic studies.

##### Subtask 7.10 - Fish Ecology Studies

Acres participated in the formation of a Fisheries Mitigation Task Force. Discussions were held with ADF&G's fisheries regarding reporting requirements and schedules.

##### Subtask 7.11 - Wildlife Ecology Studies

A response was prepared to APA concerns regarding coordination between wildlife and habitat studies' programs.

#### TES ACTIVITIES

##### Subtask 7.01 - Administration

TES prepared and submitted to Acres a schedule of work products for the remainder of Phase I, copies of which were sent to TES's subcontractors and ADF&G. TES also prepared a distribution of cost allocations; this was sent to TES's subcontractors.

Important discussions held during the month included preliminary recommendations made to Acres concerning the environmental acceptability of disposing overburden from the Watana dam abutments directly into the river, and the status of the escalation report was discussed with Acres and other subcontractors.

#### Subtask 7.05 - Socioeconomic Analysis

Work continued on refinement of methodology and assumptions to be utilized in Work Package 4 - Forecast Without Susitna. Discussions were held between the socioeconomic project leader for FO&A and the APA concerning development of a non-Susitna power scenario as well as between TES and Acres.

The TES group leader and project leader and other staff members for FO&A met in Alaska to discuss progress as well as problems related to the Work Package 4 Forecast. The TES group leader met with several Alaska state and local agencies concerning the exchange of data and information and general Susitna study coordination.

#### Subtask 7.06 - Cultural Resource Investigation

Testing for the presence of cultural resources was conducted in 45 of 56 1981 survey locals. Testing also included areas of auger holes, bore holes, seismic lines, and test trenches. Two additional cultural resource sites were located. Thus, a total of 84 sites have been discovered to date, nine of which have been systematically examined. Soil profile interpretation was conducted. Three tephra (volcanic ash layers) have been identified and are being dated.

An historic cabin on Kosina Creek, formerly owned by trapper Elmer Simco, was recorded.

#### Subtask 7.07 - Land Use Analysis

TES printed and distributed the final Land Use Annual Report. The group leader traveled to Alaska and conducted field work with the land use team from the University of Alaska. Due to poor weather, some aspects of the analysis of access corridors and visual resources could not be accomplished. During this trip, the group leader met with numerous federal, state, and local planning and management agency personnel concerning their land use efforts in the Susitna basin.

#### Subtask 7.08 - Recreation Planning

The TES group leader met with University of Alaska recreation planning staff in the field and conducted further analysis of potential recreation sites. This effort was hampered by the poor weather conditions. During this trip, the group leader met with state and local recreation and planning agency personnel concerning plans for recreation in the upper Susitna basin.

#### Subtask 7.09 - Transmission Corridor Assessment

TES prepared the draft Procedures Manual for the Susitna Hydroelectric Project transmission line corridor environmental studies. In-house review of this document was continuing at month's end.

All TES's subcontractors were actively involved in transmission corridor reviews. Their input will be utilized in the further environmental analysis of transmission corridors.

#### Subtask 7.10 - Fish Ecology Studies

Much of the Fish Ecology study team effort was directed towards the continuation of the literature search on topics pertaining to impact/mitigation issues, sub-arctic and arctic lakes and impoundments, estuarine concerns as well as resident fish ecology and life history.

The formation of a Fisheries Mitigation Task Force Core Group was initiated. Possible group members, initial meeting plans, and discussion topics were considered. An outline and work plan for completion of the Fisheries Abstract was prepared.

Alaska operations included visits to ADF&G field crews working throughout the Susitna study area. Discussions on the development of an instream flow study plan have taken place. A brief summary on the June dissolved gas study conducted by D. Schmidt was completed.

#### Subtask 7.11 - Wildlife Ecology Studies

Several meetings and discussions occurred among the group leader investigators. The group leader visited Fairbanks and discussed the project with the principal investigator for furbearers and the investigator in the nongame mammal discipline. The main topic of discussion was the preparation of the wildlife habitat analysis to be used in evaluating access route alternatives. The TES group leader provided some ideas concerning the relationship between the wildlife and fisheries efforts in regard to mitigation planning. Plans were formulated for a trip with Dr. Banfield during August to meet with ADF&G and to visit the study area for the purpose of further evaluating the potential for impact on caribou and to compare the access route alternatives.

TES submitted to Acres a detailed written description of the technical information that TES will require from ADF&G to permit impact assessment concerning big game.

Field efforts during July in the birds and nongame mammals disciplines included initiation of data analysis of the breeding bird censuses completed during late June. Field work centered around collecting additional habitat data, continued nongame mammal surveys, ground checks of raptor nests, and review of access route alternatives. The principal investigator began the analysis of habitat value, needed as input for the access road habitat comparison.

Field efforts in the furbearer studies during July resulted in the location of two previously undiscovered fox dens and the collaring of five additional foxes. Monitoring of radio collared foxes continued, as well as an intensive study of denning behavior and the identification of critical den related foraging areas. A reconnaissance level survey of the access route corridors was conducted and included both ground surveys of some areas as well as an aerial review of all

alternatives. Recommendations based on that survey are currently being prepared.

#### Subtask 7.12 - Plant Ecology Studies

July progress included a meeting between the plant ecology group leader and two members of the Army Corps of Engineers in Anchorage to discuss Wetlands. Also the group leader met with Karl Schneider to discuss concerns related to the coordination of the vegetation and wildlife efforts.

Field work by the plant ecology team in the upper basin continued. A survey was made for endangered and threatened species. Vegetation mapping and searches for endangered and threatened species were performed on the alternative access corridors.

Field work by the AES continued in the downstream area. High water during mid-July permitted observation under flood conditions. Information concerning the downstream area was obtained from R&M.

#### Subtask 7.14 - Access Route Environmental Analysis

Field work by various subtasks concerning the alternative access plans progressed during July, and data analysis commenced toward the recommendation of a selected access plan.

#### Subtask 7.15 - Preparation of FERC Application

A draft outline for the Abstract, Feasibility Report, and License Application Exhibit E was developed and sent to Acres for review and approval. It was also distributed to all TES's subcontractors and consultants.

#### STEPHEN R. BRAUND & ASSOCIATES ACTIVITIES

Work commenced in June on the sociocultural study by attending numerous meetings with Tom Lonner regarding research strategy, organization, work plan and progress. An interview with APA's staff determined their understanding of public feelings relating to the project. A review of APA correspondence files and public testimony related to the Talkeetna Susitna Hydroelectric meeting was accomplished during the month. A review of the socioeconomic reports of other subcontractors pointed out areas where further study was required. Two field trips to the study area to interview local residents were undertaken during the month.

#### TASK 8 - TRANSMISSION

##### ACRES ACTIVITIES

As reported previously, notes of meeting in draft were distributed to each of the utilities that Acres met with during the month of April for their comments or approval. Only GVEA and AMLP responded. After a phone call in early July,



MEA answered on July 15, 1981. FMVS and CEA have not responded up to the time of writing of this report.

#### Subtask 8.01 - Transmission Line Corridor Screening

The draft of the close-out report was nearly completed. This report was rewritten to conform to the screening methodology used in the Development Selection Report.

#### Subtask 8.02 - Electric System Studies

The first draft of a planning memorandum entitled "Preliminary Transmission System Analysis" was being prepared. This memorandum will review all the work completed on electric system studies up to June 15, 1981.

During this period a letter was sent to APA on the subject of selection of transmission alternatives. This letter summarized the results of system studies with respect to transmission voltage, number of circuits and electric conductor sizes. A copy of this letter was also sent to Commonwealth Associates for their information.

#### Subtask 8.03 - Transmission Line-Route Selection 1981

Work continued on this subtask. Close cooperation with other subtasks such as aerial photography, environmental and geological studies were maintained. The centerline of some possible transmission line routes were being identified on USGS maps. Inputs from other subtasks were being reviewed to determine their impact on the transmission line route.

### TASK 9 - CONSTRUCTION COST ESTIMATES AND SCHEDULES

#### ACRES ACTIVITIES

##### Subtask 9.01 - Assemble Cost and Schedule Data

Acres requested on July 6, 1981, that FMA begin assembling data concerning labor costs and availability, material and equipment costs, transportation requirements and access alternatives, and cost trends and escalation. These items are to be discussed with Acres' Task 9 Coordinator and Senior Estimator, in Anchorage, during the week of August 10.

### TASK 10 - LICENSING

#### ACRES ACTIVITIES

Work during the month included discussions with several State of Alaska agencies to determine the effects of recent changes in regulatory programs. A formal agency coordination draft program for the remainder of the study and coordination of the license application requirements was emphasized during the month. A draft outline for the March 1981 feasibility report is also being prepared.

TASK 12 - PUBLIC PARTICIPATION

ACRES ACTIVITIES

Information was provided to Jean Buchanan regarding the damsite selection process. An outline was prepared for the October public participation meetings.

TASK 13 - ADMINISTRATION

ACRES ACTIVITIES

Subtask 13.04 - Develop Schedule Control System

Work continued on monitoring and updating the project schedule to August 3, 1981.

Subtask 13.05 - Cost Control

During July, Acres received an additional allocation of \$5,963,829, bringing the total funding to \$23,933,829. Funding allocations were sent to Acres' subcontractors. Additional funding will be required around the first of the year. Johnson & Higgins, Acres' insurance broker, has reviewed our subcontractors' insurance policies and confirmed they are in accordance with their contracts. Contract Amendment No. 1 was approved increasing the contract amount to \$23,933,829.

TASK 14 - ADF&G SUPPORT

ACRES ACTIVITIES

Work on this task continued routinely during the reporting period.

# STATE OF ALASKA

## DEPARTMENT OF FISH AND GAME

RECEIVED AUG 18 1981

JAY S. HAMMOND, GOVERNOR

2207 Spenard Road  
Anchorage, Alaska  
99503

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August 11, 1981

03-81-7.10-0.4

Dr. John Hayden  
Technical Study Director  
Acres American Incorporated  
The Liberty Bank Building  
Buffalo, New York 14202

RE: Monthly Report, July 1981

Dear Dr. Hayden:

### ADMINISTRATIVE SUPPORT

The July activities of the Administrative Support staff were varied and hectic during this, the busiest month of the field season.

Tom Trent and his assistant Larry Bartlett attended a Su Hydro Steering Committee meeting where among other topics, the ADF&G Procedures Manual was discussed. They also met with the Instream Flow Group chaired by Woody Trihey. Data reduction program needs were reviewed with the appropriate personnel with Tom outlining preliminary steps for the staff to follow. He also reviewed field operations in the company of the ADF&G Regional Commercial Fisheries Supervisor.

Larry was kept busy with internal coordination of Instream Flow committees and other project needs.

Kyle Watson worked mainly on budget audits and related office necessities

Helen Dickson kept pace with the steady stream of correspondence and project typing.

Allen Bingham, Project Biometrician who started July 6, was kept busy setting up his computer equipment as it was delivered, attending meetings, recruiting for a programmer and data clerk, and reviewing data forms and reduction procedures with the project leaders.

Bob Dieryck was on leave the latter half of July but spent the first half of the month performing maintenance on the projects equipment.

RESIDENT AND JUVENILE PROJECT

Aerial surveys for chinook salmon began July 15. The surveys continued, as weather permitted, into August with the results expected by about September 15. Survey conditions were generally marginal to poor this year in those streams colored with humic acids. Survey conditions in most alpine streams were considered to be very good, however.

One member of the RJ staff was assigned to work with the project biometrician to facilitate data reduction. Several refinements of the data forms were made as a result.

High water resulted in the loss of a yet undetermined amount of set gear. Precipitation fell just 0.05 inch short of the all time recorded record for July and sent the Susitna River and its tributaries surging over their banks. Extended flood stages made working conditions impossible in some cases and extremely hazardous in others.

The lower river reach was covered to the best of the crews ability considering the flood conditions during the latter half of the month. Stickleback again dominated the first survey period with 92% of the 6122 fish captured. Three age classes (adult, 1+ and 0+) were observed.

The catch of 1+ chinook salmon increased over the previous June survey. A size sample of these fish were collected and is illustrated in Table 6.

A total of 22 fish were tagged and released. They were 12 longnose sucker, 7 humped whitefish, 2 rainbow trout and 1 burbot.

Water levels fluctuated daily. Several of the staff gages had been damaged and most showed signs of silting up to 0.75 feet since their installation.

The catch of stickleback decreased dramatically during the second survey period on the lower reach (1st: 5622 - vs - 2nd 661). Catches of chinook salmon in the 1+ age class increased from 350 to 371 fish with the Little Willow Creek site producing 231 of these.

A single rainbow trout was the only fish tagged during the second period. Gillnets were not used as extensively this trip because of fouling by adult salmon.

The river was at flood stage during the second period of sampling.

One trip report covering the July 1-15 period is available for the next upstream section of river. This section was more severely affected by high flows than the lower reach. None the less, a total of 823 fish were captured.

Three spine stickleback continued to dominate the catch in this section of river. Seventeen chinook in the 0+ age class, 269 in the 1+ age class, 4 coho in the 0+ age class, 74 coho in the 1+ age class, 19 coho in the 2+ age class, 2 Dolly Varden, 3 rainbow trout, 4 burbot, 31 sculpin and 400 stickleback were captured. Six of the resident adults were tagged.

Constant rain in the Talkeetna area plagued the field crews assigned to that section as well and some sampling site locations had to be temporarily abandoned because of dangerous flood conditions and debris. The total catch for this section was 2 0+ chinook, 22 1+ chinook, 29 0+ coho, 191 1+ coho, 2 2+ coho, 7 rainbow trout, 6 Arctic Grayling, 1 Dolly Varden, 12 Longnose Sucker, 6 round whitefish, 1 humpback whitefish, 15 burbot, 13 sculpin and 685 stickleback.

Of the above fish, 10 burbot, 2 rainbow trout, 1 round whitefish and 3 longnose sucker were tagged and released. Numerous tagged adult sockeye salmon were sighted in this section as well.

Two trips are recorded on the Gold Creek section of river. These were plagued by high water and bears. High water coming out of Devil Canyon changed the channels at several sites and bears kept getting into food supplies in spite of precautions and deterrents.

In spite of problems encountered, the first period yielded 104 stickleback, 46 0+ chinook, 7 1+ chinook, 35 sculpin, 20 rainbow trout, 13 0+ chum fry, 10 longnose sucker, 9 burbot, 3 0+ coho, 5 1+ coho, 8 Arctic Grayling, 2 humpback whitefish, 2 round whitefish and 1 Dolly Varden. Seventeen of the resident adult fish were tagged and released.

The second period yielded 64 0+ chinook, 30 1+ chinook, 28 0+ coho, 14 1+ coho, 10 rainbow trout, 2 Arctic Grayling, 21 longnose sucker, 13 round whitefish, 7 humpback whitefish, 15 burbot, 15 sculpins, 25 stickleback and 3 pink salmon fry.

Five minnow traps were crushed by bears trying to eat the bait during this period.

The impoundment trip for this month was conducted between the 15th and 28th. Paul Suchanek wrote the trip narrative which describes the conditions encountered and I'll include it with this report.

#### ADULT ANADROMOUS

July was, as expected, a very fast-paced month for this section of the project. Much higher than expected catches and high water were major points of contention.

Flood conditions did not create as much havoc on the fishwheels and sonar counters as it did on gear used for RJ and AH data collection, but still, wheels were inoperative for up to 8 days with one wheel snapping its mooring cables and drifting 5 miles downstream where it came to rest in a log jam.

The sonar counters received only minor damage; the worst being one unit at Talkeetna having a 6 to 8 foot section of tube crushed by debris.

A preliminary summary of sonar counts are included with this report. The data suggests an exceptionally high escapement of sockeye and chum salmon while the other species are about average.

Fishwheel catches are also included and suggest that a higher than forecast interception occurred at Sunshine, Talkeetna and Curry.

The chinook salmon radio telemetry program is going well. Sixteen adult chinook, 4 at Talkeetna and 12 at Curry, were tagged and their movements monitored. A map of the river system is provided to aid discussion of their movements.

The confluence area near Talkeetna is a suspected milling area. The fish tagged at the Talkeetna site moved downstream and remained in the confluence area several days. One fish moved up the Talkeetna River after holding several days, another displayed up/downstream surges before moving up the Susitna River and the remaining two held in the confluence area up to two weeks before migrating up the Susitna River.

The fish tagged at the Curry site displayed less downstream movement after tagging. Eight of the 12 moved back upstream after tagging. Two remained downstream as of July 22. One held position near a small tributary and another apparently died from tagging stress.

Of those that moved upstream, some entered more than one tributary. One fish entered Portage Creek on July 7 or 8, dropped back into the Susitna by July 12 and entered Jack Creek between July 12 and 16. Another entered Portage Creek on the 7th or 8th, dropped back to the Susitna by the 12th and re-entered Portage Creek on the 16th.

Two fish were noted to be milling in Devil Canyon as far upstream as mile 152.

The limited sonar and radio telemetry observations suggest that fish did not move about much during the high water period.

Three two man crews were hired mid month and are currently sampling Susitna River mainstem and sloughs for spawning fish. The Gold Creek crew is also conducting tributary surveys between Talkeetna and Devil Canyon and set netting immediately below Devil Canyon upstream of Portage Creek confluence. To date, the survey crews have not collected any substantially new information. A complete report will be available next report period on their progress.

#### AQUATIC HABITAT AND INSTREAM FLOW PROJECT

Routine recording of habitat and instream flow measurements continued as AH personnel accompanied the RJ crews to the sampling sites as water conditions permitted. Flood conditions resulted in the loss of 4 thermographs and general wet weather resulted in the malfunction of several instruments. The thermographs will have to be replaced from the spares now on order and the instruments were shipped to the manufacturer for repair.

The project biometrician accompanied the project leader to the field to evaluate AH data collection procedures.

Dr. John Hayden

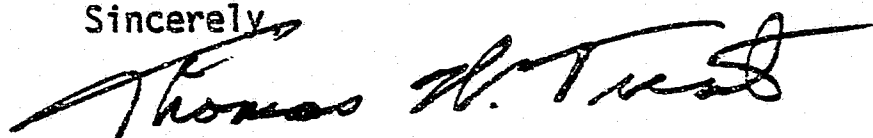
-5-

August 11, 1981

Instructions for collection of habitat data were given the recently hired AA survey teams. Survey teams will be collecting point specific habitat data at selected spawning redds as required by the procedures manual.

Collection of AH data parameters is reported to be progressing well barring some malfunction of the sophisticated equipment used for the collection and loss of other equipment.

Sincerely



Thomas W. Trent  
Aquatic Studies Coordinator  
Su Hydro Aquatic Studies  
Telephone: (907) 274-7583

cc: V. Lucid  
J. Gill  
D. Schmidt  
D. Wozniak  
M. Warner

## MEMORANDUM

State of Alaska

TO Kevin Delaney  
Res. & Juv. Anad. Project Leader

DATE August 6, 1981

FILE NO: 03-81-7.10-2.6

TELEPHONE NO

FROM Paul Suchanek *PS*  
Fisheries Biologist

SUBJECT Trip Report  
Impoundment Area  
7/15/81-7/28/81

The third monthly sampling trip in the Susitna Impoundment area took place from July 15 to July 28. The crew consisted of Joe Sautner, AH; and Paul Suchanek, Bob Marshall, and Mike Stratton, RJ. Christopher Estes, AH accompanied the crew from July 15-19. Dana Schmidt, TES accompanied the crew from July 21-25.

Set gear was fished in all 8 sampling streams where sites were available. Sally Lake was dropped from the sampling schedule. Intensive rod and reel sampling again took place in the streams sampled. On July 15, a crew of 3 flew to the mouth of the Tyone and fished with rod and reel for a short while. Only 1 grayling was tagged due to high water on the mainstem Susitna backing up water at the Tyone mouth and making fishing conditions poor. The crew then rafted down to the Oshetna River. Also during this trip the sampling period in the field was shortened by 3 days. The proposed rafting of V-canyon was aborted due to poor raft maneuverability and high water.

Fish captured on this trip (Table 1) included 867 grayling, 19 burbot, 7 longnose sucker, 1 round whitefish, and 9 cottid. About 43% of the grayling were caught in the study area.

Total fishing effort for all types of gear are listed in Table 2. About 98% of the grayling were caught by rod and reel in the study areas. Fishing success for rod and reel sampling was 8.3 grayling/hour. Six juvenile grayling and 9 cottid were captured in the minnow traps. Trot lines accounted for 18 burbot while 1 was caught by rod and reel. Gill nets were little used due to high water levels and accounted for 7 suckers, 1 round whitefish, and 2 grayling.

Total number of fish tagged on this sampling trip was 727 (Table 3). Of the fish tagged, about 99% are grayling. Cumulative totals of fish tagged are also listed in Table 3. Overall, grayling constitute 93% of the fish tagged thus far.

Grayling tag recoveries from the previous 2 trips totaled 99. Nearly all fish were recovered in the streams where they were tagged.

Adipose fins were clipped on fish tagged in the Oshetna River. No adipose fins were clipped on creeks lower in the drainage as these streams already have some fish in them with adipose fins clipped on previous trips.



Once again grayling were found throughout the streams. A helicopter shuttle was used to sample upper areas of Tsusena, Kosina, and Deadman Creeks. On Deadman Creek, the area above the falls was sampled by rod and reel and found to have good populations of large grayling; 68 were tagged.

Water levels on the mainstem Susitna were very high throughout the sampling period and creek levels were also generally high. The clearwater rearing slough near Watana Creek, previously unconnected to the Susitna was now connected. This slough, which on the previous trip had many small grayling in it, now apparently was devoid of fish.

At the clearwater slough upstream from Jay Creek, seining produced a number of grayling and round whitefish fry from 30 to 100 cm in length. It also appeared to be an excellent rearing slough and was connected to the Susitna.

Clear water from Kosina Creek flowed into a slough which begins about one half mile down the Susitna River. We fished with rod and reel at the slough mouth and captured 45 grayling in 2.5 hours. Apparently fish from Kosina make use of the slough during high water periods as we had several recaptures from Kosina.

Several black bear were observed this trip along with a large number of moose. Five caribou, 4 bulls and a cow, were seen on a gravel bar between Kosina and Watana Creeks.

Helicopter time on this trip totaled about 5.0 hours with the 205 and 3.5 hours with the 206.

cc: L. Bartlett

Table 6. Mean lengths for king salmon I+ in the Susitna River and its major tributaries from Little Willow Creek downstream to Alexander Creek, July 1 to 10, 1981.

HABITAT LOCATION	SAMPLE SIZE	MEAN LENGTH (MM)	RANGE (MM)
Alexander Creek Site A	12	80.5	70-102
Alexander Creek Site B	11	75.4	65-83
Alexander Creek Site C	18	71.9	66-88
Anderson Creek	1	82	82
Kroto Slough Mouth	0		
Mainstem Slough	2	91.5	84-99
Mid Kroto Slough	4	76.5	68-85
Deshka River Site A	66	80.6	63-92
Deshka River Site B	80	77.5	62-88
Deshka River Site C	52	78.8	66-96
Mid Channel Delta Islands	0		
Little Willow Creek	69	83.5	65-105

Table / . Yentna Station south bank unadjusted sonar counts by species, Adult Anadromous Investigations, Su Hydro Studies, 1981.

DATE	TOTAL DAILY COUNT	CHINOOK		SOCKEYE		PINK		CHUM		COHO	
		DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
June											
30	295	43	43	200	200	26	26	26	26	0	0
July											
1	377	45	88	310	510	22	48	0	26	0	0
2	371	41	129	319	829	11	59	0	26	0	0
3	483	50	179	433	1202	0	59	0	26	0	0
4	259	20	199	209	1471	20	79	10	36	0	0
5	162	10	209	81	1552	61	140	10	46	0	0
6	201	17	226	134	1686	50	190	0	46	0	0
7	339	63	289	163	1849	113	303	0	46	0	0
8	154	0	289	114	1963	43	346	0	46	7	7
9	318	17	306	206	2169	79	425	12	58	4	11
10	4406	13	319	424	6293	212	637	57	115	0	11
11	4507	0	319	448	10741	45	682	14	129	0	11
12	8843	35	354	8808	19549	0	682	0	129	0	11
13	10558	0	354	10262	29811	85	767	211	340	0	11
14	15885	0	354	15535	45346	254	1021	64	404	32	43
15	15291	0	354	14970	60316	199	1220	107	511	15	58
16	9243	0	354	9022	69338	111	1331	55	566	55	113
17	5576	0	354	5403	74741	0	1331	173	739	0	113
18	5762	0	354	5244	79985	236	1567	282	1021	0	113
19	6190	0	354	4940	84925	458	2025	718	1739	74	187
20	7259	0	354	5568	90493	777	2802	777	2516	137	324
21	8620	0	354	7060	97553	957	3759	474	2990	129	453
22	11748	47	401	9269	106822	905	4664	822	3812	705	1158
23	10467	0	401	6039	112861	2724	7448	691	4503	953	2111
24	7400	0	401	3967	116828	2316	9764	636	5139	481	2592
25	6644	0	401	2711	119539	3036	12800	757	5896	140	2732
26	4767	0	401	1940	121479	1678	14478	443	6339	706	3438
27	3387	0	401	928	122407	1534	16012	383	6722	542	3980
28	4885	0	401	752	123159	2194	18206	664	7386	1275	5255
29	3579	0	401	716	123875	1918	20124	397	7783	548	5803
30	4051	0	401	774	124649	1989	22113	429	8212	859	6662
31	2374	0	401	432	125081	1187	23300	204	8416	551	7213
August											
1	3476	0	401	435	125516	1341	24641	435	8851	1265	8478
2	2342	0	401	553	126069	904	25545	110	8961	775	9253
3	961	0	401	438	126507	84	25629	21	8982	418	9671

Table 1a. Yentna Station north bank unadjusted sonar counts by species, Adult Anadromous Investigations, Su Hydro Studies, 1981.

DATE	TOTAL DAILY COUNT	CHINOOK		SOCKEYE		PINK		CHUM		COHO	
		DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
June											
29	188	0	0	188	118	23	23	47	47	0	0
30	319	0	0	279	397	20	43	20	67	0	0
July											
1	395	2/									
2	599	2/									
3 1/		2/									
4 1/											
5 1/											
6	226	19	19	144	541	57	100	6	73	0	0
7	245	43	62	107	648	85	185	0	73	10	10
8	363	0	0	216	864	142	327	5	78	0	10
9	266	22	84	123	987	99	426	22	100	0	10
10	137	2	86	57	1044	72	498	6	106	0	10
11	151	0	86	43	1087	22	520	86	192	0	10
12	61	0	86	39	1126	11	531	11	203	0	10
13	174	0	86	150	1276	8	539	16	219	0	10
14	451	0	86	359	1635	46	585	46	265	0	10
15	470	0	86	378	2013	64	649	28	293	0	10
16	377	0	86	361	2374	0	649	16	309	0	10
17	438	0	86	406	2780	16	665	16	325	0	10
18	277	0	86	231	3011	14	679	29	354	3	13
19	234	1	87	193	3204	13	692	22	376	5	18
20	245	0	87	171	3375	37	729	36	412	1	19
21	273	0	87	194	3569	34	763	41	453	4	23
22	398	0	87	299	3868	21	784	64	517	14	37
23	539	0	87	298	4166	29	813	169	686	43	80
24	668	0	87	421	4587	70	883	158	844	19	99
25	702	0	87	520	5107	86	969	77	921	19	118
26	2516	0	87	1349	6456	571	1540	390	1311	206	324
27	1913	0	87	778	7234	266	1806	624	1935	245	569
28	1251	0	87	588	7822	280	2086	179	2114	204	773
29	908	0	87	430	8252	191	2277	239	2353	48	821
30	1700	0	87	971	9223	243	2520	486	2839	0	821
31	1418	0	87	631	9854	473	2993	157	2996	157	978
August											
1	615	0	87	615	10469	0	2993	0	2996	0	978
2	395	0	87	52	10521	158	3151	133	3129	52	1030
3	575	0	87	66	10587	89	3240	199	3328	221	1251

1/ Sonar operations halted due to high water conditions.

2/ Fishwheel operations halted due to high water conditions.

Table 2. Sunshine Station east bank unadjusted sonar counts by species, Adult Anadromous Investigations, Su Hydro Studies, 1981.

DATE	TOTAL DAILY COUNT	CHINOOK		SOCKEYE		PINK		CHUM		COHO	
		DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
June											
23	696	672	672	24	24	0	0	0	0	0	0
24	283	283	955	0	24	0	0	0	0	0	0
25	191	191	1146	0	24	0	0	0	0	0	0
26	62	62	1208	0	24	0	0	0	0	0	0
27	42	42	1250	0	24	0	0	0	0	0	0
28	68	68	1318	0	24	0	0	0	0	0	0
29	15	15	1333	0	24	0	0	0	0	0	0
30	54	32	1365	22	46	0	0	0	0	0	0
July											
1	36	24	1389	12	58	0	0	0	0	0	0
2	42	32	1421	10	68	0	0	0	0	0	0
3	43	33	1454	10	78	0	0	0	0	0	0
4	59	35	1489	20	98	2	2	2	2	0	0
5	134	57	1546	62	160	2	4	13	15	0	0
6	64	18	1564	42	202	0	4	4	19	0	0
7	62	6	1570	43	245	5	9	7	26	1	1
8	62	11	1581	35	280	16	25	0	26	0	1
9	77	19	1600	29	309	10	35	19	45	0	1
10	51	9	1609	23	332	14	49	5	50	0	1
11 <sup>1/</sup>											
12 <sup>1/</sup>											
13 <sup>1/</sup>											
14	42	0	1609	0	332	0	49	42	92	0	1
15	120	2	1611	115	447	0	49	3	95	0	1
16	205	1	1612	204	651	0	49	0	95	0	1
17	260	0	1612	260	911	0	49	0	95	0	1
18	2615	0	1612	2566	3477	39	88	10	105	0	1
19	5886	0	1612	5827	9304	59	147	0	105	0	1
20	5982	0	1612	5904	15208	60	207	18	123	0	1
21	5592	0	1612	5463	20671	84	291	45	168	0	1
22	7432	0	1612	6964	27635	156	447	312	480	0	1
23	6372	13	1625	4849	32484	427	874	1070	1550	13	14
24	5933	0	1625	3951	36435	760	1634	1198	2748	24	38
25	7353	22	1647	4603	41038	1500	3134	1228	3976	0	38
26	5783	0	1647	3412	44450	1157	4291	1214	5190	0	38
27	5904	0	1647	3011	47461	1004	5295	1801	6991	88	126
28	8566	0	1647	2047	49508	3649	8944	2844	9835	26	152
29	11676	0	1647	2405	51913	4974	13918	4063	13898	234	386
30	12480	0	1647	2683	54596	6352	20270	3220	17118	225	611
31	12231	0	1647	1578	56174	7057	27327	3376	20494	220	831

<sup>1/</sup> Fishwheel and sonar operations halted 7-11 to 7-13 due to high water conditions.

Table 2. Continued.

DATE	TOTAL DAILY COUNT	CHINOOK		SOCKEYE		PINK		CHUM		COHO	
		DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
August											
1	9879	0	1647	583	56767	6174	33501	2944	23438	178	1009
	287	0	1647	0	56767	297	33788	0	23438	0	1009
	1777	0	1647	297	57064	1302	35090	178	23616	0	1009

Table 2a. Sunshine Station west bank unadjusted sonar counts by species, Adult Anadromous Investigations, Su Hydro Studies, 1981.

DATE	TOTAL DAILY COUNT	CHINOOK		SOCKEYE		PINK		CHUM		COHO	
		DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
June											
25	88	88	88	0	0	0	0	0	0	0	0
26	57	57	145	0	0	0	0	0	0	0	0
27	31	31	176	0	0	0	0	0	0	0	0
28	51	51	227	0	0	0	0	0	0	0	0
29	45	45	272	0	0	0	0	0	0	0	0
30	14	14	286	0	0	0	0	0	0	0	0
July											
1	46	46	332	0	0	0	0	0	0	0	0
2	51	51	383	0	0	0	0	0	0	0	0
3	30	30	413	0	0	0	0	0	0	0	0
4	90	55	468	35	35	0	0	0	0	0	0
5	110	48	516	62	97	0	0	0	0	0	0
6	68	31	547	37	134	0	0	0	0	0	0
7	67	29	576	38	172	0	0	0	0	0	0
8	39	19	595	20	192	0	0	0	0	0	0
9	13	0	595	13	205	0	0	0	0	0	0
10/											
11/											
12/											
13/											
14/											
15/											
16/											
17/											
18/											
19	184	0	595	169	374	0	0	15	15	0	0
20	233	0	595	233	607	0	0	0	15	0	0
21	124	0	595	120	727	2	2	2	17	0	0
22	2173	59	654	2114	2841	0	2	0	17	0	0
23	3456	0	654	3456	6297	0	2	0	17	0	0
24	3627	0	654	3225	9522	201	203	201	218	0	0
25	3240	0	654	2916	12438	162	365	162	380	0	0
26	1414	0	654	1284	13722	86	451	44	424	0	0
27	2310	0	654	1945	15667	309	760	28	452	28	28
28	3419	19	673	2551	18218	19	779	359	811	471	499
29	4525	0	673	3186	21404	335	1114	1004	1815	0	499
30	3122	22	695	1792	23196	506	1620	484	2299	318	817
31	2445	25	720	699	23895	726	2346	672	2971	323	1140
August											
1	2533	0	720	793	24688	884	3230	469	3440	387	1527

1/ Fishwheel and sonar operations halted 7-10 to 7-18 due to high water conditions.

Table 3. Talkeetna Station east bank unadjusted sonar counts by species, Adult Anadromous Investigations, Su Hydro Studies, 1981.

DATE	TOTAL DAILY COUNT	CHINOOK		SOCKEYE		PINK		CHUM		COHO	
		DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
June											
22	56	56	56	0	0	0	0	0	0	0	0
23	49	49	105	0	0	0	0	0	0	0	0
24	26	26	131	0	0	0	0	0	0	0	0
25	27	27	158	0	0	0	0	0	0	0	0
26	37	37	195	0	0	0	0	0	0	0	0
27	31	31	226	0	0	0	0	0	0	0	0
28	19	19	245	0	0	0	0	0	0	0	0
29	12	12	257	0	0	0	0	0	0	0	0
30	11	11	268	0	0	0	0	0	0	0	0
July											
1	4	4	272	0	0	0	0	0	0	0	0
2	29	29	301	0	0	0	0	0	0	0	0
3	22	22	323	0	0	0	0	0	0	0	0
4	28	28	351	0	0	0	0	0	0	0	0
5	24	24	375	0	0	0	0	0	0	0	0
6	17	17	392	0	0	0	0	0	0	0	0
7	29	29	421	0	0	0	0	0	0	0	0
8	7	7	428	0	0	0	0	0	0	0	0
9	4	4	432	0	0	0	0	0	0	0	0
10	4	4	436	0	0	0	0	0	0	0	0
11	I/										
12	I/										
13	I/										
14	I/										
15	I/										
16	I/										
17	0	0	436	0	0	0	0	0	0	0	0
18	4	4	440	0	0	0	0	0	0	0	0
19	11	11	451	0	0	0	0	0	0	0	0
20	14	14	465	0	0	0	0	0	0	0	0
21	15	3	468	6	6	0	0	6	6	0	0
22	32	0	468	22	28	0	0	10	16	0	0
23	47	11	479	29	57	0	0	7	23	0	0
24	63	0	479	63	120	0	0	0	23	0	0
25	93	10	489	62	182	0	0	21	44	0	0

I/ Fishwheel and sonar operation halted due to high water conditions.

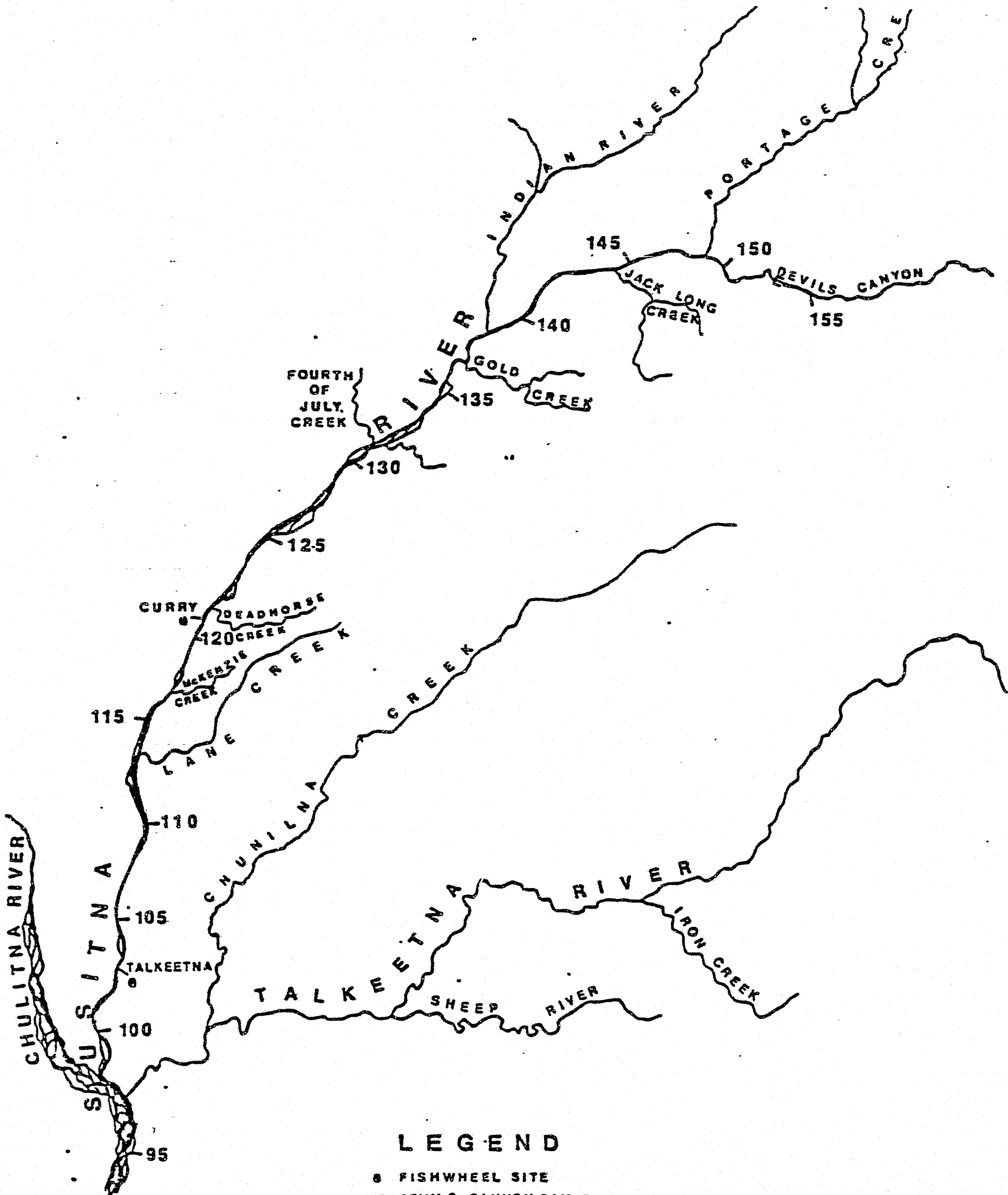


Table 4. Talkeetna Station west bank unadjusted sonar counts by species, Adult Anadromous Investigations, Su Hydro Studies, 1981.

DATE	TOTAL DAILY COUNT	CHINOOK		SOCKEYE		PINK		CHUM		COHO	
		DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
June											
22	67	67	67	0	0	0	0	0	0	0	0
23	71	71	138	0	0	0	0	0	0	0	0
24	49	49	187	0	0	0	0	0	0	0	0
25	41	41	228	0	0	0	0	0	0	0	0
26	40	40	268	0	0	0	0	0	0	0	0
27	28	28	296	0	0	0	0	0	0	0	0
28	38	38	334	0	0	0	0	0	0	0	0
29	17	17	351	0	0	0	0	0	0	0	0
30	9	9	360	0	0	0	0	0	0	0	0
July											
1	18	18	378	0	0	0	0	0	0	0	0
2	22	22	400	0	0	0	0	0	0	0	0
3 2/	13	0	400	0	0	0	0	0	0	0	0
4 2/	14	0	400	0	0	0	0	0	0	0	0
5 2/	22	0	400	0	0	0	0	0	0	0	0
6 2/	33	0	400	0	0	0	0	0	0	0	0
7	32	0	400	32	32	0	0	0	0	0	0
8 2/	28	0	400	0	32	0	0	0	0	0	0
9 2/	10	0	400	0	32	0	0	0	0	0	0
10 2/	7	0	400	0	32	0	0	0	0	0	0
11 1/											
12 1/											
13 1/											
14 1/											
15 1/											
16 2/	8	0	400	0	32	0	0	0	0	0	0
17 2/	11	0	400	0	32	0	0	0	0	0	0
18	2	0	400	2	34	0	0	0	0	0	0
19	5	0	400	5	39	0	0	0	0	0	0
20	5	0	400	0	39	0	0	5	5	0	0
21	7	0	400	7	46	0	0	0	5	0	0
22	45	0	400	0	0	0	0	45	50	0	0
23	87	0	400	68	114	0	0	19	69	0	0
24	95	16	416	63	177	0	0	16	85	0	0
25	137	0	416	91	268	23	23	23	108	0	0

1/ Fishwheels and sonars not operational

2/ No apportionments as a result of no fishwheel catches



**LEGEND**

- FISHWHEEL SITE
- DEVILS CANYON DAM SITE
- 000 RIVERMILE

Table 5. Yentna south bank fishwheel daily and cumulative catch log by species, Adult Anadromous Investigations, Su Hydro Studies, 1981.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHINOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES	
			DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
June														
28	1	24	1	1	3	3	2	2	1	1	0	0	7	7
29	1	24	3	4	20	23	7	9	3	4	0	0	33	40
30	1	24	5	9	23	46	3	12	3	7	0	0	34	74
July														
1	1	12.5	2	11	14	60	1	13	0	7	0	0	17	97
2	1	6	0	11	0	60	0	13	0	7	0	0	0	97
3	1	24	3	14	26	86	0	13	0	7	0	0	29	126
4	1	24	2	16	21	107	2	15	1	8	0	0	26	146
5	1	23	1	17	8	115	6	21	1	9	0	0	16	162
6	1	24	1	18	8	123	3	24	0	9	0	0	12	174
7	1	24	5	23	13	136	9	33	0	9	0	0	27	201
8	1	24	0	23	34	170	13	46	0	9	2	2	49	250
9	1	24	4	27	50	220	19	65	3	12	1	3	77	327
10	1	22.5	1	28	348	568	18	83	5	17	0	3	372	699
11	1	16.2	0	28	307	875	3	86	1	18	0	3	311	1010
12	1	15.2	1	29	280	1155	0	86	0	18	0	3	281	1291
13	1	14.6	0	29	341	1496	3	89	7	25	0	3	351	1642
14	1	14.5	0	29	540	2036	9	98	2	27	1	4	552	2194
15	1	13.8	0	29	756	2792	10	108	5	32	1	5	772	2966
16	1	16	0	29	158	2950	2	110	1	33	1	6	162	3128
17	1	21.5	0	29	252	3202	0	110	8	41	0	6	260	3388
18	1	14	0	29	111	3313	5	115	6	47	0	6	122	3510
19	1	14.2	0	29	130	3443	12	127	19	66	2	8	163	3673
20	1	13	0	29	79	3522	11	138	11	77	2	10	103	3776
21	1	14.5	0	29	163	3685	22	160	11	88	3	13	199	3975
22	1	14.2	1	30	224	3909	22	182	20	108	17	30	284	4259
23	1	15	0	30	202	4111	93	275	23	131	32	62	360	4619
24	1	13.8	0	30	163	4274	95	370	26	157	20	82	304	4923
25	1	15	0	30	100	4374	112	482	26	185	5	87	245	5168
26	1	13.5	0	30	44	4418	38	520	10	195	16	103	108	5276
27	1	17	0	30	29	4447	48	568	12	207	17	120	106	5382

Table 5. Continued.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHINOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES	
			DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
July														
28	1	20.5	0	30	42	4489	122	690	37	244	71	191	272	5654
29	1	13	0	30	76	4565	203	893	42	286	58	249	379	6033
30	1	12.8	0	30	107	4666	259	1152	56	342	112	361	528	6561
31	1	10	0	30	55	4721	151	1303	26	368	70	431	297	6858
August														
1	1	11.7	0	30	35	4756	108	1411	35	403	102	533	280	7138
2	1	15.7	0	30	30	4786	49	1460	6	409	42	575	127	7265
3	1	23.5	0	30	21	4807	4	1464	1	410	20	595	46	7311
4	1	24	0	30	14	4821	22	1486	11	421	27	622	74	7385
5	1	24	0	30	15	4836	27	1513	18	439	47	669	107	7492
6	1	24	0	30	14	4850	86	1599	24	463	35	704	159	7651
7	1	24	0	30	8	4858	39	1638	15	478	43	747	105	7756
8	1	24	0	30	3	4861	26	1664	22	500	22	769	23	7829
9	1	24	0	30	9	4870	5	1669	10	510	12	781	36	7865

Table (-. Yentna north bank fishwheel daily and cumulative catch log by species, Adult Anadromous Investigations, Su Hydro Studies, 1981.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHINOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES		
			DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	
June															
26	1	24	1	1	0	0	0	0	0	0	0	0	0	1	1
27	1	24	2	3	0	0	0	0	0	0	0	0	0	2	3
28	1	24	0	3	1	1	0	0	0	0	0	0	0	1	4
29	1	23	0	3	5	6	1	1	2	2	0	0	0	8	12
30	1	24	0	3	14	20	1	2	1	3	0	0	0	16	28
July															
1	1	0	0	3	0	20	0	2	0	3	0	0	0	0	23
2	1	0	0	3	0	20	0	2	0	3	0	0	0	0	23
3	1	5	0	3	0	20	0	2	0	3	0	0	0	0	23
4	1	24	2	5	21	41	2	4	1	4	0	0	0	26	54
5	1	24	1	6	17	58	15	19	0	4	0	0	0	33	87
6	1	24	3	9	23	81	9	28	1	5	0	0	0	36	123
7	1	24	4	13	10	91	8	36	0	5	1	1	1	23	146
8	1	24	0	13	41	132	27	63	1	6	0	1	1	69	215
9	1	18	2	15	11	143	9	72	2	8	0	1	1	24	239
10	1	22	1	16	37	180	47	119	4	12	0	1	1	89	348
11	1	21.5	0	16	2	182	1	120	4	16	0	1	1	7	355
12	1	24	0	16	15	197	4	124	4	20	0	1	1	23	378
13	1	22.5	0	16	37	234	2	126	4	24	0	1	1	43	421
14	1	24	0	16	39	273	5	131	5	29	0	1	1	49	470
15	1	24	0	16	41	314	7	138	3	32	0	1	1	51	521
16	1	15.8	0	16	22	336	0	138	1	33	0	1	1	23	544
17	1	9.5	0	16	26	362	1	139	1	34	0	1	1	28	572
1/18	1	21.5	0	16	167	529	10	149	21	55	2	3	3	200	772
19	1	13.8	1	17	295	824	20	169	34	89	7	10	10	357	1129
20	1	14.0	0	17	245	1069	54	223	52	141	1	11	11	352	1481
21	1	13.0	0	17	190	1259	33	256	40	181	4	15	15	267	1748
22	1	13.8	0	17	313	1572	21	277	67	248	15	30	30	416	2164
23	1	15.8	0	17	187	1759	18	295	106	354	27	57	57	338	2502
24	1	10.4	0	17	85	1844	14	309	32	386	4	61	61	135	2637
25	1	14.8	0	17	54	1898	9	318	8	394	2	63	63	73	2710

1/ New location

Table C. Continued.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHINOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES	
			DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
<b>July</b>														
26	1	11.8	0	17	59	1957	25	343	17	411	9	72	110	2820
27	1	17.2	0	17	35	1992	12	355	28	439	11	83	86	2906
28	1	22.2	0	17	23	2015	11	366	2	446	8	91	49	2955
29	1	24	0	17	9	2024	4	370	5	451	1	92	19	2974
30	1	16.5	0	17	4	2028	1	371	2	453	0	92	7	2981
2/31	1	24	0	17	4	2032	3	374	1	454	1	93	9	2990
<b>August</b>														
1	1	15.5	0	17	2	2034	0	374	0	454	0	93	2	2992
2	1	15.6	0	17	2	2036	6	380	5	459	2	95	15	3007
3	1	23.5	0	17	3	2039	4	384	9	468	10	105	26	3033
4	1	24	0	17	6	2045	66	450	43	511	20	125	135	3168
5	1	24	0	17	20	2065	110	560	44	555	25	150	199	3367
6	1	24	0	17	7	2072	136	696	44	599	29	179	216	3583
7	1	24	0	17	5	2077	140	836	16	615	14	193	175	3758
8	1	24	0	17	7	2084	79	915	31	646	17	210	134	3892
9	1	24	0	17	5	2089	25	940	21	667	7	217	58	3950

2/ Discovered a hole in livebox through which fish were escaping

Table 7. Sunshine east bank fishwheel daily and cumulative catch log by species, Adult Anadromous Investigations, Su Hydro Studies, 1981.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHINOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES	
			DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
June														
19	1	12	19	19	0	0	0	0	0	0	0	0	19	19
20	1	1	1	20	0	0	0	0	0	0	0	0	1	20
21	1	6	1	21	0	0	0	0	0	0	0	0	1	21
22	1	23	16	37	0	0	0	0	0	0	0	0	16	37
23	1	23.5	28	65	1	1	0	0	0	0	0	0	29	66
24	1	22.5	35	100	0	1	0	0	0	0	0	0	35	101
25	1	23	37	137	0	1	0	0	0	0	0	0	37	138
26	1	23	18	155	0	1	0	0	0	0	0	0	18	156
27	2	27	21	176	0	1	0	0	0	0	0	0	21	177
28	2	46.5	14	190	0	1	0	0	0	0	0	0	14	191
29	2	47.5	10	200	3	4	0	0	0	0	0	0	13	204
30	2	47.5	6	206	2	6	0	0	0	0	0	0	8	212
July														
1	2	47	19	225	7	13	0	0	0	0	0	0	26	238
2	2	45.5	51	276	10	23	0	0	0	0	0	0	61	299
3	2	46	52	328	17	40	1	1	0	0	0	0	70	369
4	2	48	87	415	43	83	2	3	2	2	0	0	134	503
5	2	48	38	453	38	121	1	4	6	8	0	0	83	586
6	2	47.5	32	485	72	193	3	7	5	13	0	0	112	698
7	2	48	20	505	55	248	4	11	10	23	0	0	89	787
8	2	47	9	514	20	268	0	11	6	29	0	0	35	822
9	2	47.5	8	522	10	278	1	12	2	31	0	0	21	843
10	2	28.5	2	524	7	285	3	15	1	32	0	0	13	856
11	2	12	0	524	0	285	0	15	0	32	0	0	0	856
12	2	24	0	524	0	285	0	15	0	32	0	0	0	856
13	2	24	0	524	0	285	0	15	0	32	0	0	0	856
14	2	24	0	524	0	285	0	15	1	33	0	0	1	857
15	2	24	1	525	46	331	0	15	1	34	0	0	48	905
16	2	24	1	526	171	502	0	15	0	34	0	0	172	1077
17	2	28.5	1	527	441	943	4	19	0	34	0	0	446	1523
18	2	41.5	1	528	662	1605	11	30	1	35	0	0	675	2198

Table 7. Continued.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHINOOK		SCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES	
			DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
July														
19	2	43	0	528	669	2274	3	33	0	35	0	0	672	2870
20	2	35	0	528	606	2880	5	38	2	37	0	0	613	3483
21	2	43.5	0	528	638	3518	8	46	4	41	0	0	650	4133
22	2	44	0	528	794	4312	22	68	31	72	0	0	847	4980
23	2	48	1	529	671	4983	64	132	133	205	1	1	870	5850
24	2	48	0	529	406	5389	49	181	104	309	1	2	560	6410
25	2	48	1	530	463	5852	102	283	108	417	0	2	674	7084
26	2	48	0	530	416	6268	109	392	116	533	1	3	642	7726
27	2	29.5	0	530	169	6437	86	478	97	630	4	7	356	8082
28	2	46	0	530	373	6810	465	943	618	1248	3	10	1459	9541
29	2	28.5	0	530	114	6924	189	1132	210	1458	6	16	519	10060
30	2	48	0	530	180	7104	317	1449	286	1744	20	36	803	10863
31	2	47.5	0	530	117	7221	457	1906	359	2103	10	46	943	11806

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Table 8. Sunshine west bank fishwheel daily and cumulative catch log by species, Adult Anadromous Investigations, Su Hydro Studies, 1981.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHINOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES	
			DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
June														
24	1	3.5	1	1	0	0	0	0	0	0	0	0	1	1
25	1	23.5	3	4	0	0	0	0	0	0	0	0	3	4
26	1	23.5	4	8	0	0	0	0	0	0	0	0	4	8
27	1	24	2	10	0	0	0	0	0	0	0	0	2	10
28	1	12.5	1	11	0	0	0	0	0	0	0	0	1	11
29	1	13	1	12	0	0	0	0	0	0	0	0	1	12
30	1	22	2	14	0	0	0	0	0	0	0	0	2	14
July														
1	1	22	9	23	0	0	0	0	0	0	0	0	9	23
2	1	23	8	31	0	0	0	0	0	0	0	0	8	31
3	1	23.5	9	40	0	0	0	0	0	0	0	0	9	40
4	2	15	5	45	4	4	0	0	0	0	0	0	9	49
5	2	39	12	57	14	18	0	0	0	0	0	0	26	75
6	2	47.5	6	63	9	27	0	0	0	0	0	0	15	90
7	2	41.3	3	66	5	32	0	0	0	0	0	0	8	98
8	2	45.5	3	69	5	37	0	0	0	0	0	0	8	106
9	2	47.5	0	69	1	38	0	0	0	0	0	0	1	107
10	2	48	0	69	1	39	0	0	0	0	0	0	1	108
11	2	45.5	0	69	1	40	0	0	1	1	0	0	2	110
12	2	36	0	69	0	40	0	0	0	1	0	0	0	110
13	2	48	0	69	0	40	0	0	0	1	0	0	0	110
14	2	48	0	69	1	41	0	0	0	1	0	0	1	111
15	2	48	2	71	6	47	0	0	0	1	0	0	8	119
16	2	39	0	71	5	52	0	0	0	1	0	0	5	124
17	2	24	0	71	1	53	0	0	0	1	0	0	1	125
18	2	24	0	71	6	59	0	0	0	1	0	0	6	131
19	2	24	0	71	11	70	1	1	0	1	0	0	12	143
20	2	11.3	0	71	7	77	0	1	0	1	0	0	7	150
21	2	20	0	71	55	132	0	1	0	1	0	0	55	205
22	2	35	1	72	101	233	1	2	1	2	0	0	104	309
23	2	33.5	0	72	71	304	0	2	0	2	0	0	71	380

Table 8. Continued.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHINOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES	
			DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
July														
24	2	40	0	72	67	371	2	4	1	3	0	0	70	450
25	2	26	0	72	47	418	1	5	1	4	0	0	49	499
26	2	48	0	72	199	617	10	15	7	11	0	0	216	715
27	2	42	0	72	123	740	14	29	1	12	1	1	139	854
28	2	44	1	73	189	929	29	58	19	31	0	1	238	1092
29	2	22	0	73	62	991	5	63	11	42	0	1	78	1170
30	2	46	1	74	130	1121	34	97	30	72	25	26	220	1390
31	2	48	1	75	91	1212	33	130	31	103	21	47	177	1567

Table 1. Taikeetna east bank fishwheel daily and cumulative catch log by species, Adult Anadromous Investigations, Su Hydro Studies, 1981.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHINOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES	
			DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
June														
22	1	10	0	0	0	0	0	0	0	0	0	0	0	0
23	1	23.5	7	7	0	0	0	0	0	0	0	0	7	7
24	1	22	12	19	0	0	0	0	0	0	0	0	12	19
25	1	23	16	35	0	0	0	0	0	0	0	0	16	35
26	1	17.5	15	50	0	0	0	0	0	0	0	0	15	50
27	1	0	0	50	0	0	0	0	0	0	0	0	0	50
28	1	24	3	53	0	0	0	0	0	0	0	0	3	53
29	1	24	1	54	0	0	0	0	0	0	0	0	1	54
30	1	22	0	54	0	0	0	0	0	0	0	0	0	54
July														
1	1	16.5	9	63	0	0	0	0	0	0	0	0	9	63
2	1	23	6	69	0	0	0	0	0	0	0	0	6	69
3	2	23	3	72	0	0	0	0	0	0	0	0	3	72
4	2	38	0	72	0	0	0	0	0	0	0	0	0	72
5	2	47	7	79	0	0	0	0	0	0	0	0	7	79
6	2	48	5	84	0	0	0	0	0	0	0	0	5	84
7	2	48	4	88	0	0	0	0	0	0	0	0	4	88
8	2	48	6	94	0	0	0	0	0	0	0	0	6	94
9	2	48	2	96	0	0	0	0	0	0	0	0	2	96
10-16	2	0	-	96	-	0	-	0	-	0	-	0	-	96
17	2	9	0	96	0	0	0	0	0	0	0	0	0	96
18	2	24	0	96	0	0	0	0	0	0	0	0	0	96
19	2	24	0	96	0	0	0	0	0	0	0	0	0	96
20	2	31	0	96	0	0	0	0	0	0	0	0	0	96
21	2	48	1	97	2	2	0	0	2	2	0	0	5	101
22	2	48	0	97	3	5	0	0	1	3	0	0	4	105
23	2	48	3	100	8	13	0	0	2	5	0	0	13	118
24	2	48	0	100	11	24	0	0	0	5	0	0	11	129
25	2	48	1	101	6	30	0	0	2	7	0	0	9	138
26	2	48	0	101	7	37	0	0	2	9	0	0	9	147

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Table 7. Continued.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHINOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES	
			DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
<b>July</b>														
27	2	47	0	101	10	47	1	1	11	20	0	0	22	169
28	2	47	1	102	31	78	3	4	25	45	1	1	61	230
29	2	48	1	103	12	90	1	5	10	55	1	2	25	255
30	2	48	0	103	6	96	1	6	21	76	3	5	31	286
31	2	48	1	104	15	111	8	14	29	105	1	6	54	340
<b>August</b>														
1	2	48	0	104	31	142	4	18	34	139	0	6	69	409

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Table 17. Talkeetna west bank fishwheel daily and cumulative catch log by species, Adult Anadromous Investigations, Su Hydro Studies, 1981.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHINOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES	
			DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
June														
26	1	15.8	9	9	0	0	0	0	0	0	0	0	0	9
27	1	23.5	4	13	0	0	0	0	0	0	0	0	4	13
28	1	23	1	14	0	0	0	0	0	0	0	0	1	14
29	1	24	1	15	0	0	0	0	0	0	0	0	1	15
30	1	22.5	0	15	0	0	0	0	0	0	0	0	0	15
July														
1	2	28	1	16	0	0	0	0	0	0	0	0	0	1
2	2	28	3	19	0	0	0	0	0	0	0	0	0	3
3	2	42	1	20	0	0	0	0	0	0	0	0	0	1
4	2	48	0	20	0	0	0	0	0	0	0	0	0	20
5	2	47.5	3	23	0	0	0	0	0	0	0	0	0	3
6	2	48	0	23	0	0	0	0	0	0	0	0	0	23
7	2	48	0	23	1	1	0	0	0	0	0	0	0	1
8	2	48	0	23	0	1	0	0	0	0	0	0	0	24
9	2	46	1	24	0	1	0	0	0	0	0	0	0	1
10	2	5.5	0	24	0	1	0	0	0	0	0	0	0	25
11-17	2	0	-	24	-	1	-	0	-	0	-	0	-	25
18	2	8.5	0	24	0	1	0	0	0	0	0	0	0	25
19	2	24	0	24	0	1	0	0	0	0	0	0	0	25
20	2	24	0	24	0	1	0	0	1	1	0	0	1	26
21	2	29.5	0	24	1	2	0	0	0	1	0	0	1	27
22	2	38	0	24	0	2	0	0	1	2	0	0	1	28
23	2	48	0	24	11	13	0	0	3	5	0	0	14	42
24	2	48	3	27	12	25	0	0	3	8	0	0	18	60
25	2	48	0	27	8	33	2	2	2	10	0	0	12	72
26	2	46	0	27	6	39	0	2	3	13	0	0	9	81
27	2	48	0	27	3	42	3	5	5	18	0	0	11	92
28	2	47.5	1	28	19	61	2	7	15	33	0	0	37	129
29	2	47	0	28	10	71	5	12	14	47	1	1	30	159
30	2	46	0	28	15	86	2	14	24	71	1	2	42	201
31	2	48	0	28	13	99	12	26	36	107	1	3	62	263

Table 7(A) Continued.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHINOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES	
			DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.	DAILY	CUM.
August 1	2	41	0	28	15	114	20	46	38	145	0	3	73	336

Table 11. Curry east bank fishwheel daily and cumulative catch log by species, Adult Anadromous Investigations, Su Hydro Studies, 1981.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHINOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES	
			DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.
June														
15	1	24	3	3	0	0	0	0	0	0	0	0	3	3
16	1	18	1	4	0	0	0	0	0	0	0	0	1	4
17	1	24	1	5	0	0	0	0	0	0	0	0	1	5
18	1	17	1	6	0	0	0	0	0	0	0	0	1	6
19	1	12	4	10	0	0	0	0	0	0	0	0	4	10
20	1	24	5	15	0	0	0	0	0	0	0	0	5	15
21	1	24	6	21	0	0	0	0	0	0	0	0	6	21
22	1	24	7	28	0	0	0	0	0	0	0	0	7	28
23	1	24	14	42	0	0	0	0	0	0	0	0	14	42
24	1	24	5	47	0	0	0	0	0	0	0	0	5	47
25	1	24	10	57	0	0	0	0	0	0	0	0	10	57
26	1	22	8	65	0	0	0	0	0	0	0	0	8	65
27	1	24	3	68	0	0	0	0	0	0	0	0	3	68
28	1	23	3	71	0	0	0	0	0	0	0	0	3	71
29	1	22	1	72	0	0	0	0	0	0	0	0	1	72
30	1	6	0	72	0	0	0	0	0	0	0	0	0	72
July														
1	1	6	0	72	0	0	0	0	0	0	0	0	0	72
2	1	24	1	73	0	0	0	0	0	0	0	0	1	73
3	1	18	4	77	0	0	0	0	0	0	0	0	4	77
4	1	23	0	77	0	0	0	0	0	0	0	0	0	77
5	1	17	0	77	0	0	0	0	0	0	0	0	0	77
6	1	24	0	77	0	0	0	0	0	0	0	0	0	77
7	1	24	1	78	0	0	0	0	0	0	0	0	1	78
8	1	21	2	80	0	0	0	0	0	0	0	0	2	80
9	1	24	2	82	0	0	0	0	0	0	0	0	2	82
10	1	10	1	83	0	0	0	0	0	0	0	0	1	83
11-15	1	0	-	83	-	0	-	0	-	0	-	0	-	83
16	1	24	1	84	0	0	0	0	0	0	0	0	1	84
17	1	24	5	89	3	3	0	0	0	0	0	0	8	92
18	1	24	2	91	3	6	1	1	0	0	0	0	6	98

Table ff. Continued.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHINOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES		
			DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.	
July															
19	1	22	2	93	0	6	0	1	0	0	0	0	0	2	1000
20	1	24	2	95	2	8	0	1	0	0	0	0	0	4	1004
21	1	23	1	96	2	10	1	2	1	1	0	0	0	5	1009
22	1	24	2	98	9	19	1	3	0	1	0	0	0	12	1221
23	1	24	1	99	3	22	0	3	0	1	0	0	0	4	1225
24	1	24	2	101	3	25	1	4	2	3	0	0	0	8	1333
25	1	23	1	102	7	32	0	4	0	3	0	0	0	8	1421
26	1	24	1	103	13	45	0	4	5	8	0	0	0	19	1600
27	1	24	0	103	14	59	1	5	5	13	0	0	0	20	1800
28	1	24	1	104	19	78	1	6	5	18	0	0	0	26	2066
29	1	24	0	104	27	105	2	8	22	40	0	0	0	51	2577
30	1	24	0	104	16	121	2	10	8	48	0	0	0	26	2833
31	1	23	0	104	33	154	8	18	37	85	0	0	0	78	3621
August															
1	1	24	1	105	31	185	2	20	13	98	0	0	0	47	4068
2	1	21	0	105	2	187	0	20	0	98	0	0	0	2	410



Table 2. Curry west bank fishwheel daily and cumulative catch log by species, Adult Anadromous Investigations, Su Hydro Studies, 1981.

DATE	NUMBER OF FISHWHEELS	NUMBER OF FISHWHEEL HOURS	CHINOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES	
			DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.
June														
15	1	24	0	0	0	0	0	0	0	0	0	0	0	0
16	1	24	6	6	0	0	0	0	0	0	0	0	6	6
17	1	22	6	12	0	0	0	0	0	0	0	0	6	12
18	1	12	8	20	0	0	0	0	0	0	0	0	8	20
19	1	24	19	39	0	0	0	0	0	0	0	0	19	39
20	1	24	11	50	0	0	0	0	0	0	0	0	11	50
21	1	24	8	58	0	0	0	0	0	0	0	0	8	58
22	1	22	8	66	0	0	0	0	0	0	0	0	8	66
23	1	24	17	83	0	0	0	0	0	0	0	0	17	83
24	1	21	12	95	0	0	0	0	0	0	0	0	12	95
25	1	24	13	108	0	0	0	0	0	0	0	0	13	108
26	1	22	9	117	0	0	0	0	0	0	0	0	9	117
27	1	24	12	129	0	0	0	0	0	0	0	0	12	129
28	1	23	6	135	0	0	0	0	0	0	0	0	6	135
29	1	24	4	139	0	0	0	0	0	0	0	0	4	139
30	1	24	0	139	0	0	0	0	0	0	0	0	0	139
July														
1	1	24	2	141	0	0	0	0	0	0	0	0	2	141
2	1	24	4	145	0	0	0	0	0	0	0	0	4	145
3	1	24	6	151	0	0	0	0	0	0	0	0	6	151
4	1	22	5	156	0	0	0	0	0	0	0	0	5	156
5	1	16	1	157	0	0	0	0	0	0	0	0	1	157
6	1	24	0	157	0	0	0	0	0	0	0	0	0	157
7	1	24	0	157	0	0	0	0	0	0	0	0	0	157
8	1	24	6	163	0	0	0	0	0	0	0	0	6	163
9	1	24	1	164	0	0	0	0	0	0	0	0	1	164
10	1	6	0	164	0	0	0	0	0	0	0	0	0	164
11-17	1	0	-	164	-	0	-	0	-	0	-	0	-	164
18	1	24	0	164	0	0	0	0	0	0	0	0	0	164
19	1	14	1	165	0	0	0	0	0	0	0	0	1	165
20	1	24	1	166	0	0	0	0	1	1	0	0	2	167

Table R. Continued.

DATE	NUMBER OF FISHERMEELS	NUMBER OF FISHERMEEL HOURS	CHINOOK		SOCKEYE		PINK		CHUM		COHO		TOTAL CATCH ALL SPECIES	
			DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.	DAILY	CUMM.
July														
19	1	14	1	165	0	0	0	0	0	0	0	0	1	165
20	1	24	1	166	0	0	0	0	1	1	0	0	2	167
21	1	24	2	168	0	0	0	0	1	2	0	0	3	170
22	1	24	1	169	0	0	0	0	0	2	0	0	1	171
23	1	24	0	169	4	4	0	0	0	2	0	0	4	175
24	1	24	1	170	5	9	0	0	1	3	0	0	7	182
25	1	23	0	170	2	11	0	0	2	5	0	0	4	186
26	1	24	0	170	1	12	0	0	0	5	0	0	1	187
27	1	24	1	171	2	14	0	0	1	6	0	0	4	191
28	1	19	0	171	5	19	1	1	0	6	0	0	6	197
29	1	24	1	172	1	20	1	2	6	12	0	0	9	206
30	1	20	1	173	1	21	0	2	2	14	0	0	4	210
31	1	24	0	173	5	26	5	7	10	24	0	0	6	230
August														
1	1	21 1/2	0	173	1	27	4	11	1	25	0	0	6	236
2	1	0	-	173	-	27	-	11	-	25	-	0	-	236

DESCRIPTION

85 06 I J B2 83
AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR
0112301220112001230122011200120012201120112301220112001230122011200122012201123012201220112
3074174185296296307418418518521852952963074174185296296306307418518529630730741741874184185

Table with 4 columns: ID, Description, Status, and Date. Rows include items like 'FIELD CAMP OPERATIONS', 'RESUPPLY & EMERGENCY SERVICE', 'EXHIBIT F MATERIAL COMPLETE', etc., with corresponding status codes and dates.

DESCRIPTION

B2

AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	
011230122011200123012201120012001200122011201123012201120012301220112001220112001220112301220122012	3074174185296296307418418518521852952963074174185296296306307418518529630730741741874184185																				

B3

50

5082	DATA ASSEMBLY-1981 DRAFT	CT-1CCCCCCCCL	
5082	DATA ASSEMBLY-1981 DRAFT	FIN .	XXX L
5083	DATA ASSEMBLY FINAL-DRAFT	ST .	XXX L
5083	DATA ASSEMBLY FINAL-DRAFT	FIN .	XXXX L
607	PRELIM WATANA DAM ALTERNATES	.L	
608	PRELIM DEVIL CANYON DAM ALT	XX	L
608	UPDATE DESIGN CRITERIA(DC)	FIN XX	L
609	ESTAB WATANA DESIGN CRITERIA	CCCCCCCCL	
609	UPDATE CRIT&ASSUMPTIONS(WAT)	CT-1CCCCCL	
609	UPDATE CRIT&ASSUMPTIONS(WAT)	FIN .	CCCL
610	ESTAB DEVIL CANYN DESIGN CRITERIA	CCCCCCCCL	
610	UPDATE CRIT&ASSUMPTIONS(DC)	CT-1CCCCCL	
610	UPDATE CRIT&ASSUMPTIONS(DC)	FIN .	CCCL
611	PRELIM DESIGN WATANA DAM	XXXXXXXXXXXXXXXXXXXXXXXXXX	L
611	INCRP GENL AMENDMENTS (WAT)	CT-1.XXXXXXXX	L
611	INCRP GENL AMENDMENTS (WAT)	FIN .	X L
611	DAM FOUNDATION TREATMENT-WAT	CT-1XX	L
611	DESIGN DAM(WAT)	ST XX	L
611	OPTIMIZE DAM HEIGHT	XXXXXX	L
611	DESIGN DAM(WAT)	CT-1.XXXXXXX	L
611	ADJUST ALIGNMENT(WAT)	FIN XXXXX	L
611	DESIGN DAM(WAT)	FIN .	XXXXXXXXXXXX L
611	DAM FOUNDATION TREATMENT-WAT	FIN . XXXXXXX	L
611	DRAFT REPORT DRAWINGS	ST XXXXXXX L	
611	DRAFT REPORT DRAWINGS	CT-1.	XXX L
611	DRAFT REPORT DRAWINGS(WAT)	CT-2.	XXXXXXXX L
611	DRAFT REPORT DRAWINGS(WAT)	CT-3.	XXXXX L
611	DRAFT REPORT DRAWINGS(WAT)	CT-4.	XXXX L
611	DRAFT REPORT DRAWINGS(WAT)	FIN .	XXXX L
612	PRELIM DESIGN DEVIL CANYON DAM	CCCCCCCCCCCCCCCCCCCCCCCCCCL	
612	INCRP GENL AMENDMENTS(DC)	CT-1.XXXXXXXXXXL	
612	INCRP GENL AMENDMENTS(DC)	FIN .	XL
612	OPTIMIZE DAM HEIGHT(DC)	FIN XXXXX	L
612	DESIGN DAM(DC)	CT-3XXXXX	L
612	DESIGN DAM(DC)	FIN .	XXXXXXXXL
612	FOUNDATION TREATMENT(DC)	FIN XXXXXXX	L
612	DRAFT REPORT DWGS(DC)	ST XXXXXXX L	
612	DRAFT REPORT DWGS(DC)	CT-1.	CCL
612	DRAFT REPORT DWGS(DC)	CT-2.	CCCCCCL
612	DRAFT REPORT DWGS(DC)	CT-3.	CCCCL
612	DRAFT REPORT DWGS(DC)	CT-4.	CCCL
612	DRAFT REPORT DWGS(DC)	FIN .	CCCL
613	DAM SELECTION REPORT	ST .	XXL
613	DAM SELECTION REPORT	. .	XXXXXXXXXXL
613	DAM SELECTION REPORT	CT-1.	XXL
613	DAM SELECTION REPORT	CT-2.	XXL
613	DAM SELECTION REPORT	CT-3.	XXL
613	DAM SELECTION REPORT	FIN .	XL
614	SPILLWAY DESIGN CRITERIA	XXXXXXXXXX	L
614	UPDATE CRIT&ASSUMPTIONS(SPWY)FIN	XXXXXXXXXX	L
615	WATANA SPILLWAY ALTERNATIVES	.L	

DESCRIPTION

B2
AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR
0112301220112001230122011200120012201120112301220112301220112001230122011200122012201220112
3074174185296296307418418518521852952963074174185296296306307418518529630730741741874184185

51

Table with columns for months (AUG-APR) and rows for project tasks (e.g., PRELIM DESIGN WATANA SPILLWAY, INCORP GENL AMENDMENTS (WAT), OPT AGAINST DAM FREEBRD, etc.) with corresponding activity codes (L, X, ST, CT, FIN) and month indicators.

DESCRIPTION

SORTED BY: 55 D6 I J 82

83

AUG SEP OCT NOV DEC JAN FEB MAR AFR MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR AFR
0112301220112001230122011200120012201120112301220112001230122011200122012201123012201220112
3074174185296296307418418518521852952963074174185296296306307418518529630730741741874184185

52

Table with columns for task ID, description, and status markers (X, L, ST, CT, FIN). Rows include tasks like SPILLWAY SELECTION REPORT, ACCESS & CAMP FACILITIES, DETERMINE SERVICES-H2O, ELEC, SEWAGE, etc.



DESCRIPTION

82 AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR
0112301220112001230122011200120012201120112011230122011200122011200122012201123012201220112
3074174185296296307418418518521852952963074174185296296306307418518529630730741741874184185

54

Table with columns for task ID, description, and monthly status indicators (AUG-APR) for years 82 and 83. Includes tasks like 'PREL DESIGN OF INTAKE', 'POWER DEVELOPMENT REPORT', 'EXHIBIT J MATERIAL COMPLETE', etc.



DESCRIPTION

82  
 AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR  
 011230122011200123012201120012001220112011230122011200123012201120012201220112301220112  
 3074174185296296307418418518521852952963074174185296296306307418518529630730741741874185

55

DESCRIPTION	82	83
7062 CULTURAL PRELIM ALTERNATIVES FIN .		L
7063 CULTURAL-OPTIMIZED DESIGN ST XXXXXXXXXXXX		L
7063 CULTURAL-OPTIMIZED DESIGN CT-1.		XXXXXXXXXXXXXXXXXXXXL
7063 CULTURAL-OPTIMIZED DESIGN FIN .		L
706XX EXHIBIT V MATERIAL COMPLETE		L
7071 LAND USE ALTERNATIVE SITES FIN .	CCCCCL	
7071 LAND USE ALTERNATIVE SITES CT-1	CCCCCCCCCCL	
7072 LAND USE PRELIM ALTERNATIVES ST XXXXXXXX		L
7072 LAND USE PRELIM ALTERNATIVES CT-1.		CCCCCCCCCCL
7072 LAND USE PRELIM ALTERNATIVES FIN .		L
7073 LAND USE OPTIMIZED DESIGN ST XXXXXXXXXXXXXXXX		L
7073 LAND USE OPTIMIZED DESIGN CT-1.		CCCCCCCCCCCCCCCCCCCCCL
7073 LAND USE OPTIMIZED DESIGN FIN .		L
708 RECREATION PLANNING CT-1.	XX L	
708 RECREATION PLANNING FIN .		XXXXX L
708 RECREATION PLANNING CT-2.	XXXXXXXXXXXXXXXXXX	L
7092 TRANS LINE ASSESS RTE SELCTN CT-1.	CCCCCCCCCCL	
7092 TRANS LINE ASSESS RTE SELCTN ST L		
7092 TRANS LINE ASSESS RTE SELCTN FIN .		CCCCCCCCCCCCCCCCCCCCCCL
7101 FISH ECOLOGY ALTERNATV SITES FIN .		L
7101 FISH ECOLOGY ALTERNATV SITES CT-1	XXXXXXXXXX L	
7102 FISH ECOLOGY PRELIM ALTERNAT ST XXXXXXXX		L
7102 FISH ECOLOGY PRELIM ALTS CT-1.		XXXXXXXXXXL
7102 FISH ECOLOGY PRELIM ALTERNAT FIN .		L
7103 FISH ECOLOGY OPTIMIZED DESGN ST XXXXXXXXXXXXXXXX		L
7103 FISH ECOLOGY OPTIMIZED DESGN CT-1.		XXXXXXXXXXXXXXXXXXXXL
7103 FISH ECOLOGY OPTIMIZED DESGN FIN .		L
7111 WILDLIFE ECOLOGY ALTER SITES FIN .	XXXXXXXXXX L	
7111 WILDLIFE ECOLOGY ALTER SITES CT-2	XXXXXXXXXXXXXXXXXX L	
7112 WILDLIFE ECOLOGY PRELIM ALTER ST XXXXXXXX		L
7112 WILDLIFE ECOLOGY PRELIM ALTER CT-1.	XXXXXXXXXX	L
7112 WILDLIFE ECOLOGY PRELIM ALTER FIN .		L
7113 WILDLIFE ECOLOGY OPTIM DESGN ST XXXXXXXXXXXXXXXX		L
7113 WILDLIFE ECOLOGY OPTIM DESGN CT-1.		XXXXXXXXXXXXXXXXXXXX L
7113 WILDLIFE ECOLOGY OPTIM DESGN FIN .		L
7121 PLANT ECOLOGY ALTERNIV SITES FIN .	CCCL	
7121 PLANT ECOLOGY ALTERNIV SITES CT-1	CCCCCCCCCCL	
7122 PLANT ECOLOGY PRELIM ALTERNAT ST XXXXXXXX		L
7122 PLANT ECOLOGY PRELIM ALTERNAT CT-1.		CCCCCCCCCCL
7122 PLANT ECOLOGY PRELIM ALTERNAT FIN .		L
7123 PLANT ECOLOGY OPTIMIZD DESGN ST XXXXXXXXXXXXXXXX		L
7123 PLANT ECOLOGY OPTIMIZD DESGN CT-1.		CCCCCCCCCCCCCCCCCCCCCCL
7123 PLANT ECOLOGY OPTIMIZD DESGN FIN .		L
714 ACCESS RD ENVIRONMENT ANALY CT-1	XXXXXXXXXXXXXXXXXXXXXXXXXXXXL	
714 ACCESS RD ENVIRONMENT ANALY FIN .		XXXXXXXXXXL
715 PREP FOR FERC EXHIBIT-DRAFT ST XXXXXXXX		L
715 PREP FOR FERC EXHIBIT-DRAFT CT-1.		CCCCCL
715 PREP FOR FERC EXHIBIT-DRAFT FIN .		L
715XX EXHIBIT W MATERIAL COMPLETE		L
715XX EXHIBIT S MATERIAL COMPLETE		L
8021 LOAD FLOW ANALYSIS FIN CCL		L



DESCRIPTION

B2

B3

AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR  
 011230122011200123012201120012001220112011230122011200123012201120012201220123012201220112  
 3074174185293296307418418518321852952963074174185293296306307418518529630730741741874184185

1008	PREP APPLICATN FORM-DRAFT	ST	XXXXXX	L
1008	PREP APPLICATN FORM-DRAFT	FIN		L
1009	REVIEW AND CORRECT			CL
1010	EXTERNAL REVIEW			CL
10XXX	PRINT LICENSE APPLICATION			CCCCCL
1101	PROJECT OVERVIEW		XXL	
1102	INTERNAL REPORTS		XXL	
1102XX	EXHIBIT U MATERIAL COMPLETE			L
1103	SUSITNA BASE PLAN RISK ANALY ST		CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCL	
1103	SUSITNA BASE PLAN RISK ANALY FIN			L
1104	SUSITNA BASE PLAN EXTEN/REVIS		CCCCCCCCCCCCCCCCCCCCCCCCCCCCCL	
1105	SUSITNA FINANCE RISK ANALYSIS		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	L
1106	RESOLUTION TAX ISSUE		XXXXXXXXXXXXXXXXXXXXXXXXXXXX	L
1107	IDENTIFY PARTIES INTEREST		XXXXXXXXXXXXXXXXXXXXXXXXXXXX	L
1108	REVENUE ASSURANCE		XXXXXXXXXXXXXXXXXXXXXXXXXXXX	L
1109	LIAISON APA BOND UNDERWRITER		XXXXXXXXXXXXXXXXXXXXXXXXXXXXL	L
1109XX	EXHIBIT G MATERIAL COMPLETE			L
12022	CONDUCT PUBLIC MEETING #2		XXXX	L
12023	CONDUCT PUBLIC MEETING #3			L
12031	CONDUCT WORKSHOPS 1,2,3		XXX	L
12032	CONDUCT WORKSHOPS 4,5,6		XXXXXXXXXXXX	L
1204	PREP PUBLISH DISTRIB MATERIAL		XXL	
1205	PREP MAINTAIN ACTION LIST		XXL	
13013	PROJECT PROCEED MANUAL-UPDATE		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	L
13042	SCHEDULE CONTROL SYS UPDATE		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	L
13052	COST CONTROL SYSTEM-OP		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	L
13062	MANPOWER LOADNG SCHED-UPDATE		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	L
1310	SUB CONTRACT ADMINISTRATION		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	L
XXX	PROJECT COMPLETE	XXX		L





CPM ANALYSIS LISTING

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I-NODE	J-NODE	DUR	SELECT	CODES	DESCRIPTION	E.S.	E.F.	L.S.	L.F.	T.F.	F.F.	CL
61602	61626	0	H	OPB 1 C6	616 DEVIL CANYON SPILLWAY ALTERNATIVE	3AUG81	31JUL81	3AUG81	31JUL81	0	0	1 CRITICAL
61702	61786	22	H	OPB 1 C5	617 PRELIM DESIGN WATANA SPILLWAY	3AUG81	1JAN82	28SEP81	15JAN82	2	0	1
61704	61705	9		OPB 1 C5	617 INCORP GENL AMENDMENTS (WAT) CT-1	3AUG81	20CT81	28SEP81	27NOV81	8	0	1
61705	61706	1		OPB 1 C5	617 INCORP GENL AMENDMENTS (WAT) FIN	50CT81	90CT81	30NOV81	4DEC81	8	3	1
61716	61726	3	R	OPB 1 C5	617 OPT AGAINST DAM FREEBRD	3AUG81	21AUG81	16NOV81	4DEC81	15	0	1
61718	61734	9	R	OPB 1 C5	617 ADJUST ALIGNMENTS	50CT81	4DEC81	9NOV81	8JAN82	5	5	1
61720	61728	6		OPB 1 C5	617 ENERGY DISSIPATION-WAT	3AUG81	11SEP81	50CT81	13NOV81	9	3	1
61721	61722	1		OPB 1 C5	617 PREL DESGN CHUTE/ROCK ANCRS	3AUG81	7AUG81	28DEC81	1JAN82	21	2	1
61723	61724	2		OPB 1 C5	617 PREL DESGN CONTRL STRUCTURES	3AUG81	14AUG81	14SEP81	25SEP81	6	0	1
61724	61730	4		OPB 1 C5	617 PREL DESGN CONTRL STRUCTURES	17AUG81	11SEP81	28SEP81	23OCT81	6	4	1
61728	61740	8		OPB 1 C5	617 ENERGY DISSIPATION-WAT	50CT81	27NOV81	13NOV81	8JAN82	6	6	1
61732	61738	5		OPB 1 C5	617 OPT AGAINST DAM FREEBOARD	24AUG81	25SEP81	7DEC81	8JAN82	15	15	1
61736	61744	4		OPB 1 C5	617 PREL DESGN CHUTE/ROCK ANCRS	24AUG81	18SEP81	4JAN82	29JAN82	19	19	1
61742	61746	6		OPB 1 C5	617 DESGN GROUTING/DRAINAGE-WAT	3AUG81	11SEP81	18JAN82	26FEB82	24	24	1
61752	61762	2	R	OPB 1 C5	617 DESIGN CLOSURE/CONTRL STRUCT	3AUG81	14AUG81	11JAN82	22JAN82	23	9	1
61758	61764	5	R	OPB 1 C5	617 DESIGN ENERGY DISSIPATION	3AUG81	4SEP81	14DEC81	15JAN82	19	4	1
61760	61768	11		OPB 1 C5	617 DESIGN WATER PASSAGES	3AUG81	16OCT81	24OCT81	8JAN82	12	0	1
61764	61766	4		OPB 1 C5	617 DESIGN ENERGY DISSIPATION	50CT81	30OCT81	18JAN82	12FEB82	15	0	1
61770	61776	5		OPB 1 C5	617 DESIGN CLOSURE/CONTRL STRUCT	19OCT81	20NOV81	25JAN82	26FEB82	14	14	1
61772	61774	2		OPB 1 C5	617 DESIGN ENERGY DISSIPATION	2NOV81	13NOV81	15FEB82	26FEB82	15	15	1
61778	61780	7		OPB 1 C5	617 DRAFT REPORT DRAWINGS(WAT)	3AUG81	18SEP81	17AUG81	20CT81	2	0	1
61780	61782	3		OPB 1 C5	617 DRAFT REPORT DRAWINGS(WAT)	21SEP81	90CT81	50CT81	23OCT81	2	0	1
61782	61784	7		OPB 1 C5	617 DRAFT REPORT DRAWINGS(WAT)	12OCT81	27NOV81	26OCT81	11DEC81	2	0	1
61784	61786	5		OPB 1 C5	617 DRAFT REPORT DRAWINGS(WAT)	30NOV81	1JAN82	14DEC81	15JAN82	2	0	1
61786	61788	4		OPB 1 C5	617 DRAFT REPORT DRAWINGS(WAT)	4JAN82	29JAN82	18JAN82	12FEB82	2	0	1
61788	61790	4		OPB 1 C5	617 DRAFT REPORT DRAWINGS(WAT)	1FEB82	26FEB82	15FEB82	12MAR82	2	2	1
61802	61870	22	H	OPB 1 C6	618 PRELIM DESIGN DEVIL CAN SPILLWAY	3AUG81	1JAN82	17AUG81	15JAN82	2	0	1
61803	61804	9		OPB 1 C6	618 INCORP GENL AMENDMENTS(DC)	3AUG81	20CT81	17AUG81	16OCT81	2	0	1
61804	61806	1		OPB 1 C6	618 INCORP GENL AMENDMENTS(DC)	50CT81	90CT81	19OCT81	23OCT81	2	1	1
61810	61838	14	R	OPB 1 C6	618 SPILLWAYS ENERGY DISIPATINS	3AUG81	6NOV81	50CT81	8JAN82	9	9	1
61814	61832	9	R	OPB 1 C6	618 ADJUST ALIGNMENTS(DC)	3AUG81	20CT81	7SEP81	6NOV81	5	3	1
61822	61828	2		OPB 1 C6	618 PREL DESGN CONTRL STRUCT(DC)	3AUG81	14AUG81	28SEP81	90CT81	8	0	1
61824	61826	2		OPB 1 C6	618 OPT AGAINST DAM FREEBRD(DC)	50CT81	16OCT81	50CT81	16OCT81	0	0	1 CRITICAL
61826	61834	7		OPB 1 C6	618 OPT AGAINST DAM FREEBRD(DC)	19OCT81	4DEC81	19OCT81	4DEC81	0	0	1 CRITICAL
61828	61830	4		OPB 1 C6	618 PREL DESGN CONTRL STRUCT(DC)	17AUG81	11SEP81	12OCT81	6NOV81	8	6	1
61834	61840	5		OPB 1 C6	618 OPT AGAINST DAM FREEBRD(DC)	7DEC81	8JAN82	7DEC81	8JAN82	0	0	1 CRITICAL
61836	61844	4		OPB 1 C6	618 PREL DESGN CHUTE/ROCK ANCRS	3AUG81	28AUG81	12OCT81	6NOV81	10	6	1
61842	61846	6		OPB 1 C6	618 PREL DESGN GROUTING/DRAINAGE	19OCT81	27NOV81	18JAN82	26FEB82	13	13	1
61852	61854	5	R	OPB 1 C6	618 LL RELEASES ENERGY DISIPATIN	3AUG81	4SEP81	14DEC81	15JAN82	19	0	1
61856	61860	2		OPB 1 C6	618 LL RELEASES ENERGY DISIPATIN	7SEP81	18SEP81	18JAN82	29JAN82	19	19	1
61862	61864	7		OPB 1 C6	618 DRAFT REPORT DUGS(DC)	3AUG81	18SEP81	17AUG81	20CT81	2	0	1
61864	61866	3		OPB 1 C6	618 DRAFT REPORT DUGS(DC)	21SEP81	90CT81	50CT81	23OCT81	2	0	1
61866	61868	7		OPB 1 C6	618 DRAFT REPORT DUGS(DC)	12OCT81	27NOV81	26OCT81	11DEC81	2	0	1
61868	61870	5		OPB 1 C6	618 DRAFT REPORT DUGS(DC)	30NOV81	1JAN82	14DEC81	15JAN82	2	0	1
61870	61872	4		OPB 1 C6	618 DRAFT REPORT DUGS(DC)	4JAN82	29JAN82	18JAN82	12FEB82	2	0	1
61872	61874	4		OPB 1 C6	618 DRAFT REPORT DUGS(DC)	1FEB82	26FEB82	15FEB82	12MAR82	2	2	1
61925	61930	2		OPB 1 C4	619 SPILLWAY SELECTION REPORT	3AUG81	14AUG81	7DEC81	18DEC81	18	0	1
61925	61955	13	H	OPB 1 C4	619 SPILLWAY SELECTION REPORT	3AUG81	30OCT81	7DEC81	5MAR82	13	0	1
61930	61935	2		OPB 1 C4	619 SPILLWAY SELECTION REPORT	17AUG81	28AUG81	21DEC81	1JAN82	18	0	1
61935	61940	4		OPB 1 C4	619 SPILLWAY SELECTION REPORT	31AUG81	25SEP81	4JAN82	29JAN82	18	0	1
61940	61945	2		OPB 1 C4	619 SPILLWAY SELECTION REPORT	28SEP81	90CT81	1FEB82	12FEB82	18	0	1













CPM ANALYSIS LISTING

I-NODE	J-NODE	DUR	SELECT	CODES	DESCRIPTION	E.S.	E.F.	L.S.	L.F.	T.F.	F.F.	CL		
A0700	A0900	10	FLC	C110	10052	PREPARE EXHIBIT D	30NOV81	5FEB82	8MAR82	14MAY82	14	14	1	
A0800	A1000	10	FLC	C110	1006	PREPARE EXHIBIT R	30NOV81	5FEB82	8FEB82	16APR82	10	10	1	
A0000	A0200	6	FLC	C110	1007	PREPARE EXHIBIT T	14SEP81	23OCT81	21SEP81	30OCT81	1	0	1	
A0200	A1100	4	FLC	C110	1007	PREPARE EXHIBIT T	26OCT81	20NOV81	2NOV81	27NOV81	1	0	1	
A2200	A2400	6	FLC	C110	1008	PREP APPLICATN FORM-DRAFT	11JAN82	19FEB82	8MAR82	16APR82	8	8	1	
A2400	A2600	0	FLC	C110	1008	PREP APPLICATN FORM-DRAFT	19APR82	16APR82	19APR82	16APR82	0	0	1	
A2600	A2800	2	FLC	C110	1009	REVIEW AND CORRECT	19APR82	30APR82	19APR82	30APR82	0	0	1	
A2800	A3000	2	FLC	C110	1010	EXTERNAL REVIEW	3MAY82	14MAY82	3MAY82	14MAY82	0	0	1	
A3000	A3400	6	FLC	C110	10XXX	PRINT LICENSE APPLICATION	17MAY82	25JUN82	17MAY82	25JUN82	0	0	1	
B0000	B0200	46 R	FLC	C210	1101	PROJECT OVERVIEW	3AUG81	18JUN82	10AUG81	25JUN82	1	1	1	
B0400	B0600	36 R	FLC	C210	1102	INTERNAL REPORTS	3AUG81	9APR82	10AUG81	16APR82	1	0	1	
B0600	B06A0	0	FLC	C210	1102XX	EXHIBIT U MATERIAL COMPLETE	12APR82	9APR82	19APR82	16APR82	1	1	1	
B1200	B1400	26 R	FLC	C210	1103	SUSITNA BASE PLAN RISK ANALY ST	3AUG81	29JAN82	3AUG81	29JAN82	0	0	1	
B1400	B1600	0	FLC	C210	1103	SUSITNA BASE PLAN RISK ANALY FIN	1FEB82	29JAN82	1FEB82	29JAN82	0	0	1	
B1600	B1800	21	FLC	C210	1104	SUSITNA BASE PLAN EXTEN/REVIS	1FEB82	25JUN82	1FEB82	25JUN82	0	0	1	
B2000	B2200	30	FLC	C210	1105	SUSITNA FINANCE RISK ANALYSIS	3AUG81	26FEB82	30NOV81	25JUN82	17	17	1	
B2400	B2600	24	FLC	C210	1106	RESOLUTION TAX ISSUE	3AUG81	15JAN82	11JAN82	25JUN82	23	23	1	
B2800	B3000	30	FLC	C210	1107	IDENTIFY PARTIES INTEREST	3AUG81	26FEB82	30NOV81	25JUN82	17	17	1	
B3200	B3400	30	FLC	C210	1108	REVENUE ASSURANCE	3AUG81	26FEB82	21SEP81	16APR82	7	0	1	
B3600	B3800	36 R	FLC	C210	1109	LIAISON APA BOND UNDERWRITER	3AUG81	9APR82	10AUG81	16APR82	1	1	1	
B3400	B34A0	0	FLC	C210	1109XX	EXHIBIT G MATERIAL COMPLETE	1MAR82	26FEB82	19APR82	16APR82	7	7	1	
C0600	C0800	4	OPB	1	C810	12022	CONDUCT PUBLIC MEETING #2	24AUG81	18SEP81	30NOV81	25DEC81	14	0	1
C1200	C1400	4	OPB	1	C810	12023	CONDUCT PUBLIC MEETING #3	14DEC81	8JAN82	22MAR82	16APR82	14	14	1
C0200	C0400	3 R	OPB	1	C810	12031	CONDUCT WORKSHOPS 1,2,3	3AUG81	21AUG81	9NOV81	27NOV81	14	0	1
C0800	C1000	12	OPB	1	C810	12032	CONDUCT WORKSHOPS 4,5,6	21SEP81	11DEC81	28DEC81	19MAR82	14	0	1
C1600	D1200	46 R	OPB	1	C810	1204	PREP PUBLISH DISTRIB MATERIAL	3AUG81	18JUN82	10AUG81	25JUN82	1	1	1
C1800	D1200	46 R	OPB	1	C810	1205	PREP MAINTAIN ACTION LIST	3AUG81	18JUN82	10AUG81	25JUN82	1	1	1
D1000	D1200	46 R	PSB	2	C310	13013	PROJECT PROCED MANUAL-UPDATE	3AUG81	18JUN82	10AUG81	25JUN82	1	1	1
D2200	D2400	46 R	PSB	2	C310	13042	SCHEDULE CONTROL SYS UPDATE	3AUG81	18JUN82	10AUG81	25JUN82	1	1	1
D2800	D3000	46 R	PSB	2	C310	13052	COST CONTROL SYSTEM-OP	3AUG81	18JUN82	10AUG81	25JUN82	1	1	1
D3400	D3600	46 R	PSB	2	C310	13052	MANPOWER LOADING SCHED-UPDATE	3AUG81	18JUN82	10AUG81	25JUN82	1	1	1
D3800	D4000	46 R	PSB	2	C310	1310	SUB CONTRACT ADMINISTRATION	3AUG81	18JUN82	10AUG81	25JUN82	1	1	1
D1200	D1300	0		10	XXX	PROJECT COMPLETE	28JUN82	25JUN82	28JUN82	25JUN82	0	183	1	

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CRITICAL

CPM ANALYSIS LISTING

I-NODE	J-NODE	DUR	SELECT	CODES	DESCRIPTION	E.S.	E.F.	L.S.	L.F.	T.F.	F.F.	CL
10000	10600	0	C	OPB 1 C2	101	REVIEW OF METHODOLOGIES						COMPLETE
10400	10500	0	C	OPB 1 C2	102	FCST PEAK LOAD DEMAND TRANS						COMPLETE
12100	11800	0	C	OPB 1 C2	103	IDENT OF POWER ALTERNAT						COMPLETE
11800	11900	0	C	OPB 1 C2	108	TERMINATION REPORT						COMPLETE
20200	20300	0	C	OFA C2	2021	FIELD CAMP SET-UP						COMPLETE
20300	20400	0	C	OFA C2	2021	FIELD CAMP SET-UP						COMPLETE
21200	21500	0	C	OFA C2	204	LAND STATUS RESEARCH						COMPLETE
21600	21700	0	C	OFA C2	205	LAND ACQUISITION ANALYSIS						COMPLETE
21700	220A0	0	C	OFA C2	205	LAND ACQUISITION ANALYSIS						COMPLETE
20800	21000	0	C	OFA C2	206	RIGHT OF ENTRY						COMPLETE
25000	25200	0	C	OFA C3	207	SITE SPECIFIC SURVEYS						COMPLETE
25200	25400	0	C	OFA C3	207	SITE SPECIFIC SURVEYS						COMPLETE
25400	25500	0	C	OFA C3	207	SITE SPECIFIC SURVEY						COMPLETE
23000	23200	0	C	OFA C3	2081	AIR PHOTOS & MAPPING-1980						COMPLETE
24000	24100	0	C	OFA C3	2082	AIR PHOTOS & MAPPING-1981						COMPLETE
24100	241A0	0	C	OFA C3	2082	AIR PHOTOS & MAPPING-1981						COMPLETE
23600	23800	0	C	OFA C3	209	CONTROL NETWORK SURVEYS						COMPLETE
22200	22300	0	C	OFA C3	210	ACCESS ROAD						COMPLETE
25600	26600	0	C	OFA C3	211	MAP & PHOTO SEARCH						COMPLETE
26400	26600	0	C	OFA C4	212	FIELD RECON FOR RSRVR CLEAR						COMPLETE
26600	26800	0	C	OFA C4	212	FIELD RECON FOR RSRVR CLEAR						COMPLETE
27600	27700	0	C	OFA C3	213	MARKETABLY & DISPOSAL STDY						COMPLETE
27700	27200	0	C	OFA C3	213	MARKETABLY & DISPOSAL STDY						COMPLETE
27000	27200	0	C	OFA C3	214	CST ESTMTS RSVR CLEARING						COMPLETE
27200	27400	0	C	OFA C3	214	CST ESTMTS RSVR CLEARING						COMPLETE
25800	26000	0	C	OFA C4	215	SLOPE EROSION & STBLTY STUDY						COMPLETE
26000	26200	0	C	OFA C4	215	SLOPE EROSION & STBLTY STUDY						COMPLETE
24400	24600	0	C	OFA C3	216	HYDROGRAPHIC SURVEYS						COMPLETE
24600	24800	0	C	OFA C3	216	HYDROGRAPHIC SURVEYS						COMPLETE
32600	32800	0	C	OPB 1 C4	301	REVIEW AVAILABLE MATERIAL						COMPLETE
32800	33000	0	C	OPB 1 C4	301	REVIEW AVAILABLE MATERIAL						COMPLETE
36200	36400	0	C	OPB 1 C4	3021	FIELD DATA INDEX-SETUP						COMPLETE
36400	36600	0	C	OPB 1 C4	3021	FIELD DATA INDEX-SETUP						COMPLETE
36600	36700	0	C	OPB 1 C4	3022	FIELD DATA INDEX OPERATION						COMPLETE
37000	37200	0	C	OPB 1 C4	3031	FIELD DATA COLLECTION-SPECS						COMPLETE
37400	37500	0	C	OPB 1 C4	3032	FIELD DATA COLLECTION 80-81						COMPLETE
37500	37600	0	C	OPB 1 C4	3032	FIELD DATA COLLECTION 80-81						COMPLETE
32800	33200	0	C	OPB 1 C4	3041	WATER RSRCS-FLOW EXTENSION						COMPLETE
33200	33300	0	C	OPB 1 C4	3041	WATER RSRCS-FLOW EXTENSION						COMPLETE
33300	333A0	0	C	OPB 1 C4	3042	WATER RSRCS-FREQ ANALYSIS						COMPLETE
34200	34400	0	C	OPB 1 C4	3043	WATER RSRCS-RESERVOIR STUDY						COMPLETE
34400	344A0	0	C	OPB 1 C4	3043	WATER RSRCS-RESERVOIR STUDY						COMPLETE
344A0	34500	0	C	OPB 1 C4	3043	WATER RSRCS-RESERVOIR STUDY						COMPLETE
33700	33900	0	C	OPB 1 C4	3045	EVAPORATION STUDIES						COMPLETE
32700	32900	0	C	OPB 1 C4	3051	FLOODS-FREQUENCY ANALYSIS						COMPLETE
32300	32400	0	C	OPB 1 C4	3052	FLOODS FMF REVIEW						COMPLETE
32800	32300	0	C	OPB 1 C4	3052	FLOODS FMF REVIEW						COMPLETE
31600	31800	0	C	OPB 1 C4	3053	FLOODS-RESERVOIR ROUTING						COMPLETE
30000	30200	0	C	OPB 1 C4	3061	HYDR&ICE-CHANNEL WTR LVLS						COMPLETE
38800	39000	0	C	OPB 1 C4	3063	HYDR&ICE-RESER SLIDE SURGE						COMPLETE
39200	392A0	0	C	OPB 1 C4	3064	HYDR & ICE-RSVR TEMP REGIME						COMPLETE

CPM ANALYSIS LISTING

I-NODE	J-NODE	DUR	SELECT	CODES	DESCRIPTION	E.S.	E.F.	L.S.	L.F.	T.F.	F.F.	CL
33400	33600	0	C	OPB 1 C4	3072 RIVER MORPHOLOGY							COMPLETE
38000	38200	0	C	OPB 1 C4	3081 TRANSMN LINE-PRLM PARAMTR							COMPLETE
38200	38400	0	C	OPB 1 C4	3082 TRANSMN LINE-DET PARAMTR							COMPLETE
38400	38600	0	C	OPB 1 C4	3082 TRANSMN LINE-DET PARAMTR							COMPLETE
30800	31000	0	C	OPB 1 C4	3101 LWR SUSITNA STUDIES-PRELIM							COMPLETE
31000	31200	0	C	OPB 1 C4	3101 LWR SUSITNA STUDIES-PRELIM							COMPLETE
43100	43200	0	C	OPB 1 C1	401 REVIEW AVAILABLE DATA							COMPLETE
43200	43400	0	C	OPB 1 C1	401 REVIEW AVAILABLE DATA							COMPLETE
43400	41200	0	C	OPB 1 C1	401 REVIEW AVAILABLE DATA							COMPLETE
44000	44200	0	C	OFA C4	402 SHORT TERM MONITORNG PROGRAM							COMPLETE
44200	41200	0	C	OFA C4	402 SHORT TERM MONITORNG PROGRAM							COMPLETE
40000	40200	0	C	OPB 1 C1	403 PRELIM RESERVV INDUCD SEISMIC							COMPLETE
40300	40600	0	C	OPB 1 C1	404 REMOTE SENSING IMAG ANALYSIS							COMPLETE
40600	40800	0	C	OPB 1 C1	404 REMOTE SENSING IMAG ANALYSIS							COMPLETE
40800	42000	0	C	OPB 1 C1	404 REMOTE SENSING IMAG ANALYSIS							COMPLETE
42200	42400	0	C	OFA C4	405 SEISMIC GEOLOGIC RECONABANCE							COMPLETE
41000	41200	0	C	OPB 1 C1	406 PRELIM EVALUATH&REPORT-DRAFT							COMPLETE
41200	41400	0	C	OPB 1 C1	406 PRELIM EVALUATION & REPORT							COMPLETE
41300	41600	0	C	OPB 1 C1	406 PRELIM EVAL & REPORT DRAFT							COMPLETE
44200	45000	0	C	OPB 1 C1	407 PRELIM GROUND MOTION STUDIES							COMPLETE
45600	45800	0	C	OPB 1 C1	408 DAM STABILITY							COMPLETE
45800	46000	0	C	OPB 1 C1	408 DAM STABILITY							COMPLETE
44400	44500	0	C	OPB 1 C1	413 GROUND MOTION STUDIES							COMPLETE
44500	44600	0	C	OPB 1 C1	413 GROUND MOTION STUDIES							COMPLETE
45200	45300	0	C	OPB 1 C1	415 SOIL SUSCEPTBY-SEISMIC FAIL							COMPLETE
50000	50200	0	C	OPB 1 C1	501 DATA COLLECTION							COMPLETE
50200	50400	0	C	OPB 1 C1	501 DATA COLLECTION							COMPLETE
50400	50600	0	C	OPB 1 C1	501 DATA COLLECTION							COMPLETE
50200	51200	0	C	OPB 1 C1	502 AIR PHOTO INTERPRETATION							COMPLETE
51200	51600	0	C	OPB 1 C1	502 AIR PHOTO INTERPRETATION							COMPLETE
50800	51600	0	C	OPB 1 C1	503 1980 PROGRAM DESIGN							COMPLETE
51000	51600	0	C	OFA C4	504 1980 EXPLORATION PROGRAM							COMPLETE
52000	52200	0	C	OPB 1 C1	505 1981 PROGRAM DESIGN							COMPLETE
52200	52600	0	C	OPB 1 C1	505 1981 PROGRAM DESIGN							COMPLETE
52400	52600	0	C	OFA C4	506 1981 EXPLORATION PROGRAM							COMPLETE
51400	51600	0	C	OPB 1 C1	5081 DATA ASSEMBLY-1980-DRAFT							COMPLETE
51600	51800	0	C	OPB 1 C1	5081 DATA ASSEMBLY-1980-DRAFT							COMPLETE
52800	53000	0	C	OPB 1 C1	5082 DATA ASSEMBLY-1981-DRAFT							COMPLETE
60120	60122	0	C	OPB 1 C4	601 REVIEW PREVIOUS STUDIES							COMPLETE
60122	60125	0	C	OPB 1 C4	601 REVIEW PREVIOUS STUDIES							COMPLETE
60200	60524	0	C	OPB 1 C4	602 INVESTIGATE TUNNEL ALTERNATIVES							COMPLETE
60325	60330	0	C	OPB 1 C4	603 EVAL ALT SUSITNA DEVELOPMENT							COMPLETE
60330	60335	0	C	OPB 1 C4	603 EVAL ALT SUSITNA DEVELOPMENT							COMPLETE
60335	60340	0	C	OPB 1 C4	603 EVAL ALT SUSITNA DEVELOPMENT							COMPLETE
60340	60345	0	C	OPB 1 C4	603 EVAL ALT SUSITNA DEVELOPMENT							COMPLETE
60420	60425	0	C	OPB 1 C4	604 DEVL CAN ARCH DAM EVALUATION							COMPLETE
60425	60430	0	C	OPB 1 C4	604 DEVL CAN ARCH DAM EVALUATION							COMPLETE
60510	60520	0	C	OPB 1 C4	6051 SELECT REPORT DRAFT							COMPLETE
60520	60522	0	C	OPB 1 C4	6052 SELECT FINAL REPORT DRAFT							COMPLETE
60522	60524	0	C	OPB 1 C4	6052 SELECT FINAL REPORT DRAFT							COMPLETE
60524	60528	0	C	OPB 1 C4	6052 SELECT REPORT FINAL DRAFT							COMPLETE

CPM ANALYSIS LISTING

I-NODE	J-NODE	DUR	SELECT	CODES	DESCRIPTION	E.S.	E.F.	L.S.	L.F.	T.F.	F.F.	CL
60529	60530	0	C	OPB 1 C4	6053 SELECT REPORT FINAL EDITION							COMPLETE
60612	60614	0	C	OPB 1 C4	606 STAGED DEVELOPMENT ALT							COMPLETE
60614	60616	0	C	OPB 1 C4	606 STAGED DEVELOPMENT ALT							COMPLETE
60616	60618	0	C	OPB 1 C4	606 STAGED DEVELOPMENT ALT							COMPLETE
60702	60703	0	C	OPB 1 C5	607 DEVELOP CONCEPTUAL PLAN(WAT)							COMPLETE
60703	60704	0	C	OPB 1 C5	607 DEVELOP CONCEPTUAL PLAN(WAT)							COMPLETE
60802	60804	0	C	OPB 1 C6	608 UPDATE DESIGN CRITERIA(DC)							COMPLETE
60804	60806	0	C	OPB 1 C6	608 UPDATE DESIGN CRITERIA(DC)							COMPLETE
62506	62508	0	C	OPB 1 C6	608 OPTIMIZE DAM HEIGHTS(DC)							COMPLETE
60902	60903	0	C	OPB 1 C4	609 UPDATE DESIGN CRITERIA(WAT)							COMPLETE
60903	60904	0	C	OPB 1 C4	609 UPDATE DESIGN CRITERIA(WAT)							COMPLETE
60904	60905	0	C	OPB 1 C4	609 UPDATE DESIGN CRITERIA(WAT)							COMPLETE
60905	60906	0	C	OPB 1 C4	609 UPDATE DESIGN CRITERIA(WAT)							COMPLETE
60907	60908	0	C	OPB 1 C4	609 UPDATE CRIT&ASSUMPTIONS(WAT)							COMPLETE
61002	61003	0	C	OPB 1 C4	610 UPDATE DESIGN CRITERIA(WAT)							COMPLETE
61003	61004	0	C	OPB 1 C4	610 UPDATE DESIGN CRITERIA(DC)							COMPLETE
61004	61005	0	C	OPB 1 C4	610 UPDATE DESIGN CRITERIA(DC)							COMPLETE
61005	61006	0	C	OPB 1 C4	610 UPDATE DESIGN CRITERIA(DC)							COMPLETE
61007	61008	0	C	OPB 1 C4	610 UPDATE CRIT&ASSUMPTIONS(DC)							COMPLETE
61102	61103	0	C	OPB 1 C5	611 DEV ENGRG SKCHS/LAYOTS(WAT)							COMPLETE
61103	61104	0	C	OPB 1 C5	611 DEV ENGRG SKCHS/LAYOTS(WAT)							COMPLETE
61104	61105	0	C	OPB 1 C5	611 DEV ENGRG SKCHS/LAYOTS(WAT)							COMPLETE
61105	61106	0	C	OPB 1 C5	611 DEV ENGRG SKCHS/LAYOTS(WAT)							COMPLETE
61108	61110	0	C	OPB 1 C5	611 DEV DWGS/COST COMPRISH(WAT)							COMPLETE
61110	61111	0	C	OPB 1 C5	611 DEV DWGS/COST COMPRISH(WAT)							COMPLETE
61111	61112	0	C	OPB 1 C5	611 DEV DWGS/COST COMPRISH(WAT)							COMPLETE
61112	61114	0	C	OPB 1 C5	611 DEV DWGS/COST COMPRISH(WAT)							COMPLETE
61116	61117	0	C	OPB 1 C5	611 INCORP GENL AMENDMENTS (WAT)							COMPLETE
61120	61122	0	C	OPB 1 C5	611 DESIGN DAM(WAT)							COMPLETE
61124	61126	0	C	OPB 1 C5	611 Dam FOUNDATION TREATMENT-WAT							COMPLETE
61128	61130	0	C	OPB 1 C5	611 OPTIMIZE DAM HEIGHT							COMPLETE
61132	61138	0	C	OPB 1 C5	611 ADJUST ALIGNMENT(WAT)							COMPLETE
61138	61146	0	C	OPB 1 C5	611 ADJUST ALIGNMENT(WAT)							COMPLETE
61202	61204	0	C	OPB 1 C6	612 DEV ENGRG SKCHS/LAYOTS(DC)							COMPLETE
61204	61206	0	C	OPB 1 C6	612 DEV ENGRG SKCHS/LAYOTS(DC)							COMPLETE
61206	61208	0	C	OPB 1 C6	612 DEV ENGRG SKCHS/LAYOTS(DC)							COMPLETE
61208	61210	0	C	OPB 1 C6	612 DEV ENGRG SKCHS/LAYOTS(DC)							COMPLETE
61212	61214	0	C	OPB 1 C6	612 DEV DWGS/COST COMPRISH(DC)							COMPLETE
61214	61216	0	C	OPB 1 C6	612 DEV DWGS/COST COMPRISH(DC)							COMPLETE
61216	61218	0	C	OPB 1 C6	612 DEV DWGS/COST COMPRISH(DC)							COMPLETE
61218	61220	0	C	OPB 1 C6	612 DEV DWGS/COST COMPRISH(DC)							COMPLETE
61222	61223	0	C	OPB 1 C6	612 INCORP GENL AMENDMENTS(DC)							COMPLETE
61228	61229	0	C	OPB 1 C6	612 DESIGN DAM(DC)							COMPLETE
61229	61230	0	C	OPB 1 C6	612 DESIGN DAM(DC)							COMPLETE
61232	61234	0	C	OPB 1 C6	612 OPTIMIZE DAM HEIGHT(DC)							COMPLETE
61236	61240	0	C	OPB 1 C6	612 DESIGN DAM(DC)							COMPLETE
61238	61242	0	C	OPB 1 C6	612 FOUNDATION TREATMENT(DC)							COMPLETE
61402	61403	0	C	OPB 1 C4	614 SPILLWAY DESIGN CRITERIA							COMPLETE
61403	61404	0	C	OPB 1 C4	614 SPILLWAY DESIGN CRITERIA							COMPLETE
61404	61405	0	C	OPB 1 C4	614 SPILLWAY DESIGN CRITERIA							COMPLETE
61405	61406	0	C	OPB 1 C4	614 SPILLWAY DESIGN CRITERIA							COMPLETE

CPM ANALYSIS LISTING

I-NODE	J-NODE	DUR	SELECT	CODES	DESCRIPTION	E.S.	E.F.	L.S.	L.F.	T.F.	F.F.	CL
61407	61408	0	C	OPB 1 C4	614 UPDATE CRIT&ASSUMPTIONS(SPWY)ST							COMPLETE
61502	61503	0	C	OPB 1 C5	615 DEV ENGRG SKCHS/LAYOTS(WAT) ST							COMPLETE
61503	61504	0	C	OPB 1 C5	615 DEV ENGRG SKCHS/LAYOTS(WAT) CT-1							COMPLETE
61504	61505	0	C	OPB 1 C5	615 DEV ENGRG SKCHS/LAYOTS(WAT) CT-2							COMPLETE
61505	61506	0	C	OPB 1 C5	615 DEV ENGRG SKCHS/LAYOTS-WAT/SYFIN							COMPLETE
61507	61508	0	C	OPB 1 C5	615 DEV ENGRG SKCHS/LAYOTS-WAT/SYST							COMPLETE
61508	61510	0	C	OPB 1 C5	615 DEV ENGRG SKCHS/LAYOTS-WAT/SYFIN							COMPLETE
61510	61511	0	C	OPB 1 C5	615 DEV DWGS/COST COMPRISN(WAT) CT-2							COMPLETE
61511	61512	0	C	OPB 1 C5	615 DEV DWGS/COST COMPRISN(WAT) CT-2							COMPLETE
61512	61514	0	C	OPB 1 C5	615 DEV DWGS/COST COMPRISN-WAT/SYFIN							COMPLETE
61515	61516	0	C	OPB 1 C5	615 SELECT SPILLWAY FORMAT ST							COMPLETE
61516	61518	0	C	OPB 1 C5	615 SELECT SPILLWAY FORMAT FIN							COMPLETE
61602	61604	0	C	OPB 1 C6	616 DEV ENGRG SKCHS/LAYOTS(DC) ST							COMPLETE
61604	61606	0	C	OPB 1 C6	616 DEV ENGRG SKCHS/LAYOTS(DC) CT-1							COMPLETE
61606	61608	0	C	OPB 1 C6	616 DEV ENGRG SKCHS/LAYOTS(DC) CT-2							COMPLETE
61608	61610	0	C	OPB 1 C6	616 DEV ENGRG SKCHS/LAYOTS(DC) FIN							COMPLETE
61612	61614	0	C	OPB 1 C6	616 DEV DWGS/COST COMPRISN(DC) FIN							COMPLETE
61614	61616	0	C	OPB 1 C6	616 DEV DWGS/COST COMPRISN(DC) CT-1							COMPLETE
61616	61618	0	C	OPB 1 C6	616 DEV DWGS/COST COMPRISN(DC) CT-2							COMPLETE
61618	61620	0	C	OPB 1 C6	616 DEV DWGS/COST COMPRISN(DC) FIN							COMPLETE
61622	61624	0	C	OPB 1 C6	616 SELECT SPILLWAY FORMAT ST							COMPLETE
61624	61626	0	C	OPB 1 C6	616 SELECT SPILLWAY FORMAT FIN							COMPLETE
61702	61704	0	C	OPB 1 C5	617 INCORP GENL AMENDMENTS (WAT) ST							COMPLETE
61708	61718	0	C	OPB 1 C5	617 ADJUST ALIGNMENTS ST							COMPLETE
61710	61720	0	C	OPB 1 C5	617 ENERGY DISSIPATION-WAT ST							COMPLETE
61712	61721	0	C	OPB 1 C5	617 PREL DESGN CHUTE/ROCK ANCRS ST							COMPLETE
61714	61723	0	C	OPB 1 C5	617 PREL DESGN CONTRL STRUCTURES ST							COMPLETE
61748	61750	0	C	OPB 1 C5	617 CONFIRM CONCEPT/ALIGNMENTS ST							COMPLETE
61750	61754	0	C	OPB 1 C5	617 CONFIRM CONCEPT/ALIGNMENTS FIN							COMPLETE
61756	61760	0	C	OPB 1 C5	617 DESIGN WATER PASSAGES ST							COMPLETE
61802	61803	0	C	OPB 1 C6	618 INCORP GENL AMENDMENTS(DC) ST							COMPLETE
61808	61814	0	C	OPB 1 C6	618 ADJUST ALIGNMENTS(DC) ST							COMPLETE
61812	61820	0	C	OPB 1 C6	618 PREL DESGN CHUTE/ROCK ANCRS ST							COMPLETE
61816	61824	0	C	OPB 1 C6	618 OPT AGAINST DAM FREEBRD(DC) ST							COMPLETE
61818	61822	0	C	OPB 1 C6	618 PREL DESGN CONTRL STRUCT(DC) ST							COMPLETE
61848	61850	0	C	OPB 1 C6	618 CONFIRM CONCEPT							COMPLETE
62010	62020	0	C	OPB 1 C5	620 ESTABLISH LOADING SCHEDULE							COMPLETE
62010	62022	0	C	OPB 1 C5	620 ESTAB PERMANENT OPERATING FORCE							COMPLETE
62102	62104	0	C	OPB 1 C5	621 CONFIRM CONCEPT							COMPLETE
62106	62112	0	C	OPB 1 C5	621 DESIGN WATER PASSAGES-WAT ST							COMPLETE
62108	62114	0	C	OPB 1 C5	621 DESIGN COFFERDAM HEIGHT ST							COMPLETE
62202	62204	0	C	OPB 1 C6	622 CONFIRM CONCEPT(DC)							COMPLETE
62302	62303	0	C	OPB 1 C4	623 DEV ENGRG SKCHS/LAYOTS(WAT) ST							COMPLETE
62303	62304	0	C	OPB 1 C4	623 DEV ENGRG SKCHS/LAYOTS(WAT) CT-1							COMPLETE
62304	62305	0	C	OPB 1 C4	623 DEV ENGRG SKCHS/LAYOTS(WAT) CT-2							COMPLETE
62305	62306	0	C	OPB 1 C4	623 DEV ENGRG SKCHS/LAYOTS(WAT) FIN							COMPLETE
62308	62310	0	C	OPB 1 C4	623 DEV DWGS/COST COMPRISN(WAT) ST							COMPLETE
62310	62311	0	C	OPB 1 C4	623 DEV DWGS/COST COMPRISN(WAT) CT-2							COMPLETE
62311	62312	0	C	OPB 1 C5	623 DEV DWGS/COST COMPRISN(WAT) FIN							COMPLETE
62312	62314	0	C	OPB 1 C4	623 DEV DWGS/COST COMPRISN(WAT) FIN							COMPLETE
62315	62316	0	C	OPB 1 C5	623 TAKEOFF FOR ALTNATIVE LAYOUT ST							COMPLETE



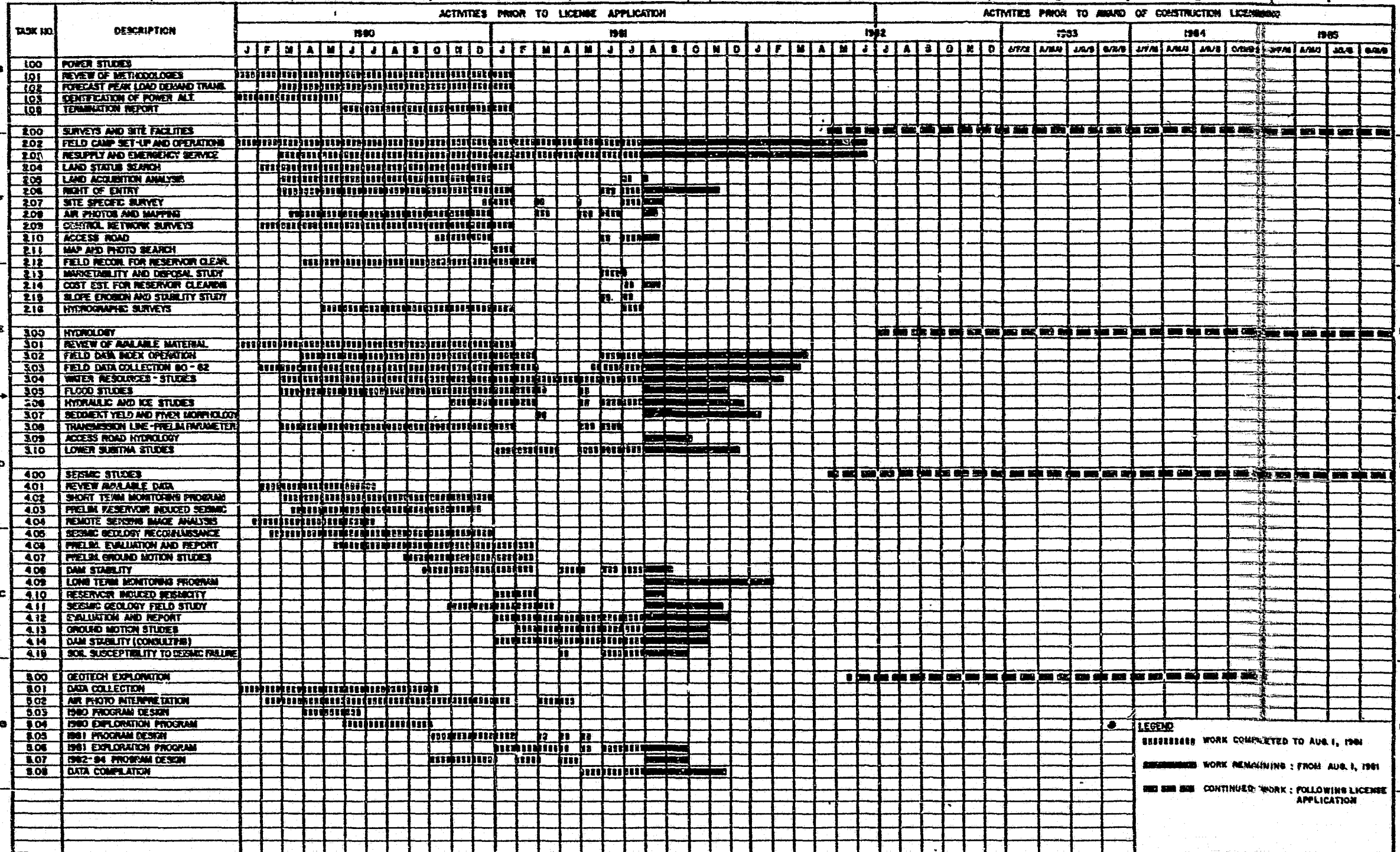
CPM ANALYSIS LISTING

I-NODE	J-NODE	DUR	SELECT	CODES	DESCRIPTION	E.S.	E.F.	L.S.	L.F.	T.F.	F.F.	CL
62316	62318	0	C	OPB 1 C5	623 TAKEOFF FOR ALTERNATIVE LAYOUT	FIN						COMPLETE
62320	62323	0	C	OPB 1 C4	623 REVIEW ALIGNMENTS-WAT	ST						COMPLETE
62322	62326	0	C	OPB 1 C4	623 LAYOT U/G F/H & TAILR [ 800 MW							COMPLETE
62323	62324	0	C	OPB 1 C4	623 REVIEW ALIGNMENTS-WAT	CT-1						COMPLETE
62402	62404	0	C	OPB 1 C4	624 DEV ENGRG SKCHS/LAYOTS(DC)	ST						COMPLETE
62404	62406	0	C	OPB 1 C4	624 DEV ENGRG SKCHS/LAYOTS(DC)	CT-1						COMPLETE
62406	62408	0	C	OPB 1 C4	624 DEV ENGRG SKCHS/LAYOTS(DC)	CT-2						COMPLETE
62408	62410	0	C	OPB 1 C4	624 DEV ENGRG SKCHS/LAYOTS(DC)	FIN						COMPLETE
62412	62414	0	C	OPB 1 C4	624 DEV DWGS/COST COMPRISN(DC)	ST						COMPLETE
62414	62416	0	C	OPB 1 C4	624 DEV DWGS/COST COMPRISN(DC)	CT-1						COMPLETE
62416	62418	0	C	OPB 1 C4	624 DEV DWGS/COST COMPRISN(DC)	CT-2						COMPLETE
62418	62420	0	C	OPB 1 C4	624 DEV DWGS/COST COMPRISN(DC)	FIN						COMPLETE
62422	62424	0	C	OPB 1 C4	624 TAKEOFFS ALTERNATIVE LAYOUT	ST						COMPLETE
62424	62426	0	C	OPB 1 C4	624 TAKEOFFS ALTERNATIVE LAYOUT	FIN						COMPLETE
62428	62429	0	C	OPB 1 C4	624 REVIEW ALIGNMENTS(DC)	ST						COMPLETE
62429	62432	0	C	OPB 1 C4	624 REVIEW ALIGNMENTS(DC)	CT-1						COMPLETE
62430	62434	0	C	OPB 1 C4	624 LAYOT U/G F/H & TAILR [ 800 MW							COMPLETE
62502	62504	0	C	OPB 1 C4	625 OPTIMIZE DAM HEIGHT							COMPLETE
62510	62512	0	C	OPB 1 C4	625 SELECT 2-LYOTS-DETAILED STDY	ST						COMPLETE
62520	62521	0	C	OPB 1 C4	625 SELECT 2-LYOTS-DETAILED STDY	FIN						COMPLETE
62521	62522	0	C	OPB 1 C4	625 SELECT 2-LYOTS-DETAILED STDY	FIN						COMPLETE
62608	62611	0	C	OPB 1 C5	626 REVIEW ALIGNMENTS	ST						COMPLETE
62610	62614	0	C	OPB 1 C5	626 LAYOUT U/G F/H & TAILR CHANNEL							COMPLETE
62611	62612	0	C	OPB 1 C5	626 REVIEW ALIGNMENTS	CT-1						COMPLETE
62702	62703	0	C	OPB 1 C6	627 INCORP GENL AMENDMENTS(DC)	ST						COMPLETE
62708	62709	0	C	OPB 1 C6	627 REVIEW ALIGNMENTS(DC)	ST						COMPLETE
62709	62712	0	C	OPB 1 C6	627 REVIEW ALIGNMENTS(DC)	CT-1						COMPLETE
62710	62714	0	C	OPB 1 C6	627 LAYOUT U/G F/H & TAILR CHAL							COMPLETE
6A500	6A600	0	C	OPB 1 C2	632 THERMAL GENERATION RESOURCE	ST						COMPLETE
6A600	6A700	0	C	OPB 1 C2	632 THERMAL GENERATION RESOURCE	CT1						COMPLETE
6A700	6A800	0	C	OPB 1 C2	632 THERMAL GENERATION RESOURCE	FIN						COMPLETE
6A900	6B100	0	C	OPB 1 C2	633 HYDRO GENERATION RESOURCES	ST						COMPLETE
6B100	6B200	0	C	OPB 1 C2	633 HYDRO GENERATION RESOURCES	CT-1						COMPLETE
6B200	6B300	0	C	OPB 1 C2	633 HYDRO GENERATION RESOURCES	FIN						COMPLETE
6B500	6B600	0	C	OPB 1 C8	6341 ENVIRONMENT ASSESSMENT	ST						COMPLETE
6B600	6B700	0	C	OPB 1 C8	6341 ENVIRONMENT ASSESSMENT	CT1						COMPLETE
6B700	6C300	0	C	OPB 1 C8	6341 ENVIRONMENT ASSESSMENT	FIN						COMPLETE
6C600	6C700	0	C	OPB 1 C8	6342 ENVIRONMENT ASSESSMENT-FINAL							COMPLETE
6C800	6C900	0	C	OPB 1 C2	635 LOAD MANAGE & CONSERVE							COMPLETE
6D100	6D200	0	C	OPB 1 C2	6361 GENERATION PLAN PARAMATERS							COMPLETE
6D300	6D3A0	0	C	OPB 1 C2	6362 GENERAT PLAN ANALY & REPORT	ST						COMPLETE
6D3A0	6D400	0	C	OPB 1 C2	6362 GENERAT PLAN ANALY & REPORT	CT-1						COMPLETE
6D400	6D500	0	C	OPB 1 C2	6362 GENERAT PLAN ANALY & REPORT	CT-2						COMPLETE
6D500	6D600	0	C	OPB 1 C2	6362 GENERAT PLAN ANALY & REPORT	FIN						COMPLETE
71200	71400	0	C	OPB 1 C8	701 STUDY COORD-ALTERNATIVE SITE	CT-2						COMPLETE
70800	71000	0	C	OPB 1 C8	7011 STUDY COORD-ALTERNATIVE SITE	ST						COMPLETE
71000	71200	0	C	OPB 1 C8	7011 STUDY COORD-ALTERNATIVE SITE	CT-1						COMPLETE
71600	71800	0	C	OPB 1 C8	7012 STUDY COORD-PRELIM ALTERNATV	ST						COMPLETE
72000	72100	0	C	OPB 1 C8	7013 STUDY COORD-OPTIMIZED DESIGN	ST						COMPLETE
79200	79300	0	C	OPB 1 C8	702 MONITOR FIELD ACTIVITIES	ST						COMPLETE
71000	71100	0	C	OPB 1 C8	7041 WATER RESOURCE ALT SITES							COMPLETE

CPM ANALYSIS LISTING

I-NODE	J-NODE	DUR	SELECT	CODES	DESCRIPTION	E.S.	E.F.	L.S.	L.F.	T.F.	F.F.	CL
71600	70000	0	C	OPB 1 C8	7042 WTR RES-PRE WAT&DEVL CAN ALT							COMPLETE
73000	73100	0	C	OPB 1 C8	705 SOCIOECONOMIC ANALYSIS							COMPLETE
78600	78800	0	C	OPB 1 C8	7061 CULTURAL ALTERNATIVE SITES							COMPLETE
78800	78700	0	C	OPB 1 C8	7061 CULTURAL ALTERNATIVE SITES							COMPLETE
75200	75400	0	C	OPB 1 C8	7071 LAND USE ALTERNATIVE SITES							COMPLETE
72400	72500	0	C	OPB 1 C8	708 RECREATION PLANNING							COMPLETE
71200	73500	0	C	OPB 1 C8	7091 TRANS LINE ASSESS SCREENING							COMPLETE
734A0	73900	0	C	OPB 1 C8	7101 FISH ECOLOGY ALTERNATV SITES							COMPLETE
74900	749A0	0	C	OPB 1 C8	7111 WILDLIFE ECOLOGY ALTER SITES							COMPLETE
749A0	750A0	0	C	OPB 1 C8	7111 WILDLIFE ECOLOGY ALTER SITES							COMPLETE
77100	77300	0	C	OPB 1 C8	7121 PLANT ECOLOGY ALTERNTV SITES							COMPLETE
71000	710A0	0	C	OPB 1 C8	714 ACCESS RD ENVIRONMENT ANALY							COMPLETE
80000	80200	0	C	OPB 1 C3	801 SELECT INITIAL CORRIDORS							COMPLETE
80200	80400	0	C	OPB 1 C3	801 SELECT INITIAL CORRIDORS							COMPLETE
80400	80500	0	C	OPB 1 C3	801 SELECT INITIAL CORRIDORS							COMPLETE
81600	81800	0	C	OPB 1 C3	8021 LOAD FLOW ANALYSIS							COMPLETE
82400	82600	0	C	OPB 1 C3	80221 PRELIMINARY ELEC SYSTEM							COMPLETE
A2000	A1600	0	C	FLC C110	10021 ESTABLISH REGULATORY REQUIRE							COMPLETE
C0000	C0200	0	C	OPB 1 C810	12021 CONDUCT PUBLIC MEETING #1							COMPLETE
D0200	D0400	0	C	PSB 2 C310	13011 PROJECT PROCED MANUAL-DRAFT							COMPLETE
D0400	D0600	0	C	PSB 2 C310	13011 PROJECT PROCED MANUAL-DRAFT							COMPLETE
D0600	D0800	0	C	PSB 2 C310	13011 PROJECT PROCED MANUAL-DRAFT							COMPLETE
D0800	D1000	0	C	PSB 2 C310	13012 PROJECT PROCED MANUAL-FINAL							COMPLETE
D0000	D0600	0	C	PSB 2 C310	1302 FINANCIAL CONTROL PROCEDURES							COMPLETE
D1400	D1500	0	C	PSB 2 C310	1303 PROJECT MASTER SCHEDULE							COMPLETE
D2000	D2200	0	C	PSB 2 C310	13041 SCHEDULE CONTROL SYSTEM-DEV							COMPLETE
D2600	D2800	0	C	PSB 2 C310	13051 COST CONTROL SYSTEM-DEV							COMPLETE
D3200	D3400	0	C	PSB 2 C310	13061 MANPOWER LOADNG SCHEULE-DEV							COMPLETE
D1600	D0600	0	C	PSB 2 C410	1307 DEVELOP ACCOUNTING POLICIES							COMPLETE
D1800	D1900	0	C	PSB 2 C310	1308 DOCUMENTATION CONTROL							COMPLETE

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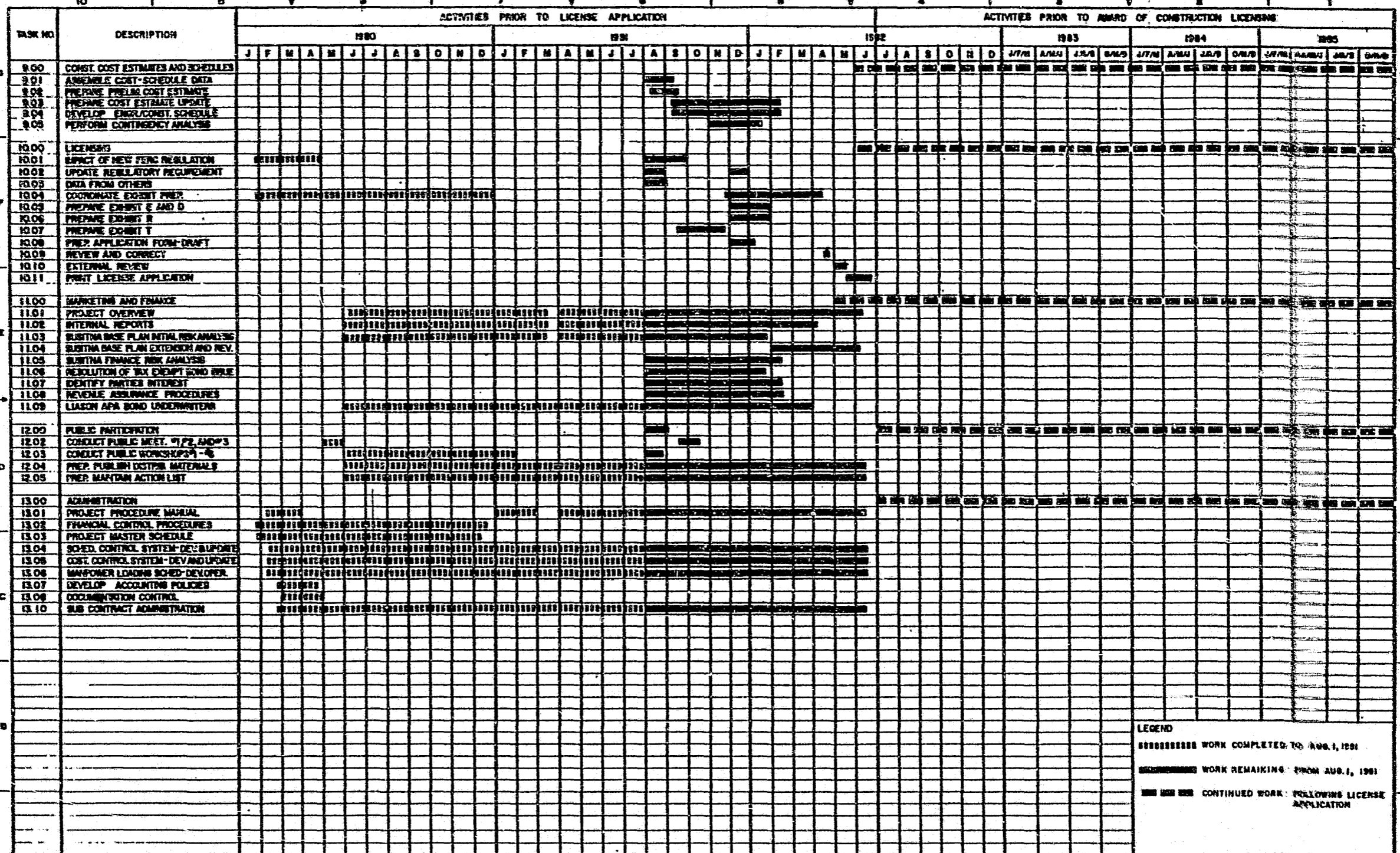


### SUSITNA HYDROELECTRIC PROJECT PLAN OF STUDY MASTER SCHEDULE

LEGEND  
■■■■■■■■■■ WORK COMPLETED TO AUG. 1, 1981  
- - - - - WORK REMAINING : FROM AUG. 1, 1981  
..... CONTINUED WORK : FOLLOWING LICENSE APPLICATION







SUSITNA HYDROELECTRIC PROJECT  
 PLAN OF STUDY MASTER SCHEDULE

FIGURE 3 OF 3



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