Herb Jenkins Grant County PUD March 5, 1959

EPHRATA--"The target date for the start of construction of Wanapum dam has been set for September of this year," R. R. Ries, supervisor of production for the Grant County PUD, announced today. "At a meeting in Ephrata on March 4, attended by the PUD Commissioners and District staff, representatives of the power purchasers, Harza engineers and bond underwriters, everyone agreed that construction of Wanapum should go ahead."

Ries said that the multiple details of financing, power sales contracts and the construction contract were discussed at the meeting.

Plans are shaping up for a call for bids for the construction of Wanapum to be issued this month (March). Pre-bid information has been released for the job and more than 30 contractors have requested pre-bid documents.

Wanapum dam, the second major hydroelectric project to be undertaken by the Grant County PUD within three years, will be located 18 miles upstream from Priest Rapids dam. The dam will have a total length of approximately 8,320 feet, and its ten generators will have a total capacity of 831,250 KW. It will be financed by the sale of 50-year revenue bonds in an amount of approximately \$200,000,000.

(More)

Ries said it is planned to open bids by May 1, with the actual contract award following several weeks later after the bids have been evaluated and the bonds have been sold.

Actual construction could get under way in September of 1959. It is expected that approximately five years will be allowed for construction of Wanapum dam with completion scheduled for the fall of 1964.

Public and private electric utilities of the Pacific Northwest are purchasing 63-1/2 percent of the Wanapum power, with the Public Utility District of Grant County reserving 36-1/2 percent for its own use. Power purchasers are Cowlitz County PUD, Eugene Water & Electric Board, City of Forest Grove, City of McMinnville, City of Milton-Freewater, Pacific Power & Light Co., Portland General Electric, Puget Sound Power & Light, City of Tacoma, and The Washington Water Power Co.

Herb Jenkins Grant County PUD 4-21-59

FOR YOUR INFORMATION

The opening of bids for the construction of Wanapum dam has been postponed from May 8, 2:00 P.M. to May 15, 9:00 A.M., at Ephrata, Washington, to give prospective bidders more time to study the bid documents, according to R. R. Ries, Supervisor of Production for the Public Utility District of Grant County.

The change in the time of the bid opening was announced by the PUD on April 6, but apparently some publications did not receive the notice.

Please notice also the time has been changed from the afternoon to morning.

EPHRATA --- Bids will be opened at 2 p.m. November 30 at the office of the Public Utility District of Grant County in Ephrata for the furnishing of five main transformers for Wanapum dam, and for one spare transformer with adaptors so that it may be used at either Wanapum or Priest Rapids dam, it was announced Monday at a meeting of the Grant County PUD Commissioners.

The contract documents for the transformers says: "It is of great importance to the District that prompt repairs and servicing be available for the transformers after they are placed in operation. The District considers that the repairing and servicing of the transformers can be handled most expeditiously and to the best advantage of the District if done in the United States. Therefore, consideration will be given only to Bidders manufacturing the transformers in the United States and having their principal manufacturing facilities in the United States. Transformers shall be furnished by manufacturers who have previously produced transformers of similar type, size, capacity, and quality."

The transformers will be 3-phase, 194,000 KVA, 3-winding units. Each of the five main transformers will serve two generators at Wanapum.

PRIEST RAPIDS, Oct. 19 --- The first commercial power generated at Priest Rapids dam, one of the Nation's largest locally-owned hydroelectric projects, flashed over the lines at one minute past midnight Monday, October 19, a full 16 months ahead of the schedule allowed for completion of the dam.

When the first generator went into service, it was exactly three years and 34 days after the first bucket of earth was excavated to start construction on the banks of the Columbia River, 24 miles downstream from Vantage, Wash.

The huge hydroelectric facility, to be equipped with ten giant generators when finished, is now 85 percent complete. It is being constructed for the Public Utility District of Grant County by Merritt-Chapman & Scott Corporation, of New York, under a \$98,000,000 contract, one of the largest competitively bid construction contracts ever awarded a single contractor.

An informal ceremony marking the start of commercial power will be held at Priest Rapids Friday, October 30. Because of construction work still in progress, attendance will be limited to representatives of the Public Utility District of Grant County, the general contractor, consulting engineers, power purchasers, and newspaper, radio and television reporters.

Operation of Priest Rapids' first generator marked the beginning of power production that within a year will reach an installed capacity of 788,500 kilowatts, enough to supply the electrical requirements of a city of 2,000,000.

For the project owners, the Public Utility District of Grant County, the production of power so far in advance of the scheduled completion date will mean millions of dollars in earlier revenues which will be used to reduce the initial cost of the Project. It also marked the near culmination of years of planning and work that began in 1950.

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With 36-1/2 percent of the power reserved for its own use, the PUD is assured of low-cost power for future development within Grant County. Twelve public and private utilities, located in Washington and three other northwestern States, are purchasing the remaining 63-1/2 percent of the project's power output and can look forward to an assured supply of power for the next 50 years.

For the contractor, Merritt-Chapman & Scott, the production of Priest Rapids' first power marks a record seldom equalled in the construction field--a job of this magnitude now 16 months ahead of schedule and 85 percent complete. Merritt's \$98,000,000 contract specifies that the dam and powerhouse had to be completed by mid-September of 1961, but all indications are that the job will be finished far ahead of this date.

As for the Harza Engineering Company, of Chicago, the designing and supervising engineering firm for the Priest Rapids Development, there is the satisfaction of having guided the giant construction project toward a highly successful conclusion.

Priest Rapids Dam comprises the first phase of the PUD's new Columbia RiverDevelopment--financed entirely through the sale of revenue bonds--that will create the third largest source of hydroelectric power in the Unite'd States--more than 1,350,000 kilowatts. The second phase, to be known as Wanapum Dam, is being built under a separate contract about 18 miles upstream.

Construction of Priest Rapids Dam got underway on September 15, 1956--slightly more than three years ago--when Merritt-Chapman & Scott moved a dragline here to the sagebrush-covered east banks of the Columbia River, and excavated the first bucket of dirt. Merritt was awarded the project contract on July 1956, but the intervening time was spent in building access roads, setting up a construction camp and moving in equipment. Work on the dam itself did not begin until two months later.

Since that time 2,910,000 cubic yards of earth and rock have been excavated and another 3,105,000 cubic yards of "fill" have been moved in. Some 844,000 cubic yards of concrete have been placed--enough to build a sidewalk 4 feet wide and 4 inches thick clear across the United States, or 3,240 miles, to be exact. More than 23,000 tons of reinforcing steel were embedded in concrete. Nine and one-half acres of curved wooden forms were used, and enough lumber has been consumed in building straight forms to build a fence six feet high and 130 miles long.

Including the eart abutments on either end, Priest Rapids Dam has a total length of 10,138 feet. The concrete spillway is 1142 feet long and contains 22 tainter gates, each 40 feet wide and 50 feet high. The powerhouse is 1025 feet long, with a base width of 197 feet. The maximum height of the dam from deepest point of excavation is 178 feet and it develops a head of 79 feet. Concrete fish ladders have been constructed at the east end of the powerhouse and at the west end of the spillway section.

EPHRATA --- A contract for the replacement of sports fishery lost in the Columbia River because of the building of Priest Rapids and Wanapum dams has been drawn up between the State Game Department and the Public Utility District of Grant County, according to R. R. Ries, supervisor of production for the Priest Rapids Project.

One of the main points in the contract is that the District agrees to pay the State Game Department \$454,000 for the construction of a fish hatchery in Grant county. The site of the hatchery will be selected by the Game Department, and the Department will operate the hatchery at its own expense.

"This contract also provides for a program of sports fishery replacement in Grant county and the Priest Rapids and Wanapum impoundment areas," Ries said. "The District has conducted investigations on the fishery replacement program for two years and the subject has been under negotiation for a year. I feel that we have reached an agreement that will not only be of benefit to both parties but to the entire area as well. From the District's standpoint it offers a plan whereby the limits of the District's obligation both as to money contributions and length of time have been established."

The contract describes the extent of the anticipated loss of fishing in the Columbia River due to the construction of the Priest Rapids and Wanapum dams, sets up a program of replacement for these losses and defines the responsibility of both parties in the program. By participating in this program the District meets the requirements of the Federal Power Commission license for the Priest Rapids Project.

The contract will not become effective until it is approved by the U. S. Fish and Wildlife Service and by the Federal Power Commission.

The replacement period covers two periods of time for each dam; a ten-year period for the replacement of sports fishing in the river, and a 13-year period for the replacement of steelhead fingerlings lost in passing the dams. These two periods will run concurrently, the steelhead program running three years past the sport fishing period.

During the first five years of the ten-year replacement period of the sports fishing, the Game Department will produce, at its own cost, rainbow trout 6 to 8 inches in length, that will be planted annually in the lakes in Grant county. For the first five years following the completion of Priest Rapids dam the Department will plant 160,000 of these trout in the lakes of Grant county, and for the first five years following Wanapum dam completion, the Department will plant 90,000 trout annually in the lakes. These lakes will be open to fishing the year around.

Also, during the first five year period for each dam the Department will produce, at its own expense, 150,000 6 to 8-inch Kamloops trout that will be planted annually in the reservoirs of the two dams. It is anticipated that these plantings will aid in the development of a sports fishery in the impoundment areas.

At the end of the initial five year period for each reservoir, the sports fishery in the reach of the river affected will be evaluated to determine the success of the replacement program. The evaluation will be done on the same basis as that used initially in determining the magnitude of the whitefish fishery; namely, by counting the total catches of the fishermen. The species of fish tallied in the catches of fishermen will include all game fish under the jurisdiction of the State Game Department.

The evaluation of the sports fishery also shall be made on each succeeding year of the second five-year period if deemed necessary by both parties. The District shall compensate the Department for any residual loss in the sports fishery in each reservoir during the second period.

At the conclusion of the second five-year period for each reservoir the District will have completely satisfied its obligation to the Department for the loss of sports fishing in the impoundment areas.

During the first five years of the 13-year replacement program for the loss of steelhead fingerlings at the dams the Department will produce at its own cost a designated number of summer run steelhead fingerlings based upon the estimated losses of these fingerlings at the dams as agreed upon by both parties.

In the eight years following the initial five year period, which will include two 4-year fish cycles, the District will compensate the Department for the loss of steelhead fingerlings passing the dams, as based upon the actual annual counts of adult steelheads at the structures.

At the conclusion of this eight-year period the District will have completely satisfied its obligation to the Department for the losses of steelhead fingerlings because of the Priest Rapids and Wanapum Developments.

The District will retain some supervision over the replacement program. This will include permission to inspect hatchery operations and to assist in the selection of fish stocks that will be used for the replacement of sports fishery. It is anticipated that a representative of the District will be present, insofar as possible, at the times the plantings are made to check on the size and condition of the fish, according to the terms of the agreement. Also, the counting of the fish caught by fishermen in the Priest Rapids and Wanapum areas will be carried on as a joint project by the District and the Game Department.

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EPHRATA --- The Public Utility District of Grant County will save an estimated \$3,000,000 on the cost of Priest Rapids dam by paying a bonus to the contractor for all generators brought on the line before the contract expiration date in mid-September 1961, R. R. Ries, supervisor of production for the Priest Rapids Project, said today.

Early completion of the dam will reduce the amount of borrowed money which otherwise would have to be used for interest payments,
Ries explained. This money in turn will be applied to reduce the overall cost of the Development.

Under the terms of the contract, the contractor, Merritt-Chapman & Scott, is paid a bonus of \$1300 a day for each generator in full head operation before mid-September 1961. (The contractor also is subject to a \$2600 a day penalty for each unit not in operation at full head by the date of the contract expiration.)

After the units go on full head operation the power purchasers will pay on the units in operation in the same proportion as they would pay per machine after the construction contract ends. The money for payment of the bonus comes out of this payment by the power purchasers. The remaining income from the power purchasers is used for operations and maintenance and for reducing the amount of money that would otherwise be paid for interest charges, Ries said.

Ries said perhaps the following example is an over simplification of the bonus payment, but the principle is essentially the same: "Suppose somebody asks you to erect a building for him. The renter is willing to pay \$100 a day rent from the day the building is ready for occupancy. Ordinarily, it would require a year to erect that size building. You can afford to pay the contractor a very substantial bonus to complete the building ahead of time because you will start receiving a return on your investment sooner, you will cut down on your construction interest payments, and you can start paying off the cost of the building at an earlier date."

EPHRATA --- The letting of a \$93,277,690 contract to Grant County Constructors on July 16, 1959 for the construction of Wanapum dam, 6 miles below Vantage, marked the start of the second major hydroelectric project by the Public Utility District of Grant County within three years.

Construction was started on Priest Rapids dam, 18 miles downstream from Wanapum, on July 9, 1956, under a general contract for \$98,000,000. Priest Rapids is now 91% complete and should be finished by December 1960, far ahead of the contract completion date of September 21, 1961.

Priest Rapids has a rated capacity of 788,500 KW and Wanapum a rated capacity of 831,250 KW. All of which means that by the fall of 1964 the two hydro giants will be pouring a total of 1,619,750 KW of power into the transmission lines of the Pacific Northwest.

Grant County Constructors, a five-firm combine with Morrison-Knudsen as the sponsoring contractor, started work on Wanapum the day the contract was let. A contractor's camp was set up, and work was soon proceeding on both sides of the river.

It is estimated that \$32,500,000 will be spent on Wanapum construction during 1960. Work will include the building of cofferdams, the start of pouring of concrete for the right and left bank gravity dams and fishways, and for the powerhouse and spillways.

Some \$8,000,000 was spent on Wanapum during 1959. With 414 men on the job, the contractor completed the right bank slurry trench, started work on the cofferdams, and had work well under way on excavation for the right and left embankments, spillways and approach channels.

Wanapum dam will be approximately the same size as Priest Rapids, but will be a modified "Z" shaped structure rather than a straight line structure, as is Priest Rapids. The dam will have a total length, including right and left earth embankments, of 8,320 feet. It will have a rated head of 80 feet with a maximum height of 185 feet from deepest point of excavation. The Wanapum powerhouse will be 1,540 feet long and will contain 10 generators and space for six future generating units. The 820-ft. spillway will contain 12 Tainter gates, each 50 x 65 feet in size.

Three generators are now on the line at Priest Rapids under low head operation. The remaining seven are expected to be placed in service during 1960, with all ten generators operating at full capacity by December 1, 1960.

R. R. Ries, supervisor of production for the Priest Rapids Project for the Grant County PUD, says that the contractor, Merritt-Chapman & Scott of New York, had 740 men on the job in December of 1959.

It is estimated that \$16,250,000 will be spent on Priest Rapids in 1960. Major remaining work includes completing the installation of the last seven generators, completion of concrete work and miscellaneous work in the powerhouse, finish installation of the spillway gates, and painting.

Some \$32,100,000 was spent on Priest Rapids during 1959. In addition to bringing the three generators on the line, all cofferdams were removed, the spillway and fish handling facilities were completed, the power-house roof was placed, right and left earth embankments finished and rip rap placed, pulloff structures were completed, and two steel tower transmission lines from Priest Rapids to Midway (about 7 miles) were put into service.

Priest Rapids dam has a total length of 10,138 feet --- the longest dam on the Columbia River. It has a head of 79 feet and is 178 feet high from the deepest point of excavation. Twenty-two massive spillways bays, each containing a Tainter gate 40 x 50 feet in size, will handle 1,400,000 cfs of water, or almost twice the largest flood of record.

In addition to the work mentioned above on the Wanapum Development, 4.5 miles of road will be constructed by the Grant County PUD between the new Vantage Bridge site and Wanapum to replace an existing county road that will be flooded by the reservoir. C. R. O'Neil of Cresswell, Oregon, is the apparent low bidder at \$126,388 for grading and draining the road for the PUD. Under terms of a three-way agreement, the PUD will grade and drain the road, the Wanapum contractor (Grant County Constructors) will do the surfacing, and Kittitas County will take over the maintenance.

The Westinghouse Electric Corporation has been awarded a contract at \$1,541,112 for furnishing six 194,000 KV transformers. Five of these will be used at Wanapum and the other will be equipped with adaptors so that it may be used as a spare at either Priest Rapids or Wanapum.

(General Electric is furnishing the 10 generators and Dominion Engineering of Canada the 10 turbines for Wanapum under the general contract with Grant County Constructors.)

R. C. Hughes & Company of Spokane, was recently granted a \$469, 489 contract to build a steel tower 230 KV transmission line, (paralleling the existing pair) from Priest Rapids to the BPA substation at Midway, a distance of about 7 miles. The contract completion date is August 15, 1960.

Bids will be called in the near future for the construction of 30 homes on the east side of the Columbia River near the Wanapum dam site for use by permanent PUD operating personnel.