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4920233-15  
PD-AAD 501-D1

MONTHLY REPORT NO. 6

5p.

October 1, 1971

To : Government of the Philippines  
Thru : USAID/Manila  
From : Project Engineer, BuRec, Water Resources  
Development Project, USAID/Manila  
SUBJECT: Monthly Report, September 1971, in Accordance  
with PIO/T 492-233-2-90095, Admendment No. 1,  
dated March 24, 1971.

Significant Accomplishments:

Magat River Project Feasibility Study

On September 21 the Administrator, National Irrigation Administration called a staff meeting of all of his Division Chiefs, the Section Chiefs of the Magat River Investigation office, Messrs. Vogel and Larson of USAID, and the BuRec personnel. The Administrator was disturbed about Monthly Report No. 5 dated September 1, 1971 as he did not believe that the report presented an actual gage of the progress being made on the Magat Project. He stated that the report did not agree with the report of the Project Manager and asked that hereafter the reports submitted as a requirement of PIO/T 90095 should be concurred in by the Project Manager. This is the first such report. It was also agreed at the meeting that a chart would accompany future reports showing the progress of each principle part of the study. A copy of the chart is attached.

Progress improved during September on nearly all phases of the study. In the Engineering Section preliminary area-capacity tables of the alternative reservoirs were developed for use until final area-capacity tables can be developed from the aerial survey topography which is expected about November 1, 1971. Some preliminary studies of layouts of the dam and structures were initiated

and some study was made of alternate locations and sizing of diversion tunnels, spillway, and power plant. Data and maps were assembled from other agencies and were indexed and filed. Vertical control records in the provinces of Isabela, Nueva Vizcaya, and Cagayan were collected and put on location maps. Geologic data were assembled and mailed to the geologic consultant (Mr. C. J. Okeson, BuRec, Boise, Idaho) who plans to arrive in Manila on October 4. The position of Chief, Engineering Section was filled early in the month, and the position of Chief, Geology, was filled near the end of the month. Members of the Engineering Section went to the Magat River Project dam site and service area for a familiarization trip. They were shown around by the resident Field Engineer who spent the month supervising construction of the Magat Project office building at the NIA Region 2 compound in San Mateo. Power studies were continued during the month and arrangements were made to initiate a load and market survey during October. No assignment has been made to the position of Operation and Maintenance section chief so no work was accomplished on that phase.

In the Economics and Land Resources Section work continued on the economic study and the field land classification. Economic studies consisted of compiling and analyzing data that have been collected in Manila from the various sources on monthly average prices of farm commodities, prices paid and received by farmers, farmer cooperative marketing associations, rural banks, rice and corn warehouses, average monthly farm wage rates, and general economic information related to processing, marketing, storing, retail stores, roads, schools, health centers, etc. The farm survey questionnaire form was revised based on results of field testing the form in August. A tentative manual of instruction for farm survey enumerators was prepared and a tentative plan was drafted for the economic appraisal of the area that could possibly be inundated by the reservoir of the project.

Arrangements were finalized at the end of the month for the Economics staff to go to the field on October 3 for about 4 weeks of interviews with Barrio captains preparatory to selecting individual farmers for interviews of present farming practices and economics.

Land classification work consisted of digging, describing, and collecting soil samples from 16 pits each 2 meters deep. The first rectified aerial photos were delivered on September 23 and were immediately sent to the field and land classification was resumed.

The Hydrology Section, consisting of sub-sections of Hydrology and Drainage and Groundwater, made progress during the month in several fields of activity. In Hydrology ratings were accomplished of both the Magat River Irrigation System and the Siffu Irrigation System. main canals so gage heights could be converted to discharge data. A field study was made of proposed sites for a stream gaging station on Magat River near the dam site and a bill of materials was worked up for construction of the station. Computation of records of discharge were made from the gage heights made at the damsite and sediment data were assembled. Climatological and hydrometeorological data were collected and computations were initiated of flood frequencies, magnitude, and shape of hydrograph.

The Drainage and Groundwater section has continued to collect maps and data, and also to assemble equipment necessary for making field studies. It is planned that field crews will be sent to the project area early in October to commence installing the approximately 100 groundwater observation wells and to continue the inventory of all existing wells in the area. An inventory of existing wells was initiated during September, and forms were prepared to assist the men making the inventory.

The BuRec team completed their move to the Magat River Project Feasibility Study office on September 21. Their address is now: Industrial Research Bldg., Philsugin Compound, North Avenue, Diliman, Quezon City. The phone number is 98-17-41 Local 352 or 353.

Mr. Edwin A. Kapernick arrived on September 13 to join the BuRec team as Field Engineer.

Word was received from USAID/Manila that there was some definite interest in the report of Social and Environmental aspects of the Magat River Project and that funds could probably be made available if an interested candidate could be found to make the study proposal. The Project Manager, Magat study, was informed and he has initiated proceedings to obtain an interested candidate to make the proposal and follow through with the study if the proposal is acceptable.

#### Balog Balog Project

Photo rectification by Coast and Geodetic Survey was completed and rectified prints, enlarged to 1:8,000

scale, were delivered to the Water Resources Division, BPW. Preliminary work including putting on match lines was started. As soon as operating funds are available, field land classification can begin.

#### Upper Pampanga River Project

The land classification report, including all maps, tables, photos, and text, was turned over to the UPRP Procurement Branch on September 28. Negotiations were started immediately by the UPRP to get the printing done.

#### Baloc Shallow Well Study

Another test of the installed equipment at well No. 4 was made by the pump supplier but the pump failed to meet the specifications. The specifications call for the pump to produce 800 gallons per minute with a drawdown of 82 feet in the well. The test indicated only 700 gpm with a drawdown of only 37 feet, therefore the pump could not be accepted. The supplier is to make some modifications and notify us of a new test date.

The pump and engine from well number 2 was stolen during the month. It was a centrifugal pump.

#### Establishment of Central Land Classification Laboratory - BPW

Hiring a soil chemist to head up the laboratory was still in process. Apparently it will not be possible to fill the position until after the November elections.

Installation of laboratory equipment was slowed pending completion of the rewiring work.

Training sessions were held in operation of the spectrophotometers and flame photometers. Chemists from the Bureau of Soils and the Chemistry Department, University of the Philippines, participated in the sessions. However both flame photometer burners were found to be inoperable so the training sessions were not entirely successful. The burners were returned to Botica BOIE, laboratory equipment dealer, for repairs, and additional training was planned as soon as possible.

Two library books on spectrophotometry were sent to the project office by the Chief, Division of Planning Coordination, Bureau of Reclamation, Denver, for temporary use of laboratory personnel.

General Interest

All of the BuRec team accompanied the Project Manager of the Upper Pampanga River Project, along with members of the UPRP staff, USAID representatives, and others on a two day tour of the Upper Pampanga River project. It was an excellent tour. The Project Manager had arranged briefings at the project headquarters in Cabanatuan City, Rizal, and Pantabangan dam. The briefings were all very well done and particularly helpful in understanding the project construction and its problems.

Films on groundwater development were made available through the Commissioner's office, BuRec, Washington D.C. and those films were shown to members of the Magat study staff, and UNDP Groundwater Program staff, and others.

A meeting was held with Messrs. Albertson and Jones of Colorado State University during their visit to the Philippines. The University has been given a contract by USAID to study irrigation water use and management in the tropical areas of Asia. Copies of the BuRec reports of river basins studied in the Philippines were furnished to the visitors.

A member of the BuRec team accompanied several members of the Magat Project staff on a one day visit to Angat Dam on September 25.

*A. L. Mitchell*

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NOTED:

*Jose B. Del Rosario, Jr.*

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Project Chief, Magat River Project  
Feasibility Study

ALM/mps