# ANNEX E

# PROPOSED AGRICULTURE

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# E1. PROPOSED LAND USE AND CROPPING PATTERN

## E1.1 Basic Consideration

In selecting crops and planning future agricultural production in the Western Plain of the Choluteca Plain, the following basic considerations are applied:

1) Production of sugar cane will be planned to meet the demand of the two sugar factories which are located in the Western Plain.

2) Production of cereal crops will be planned to meet the demand of population increased in the south region (Choluteca and Valle Departments) in 1985.

3) Production of cotton, sesame, melon and water melon will be selected in view of the physical and socio-economic conditions, to increase farmers' income.

4) More productive use of land will be considered, including possible shift from pasture lands to upland crop fields.

## E1.2 Proposed Land Use and Cropping Pattern

### E1.2.1 Crop Zoning

The crop zoning under with-project condition is outlined hereunder, in view of the present land use, soil and other conditions.

1) Sugar cane:

Sugar cane fields will be mainly concentrated to the central plain on the right bank of the Choluteca river, in view of the fact that sugar cane production zone should be established with the sugar factory as a center.

2) Maize, sorghum, beans, sesame and cotton:

These crops can be grown with rotation reciprocally on the upland fields in the whole area, except for the lands which have difficulties in drainage and extreme stoniness.

3) Rice:

Rice production zone will be distributed to the lands on the vertisols which are extended in the northern part of the area (mainly the Ola area) and on the Mollisols and Alfisols which are extended in the southern part of the area.

4) Melon, water melon and vegetables:

The production zone of these crops will be mainly distributed to the recent alluvial soils with rather coarser texture, adjacent to the Choluteca river.

5) Pasture lands will be mainly distributed to the lands classified into the Class IV.

### E1.2.2 Cropping Pattern

In view of the crop zoning and soil conditions, as well as climate, farming practices and socio-economic conditions, ten (10) crop rotation types are proposed as illustrated in Fig.-E1. Individual farmers or cooperative farmers will be guided to select the most adaptable cropping pattern among these cropping types. Type-I will be suitable for the sugar cane factory's farms or the middle to large scale farm. Type-2 to Type-5 will be suitable for the middle to large scale farms, and Type-6 and Type-7 for the small to middle scale farms. Type-8 will be suitable for farms of any scale, and Type-9 will be selected by small farms in combination with Type-5 and Type-7.

### E1.2.3 Cropping Area in Western Plain

The production area of each crop and cropping pattern will be programed in the light of basic consideration in E1.1 mentioned above. It will be programed to attain maximum return from the production under technical and economical conditions as follows:

Major technical conditions:

i) type of cropping pattern

ii) crop zoning and soil conditions

Major economical conditions:

iii) demand and marketability of crop

iv) profitability of each crop and cropping pattern

On the major crops to be cultivated in the Western Plain, as sugar cane, cotton, maize and rice, the production program will be formulated first to meet the minimum requirement of less profitable crops and then to maximize production area of more profitable crops, thus enabling to maximize the profit from the Project. Under this principle, the acreage of each crop cultivation has been planned as follows:

(1) Sugar cane:

Maximum cultivable area under the soil condition will be:

(Western plain) - (Vertisols area) - (poorly drainable Mollisols area)
= 15,600 ha - 1,400 ha - 2,000 ha
= 12,200 ha .................................................. (A)

Total quantity of sugar cane requirement for full operation of the ACHSA and ACENSA mills will be estimated at:

(processing capacity) x (annual processing days)
= 5,800 t/day x 150 days
= 870,000 t .................................................. (B)

Production expectable from outside the Western Plain will be:

(Santa Ana area production) + (Marcovia area production)
= (1,120 ha x 61t/ha ) + (30 ha x 70t/ha )
= 70,000 t .................................................. (C)

Minimum area required for production will be:

$$\frac{(B) - (C)}{\text{(expected production with-project)}}$$

$$= \frac{(870{,}000\ t - 70{,}000\ t)}{118.3\ t/ha}$$

= 6,760 ha .................................................. (D)

The minimum required area (D) should be secured in the Western Plain (A). Therefore, to meet the demand of ACHSA and ACENSA mills, the cropping area for sugar cane will be determined at 6,700 ha.

(2) Maize:

*Maximum area under suitable soil conditions will be:*

(Western plain) - (Vertisols and Mollisols area) - (sugar cane area)

= 15,900 ha - 3,400 ha - 6,700 ha

= 5,800 ha

The demand of grain (including maize, rice, sorghum and beans) in the Choluteca Department and Valle Department is estimated for 1985 at:

(1985 population in Choluteca and Valle)/1 x (per capita consumption)/2

= $(193,300 \times 1.02^{11} + 91,900 \times 1.01^{11}) \times 167$ kg/capita

= 57,100 t ............................................... (E)

This regional demand can partly be met by production outside the Project area in the two Departments, as follows:

| | | |
|---|---|---|
| maize | 19,100 t /3 | |
| maicillo and rice | 9,500 t /3 | |
| others (approx.) | 3,500 t | |
| Total | 22,100 t | ........................... (F) |

The gain demand will therefore be estimated at:

(E) - (F)

= 57,100 t - 22,100 t

= 35,000 t ............................................... (G)

The Project aims to satisfy this demand of maize, rice, sorghum and bean, namely

*Maize production* = (*grain demand*) - (rice prod.) - (sorghum prod.) - (bean prod.)

= 35,000 t - 9,600 t /4 - 3,200 t /5 - 1,600 t /6

= 20,600 t ................................ (H)

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Remarks:
- /1 : 1974 census and population increase at the same rate as 1961 - 74 increase
- /2 : Ref. to Table E1
- /3 : 3rd Agricultural census, 1974
- /4 : Ref. (N) below
- /5 : Ref. (R) below
- /6 : Ref. (S) below

The minimum area required for maize production will be:
(min. maize demand)/(prod. with-project)
= 20,600 t / 4t/ha
= 5,100 ha. ...................................................... (I)

Even if the proposed regional production turns out to exceed the regional demand, the surplus will be marketable in other regions, because the country-wide deficit in grain production in 1985 is estimated at about 170,000 tons./1

(3) Rice:

Higher profit will be accruable from rice production than any other cropping pattern. However, in view of some technical and economic restrictions, the rice production area will be programed prior to the cotton cultivation.

The suitable area for rice under soil conditions will be:
(Vertisols in Ola area) + (Mollisols area in extream south block)
= 1,400 ha. + 2,000 ha.
= 3,400 ha. ...................................................... (J)

In the Ola district, a part of project area (340 ha ) will be irrigated by water led through a booster pump. Water consuming rice cultivation in such a district will be less economical. Besides, a part of Vertisols is at present cultivated by maize and cotton, and a part by sugar cane. Therefore, rice cultivation in the Ola district will be planned in about a half of the Vertisols area exclusive of the booster irrigation blocks, namely

{(Vertisols area) - (booster irrig. area)} x 1/2
= (1,400 ha - 340 ha ) x 1/2
= 500 ha ...................................................... (K)

The Mollisols area extends on both banks of the Choluteca river in the southern-most part of the irrigable area. Some part of the Mollisols area demonstrated high soil percolation of more than 3 mm which will not

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Remark : /1 : Ref. to Table-E1

be recommendable for rice cultivation. Besides, the water consuming rice cultivation in such area distant from the intake wair will cause increase in construction cost of canals, and particularly cost of siphon for irrigation on the left bank. Under these conditions, rice production area will be provisionally programed as follows:

(Mollisols: left bank) x 1/2 + (Mollisols: right bank) x 4/5
= 1,420 ha x 1/2 + 510 ha x 4/5
= 1,100 ha ........................................................ (L)

The proposed rice cultivation area will total:

(K) + (L)
= 500 ha + 1,100 ha
= 1,600 ha ........................................................ (M)

The estimated production of milled rice will be estimated at:

(crop area) x (unit prod./ha) x (milling rate)
= 1,600 ha. x (5t + 5t) x 0.6
= 9,600 t/year ........................................................ (N)

For reference, the actual import of milled rice in 1975 was 9,000 tons. /1

(4) Cotton:

Land available for cotton production will be:

(Western plain) - (sugar cane area) - (Mollisols area) - (Vertisols area - rice area) - (sorghum and bean area)
= 15,900 ha - 6,700 ha - 2,000 ha - 500 ha - (sorghum and bean area)
= 6,700 ha - (sorghum and bean area)
= 6,700 ha - (800 ha /2 + 800 ha. /3)
= 5,100 ha ........................................................ (O)

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Remarks: /1 : Export-Import statistics
/2 : Ref. (R) below
/3 : Ref. (S) below

The production of the ginned cotton from the available land will be:

(available area) x (estimated prod. per ha)/1 x (ginning ratio)
= 5,100 ha x 3 t/ha x 0.375
= 5,700 t ........................................................ (P)

In 1976-77, export and import of ginned cotton was approximately 6,300 tons and 1,500 tons respectively. By covering the import for the local textile factory, the production of ginned cotton (P) from 5,100 ha will result in increase of export by about 70 %. Such an increase in export will be possible in view of the fact that the increase is quite marginable in the export market quantitatively. For reference, the production and export of cotton in Central America made up for 2.1 % and 8.2 % of the world production and export respectively, and the export of cotton from Honduras was only about 1 - 2 % of the Central American export.

It is noted that the projected production of raw cotton can be processed at the existing ginning factory in San Lorenzo which has a processing capacity of about 55,000 tons of raw cotton (250 t/day x 220 days).

(5) Sesame:

Increase of sesame production will be desirable to meet the plant oil demand. The sesame area is provisionally planned to cover at least 5 % of the total project area, as follows:

(Western plain) x 0.05
= 15,900 ha x 0.05
= 800 ha ........................................................ (Q)

The estimated production of 1,200 tons will be considered as marketable.

(6) Sorghum and Beans:

Out of the total grain demand as estimated in (G) above, it is provisionally planned that about 15 % will be supplied by sorghum and beans. On the assumption that ratio of sorghum and beans production is 2:1, the areas of these crops are estimated at:

(Grain demand) - (maize prod.)/1 - (rice prod.)/2
= 35,000 t - 20,600 t - 9,600 t
= 4,800 t

Sorghum area = (4,800 t x 2/3) / 4t/ha /3 = 800 ha ........ (R)

Beans area = (4,800 t x 1/3) / 2t/ha /3 = 800 ha ........ (S)

Consequently, the cropping area of the (cotton - maize) pattern will be planned as follows:

(cotton area) - (cotton/sorghum area) /4 - (cotton/beans area) /5

= 5,100 ha - 800 ha - 800 ha

= 3,500 ha ................................................ (T)

(7) Melon and Water Melon:

Melon and water melon will be cropped with maize under the proposed cropping pattern. The total area of melon and water melon is estimated as follows:

(maize area) /6 - (maize/cotton area) /7 - (maize/sesame area) /8

= 5,100 ha - 3,500 ha - 800 ha

= 800 ha ................................................ (U)

Increase in melon market will be expectable to some extent in view of the fact that the production under irrigated condition will enable seasonal adjustment of harvest to the off-crop season in the exported countries. While, rapid expansion of market (domestic) of water melon will not be so expectable. The production area will be planned under such forecast as follows:

Melon area : 400 ha x 6.5 t/ha = 2,600 t/year ....... (V)

Water melon: 400 ha x 12 t/ha = 4,800 t/year ....... (W)

(8) Pasture and other crop:

In the remaining area of about 900 ha. pasture and vegetables will be cropped. Pasture land for livestock will be selected on the land uncultivable by other crops in the class IV land in the Ola district.

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Remarks: /1 : Ref. (H) above
/2 : Ref. (N) above
/3 : Ref. to Chapter E.7
/4 : Ref. (R) above
/5 : Ref. (S) above
/6 : Ref. (I) above
/7 : Ref. (T) above
/8 : Ref. (Q) above

(9) Proposed Cropping Area:

In summarizing the production program mentioned above, the cropping area by cropping type and the cropping area by each crop are shown in Table-E2.

## E2. FARMING PRACTICES

For the accelerated agricultural development in the Project area, the prevailing farming practices and management should be developed by adopting improved farming techniques and rational farming procedures with assistance of supporting services. Major points of improvement of farming practices under irrigated conditions are to use improved varieties, to improve fertilizer application practices and partinent irrigation and drainage and effectivemechanized farming, etc. Proposed improvement of farming practices for each crop cultivation are described hereunder.

### E2.1 Maize

(1) Improved varieties:

As the improved varieties of maize, the following varieties will be recommendable:

Free polination variety : Sintetico Texpeno, V. Criollas, Nicarillo
Hybrid variety : HB101, HB105, HA502

(2) Seeding:

Seeding by machines and 16 kg per ha of seed rate is proposed.

(3) Improved fertilizer application rate:

The standard application rate of fertilizer recommendable for maize will be as follows:

N : 50-100 kg/ha
$P_2O_5$ : 50 kg/ha
$K_2O$ : 0-50 kg/ha

Half of the total quantity of nitrogen will be applied at the seeding time as the basic fertilizers and the remainder will be applied at one month or one and half month after seeding as the top-dressing.

(4) Application of herbicides:

Application of the following rate of herbicides will be recommendable:

1.5 kg per hectare of Gesaprim 80 (wettable) each time

(5) Water management:

Furrow irrigation, irrigation of 5mm per day at one to two-week intervals will be proposed. Since maize is relatively weak against excess water content in soil, attention should be paid on drainage.

(6) Application of insecticides:

1.5 per hectare of Cytralene or Dipterex (Emulsion) each time and 3.5 kg per hectre of Furadan (Dust) are proposed.

(7) Improved farming calender:

The farming calendar is proposed to be improved as follows:

| | |
|---|---|
| Land preparation | - Mid. Jan. to mid. Apr. |
| Seeding and basic fertilizer app. | - Mid. Feb. to mid. May |
| Application of herbicides | - Mid. Feb. to mid. May |
| Application of top-dressing | - Mid. Mar. to mid. June |
| Tilling and weeding | - Beg. Apr. to mid. July |
| Application of insecticides | - Beg. Apr. to mid. July |
| Harvest | - Beg. June to end Aug. |

Land preparation, seeding and fertilizer application, tilling will be done by tractor, and application of agro-chemicals will be proposed to be done by air craft except for small isolated farms. Harvest is done by hand.

E2.2 Sorghum

(1) Improved varieties:

On the basis of experiments at the Lujosa Experiemental Station, recommendable varieties of sorghum will be as follows:

For human consumption - CENTA S-1, SART, C-42-Y

For animal consumption - ICA NATAIMA, E59 Dekalb, E-57 Dekalb, 8417 Pioneer

New improved varieties to be bred and selected by the Lujosa Station will also be adaptable in the Choluteca area.

(2) Improved fertilizer application rate:

Little fertilizer is applied for sorghum at present, but fertilizers are proposed to be applied for improvement of productivity as follows:

N : 60-100 kg

$P_2O_5$ : 50 kg/ha

$K_2O$ : 0-50 kg/ha

Application rate should be chosen in accordance with the soil conditions. Half of the total nitrogen should be applied at the seeding time as basic fertilizers and the remaining half should be applied at one month or one and half month after seeding as top-tressing.

(3) Seed rate:

15 kg per hectare is proposed.

(4) Application rate of herbicides and insecticides:

Same application as that of maize is proposed, except for Furadan (insecticides) which will not be required.

(5) Improved farming calendar:

The improved farming calendar is proposed as follows:

| | |
|---|---|
| Land preparation | - Mid. Jan. to mid. Mar. |
| Seeding and basic fert. app. | - Mid. Feb. to mid. Apr. |
| Application of herbicides | - Mid. Feb. to mid. Apr. |
| Application of top-dressing | - Mid. Mar. to mid. May |
| Tilling and weeding | - Beg. Apr. to end May |
| Aoplication of insecticides | - Beg. Apr. to mid. June |
| Harvest | - Beg. June to end July |

Farming methods, starting from land preparation to harvest, will be the same as that of maize cultivation.

E2.3 Rice

Rice will be one of the promising crops in the Choluteca Plain in view of possibility of two crops a year and expectation of high net return under irrigation. The mollisols, Vertisols and Alfisols, except for the lands of extreme shallow surface of stony soils, will be suitable for rice growing.

(1) Improved varieties:

On the basis of experiments at the Lujosa Experimental Station, CICA6 will be recommendable as the higher yielding variety. CICA6 has advantages in good germination, resistance against blast, vigorous growth and high yields. The results of cultivation trials on CICA6 at the Lugosa Experimental Station in 1976 showed 7.2 tons per ha under irrigated condition and 3.4 to 6.1 tons per ha under supplemental irrigation.

(2) Improved fertilizer application rate:

The optimum fertilizer application rate is proposed as follows:

N : 100 kg/ha
$P_2O_5$ : 50 kg/ha
$K_2O$ : 0 - 25 kg/ha

Half of the total nitrogen will be applied at the seeding time as basic fertilizers and the remaining half will be applied one month after the seeding time and at the beginning of the young panicle formation stage as top-dressing.

(3) Seeding method:

Seeding of rice is generally done by a direct seeding method on a dry field by seeding machines. For executing direct seeding method, attention should be paid to the pulverizing soils of seed beds, expecially on the Vertisols in order to obtain good germination of seeds. Optimum seed rate at the rate of 70 to 80 kg per ha is proposed.

(4) Water management:

Irrigation is required in approximately 20-25 days after seeding, and submerged irrigation with 5 to 10 cm in water depth from the 6 leaves stage to the end of the productive tillering stage (approximately 30 days). After that the rice field is once dried up until the beginning of the young panicle formation stage (approximately 20 days). and thereafter deep water should be kept until the end of heading (approximately 20-30 days). During the ripening stage (approximately 20 days) intermittent irrigation will be done and then the rice field will be dried up completely until harvesting. Among the water management mentioned above. drying practices (from the end of the productive tillering stage to the beginning of the yound panicle formation stage) and deep submerged irrigation (from the beginning of the yound panicle formation stage to the end of heading) are most important to obtain high yields of rice.

(5) Application of herbicides:

For the direct seeding of rice, application of herbicides is indispensable, especially at the inital stage of growth. Application of 10ℓ per ha of Propanil (Emulsion) each time and 3ℓ per ha of 2.4 D (Emulsion) each time are proposed.

(6) Application of fugicides and insecticides:

For blast control, spray of 30 kg per ha of Kasumin (Dust) each time is recommended, and for stemborer and/or aphid control, spray of 2ℓ per ha of Malathion (Emulsion) each time is proposed.

(7) Improved farming calendar:

The farming calendar is proposed for double crops a year, as follows:

(1) Wet season rice;

| | |
|---|---|
| Land preparation | -Beg. Aug, to end Sep. |
| Seeding and basic fertilizer application | -Beg. Sep. to end Oct. |
| Application of herbicides | -Beg. Sep. to end Oct. |
| Application of top-dressing | -Beg. Oct. to end Nov. |
| Weeding | -Beg. Sep. to end Dec. |
| Application of fungicides and insecticides | -Beg. Sep. to end Jan. |
| Harvest | -Mid. Jan. to mid. Mar. |

(2) Dry season rice;

| | |
|---|---|
| Land preparation | -Mid. Jan. to mid. Mar. |
| Seeding and basic fertilizer application | -Mid. Feb. to mid. Apr. |
| Application of herbicide | -Mid. Feb. to mid. Apr. |
| Application of top-dressing | -Mid. Mar. to mid. May |
| Weeding | -Mid. Mar. to mid. June |
| Application of fungicides and insecticides | -Mid. Mar. to mid. July |
| Harvest | -Beg. July to end Aug. |

Land preparation, seeding, application of basic fertilizers will be done by machines, and top-dressing and supplemental weeding by hand. Application of agro-chemicals is proposed to be done by air craft except for an isolated rice field. Harvest will be done by a combine.

E2.4 Beans

Beans in the Choluteca Plain are mainly lima beans, but the production area is relatively small at present. The production should be increased with the view to attain soil conservation and to supply food for human diet.

(1) Improved variety:

The following varieties are proposed as recommended by MRN:

Desarrural V.B.

Desarrual V.R.

Porills

(2) Seeding:

Seeding will be made by machines at the rate of 35 kg per ha.

(3) Improved fetilizer application rate:

Application standard is proposed as follows:

N: 50kg/ha

$P_2O_5$ : 30kg/ha

$K_2O$ : 0-30kg/ha

When beans are cultivated, seeds should be inoculated with leguminous bacterica to obtain higher yield.

In addition to lima beans, cultivation of soy bean is proposed as a plant oil resource and measures for conservation of soil fertility. Research on soy bean cultivation under irrigated condition will be proposed to be carried out in the Choluteca Plain.

(4) Water management:

Furrow irrigation of 5.4 mm per day at one-week to two-week intervals is proposed.

(5) Application of insecticides:

Spray of 2ℓ per ha of Malathion (Emulsion) each time is proposed.

(6) Farming calender:

| | |
|---|---|
| Land preparation | - Mid. Jan. to mid. Mar. |
| Seeding and application of fertilizers | - Mid. Feb. to mid. Apr. |
| Tilling, weeding | - Mid. Mar. to mid. May |
| Application of inspecticides | - Mid. Mar. to end May |
| Harvest | - Beg. June to end July |

Land preparation, seeding, application of fertilizers, application of insepcticides will be done by machine, but harvest will be done by hand.

E2.5 Sugar Cane

Present yield of sugar cane grown by farmers under without-irrigation is approximately 80 tons per ha on an average in the Choluteca Plain. This relatively high yields will be attributable to favourable soil conditions in this area. However, by applying further improved farming technics, yield of cane will be further increased to the level of 140 tons per ha (118.3 ton/ha including fallow) on an average. To attain the above yeild, improved farming are proposed in the following manner:

(1) Improved variety:

At present, NCO310 is adopted for more than 90% of the cropped area. NCO310 has advantage in good ratoonigh, good tillering and early maturity. but it has disadvantage in fine stalks, high fibre content and high rate of flowering. Further, higher yield of cane is hardly expectable in line with the higher rate fertilizer application if compared with other big stalk varieties (B34-64, Pinder etc.).

Under high rate of fertilizer application and perfectly irrigated conditions. B34-62, CP3437. Pinder or Q51 will be more advantageous than NCO310.

(2) Planting:

Present rate of seed cane for planting is approximately 10 tons per ha.

This high rate will have been practised in order to avoid poor germination of seeds due to draught. However after completion of irrigation facilities, 6 tons of seed cane will be sufficient.

(3) Improved fertilizer application rate:

N : 150 kg/ha; $P_2O_5$ : 50 kg/ha and $K_2O$ : 50 kg/ha are proposed. Half of nitrogen will be applied at the planting time and one-forth at one or one and half month after planting, and the remainder at two or three month after planting.

(4) Water management:

Furrow irrigation of 7.1 mm per day at 10 ton 15-day intervals is proposed. To obtain higher content of sugar, irrigation should be cut at the time of 30 days before harvest.

(5) Application of herbicides:

Application of 1.5 kg per ha of Atrazine (wetable) each time is proposed for saving labor force.

(6) Application of rodenticides:

Little insect damage but rather servere rodent damage have been experienced in the Choluteca Plain. Therefore, application of zinc phosphate of 1 to 5 percent by weight in cereal bait will be proposed. However, as zinc phosphate is a poisonal chemical, careful attention should be paid paid to human and animals when it is applied.

(7) Tilling and weeding:

Plant cane: Approximately one month after planting, the planting furrows are fluttened with soil, cutting down from the rows by tractor. One month thereafter, earthing to cane root will be done by tractor. After that, top-dressing and weeding will be done by hand.

Ratoonig: After harvesting of cane, stubble should be cut off, and the cane field is flattened by tractor. One month thereafter, earthing to the cane root will be performed. After earthing, all works in the cane field will be done by hand.

(8) Improved farming calendar:

Plant cane;

| | |
|---|---|
| Land Preparation | - Mid. Aug. to mid. Apr. |
| Planting and basic fertilizer app. | - Mid. Sep. to mid. May |
| Application of harbicide | - Mid. Spe. to mid May |
| Application of top-dressing | - Mid. Oct. to mid. July |
| Application of rodenticides | - Mid. Nov. to mid. Feb. |
| Tilling and weeding | - Mid. Oct. to mid. July |
| Harvest | - Mid. Nov. to mid. May |

Ratoon cane:

| | |
|---|---|
| Ratooning and basic fertilizer app. | - Mid. Nov. to mid. May |
| Application of top dressing | - Mid. Dec. to mid. June |
| Application of rodenticides | - Mid. Jan. to mid. Feb. |
| Tilling and weeding | - Mid. Dec. to mid. June |
| Harvest | - Mid. Nov. to mid. May |

Land preparation, fertilizer application, earthing will be done by tractor. Weeding, harvest are done by hand in general.

(9) Establishment of harvesting schedule:

Delayed harvest of matured cane will result in increased mortality of cane and decreased sugar content. Brix of cane juice should be examined and a rational harvesting schedule should be established.

E2.6 Cotton

With the irrigation and drainage facilities and further improved farming practices, i.e. use of improved variety, application of pertinent fertilizers, hervicides and pesticides etc., yields of seed cotton would be increased remarkably.

(1) Improved variety:

The major varieties of cotton grown in the Choluteca Plain are Stonville 213 and Conal-S. Introduction of new improved varieties may also be contemplated as envisaged by the Cooperativa Algodonera del Sur.

(2) Seeding:

25 kg per ha of seed rate is proposed.

(3) Application of fertilizer rate:

The optimum fertilizer application rate is proposed as follows:

N : 100 kg/ha

$P_2O_5$ : 50 kg/ha

$K_2O$ : 25 kg/ha

Half of nitrogen will be applied at the seeding time and the remainder at one month after planting.

(4) Water management:

Furror irrigation of 6.8 mm per day at one to two-week intervals.

(5) Application of herbicides:

Application of 1.5 kg per ha of Planavin (wettable) each time is proposed.

(6) Application of insecticides:

For cotton cultivation, insect control is the most important. Spray of chemicals for insect control will be done 10 to 20 times during the growth period of cotton.

Spray of 2 per ha of Malathion (Emulsion) and 1.0 kg of Orthene per ha each time is proposed.

(7) Improved farming calendar:

| | |
|---|---|
| Land preparation | - Beg. June to end July |
| Seeding and basic fertilizer app. | - Beg. July to end Aug. |
| Thinning | - Beg. Aug. to end Sep. |
| Application of top dressing | - Beg. Aug. to end Sep. |
| Tilling and weeding | - Beg. Aug. to end Nov. |
| Application of inspecticides | - Mid. July to mid. Dec. |
| Harvest | - Mid. Jan. to mid. Mar. |

Land preparation, seeding, fertilizer application, tilling will be done by tractor, application of chemicals will be done by aircraft (except for isolated fields), and thinning, supplemental weeding will be done by hand.

E2.7 Sesame

Sesame is an important crop as a resourse of plant oil food in Honduras.

(1) Improved variety:

| | |
|---|---|
| Instituto 70 and | |
| De Sarrural C10 | - early maturity and no branch variety |
| Venezuela 44 | - late maturity, no branch variety |
| Tardias | - late maturity, branch variety |

Selectionof new hybred varieties are being done at the Lujosa station, and varieties of higher quality and yield will also be expectable.

(2) Seeding:

Seeding is done by stripe seeding in space of 60 cm, and the seeding rate is 3 kg per ha. About 15 to 20 days after germination, thinning will be performed in hill space of approximately 15 cm.

(3) Fertilizer application rate:

The following fertilizer rate is proposed.

N : 30-50 kg/ha

$P_2O_5$ : 20 kg/ha

$K_2O$ : 10 kg/ha

(4) Water management:

Furrow irrigation of 5.5 mm per day at one to two-week intervals is proposed.

(5) Application of herbicides:

2 kg per ha of Herban 80 (wettable) each time is proposed.

(6) Application of insecticides:

Spray of 1.0 ℓ per ha of Dipterex (Emulsion) each time is proposed.

(7) Farming calendar:

| | |
|---|---|
| Land preparation | - Beg. Sep. to end Oct. |
| Seeding, basic fertilizer app. | - Beg. Oct. to end Nov. |
| Application of herbicides | - Beg. Oct. to end Nov. |
| Thinning | - End Oct. to end Dec. |
| Application of top dressing | - Beg. Nov. to end Dec. |
| Application of insecticides | - Beg. Nov. to end Feb. |
| Harvest | - Beg. Feb. to end Mar. |

Land preparation and tilling will be done by tractor; seeding, thinning, top-dressing and harvest will be done by hand, and application of agro-chemicals is proposed to be done by sprayer or aircraft.

E2.8 Melon and Water melon

The production of melon and water melon will be increased to some extent by increase in the cropped area and unit yield resultant from the partinent farming proactices and irrigation. However, large increase of these crop productions will not be expectable in the light of the future demand.

E2.9 Livestock Production

The future livestock production will not be increased because livestock raising is programed to utilize the land of Class IV.

# E3. FARMING INPUTS, MACHINERY AND LABOR REQUIREMENTS

## E3.1 Farming Inputs Requirements

For the efficient execution of the development program, the required farming inputs such as seed, fertilizers and agro-chemicals for the Western Plain are estimated as follows:

| Farming Inputs | Western Plain |
|---|---|
| Seed (ton) | |
| - Maize | 81 |
| - Sorghum | 12 |
| - Beans | 36 |
| - Sesame | 2 |
| - Rice | 224 |
| - Sugar cane (Seed cane) | 40,600 |
| - Cotton | 128 |
| - Melon | 0.6 |
| - Watermelon | 0.6 |
| - Pasture grass /1 | 0.5 |
| - Tomato | 0.8 |
| Fertilizers (ton) | |
| - Compound 12:24:12 | 2,890 |
| " 15:15:15 | 3,140 |
| - Urea | 4,380 |
| Agro-chemicals | |
| - Herbicides | |
| Emulsion (kℓ) | 74 |
| Wettable (ton) | 28 |
| - Insecticide | |
| Emulsion (kℓ) | 120 |
| Wettable (ton) | 74 |
| Dust (ton) | 77 |
| - Fungicides | |
| Wettable (ton) | 25 |
| Dust (ton) | 80 |
| - Rodenticides | |
| Wettable (ton) | 41 |

/1 Required seed is calculated on the basis of 6-year renovation.

## E3.2 Man-Power Requirement

### E3.2.1 Operator Requirement

Total number of operators required for the execution of the developed farming practices in the Western Plain of the Choluteca Plain at the peak season (August) is estimated at approximately 6,500 Man-days or 300 persons per day. The existing number of operators engaged in mechanized farming is estimated at about 100 persons. Consequently, the increase in operators required for the Project at the peak season is estimated at about 200 persons. The feature of operator requirement is shown in Table E3-(1).

### E3.2.2 Labor Requirement

Total number of labors required for the developed farming practices in the Western Plain is estimated at approximately 236,000 Man-days at the peak season (January). Total number of workable laborers at the peak season (January) is estimated at 209,000 Man-days. Consequently, the additional labor requirement at the peak season is estimated at about 27,000 Man-days, or 1,000 persons. The feature of labor requirement is shown in Table E3-(2). This labor requirement will be met by the people in the Choluteca and Valle Departments.

## E3.3 Machinery Requirement

### E3.3.1 Necessity of Mechanization

For the realization of the proposed farming systems, every farming practice should be carried out within the season optimum for the crop growth. Since the average farm size, in general, is relatively large in the Choluteca Plain, the farmers will be obliged to adopt a mechanized farming system as much as practicable. Deep plowing and good pulverizing of soils, particulary for the fields of the Vertisols, are essential to obtain higher yields of crops and it should be made timely for the optimum seeding season.

Seeding and fertilizer application practices can be simultaneously carried out by a tractor equipped with a seed machine and a fertilizer distributer. Weeding will be done by applying herbicides and tilling of rows by cultivator drawn by a tractor. Fields of sugar cane, cotton, maize, sorghum etc. grown on a large scale will be suitable for application of agricultural chemicals by aircraft. There is an agro-chemical spraying enterprise in Choluteca, and application of chemicals by aircraft is bing carried out. Farmers will have to make plans for collective aero-chemical spray by gathering their fields to one block of one crop. Harvesting of sugar cane and cotton will be carried out by hand in view of low labor cost and employment situation in the area. In case farmers want to use a cane harvester or a cotton picker, the following conditions should be considered:

For cane harvester: i) wind velocity during cane harvest season to keep safety from fire due to burning cane fields for mechanized harvest, ii) situation of cane lodging, iii) existing gravels on cane fields, iv) trash percentage and harvesting loss of cane, and v) operation cost.

For cotton picker: Variety of cotton used at present should be changed to other varieties adaptable to mechanized picking.

For rice harvester, a grain combine with 120 HP, is used in the Choluteca Plain at present. Use of a combine will be effective for rice harvesting in the future.

### E3.3.2 Machinery Requirement

The net requirement of agricultural machineries for the improved farming practices in the Western Plain is estimated as shown in Table E5.

### E3.3.3 Necessity of establishing an agricultural machinery cooperatives and supporting services

For smooth and efficient execution of farming practices, establishment of agricultural machinery cooperatives and contract systems for mechanized farming will be indispensable. Further work-shops and a training center for operators will be necessary to be established in the Project area (Western Plain).

## E4. INCREASED AGRICULTURAL PRODUCTION

With the efforts of farmers to apply improved farming practices as proposed herein and inprovement of the supporting service activities, the agricultural production under irrigated condition will be developed year by year.

The estimate of the increased agricultural production at the fully developed stage (in 1985) is given in Table-E6.

## E5. ASSOCIATED PROJECT AREA

### E5.1 San Juan de Flores Area

The future crop production program in the San Juan de Flores Area is proposed to concentrate in sugar cane cultivation to provide cane to the factory to the maximum extent. The cropping pattern for this area is proposed to adapt the cropping pattern-Type 1 (Sugar cane). The farming practices will be much the same as that of the Choluteca Plain.

Yield of sugar cane in the area in future will increase to the same level as the Choluteca Plain. However, even if the unit yield of cane reaches the target, the total production of cane will be limited to 175,000 tons in the area as follows.

Estimation of Sugar Cane Production in the San Juan de Flores Area

| Crop | Area | Unit Yield | Production |
|---|---|---|---|
| Sugar Cane | 1,480 ha | 118.3 t/ha | 175,100 t |

Therefore, the balance of 97,000 tons/1 should be produced in the area outside of the valley, viz. hill area surrounding the terraces and/or the southern area of Villa de San Francisco or Talanga Valley.

### E5.2 Middle Reach Valleys

Taking into account the physical and socio-economic conditions in the valleys, a cropping pattern is proposed as shown in Fig-E2.

Farming practices are proposed to be the same as that of the Choluteca Plain area.

Yield of crop per hectare at the target year will reach at the same level as the Choluteca Plain area by means of assistance in improved farming practices and supporting service

---

/1 1,814 t/d x 150 days = 272,000 t
272,000 t - 175,000 t = 97,000 t

activities. The future crop production in the Middle Reach Valleys at the fully developed stage is shown in Table-E7.

Table-E1 SUPPLY AND DEMAND OF GRAIN
(MAIZE, SORGHUM, BEANS, RICE)

(Unit: 1,000 Tons)

| Year | Supply | | | | Demand | | | Differ-ence |
|---|---|---|---|---|---|---|---|---|
| | Produc-tion/1 | Import/2 | Export/2 | Total Supply | Per-Capita Consumption | Popu-lation | Total Demand | |
| | | | | | (kg) | ($10^6$) | | |
| 1966 | 436 | 9 | 62 | 383 | 178 | 2.15 | 383 | |
| 1977 | 417 | 9 | 43 | 383 | 173 | 2.21 | 383 | |
| 1968 | 441 | 9 | 68 | 382 | 168 | 2.27 | 382 | |
| 1969 | 466 | 8 | 33 | 441 | 189 | 2.33 | 441 | |
| 1970 | 446 | 9 | 24 | 431 | 180 | 2.39 | 431 | |
| 1971 | 268 | 3 | 25 | 346 | 141 | 2.46 | 346 | |
| 1972 | 257 | 4 | 19 | 342 | 136 | 2.52 | 342 | |
| 1973 | 417 | 3 | 3 | 417 | 161 | 2.59 | 417 | |
| 1974 | 425 | 1 | 6 | 420 | 158 | 2.66 | 420 | |
| 1975 | 450 | 53 | 3 | 500 | 183 | 2.73 | 500 | |
| 1985 | 422 | | | 422 | 167 | 3.56 | 595 | -173 |
| 1990 | 422 | | | 422 | 167 | 4.07 | 680 | -258 |

/1 Anuario Estadistico 1975, Ministerio de Economia.

/2 Trade Yearbook, Vol. 25, 27 & 29, FAO.

/3 Production and per-capita consumption in 1985 and 1990 is estimated at the average from 1966 to 1975.

Table-E2 PROPOSED CROPPING AREA IN THE CHOLUTECA PROJECT AREA (WESTERN PLAIN)

A. Cropping Area by Cropping Type

| Cropping Type | Area (ha) | % |
|---|---|---|
| 1. Sugar Cane | 6,760 | 42.2 |
| 2. Maize-Cotton | 3,500 | 21.9 |
| 3. Sorghum-Cotton | 800 | 5.0 |
| 4. Beans-Cotton | 800 | 5.0 |
| 5. Maize-Sesame | 800 | 5.0 |
| 6. Maize-Melon | 400 | 2.5 |
| 7. Maize-Water Melon | 400 | 2.5 |
| 8. Rice-Rice | 1,600 | 10.0 |
| 9. Pasture | 140 | 0.9 |
| 10. Vegetables | 800 | 5.0 |
| Total | 16,000 | 100.0 |

B. Cropping Area by Crop

| Crop | Area (ha) | % |
|---|---|---|
| Sugar Cane | 6,760 | 27.8 |
| Maize | 5,100 | 21.0 |
| Sorghum | 800 | 3.3 |
| Beans | 800 | 3.3 |
| Sesame | 800 | 3.3 |
| Rice | 3,200 | 13.2 |
| Cotton | 5,100 | 21.0 |
| Water Melon | 400 | 1.6 |
| Melon | 400 | 1.6 |
| Pasture | 140 | 0.6 |
| Vegetables | 800 | 3.3 |
| Total | 24,300 | 100.0 |
| Cropping intensity | 1.52 | |

Table-E3. LABOR AND OPERATOR REQUIREMENT IN THE CHOLUTECA PROJECT AREA (WESTERN PLAIN)

(1) Operator Requirement (X $10^3$ M/D)

| | J | F | M | A | M | J | J | A | S | O | N | D | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total operator | 4.2 | 5.8 | 6.3 | 4.0 | 2.6 | 3.9 | 6.0 | 6.5 | 4.7 | 3.2 | 2.8 | 2.9 | 52.9 |
| Person/day | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.2 | 0.3 | 0.3 | 0.3 | 0.2 | 0.1 | 0.1 | - |
| Existing number of operators | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | |
| Net operator requirement | 0.1 | 0.1 | 0.1 | - | - | 0.1 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | - | |

(2) Labor Requirement (X $10^3$ M/D)

| | J | F | M | A | M | J | J | A | S | O | N | D | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total labor req. | 236 | 198 | 181 | 120 | 74 | 52 | 77 | 52 | 44 | 20 | 91 | 183 | 1,298 |
| Family laborer | 209 | 186 | 209 | 201 | 141 | 134 | 171 | 171 | 112 | 119 | 201 | 209 | |
| Hired laborer | 27 | 12 | - | - | - | - | - | - | - | - | - | - | 39 |
| Persons/ day | 1.0 | 0.5 | - | - | - | - | - | - | - | - | - | - | - |

---

(1) Total number of families in the Wester Plain in 1985 is estimated at 2.980. (See Table E.4).

(2) Workable persons per family are estimated at 2.5.

(3) Monthly rate of workable days are estimated as follows:
Jan. - Apr., Nov. - Dec. : 0.9
May - June : 0.6
July - Aug. : 0.75
Sept. - Oct. : 0.5

### Table-E4 ESTIMATION OF LABOUR FORCE IN THE CHOLUTECA PROJECT AREA (WESTERN PLAIN)

| | |
|---|---|
| 1) Present situation (1974) | |
| Farmers' population | 11,000 |
| Family size (person/family) | 5.3 |
| Farmers' household | 2,070 |
| - Land holder | (830) |
| - Landless farmer | (1,240) |
| Labour force /1 | 5,200 |
| - Land holder | (2,100) |
| - Landless farmer | (3,100) |
| 2) Future with project condition (1985) | |
| Farmers' polultion /2 | 15,700 |
| Family size (person/family) | 5.3 |
| Farmers' household | 2,980 |
| - Land holder /3 | (830) |
| - Transmigrants /4 | (680) |
| - Landless farmer | (1,470) |
| Labour force | 7,500 |
| - Land holder | (2,100) |
| - Transmigrants | (1,700) |
| - Landless farmer | (3,700) |

/1 Estimated at 2.5 persons per family.

/2 Farmers population is estimated as follows, on the bais of annual increased rate (2%) from 1961 to 1974 in the Choluteca Department and the number of transmigrants from outside project area. (400 families, 2,000 persons)

- Population increase of farmer in the project area:
  11,000 persons x $1.02^{11}$ = 13,700 persons (2,580 families)
- Transmigration from outside project area:
  2,000 persons ( 400 families)

Total farmers' population: 15,700 persons (2,980 families)

/3 It is assumed that the number of land holder at present will remain unchanged.

/4 Including transmigrants from inside project area. (280 families)

Table-E5 NUMBER OF FARMING MACHINERY REQUIRED IN THE CHOLUTECA PROJECT AREA (WESTERN PLAIN)

| Machines | Total Requirement | Present number | Net Requirement |
|---|---|---|---|
| Tractor | 256 | 100 | 156 |
| Attachment | | | |
| Plow | 113 | - | 113 |
| Harrow | 74 | - | 74 |
| Fert. distributer | 130 | - | 130 |
| Digger | 80 | - | 80 |
| Ridger | 83 | - | 83 |
| Cultivator | 72 | - | 72 |
| Tractor trailer | 64 | - | 64 |
| Combine | 10 | - | 10 |
| Sprayer duster | 54 | - | 54 |

1) : All attachments of tractors are assumed to be newly purchased at the starting time of the Project.

2) : Number of cane-trailers is precluded because cane transportation from fields to the factory will be executed by a cane transportation enterprise.

Table-E6 INCREASED AGRICULTURAL PRODUCTION IN THE CHOLUTECA PROJECT AREA

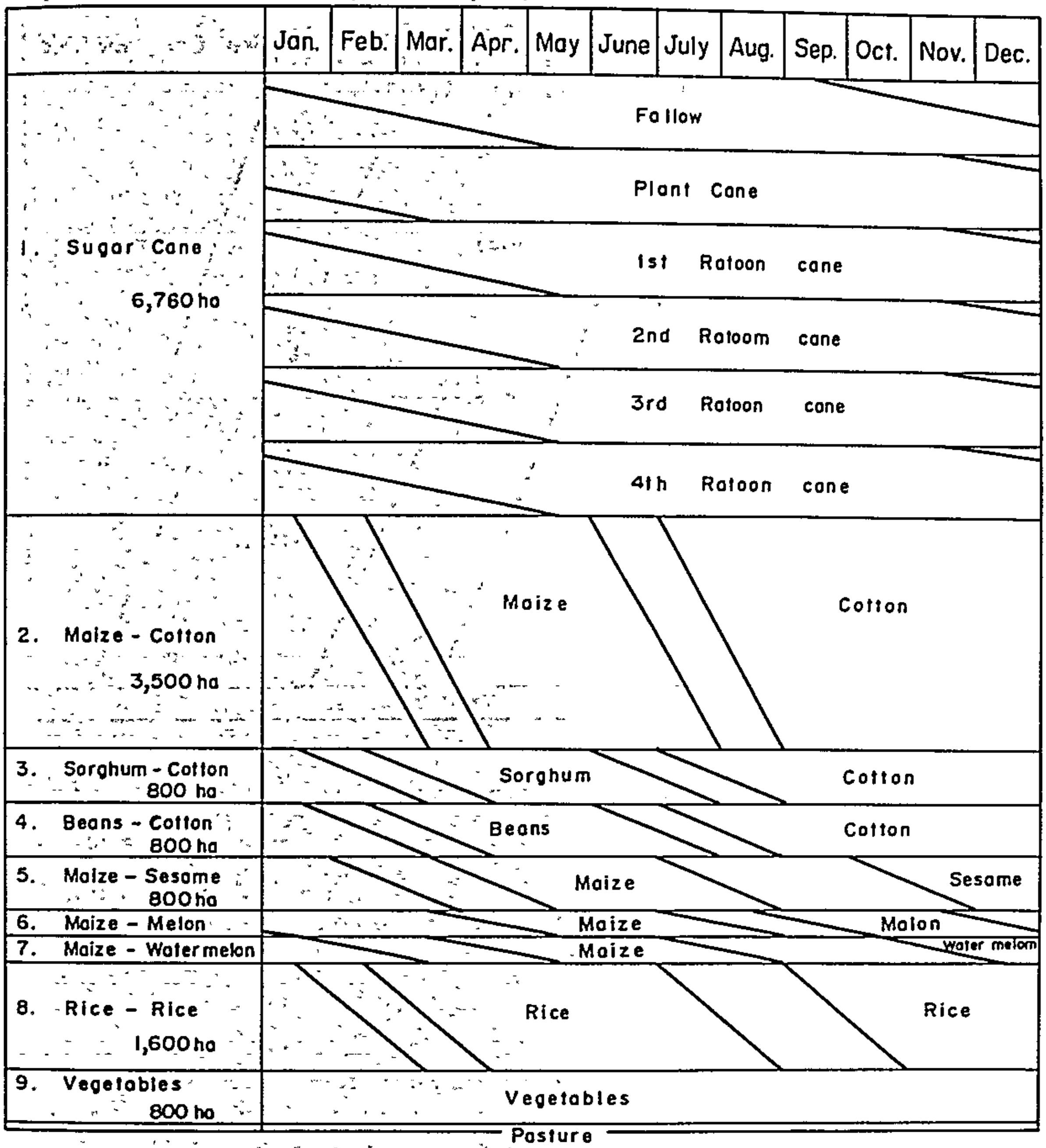
(WESTER PLAIN)

| Crop | Area (ha) | Unit Yield (t/ha) | Production (t) |
|---|---|---|---|
| Sugar cane | 6,760 | | 799,700 |
| - Estate farm | (3,530) | (118.3) | (417,600) |
| - Farmers' farm | (1,640) | (118.3) | (194,000) |
| - Expanded farmers' farm | (1,590) | (118.3) | (188,100) |
| Cotton | 5,100 | 3.0 | 15,300 |
| Maize | 5,100 | 4.0 | 20,400 |
| Sorghum | 800 | 4.0 | 3,200 |
| Beans | 800 | 2.0 | 1,600 |
| Sesame | 800 | 1.5 | 1,200 |
| Rice (Wet season) (Paddy) | 1,600 | 5.0 | 8,000 |
| Rice (Dry season) (Paddy) | 1,600 | 5.0 | 8,000 |
| Melon | 400 | 6.5 | 2,600 |
| Water melon | 400 | 12.0 | 4,800 |
| Pasture | 140 | - | - |
| Vegetables | 800 | 20 | 16,000 |
| Total | 24,300 | - | - |
| Livestock | | | |
| - Milk | 140 ha | 190ℓ | 30 kℓ |
| - Meat | 140 | 130 kg | 20 t |

Table-E7 ESTIMATE OF CROP PRODUCTION IN THE CHOLUTECA VALLEY

| Crop | Morolica | | | Orocuina | | | Total | |
|---|---|---|---|---|---|---|---|---|
| | Area | Unit Yield | Produc-tion | Area | Unit Yield | Produc-tion | Area | Produc-tion |
| | ha | t/ha | t | ha | t/ha | t | ha | t/ha |
| Rice (Wet Season) | 150 | 5.0 | 750 | 520 | 5.0 | 2,600 | 670 | 3,350 |
| Rice (Dry Season) | 150 | 5.0 | 750 | 520 | 5.0 | 2,600 | 670 | 3,350 |
| Maize | 130 | 4.0 | 520 | 470 | 4.0 | 7,880 | 600 | 2,400 |
| Beans | 130 | 2.0 | 260 | 470 | 2.0 | 940 | 600 | 1,200 |
| Vegetables | 20 | 20.0 | 400 | 50 | 20.0 | 1,000 | 70 | 1,400 |
| Total | 580 | - | - | 2,030 | - | - | 2,610 | - |
| Cropping intensity | 1.93 | | | 1.95 | | | 1.95 | |

# Fig. - E 1 PROPOSED CROPPING PATTERN (CHOLUTECA WESTERN PLAIN)




6. Maize - Melon 400 ha
7. Maize - Water melon 400 ha
10. Posture 140 ha

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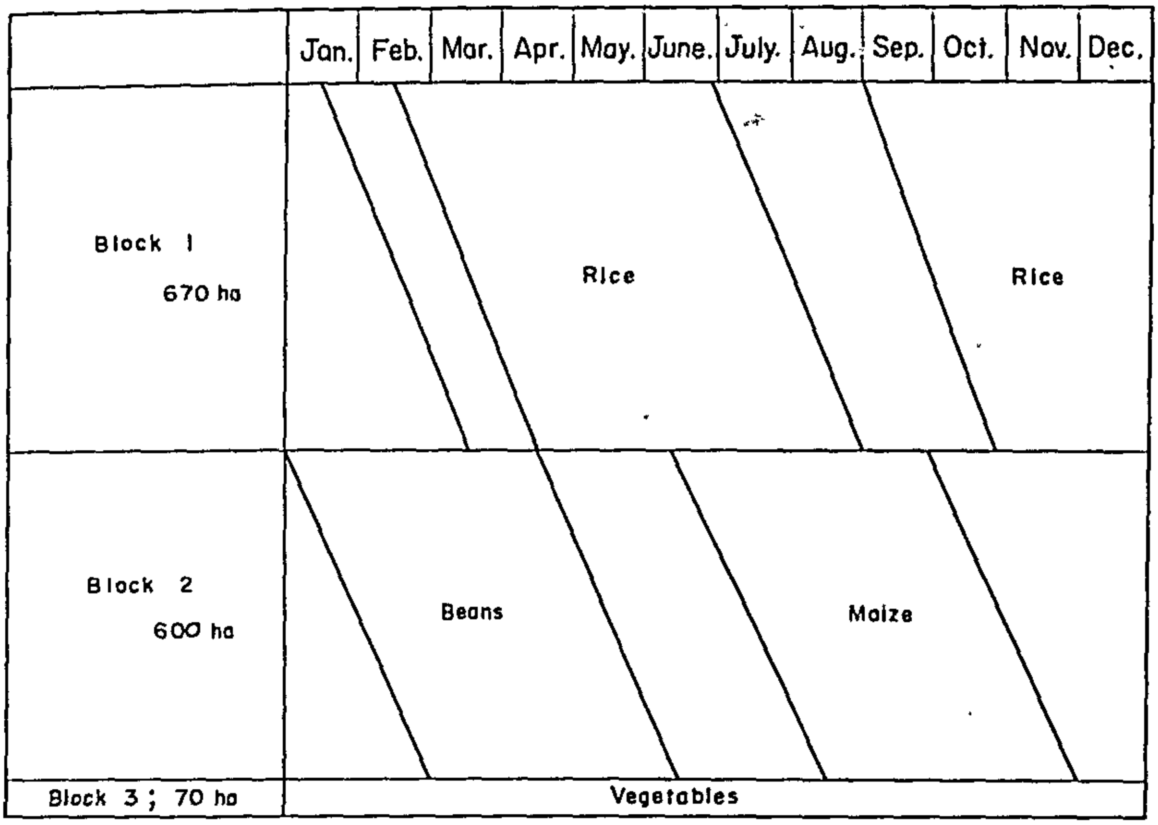
Fig.-E2 PROPOSED CROPPING PATTERN (MIDDLE REACH)

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# ANNEX F

# POWER SUPPLY AND DEMAND

# F POWER SUPPLY AND DEMAND

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## F1. PRESENT POWER SUPPLY SITUATION

A greater part of power demand in Honduras is met by a system of ENEE (La Empresa Nacional de Energia Electrica). There exist several privately owned electric systems, but they are small in capacity and account for only about 5 % of the total capacity in Honduras.

ENEE is one of the autonomies of the Honduran Government, and the ENEE's policy is subject to approval of the Joint Board of Directors composed of the ministers of such ministries as Ministry of Transport, Communications and Public Works, Ministry of Natural Resources, Ministry of Finance and Ministry of Economic Planning.

ENEE is responsible to supply power through its Central Interconnected System and many Isolated Systems. The total installed capacity of ENEE in 1976 was 146 MW, of which 138 MW was included in the Central Interconnected System. Details of installed capacity of ENEE are shown in Table-F1. The total energy generated by ENEE's system reached 560 GWh in 1976, of which the sold energy was 478 GWh. Energy generated by ENEE is shown in Table-F2 for the past 11 years.

Power transmission system of ENEE is shown in Fig.-F1, in which the location of the existing powerplants and substations is also shown.

Peak load of the ENEE's total system, which was 25.8 MW in 1966, reached 96.6 MW in 1975. The load factor has been around 55 to 60 percent. The historical peak load, generated energy and the annual load factor are given in Table-F3. Power loss was 14.3 percent for the Central Interconnected System and 23.8 percent for the Isolated Systems in 1976.

It is to be noted that the Central Interconnected System was interconnected with the Nicaraguan power system in 1974, and since then power has been exchanged between the two countries with contracted charge. In 1976, for instance, energy of 1.4 GWh was imported by ENEE from Nicaragua.

## F2. POWER DEMAND FORECAST AND POWER INSTALLATION PROGRAM

In 1976, ENEE conducted power demand forecast up to 1995. According to the forecast, peak load of the Central Interconnected System is estimated to increase from 94.8 MW in 1976 to 278.5 MW in 1985 and 700.0 MW in 1995. Details of the forecast is given in Table-F4.

To cope with increasing power demand, ENEE has prepared a power installation program as shown in Table-F5. The Rio Lindo Extension Project, 40 MW in installed capacity and 250 GWh in annual mean energy output, is now under construction and will be put into commercial operation in 1978. The Puerto Cortes Gas Turbine Powerplant Project, 33 MW in installed capacity and 225 GWh in scheduled annual energy output, is under negotiation with the contractor for construction and the construction work is about to start. The Nispero Hydropower Project, 22.5 MW in installed capacity and 66 GWh in annual mean energy output, has been completed in financial arrangement and is ready for tender calling for construction. The next El Cajon Hydropower Project, 282 MW in installed capacity and 1,192 GWh in annual mean energy output, is now under financial arrangement for a timely commencement of the powerplant operation in early 1983.

The power demand-supply condition is illustrated in Fig.-F2.

## F3. POWER TARIFF AND POWER PRODUCTION COST

In 1976, ENEE's total income from energy sale of 479 GWh amounted Lps. 43.9 million, resulting in the averaged power tariff of Lps. 0.092 per kWh in 1976. The detailed information on power tariff is shown in Table-F6 for years 1975 and 1976.

On the other hand, ENEE's total expense in 1976 amounted Lps. 35.9 million, of which Lps. 19.8 million was for the Central Interconnected System, Lps. 2.5 million was for the Isolated Systems and the remaining Lps. 13.6 million was for general expense of ENEE and its departments.

Two hydropower stations and five thermal stations were operated in the Central Interconnected System in 1976. The direct power production cost at powerplant is estimated to be Lps. 0.0303/kWh for hydro stations and Lps. 0.0699/kWh for thermal stations, averaging Lps. 0.0386/kWh. Details are shown in Table-F7. The power production cost at consumer's end is estimated to be Lps. 0.075/kWh.

## F4. POWER BENEFIT STUDY

For the purpose of evaluating power benefit of the present Choluteca Project, a 30 MW oil-fired powerplant is considered as an alternative thermal plant in view of the largest unit size of 20 MW in the existing installation and the peak load of around 200 MW in 1983 when the proposed powerplant at San Fernando dam is scheduled to commence operation.

The installation cost of a 30 MW oil fired thermal plant is estimated to be US$500/kW. Annual operation and maintenance cost is considered proportional to the installed capacity and US$13/kW is estimated. A capacity adjustment factor is calculated to be 1.146 as explained in detail below.

Several values pertinent to a hydro and thermal plant are estimated as follows.

| | Hydro | Thermal |
|---|---|---|
| Loss at Primary Substation | 5 % | 2 % |
| Auxiliary Power Use | 0.3 % | 6 % |
| Forced Outage | 0.5 % | 2.8 % |
| Overhaul | 2 % | 10 % |

Then a capacity adjustment factor is calculated as follows.

Capacity Adjustment Factor

$$= \frac{(1-0.05)(1-0.003)(1-0.005)(1-0.02)}{(1-0.02)(1-0.06)(1-0.028)(1-0.10)} = 1.146$$

The initial investment cost and annual operation and maintenance cost are, therefore, determined to be US$573/kW and US$14.9/kW, respectively, adjusted by the capacity adjustment factor. These values are called as capacity benefit.

Cost proportional to energy output, which is mainly cost of fuel, is estimated based on following factors.

| | |
|---|---|
| Fuel consumption | 9,600 BTU/kWh |
| Cost of Fuel (Bunker C) | US$0.2853/U.S. Gallon |
| Thermal Energy of Fuel | 144,000 BTU/U.S. Gallon |
| Energy Adjustment Factor | 1.028* |

$$\text{*Energy Adjustment Factor} = \frac{(1-0.05)(1-0.003)}{(1-0.02)(1-0.06)} = 1.028$$

The cost of fuel, which is called an energy benefit, is then calculated to be US mills 19.5/kWh as detailed below.

US$0.2853/U.S. Gallon ÷ 144.000 BTU/U.S. Gallon = US$1.98/mBTU
US$1.98/mBTU x 9,600 BTU/kWh x 1.028 = US mills 19.5/kWh

The service life of an oil fired thermal plant is estimated to be 25 years. On expiration of the service life, the plant must be replaced with the replacement cost of US$519/kW, 90 % of the initial investment cost.

The estimated power benefit is summarized below.

| | Capacity Benefit | Energy Benefit |
|---|---|---|
| Installation cost | US$573/kW | - |
| Replacement cost | US$519/kW | - |
| Annual O & M cost | US$14.9/kW | - |
| Fuel cost | - | US mills 19.5/kWh |

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Table-F1 INSTALLED CAPACITY OF ENEE SYSTEM

Unit (MW)

| Power Station | Type | 1973 | 1974 | 1975 | 1976 |
|---|---|---|---|---|---|
| **Interconnected Central System** | | | | | |
| Hydro-plant | | | | | |
| Canaveral | Hydro | 28.5 | 28.5 | 28.5 | 28.5 |
| Rio Lindo | " | 40.0 | 40.0 | 40.0 | 40.0 |
| Sub-total | | 68.5 | 68.5 | 68.5 | 68.5 |
| Thermal-plant | | | | | |
| Santa Fé | Diesel | 10.0 | 10.0 | 10.0 | 10.0 |
| San Pedro Sula | Gas Turbine | 15.0 | 15.0 | 15.0 | 15.0 |
| Miraflores | Gas Turbine | 13.6 | 13.6 | 13.6 | 13.6 |
| La Ceiba | Diesel | - | 26.6 | 26.6 | 26.6 |
| San Lorenzo /1 | Diesel | 3.4 | 4.2 | 4.2 | 4.2 |
| Sub-total | | 38.6 | 65.2 | 65.2 | 69.4 |
| Total | | 107.1 | 133.7 | 133.7 | 137.9 |
| **Isolated Systems** | | | | | |
| Santa Rosa de Copan | Diesel | 0.85 | 0.95 | 0.95 | 1.35 |
| Juticalpa | Diesel | 0.54 | 0.54 | 0.54 | 0.84 |
| Danli | Diesel | 0.79 | 1.75 | 1.75 | 2.55 |
| Ocotepeque | Diesel | 0.43 | 0.55 | 0.38 | 0.45 |
| Trujillo | Diesel | 0.20 | 0.40 | 0.28 | 0.40 |
| El Paraiso | Diesel | 0.58 | 0.74 | 0.74 | 0.94 |
| Choluteca /2 | Diesel | 2.35 | 2.45 | 1.65 | - |
| Catacamas | Diesel | 0.40 | 0.70 | 0.70 | 0.40 |
| Isletas | Diesel | - | - | - | 0.30 |
| Others | Hydro | 0.11 | 0.11 | 0.11 | 0.17 |
| Others | Diesel | 1.57 | 1.57 | 1.14 | 0.90 |
| Total | | 11.22 | 13.96 | 12.44 | 8.30 |

/1: Interconnected in 1976

/2: Actually interconnected

Source: Datos Estadisticos 1976. ENEE

Table-F2 ENERGY GENERATED BY ENEE

| Year | Annual Energy Output (MWh) | | |
|---|---|---|---|
| | Central Interconnected System | Isolated Systems | Total ENEE System |
| 1966 | 127,869 | 4,476 | 132,345 |
| 1967 | 152,997 | 5,670 | 158,667 |
| 1968 | 185,795 | 8,045 | 193,840 |
| 1969 | 218,582 | 10,113 | 228,695 |
| 1970 | 242,709 | 14,830 | 257,539 |
| 1971 | 272,725 | 19,134 | 291,859 |
| 1972 | 309,861 | 22,675 | 332,536 |
| 1973 | 360,797 | 25,352 | 386,149 |
| 1974 | 433,660 | 25,505 | 459,165 |
| 1975 | 483,584 | 26,876 | 510,460 |
| 1976 | 547,343 | 12,909 | 560,252 |

Source: Datos Estadisticos 1976, ENEE

Table-F3 PEAK LOAD, GENERATED ENERGY AND LOAD FACTOR

| Year | Peak Load (kW) /1 | Energy (MWh) | Load Factor (%) |
|---|---|---|---|
| 1966 | 25,789 | 132,345 | 58.6 |
| 1967 | 31,827 | 158,667 | 56.9 |
| 1968 | 40,304 | 193,840 | 54.8 |
| 1969 | 44,203 | 228,695 | 59.1 |
| 1970 | 51,170 | 257,539 | 57.5 |
| 1971 | 59,582 | 291,859 | 55.9 |
| 1972 | 69,567 | 332,536 | 54.4 |
| 1973 | 73,777 | 386,149 | 59.7 |
| 1974 | 84,520 | 459,165 | 62.0 |
| 1975 | 96,596 | 510,460 | 60.3 |

Note /1: Sum of non-coincidental area peaks.

Source: Datos Estadisticos 1976. ENEE

Table-F4 PEAK LOAD PROJECTION OF ENEE SYSTEM

(Unit: MW)

| Year | Central Interconnected System: Non-coincident total peak | Central Interconnected System: Coincident peak | Isolated Systems: Non-coincident total peak |
|---|---|---|---|
| 1976 | 99.8 | 94.8 | 3.0 |
| 1977 | 115.0 | 109.2 | 3.8 |
| 1978 | 131.7 | 125.1 | 3.9 /1 |
| 1979 | 152.7 | 145.1 | 4.2 |
| 1980 | 176.1 | 167.3 | 4.6 |
| 1981 | 197.5 | 187.6 | 5.3 |
| 1982 | 219.1 | 208.1 | 5.9 |
| 1983 | 243.8 | 231.6 | 6.7 |
| 1984 | 268.0 | 254.6 | 7.6 |
| 1985 | 293.2 | 278.5 | 8.4 |
| 1986 | 325.5 | 309.2 | 3.4 /2 |
| 1987 | 356.4 | 338.6 | 3.7 |
| 1988 | 390.7 | 371.2 | 4.2 |
| 1989 | 428.4 | 407.0 | 4.6 |
| 1990 | 468.3 | 444.9 | 5.0 |
| 1991 | 512.5 | 486.9 | 5.5 |
| 1992 | 560.9 | 532.9 | 6.1 |
| 1993 | 613.8 | 583.1 | 6.6 |
| 1994 | 671.9 | 638.3 | 7.3 |
| 1995 | 736.6 | 700.0 | 8.0 |

Notes /1: Trujillo Isolated System is scheduled to be interconnected to Central Interconnected System.

/2: 6 Isolated Systems including Santa Rosa de Copan, Danli, El Paraiso, etc. are scheduled to be interconnected to Central Interconnected System.

Source: System Optimization Study
Vol. I Review of Forecast of ENEE System Energy Sales and Projected Loads for the Forecast Year 1976 - 1995.
ENEE, Sep. 1976.

Table-F5: POWER INSTALLATION PROGRAM FOR CENTRAL INTERCONNECTED SYSTEM

| Power Station | Type | Installed capacity (MW) | Average energy output (GWh/year) | Commencement year of operation |
|---|---|---|---|---|
| Rio Lindo Extension/1 | Hydro | 2 x 20 = 40 | 250 | 1978 |
| Puerto Cortés/2 | Gas Turbine | 5 x 6.6 = 33 | 225 | 1980 |
| Nipero/3 | Hydro | 1 x 22.5 = 22.5 | 66 | 1981 |
| El Cajón/4 | Hydro | 6 x 47 = 282 | 1,192 | 1983 |
| Remolino/5 | Hydro | 140 | 475 | 1989 |

Remarks:

1. Under construction. Will be completed in 1978.

2. Tender for construction was closed in early October 1977. Construction will be started from early 1978.

3. Definite design has been prepared and fund raising has also been completed within 1977.

4. Definite design is under preparation. Fund raising is also underway.

5. Plan not yet finalized. Figures for installed capacity and energy output are preliminary.

Table-F6 POWER CONSUMERS, CONSUMPTION AND AMOUNT OF ENERGY SALE BY CONSUMING CATEGORIES 1975-1976

| Consuming Category | No. of Consumers | Energy consumption (MWh) | Mean consumption per consumer (kWh) | Amount of energy sale ($x10^3$ Lps.) | Unit sale price (Cts/Lps.) |
|---|---|---|---|---|---|
| | | 1975 | | | |
| Residencial | 76,281 | 103,182 | 1,352 | 14,205 | 13.8 |
| Commercial | 9,215 | 64,366 | 6,984 | 6,979 | 10.8 |
| Industrial | 1,297 | 47,391 | 36,538 | 4,653 | 9.8 |
| Bulk Consumers | 51 | 193,492 | 3,793,956 | 11,572 | 6.0 |
| Governmental and Municipal | 1,094 | 15,435 | 14,108 | 1,406 | 9.1 |
| Public Lighting | 41 | 11,483 | 280,070 | 278 | 2.4 |
| Sale to Other System | 1 | 233 | 233,000 | 9 | 3.9 |
| ENEE Self Consumption | - | 720 | - | - | - |
| Total or Average | 87,980 | 436,302 | 4,959 | 39,102 | 8.9 |
| | | 1976 | | | |
| Residencial | 82,464 | 113,076 | 1,371 | 15,576 | 13.8 |
| Commercial | 9,601 | 69,729 | 7,263 | 7,487 | 10.7 |
| Industrial | 1,439 | 62,841 | 43,670 | 5,880 | 9.4 |
| Bulk Consumers | 46 | 194,296 | 4,223,826 | 11,916 | 6.1 |
| Governmental and Municipal | 1,202 | 18,268 | 15,198 | 1,717 | 9.4 |
| Public Lighting | 63 | 12,449 | 197,603 | 415 | 3.3 |
| Sale to Other System | 2 | 7,374 | 3,687,000 | 954 | 12.9 |
| ENEE Self Consumption | - | 715 | - | - | - |
| Total or Average | 94,817 | 478,748 | 5,049 | 43,945 | 9.2 |

Source: Datos Estadisticos 1976, ENEE

Table-F7 POWER PRODUCTION COST IN 1976

| Power Station | Cost ($x10^3$ Lps.) | | | | |
|---|---|---|---|---|---|
| | Generation | Distri-bution | Depreciation | Debt Repay-ment /1 | Total cost |
| Hydro | | | | | |
| Rio Lindo | 342.6 | - | 1,916.8 | 6,832.4 | 9,091.8 |
| Canaveral | 1,043.2 | 21.9 | - | 2,928.2 | 3,993.3 |
| Thermal | | | | | |
| Santa Fé (D) | 1,123.8 | - | 98.2 | - | 1,222.0 |
| San Pedro Sula(G) | 791.9 | - | 87.0 | - | 878.9 |
| Miraflores (G) | 1,460.0 | - | - | - | 1,460.0 |
| La Ceiba (D) | 3,378.7 | - | 568.8 | - | 3,947.5 |
| San Lorenzo (D) | 399.2 | - | 93.0 | - | 492.2 |

/1: Total debt repayment of Lps. 9,760,600 is assumed to be allocated to Rio Lindo Power Station (70 %) and Canaveral Power Station (30 %).

Note: (D) means diesel plant and (G) means gas turbine plant.

| Power Station | Energy output (GWh) | Cost ($x10^3$ Lps.) | Power production cost (LPs./kWh) |
|---|---|---|---|
| Hydro | | | |
| Rio Lindo | 330.6 | 9,091.8 | 0.0275 |
| Canaveral | 100.9 | 3,993.3 | 0.0396 |
| Total or average | 431.5 | 13,085.1 | 0.0303 |
| Thermal | | | |
| Santa Fé | 13.18 | 1,222.0 | 0.0927 |
| San Pedro Sula | 6.11 | 878.9 | 0.144 |
| Minaflores | 12.03 | 1,460.0 | 0.121 |
| La Ceiba | 80.79 | 3,947.5 | 0.0489 |
| San Lorenzo | 2.29 | 492.2 | 0.215 |
| Total or average | 114.4 | 8,000.6 | 0.0699 |
| Total or average | 545.9 | 21,085.7 | 0.0386 |

Fig.-F1 POWER SYSTEN OF ENEE

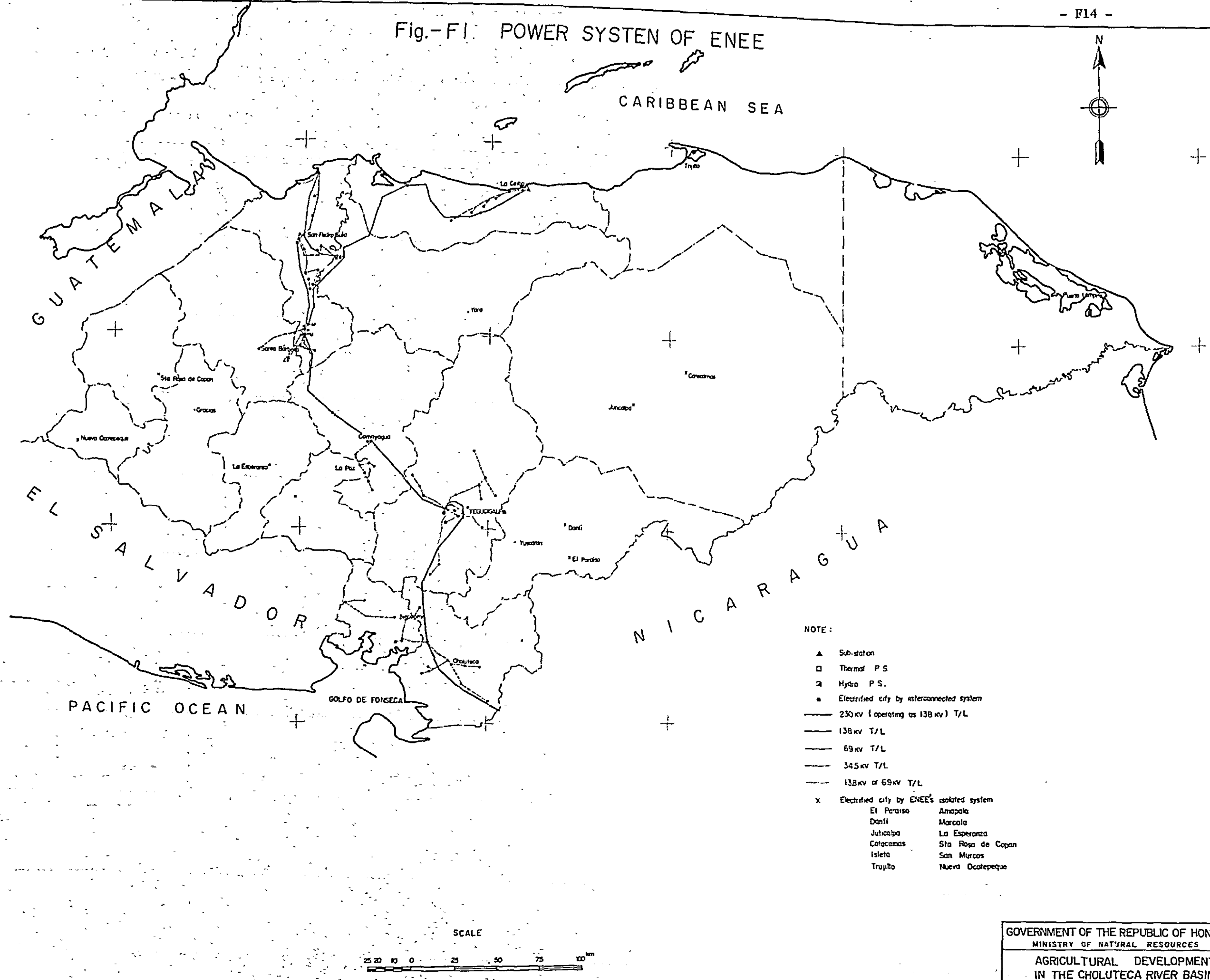


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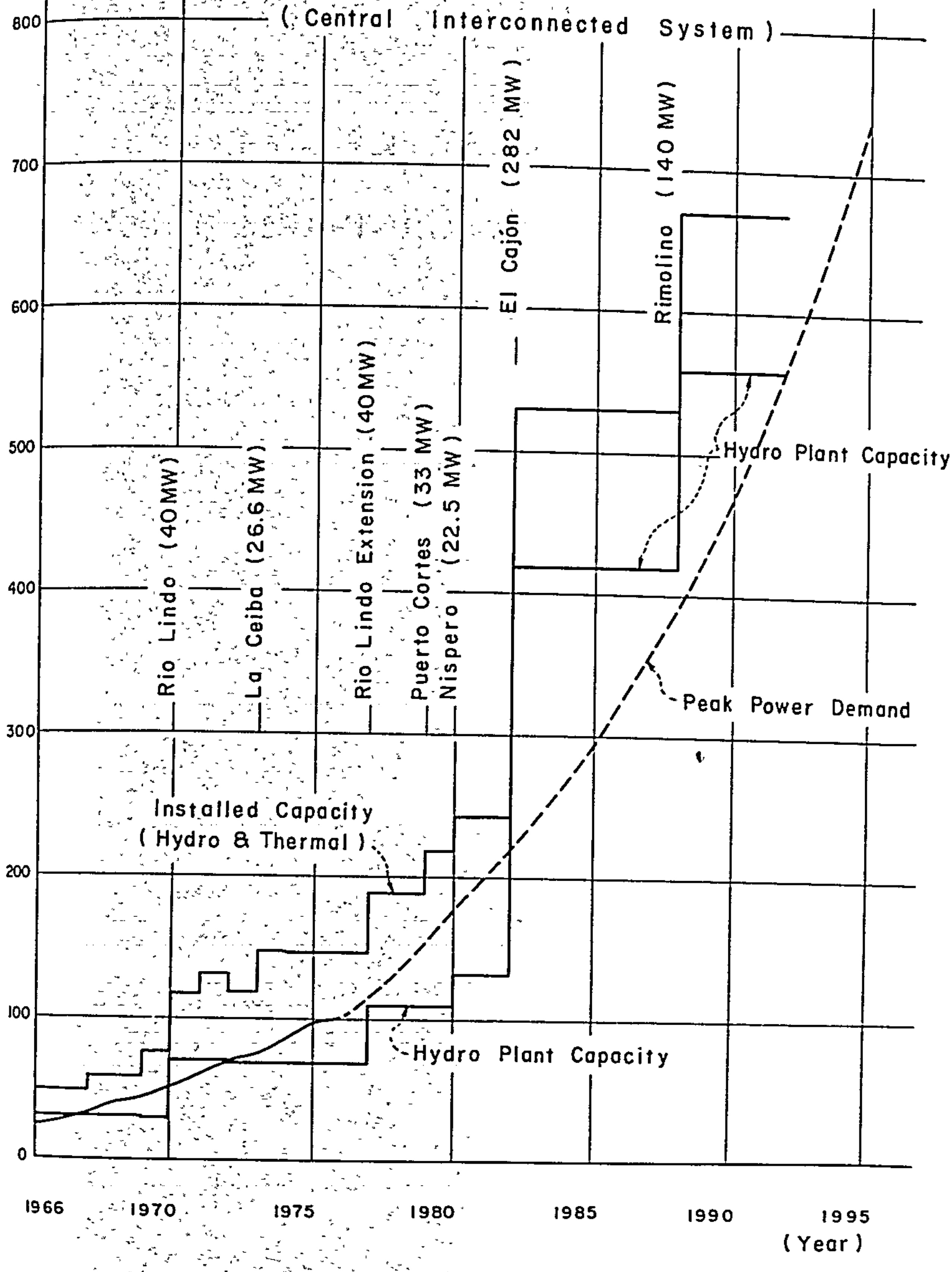
Fig.-F2 PEAK POWER DEMAND AND POWER INSTALLATION PROGRAM OF ENEE (Central Interconnected System)

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# ANNEX G

# PLANNING AND DESIGN OF DAM AND RESERVOIR

# G PLANNING AND DESIGN OF DAM AND RESERVOIR

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## G1. NEED OF DAM AND RESERVOIR SCHEME

The discharge volume of the Choluteca river during the dry season from December to April is about 100 million cubic meters accounting for only 7 percent of the annual discharge volume of about 1,400 million cubic meters at proposed intake weir site at El Papalón.

On the other hand, need for agricultural development by introducing irrigated farming has become increasingly higher in the Choluteca basin and the area of about 2,700 ha is actually irrigated by a natural flow of the Choluteca river and the area is scheduled to increase up to 3,500 ha in the near future by the rehabilitation work at San Juan de Flores irrigation project and new irrigation project at Oropoli. This situation means that the Choluteca river runoff is not sufficient even under the present condition and shortage of irrigation water becomes more serious in the near future.

In order to formulate a sizable irrigation development project in the Choluteca basin to meet the urgent requirement for sugar cane production, it is indispensable to augment the Choluteca river runoff during the dry season by means of a construction of a dam and reservoir, because water diversion from the neighbouring river basins is not feasible at all from the topographic conditions.

## G2. ALTERNATIVE DAM AND RESERVOIR SCHEMES

### G2.1 Selection of Damsites

A preliminary study on 1/50,000 topographic maps concluded that the following four sites were hopeful for a damsite as far as the topography is concerned, i.e. small dam volume and high water storage efficiency.

| Damsite selected by Preliminary Study | Drainage area ($km^2$) | Estimated annul discharge volume (MCM) |
|---|---|---|
| San Fernando | 1,665 | 425 |
| Oropoli | 4,154 | 938 |
| Morolica I | 6,140 | 1,206 |
| Morolica II | 6,187 | 1,215 |

The location of the alternative damsites are shown in Fig.-G1.

From the above four alternative damsites, Oropoli site was dropped from further study because the topographic condition at the site was inferior to any other site. Also Morolica I site, though the site is topographically superior to Morolica II site, was dropped because the geological condition did not allow a dam construction at Morolica I site, as described in detail in ANNEX C.

Thus San Fernando and Morolica II sites are taken up for further study. San Fernando site is topographically superior but hydrologically inferior to Morolica II site. From a geological point of view, both sites are considered almost the same.

### G2.2 Basic Approach for Dam and Reservoir Scheme Formulation

As the Choluteca Project is basically an irrigation project, a dam and reservoir scheme is first formulated for only irrigation purpose, storing water just enough to meet irrigation requirement.

After determining a required storage capacity of a reservoir for irrigation purpose, addition of a powerplant is studied utilizing water released from and water head created by the dam. Additional cost consisting of cost of power generating equipment as well as costs of power transmission line and substation facilities, cost of civilworks necessary for power installation such as intake, waterway, powerhouse and tailrace structure, and incremental dam cost when required, is estimated and compared with power benefit. Power benefit is capitalized by a discount rate of 14 %, which is considered to be attractive enough for ENEE.

The optimum height of dam and optimum size of power installation will be determined when the net benefit, difference of power benefit and an additional cost, becomes maximum. Detailed procedure of dam height optimization is described in Section G3.

## G2.3 San Fernando Dam Scheme

### G2.3.1 General Situations

San Fernando damsite is located at approximately 2.5 km downstream of the Hernando Lopez bridge on the Olancho highway, and at about 25 km north of Tegucigalpa.

The drainage area of the Choluteca river at San Fernando damsite is 1,665 $km^2$ and the annual averaged discharge is 425 million cubic meters or 13.5 $m^3/s$. About 80 percent of annual discharge volume is concentrated during 5 months from June to October. The magnitudes of flood are estimated as follows.

| Flood | Peak discharge ($m^3/s$) | Flood volume (MCM) |
|---|---|---|
| Probable maximum flood | 5,280 | 511 |
| 1,000-year probable flood | 2,121 | 168 |
| 100-year probable flood | 1,488 | 115 |
| 10-year probable flood | 845 | 60 |

The river is 20 to 30 meters in width and steep cliffs are formed on both banks to the height of about 90 meters from the river bed. Rocks exposed at the damsite are ryolitic welded tuffs, in which vertical joints or joints of steep inclination are developed. Geological investigations suggest that rocks at the damsite are not hard enough to guarantee a construction of a concrete arch dam of 80 to 90 meters in height.

Shearing strength of foundation rocks is estimated to be 10 $kg/cm^2$, which is tentatively used for a design of concrete gravity dam, subject to further geological investigations.

As for a material availability for dam construction, sand deposited on the river bed may be suitable for fine aggregates of concrete but gravel deposit cannot be used for coarse aggregates of concrete because it contains soft fragments to a considerable extent. Quarry site to obtain coarse aggregates of concrete should be opened from hard dacite located at about 10 km from the damsite. In case rockfill type dam is taken up for construction, rock material for dam embankment will be provided from tuff within 2 km from the damsite or from spillway excavation.

A topographic map with a scale of 1/1,000 was prepared by IECO in 1967 covering San Fernando damsite and topographic map with a scale of 1/5,000 was also prepared by IECO covering a reservoir area. These maps are used for the design of dam at San Fernando and for the preparation of area-storage curves. Area-storage curves are shown in Fig.-G2.

A new access road of about 10 km in length will be needed, relocating the existing Olancho highway, to reach the damsite. Access during construction, though the distance from the Hernando Lopez to the damsite is only 2.5 km, will be difficult due to narrow and steep river banks. Flat land for working space is extended on a terrace about 90 meters above the reverbed, but at the level of river bed a working space is tight enough to hamper a workability of heavy construction equipment.

The reservoir area is mostly mountainous and the land is used as a timber reserve of mainly pine trees and occasionally where the land is more or less flat as animal raising under natural condition. There are no villages submergible in the reservoir, except a village called Rio Hondo located at about El.820 meters near the Amarateca river. The village is a small one with about 20 houses and a resettlement problem is not anticipated to be serious. A reservoir creation at San Fernando will present a problem of inundating a new highway between Tegucigalpa and Talanga. The highway was completed in 1976 and the lowest road surface level is El.803.8 m at the Amerateca river crossing. The second lowest level is El.814.4 m at the Guangolo river crossing. When the San Fernando dam is constructed, the highway should be relocated for a length of 8 to 10 km.

G2.3.2 Type of Dam

If the geological conditions permit, a concrete arch dam is the most economical type of dam. If foundation and abutment rocks are weak enough to necessitate an intricate and intensive foundation treatment including replacement of rocks with concrete, an arch dam will become more costly than a concrete gravity dam. Even a concrete gravity dam cannot be constructed safely on a weak foundation. In case the foundation rocks are too weak to sustain a concrete gravity dam, a fill-type dam will have to be planned naturally.

Preliminary layout and typical cross sections of dam and other structures are shown in Fig.-G3 to Fig.-G8, for a concrete arch dam, a concrete gravity dam and a fill-type dam. Because of the scarcity of impervious clay material near the damsite, a fill-type dam is designed as a rockfill dam with asphalt facing. Preliminary cost estimates are made for three types of dam as shown in Table-G1.

According to the geological investigations at the damsite, the expected shearing strength is around 10 kg/cm$^2$ which unable the safe construction of concrete arch dam. Therefore a concrete gravity dam is proposed for the moment, with possibility to change it to a concrete arch or a fill-type dam, depending on the results of further geological investigations.

G2.3.3 Dam Required for Irrigation

According to the reservoir operation study, a net storage of 210 million cubic meters is necessary to meet the irrigation water requirement. Then a gross storage capacity of 265 million cubic meters is to be provided to the reservoir, allowing a sediment space of 55 million cubic meters. The required high water level is El.817.5 meters and the low water level is El.794.5 meters, from the area storage curve at the damsite shown in Fig.-G2.

About 300 meter long diversion tunnel with the inside diameter of 3.6 meters is excavated through the right bank of the river. The river diversion is planned to divert only dry season flow and the river runoff during the rainy season is allowed to pass over a concrete main dam under construction.

A main dam with a crest elevation at El.823.5 meters is of a concrete gravity type and has a downstream slope of 1:0.8 and the upstream slope of 1:0.15 above the El.775 m and 1:0.8 below that elevation, due to the expected insufficient shearing strength of foundation rock. The concrete volume is about 280,000 cubic meters.

A spillway is located in the middle of the main dam. A crest elevation is set at El.810.5 meters and three sets of radial gates with 8 meters in height and 10 meters in width are installed. When the maximum probable flood comes, the water level in the reservoir will rise up to El.823.0 meters and the spillway outflow capacity at the moment is 2,630 $m^3/s$. A stilling basin is provided at the bottom of the spillway chute to protect the existing river bed and side banks from scoring.

An outlet structure is embedded in the dam body with a valve chamber also embedded in the dam. The intake level is at El.791.5 meters so as to ensure outlet flow required for irrigation even at the low water level of El.794.5 meters.

The construction cost of the San Fernando irrigation dam is estimated to be US$37 million. The breakdown of the cost is shown in Table-G1.

G2.3.4 Dam Height Optimization by Adding Power Facilities

Dam height optimization study was made as described in Section G3 in detail, and the result is shown in Table-G2. The optimum dam height is 93.5 meters, 5.5 meters higher than the irrigation purpose dam, having a net storage capacity of 330 million cubic meters. Power installed capacity is 14,000 kW and annual averaged energy output of 58.4 GWh can be expected.

### G2.4 Morolica Dam Scheme

#### G2.4.1 General Situation

Morolica damsite is located at approximately 10 km downstream from the town of Morolica and about 40 km northeast of Choluteca City.

The drainage area of the Choluteca river at Morolica damsite is 6,187 $km^2$ and the annual averaged discharge is 1,215 million cubic meters or 38.5 $m^3/s$. About 80 % of annual discharge volume is concentrated during 5 months from June to October. The magnitudes of floods are estimated as follows.

| Flood | Peak discharge ($m^3/s$) | Flood Volume (MCM) |
|---|---|---|
| Probable maximum flood | 6,393 | 1,035 |
| 1,000-year probable flood | 3,475 | 573 |
| 100-year probable flood | 2,394 | 373 |
| 10-year probable flood | 1,286 | 169 |

The river bed is 200 to 250 meters in width, of which 60 meters is the width of the present river channel. The left bank shows around 30° of inclination to the height of 700 meters above the riverbed. The right bank has 45° of slope to the height of about 150 meters above the river bed. Rocks are generally andesite and considered strong enough as a foundation of a fill-type dam.

Rock material for fill-type dam construction is available from spillway excavation and quarries within 1 km from the damsite, from a mass of andesite, while impervious clay material is not sufficient in quantity. As for concrete aggregates, river sand can be used for fine aggregates but river gravels are not recommended for coarse aggregates. Coarse aggregates of concrete can be produced by crushing of andesite available near the damsite in sufficient quantity.

A topographic map is prepared with a scale of 1/2,000 covering the damsite. But for the reservoir area, no topographic map is available with a larger scale than 1/50,000. For a design of dam and other structures, the 1/2,000 map is used, and for a preparation of area-storage curves, the 1/50,000 maps are used. Area-storage curves are shown in Fig.-G9.

There exists a gravel metalled all-weather road from the Pan American Highway near Choluteca City to the town of Morolica through Orocuina and Apacilagua. The damsite is located in between Morolica and Apacilagua. The road will be improved as required during the construction and no new access road construction is necessary. Open flat space is developed along the Choluteca river and no problem is foreseen in the layout of temporary facilities. Wide working space will facilitate an efficient operation of heavy construction equipment.

The Morolica dam scheme will inundate Morolica town and other villages located in the Morolica valley, which could present a serious social problem. Morolica is a town with about 220 households or 860 inhabitants. Including the people of the neighbouring villages, it is estimated that about 670 households or 3,000 inhabitants will have to be resettled. An irrigable land of about 300 ha will also be inundated. In case the Morolica dam scheme is taken up for construction, a careful resettlement program should be prepared in cooperation with INA program so as to cause the least social conflict.

G2.4.2 Type of Dam

At the Morolica damsite only fill-type dam is conceivable in view of wide river channel and abundant fill materials from river bed gravels or from andesite quarry, except impervious core material. In case of fill-type dam, rock material from spillway excavation can be effectively utilized as a dam embankment material. A rock-fill dam with asphalt facing is proposed as the most recommendable type of dam at the Morolica site.

A general layout and typical sections of dam, spillway and other structures are shown in Fig.-G10 and Fig.-G11.

G2.4.3 Dam Required for Irrigation

As a result of the reservoir operation study, a net storage of 208 million cubic meters is needed to meet the irrigation water requirement. A reservoir with a gross storage capacity of 368 million cubic meters will have to be created by a dam construction as a sediment space of 160 million cubic meters should be allowed at the Morolica damsite. From the area-storage curves at the damsite, the required high water level and low water level are determined to be El.219.0 meters and El.204.0 meters, respectively.

A diversion tunnel of about 500 meters in length will be constructed with inside diameter of 11.0 meters through the left bank. An upstream cofferdam with the crest elevation at El.176 meters, 26 meters higher than the river bed elevation of El.150 m, will be constructed as a center clay core rockfill dam. Then the diversion tunnel is provided with a capacity of 1,290 $m^3/s$, equivalent to a 10-year probable flood at this site.

Main dam, rockfill dam with asphalt facing, will have an embankment volume of about 3 million cubic meters with a crest elevation at El.226.0 meters, 7 meters above the high water level, and the upstream slope of 1:1.8 and the downstream slope of 1:2.0. The height of dam is 76 meters above the river bed level. Asphalt facing is 40 cm in thickness and an inspection gallery made of concrete is provided along the contact line of asphalt facing with the foundation bed rock.

An open chute type spillway is arranged on the right bank of the river. A crest elevation is set at El.207 and three sets of radial gates with 12 meters in height and also 13 meters in width. When the probable maximum flood comes, the water level in the reservoir will rise up to El.224.5 meters and the spillway capacity is 5,326 $m^3/s$. The spillway forebay is levelled at El.203.5 meters. The energy of spilled water is dissipated by ski-jump.

A river outlet structure is constructed utilizing the diversion tunnel. A morning glory type intake is constructed at El.201.0 meters, and connected with the diversion tunnel. A steel pipe is embedded in plug concrete of the diversion tunnel and equipped with outlet valves.

The construction cost of the Morolica irrigation dam is estimated to be US$55 million. The breakdown of the cost is shown in Table-G3.

### G2.4.4 Dam Height Optimization by Adding Power Facilities

Dam height optimization study was made and the result is shown in Table-G4. According to Table-G4, the optimum height of dam is between 82.0 m and 88.0 m with a power installation of 40,000 kW to 50,000 kW. In this case, however, the additional investment for power installation becomes more than US$30 million and this magnitude of cost is considered to be beyond the scope to plan an irrigation purpose dam. Therefore power installation of 26,000 kW without heightening of the irrigation dam is considered as an alternative of the San Fernando dam and reservoir scheme.

The Morolica high dam plan, aiming at a considerable power generation as well as irrigation water supply, is studied and presented in ANNEX L.

# G3. DAM SCALE OPTIMIZATION BY RESERVOIR OPERATION STUDY

## G3.1 Conditions for Reservoir Operation Study

### G3.1.1 Irrigation Water Requirement

#### G3.1.1.1 San Fernando Dam

As the San Fernando dam is located upstream of all irrigation areas, irrigation water requirement should be met by a natural flow and water released from the dam. The irrigation water requirement is shown in Table-G5 for each irrigation area. The San Fernando dam is responsible to supply water for all irrigation areas.

#### G3.1.1.2 Morolica Dam

As the Morolica dam is located downstream of the San Juan de Flores area and the Oropoli area, these two areas must depend on a natural flow when irrigated. The Morolica irrigation area is totally inundated by the construction of the dam; and therefore the Morolica dam is only responsible to supply water for the Orocuina and Choluteca plain irrigation areas. Inflow discharge volume to the Morolica reservoir, however, must be reduced because a natural flow is consumed upstream for the irrigation of San Juan de Flores and Oropoli areas.

#### G3.1.1.3 Criteria for Irrigation Water Supply

Irrigation water requirement must be met at least for 18 years from 20 year study period (90 % guarantee). In other words, water shortage is allowed two dry seasons out of 20 year study period.

### G3.1.2 Loss of Water

Evaporation loss from reservoir surface is taken into account, but seepage loss through the dam and water conveyance loss through the Choluteca river channel is neglected. Values of reservoir evaporation loss is shown in Table-A27 and Table-A28 of ANNEX A.

### G3.1.3 River Maintenance Flow

River flow downstream of the proposed El Papalón intake weir should be kept more than 0.5 $m^3/s$ as a river maintenance flow.

### G3.1.4 Operation of Powerplant

In case power facilities are provided, the powerplant must be operated at least 5 hours a day to satisfy peak load requirement.

## G3.2 Reservoir Operation Study

Under the conditions as stated above, a reservoir operation study was carried out and the results are attached as computer output forms at the end of ANNEX G.

## G3.3 Criteria for Dam Scale Optimization

### G3.3.1 Estimate of Power Benefit

Power benefit is estimated in Section F4 of ANNEX F. When all the the benefits are capitalized by a discount rate of 14 % as discussed in G2.2, the capacity benefit and the energy benefit are calculated as shown below.

Power Benefit

| | |
|---|---|
| Capacity Benefit | US$698.9/kW |
| Energy Benefit | US$0.1391/kWh |

Power capacity benefit is not based on power installed capacity but 90 % dependable peak output.

### G3.3.2 Additional Dam Cost Required by Power Installation

The volume increase of dam is estimated by the following equation both for San Fernando and Morolica dams.

$$\text{Volume Increase} = \text{Irrigation Dam Volume} \left[ \left(\frac{H}{Ho}\right)^{2.5} - 1 \right]$$

where, H: Height of proposed dam

Ho: Height of irrigation dam

The cost increase is estimated based on the volume increase applying the unit cost of US$60/$m^3$ for concrete dam and the unit cost of US$7.0/$m^3$ for rockfill dam.

The cost of other facilities such as river diversion, spillway, river outlet, is considered to be kept constant.

### G3.3.3 Power Facility Cost

#### G3.3.3.1 Civilworks

The cost of intake, penstock, powerhouse and tailrace structures at San Fernando dam is estimated to be US$1,868,000 for a maximum discharge of 19.0 $m^3$/s for power generation. The cost of civilworks for power generation is assumed to be changed depending on a maximum discharge for power generation by the following equation.

$$C_c = 1,868,000 \times \sqrt{\frac{Qmax}{19.0}}$$

where, $C_c$: Cost of civilworks in US Dollars

Qmax: Maximum discharge for proposed power generation in $m^3/s$

Likewise, the cost of civilworks for power generation at Morolica dam is estimated to be US$4,624,000 for a maximum discharge of 45.0 $m^3/s$. The cost of the civilworks for other discharges can be determined by the following equation.

$$C_c = 4,624,000 \times \sqrt{\frac{Qmax}{45.0}}$$

### G3.3.3.2 Generating Equipment

The cost of generating equipment with auxiliary electrical facilities is estimated as a function of Qmax (maximum discharge for power generation) because a head is almost constant at around 65 meters. The function is as follows.

$$C_G = 197.5\ Qmax^{0.85}$$

where, $C_G$: Cost of generating equipment in 1,000 U.S. Dollars

Qmax: Maximum discharge for one unit in $m^3/s$

The maximum unit of generating equipment is considered to be 30,000 kW in view of the power demand and supply condition in Honduras.

### G3.3.3.3 Transmission Line Cost

The transmission line cost per kilometer is estimated as follows.

| Installed capacity (kW) | Voltage (kV) | Cost per km single circuit (US$/km) |
|---|---|---|
| 10,000 | 34.5 | 17,300 |
| 20,000 | 69 | 22,100 |
| 40,000 | 138 | 27,000 |

For San Fernando power station 25 km long transmission line is considered to connect the power station with Tegucigalpa substation, and for Morolica power station 60 km long transmission line is considered to connect the power station with Choluteca or Pavana substation.

G3.3.3.4 Substation Cost

Substation cost is estimated to be calculated by the following equation.

$$C_s \doteq 102 \times P^{0.78}$$

where, $C_s$: Cost of substation in 1,000 U.S. Dollars
P : Power installed capacity in MW

G3.3.4 Interest during Construction

In order to secure 14 percent of internal rate of return to the power side, the additional cost to the irrigation dam cost is increased by 11.6 percent as an interest during construction at the interest rate of 14 percent, as explained below.

| Year | Cost proportion assumed | Interest 14 % | |
|---|---|---|---|
| 1 | 20 % | x $1.14^2$ | 0.260 |
| 2 | 40 % | x 1.14 | 0.456 |
| 3 | 40 % | x 1.00 | 0.400 |
| 4 | Year of operation | | 1.116 |

G3.3.5 Operation and Maintenance Cost of Power Station

Operation and maintenance cost of power station is estimated to be US$110,000 annually in case of one unit operation and to be US$150,000 annually in case of two unit operation.

G3.4 Result of Scale Optimization Study

Results of the dam scale optimization study under the above-mentioned criteria are shown in Table-G2 and Table-G4.

## G4. PROPOSED DAM AND RESERVOIR SCHEME

### G4.1 Selection of Best Alternative Plan

As the best dam and reservoir scheme to supply proposed irrigation development areas with water, San Fernando scheme with reservoir high water level at El. 823.5 m is selected after comparing it with Morolica scheme with reservoir high water level at El. 219.0 m. The estimated costs of San Fernando and Morolica schemes are as follows:

(Unit: 1,000 US$)

| | San Fernando Scheme | Morolica Scheme |
|---|---|---|
| Irrigation purpose dam Investment cost | 30,770 | 45,910 |
| Irrigation dam with power instllation Investment cost | | |
| Dam cost | 34,580 | 45,910 |
| Power facility cost | 8,690 | 17,720 |
| Total | 43,270 | 63,630 |
| Capitalized power benefit | 15,700 | 29,360 |
| Cost for irrigation | 27,570 | 34,270 |

The proposed San Fernando scheme has advantages over the Morolica alternative scheme in the following factors in addition to the cost factor.

(i) The initial investment cost is considerably less in the proposed San Fernando scheme than in the Morolica scheme, which will facilitate a fund raising for the implementation.

(ii) The San Fernando scheme is almost free from social problems, while the Morolica scheme will be encountered by a serious problem of inundating the Morolica town.

(iii) The San Fernando scheme can guarantee water supply to the important irrigation development of the San Juan de Flores area, while the Morolica scheme located downstream of San Juan de Flores area cannot.

(iv) Since the San Fernando damsite is located at about 1-hour drive from Tegucigalpa, tourism development is hopeful.

Salient features of the proposed San Fernando dam and power station scheme are summarized in Table-G6.

G4.2 Basic Design Concept of Proposed San Fernando Dam and Power Station

G4.2.1 General

The design is based on the topographic maps with a scale of 1:1,000 for the damsite and 1:5,000 for the reservoir area. These maps were prepared by IECO under the Ministry of Natural Resources over 10 years ago.

The geology and topography of the proposed damsite and reservoir area are described in ANNEX C, and hydrology is described in ANNEX A. The availability of natural construction materials are also described in ANNEX C.

G4.2.2 Main Dam

The general layout of the dam, power station and other related structures is shown in Plate No. 10, and typical sections of each structure are shown in Plate No. 11 of the main report.

The proposed dam is designed as a concrete gravity type. The upstream and downstream slopes are 1:0.15 and 1:0.8, respectively. On the upstream surface a fillet with 1:0.8 slope is provided below El. 775 m.

The dam crest is at El. 829.0 m and dam height will be approximately 88.5 meters above the riverbed and 93.5 meters above the assumed lowest foundation. The dam will have a crest length of 217.5 meters and contain about 310,000 cubic meters of concrete. The dam crest is 5.5 meters above the normal high water level of El. 823.5 m and 0.5 meters above maximum flood water level of El. 828.5 m when the probable maximum flood comes.

For a stability analysis of a gravity dam, a shearing strength of foundation rocks is assumed to be 10 kg/cm$^2$ based on the geological analysis. Though no earthquakes have been recorded centered in southern region of Honduras in the past, the Pacific coastal area including the neighboring Nicaragua and El Salvador has experienced earthquakes of a considerable magnitude. The epicentral map prepared by ENEE is shown in Fig.-G12. A horizontal acceleration of 0.12 g is therefore applied for the design of structures. The stability analysis of the proposed concrete gravity dam was made in accordance with the design standard specified by the Unites States Bureau of Reclamation.

Further modification of the dam section may be needed when further geological investigation is carried out and a change of 10 kg/cm$^2$ of rock shearing strength becomes necessary.

The outcrops of rock at the damsite is assumed to be weathered to the thickness of 5 meters from the surface. All weathered rock should be removed from dam foundation. Joints and seams in the foundation rock will be adequately treated with consolidation grouting and if nessesary with dental work, to provide an adequate foundation. A 60-meter-deep, double grout curtain is provided at the heel of the dam and drainage holes will be drilled from the bottom inspection gallery at the downstream side of the curtain grouting, to release uplift pressures.

An embedded pipe cooling system is considered necessary to a normal extent in the concreting of the main dam.

A network of a galleries will be incorporated in the dam for inspection and other purposes. An instrumentation program will be effectuated to control construction stresses in the dam and to observe the behavior of the dam after completion.

An intake structure to be located on the upstream face of the dam is provided both for power and irrigation outlet works. A spillway is provided in the center of the dam and a power house will be located under the spillway chute at the toe of the dam. A 8-meter-wide roadway with sidewalks and guard rails will be provided at the dam crest.

G4.2.3 Diversion during Construction

Diversion works will consist of an upstream and downstream cofferdams and a circular sectioned diversion tunnel in the right bank of the river. In addition, two 4.0-meter-wide by 6.0-meter-high openings, one on either side of the penstock line, with sills at El. 760.0 m, will be provided through the dam during construction. The upstream cofferdam with crest at El. 748.0 m will divert the river flow through the tunnel and permit construction of the main dam, power house and a stilling basin during the first dry season. With upstream water surface at El. 745.5 m, a discharge of 40 $m^3/s$ will be attained through the diversion tunnel. This is enough to divert river flows during the dry season, and permit excavation and construction of the power house structure, main dam and the stilling basin to El. 766 m during the dry season.

When the rainy season comes, the upstream cofferdam will be overtopped, and the main dam will function as an upstream cofferdam and divert river flows through the tunnel. A portion of the river flow will also pass through the openings provided in the dam. The dam will be constructed leaving a lower portion in the center to permit overtopping the lower portion of dam in case of large floods.

In the second dry season, the river flow can be diverted only through the tunnel. The main dam and other related structures will be completed in this dry season.

The downstream cofferdam with a crest at El. 746.0 m will be destructed during the rainy season and a concrete weir to be constructed at the end of the stilling basin will function as a downstream cofferdam during the second dry season. Both upstream and downstream cofferdams are of temporary nature and can be constructed from random materials available from tunnel and other required excavations.

The diversion tunnel will be 310 meters long and 3.6 meters in diameter. It will be concrete lined with 30 cm in average thickness. The concrete inlet structure is designed to be bulkheaded at the time of tunnel plug. A 40-meter-long tunnel plug is made for closure and will have a grout curtain to tie into the main grout curtain for the dam. The two openings in the main dam will be concreted during the second dry season prior to deversion tunnel closure.

G4.2.4 Spillway and Stilling Basin

The spillway is located in the center of the dam as a part of the main dam. The spillway will consist of a gated crest, four piers, spillway bridge, two training walls on both sides of the spillway chute, the lower part of which forms a roof of the powerhouse, and the stilling basin of about 85 meters in length.

The spillway crest is at El. 816.5 m and will have a gross width of 39 meters including two pier width of 9 meters. Three numbers of 10-meter-wide and 8-meter-high radial gates will be installed with a stoplog structure. A spillway bridge will be provided over the spillway crest. The spillway is designed to pass the maximum probable flood safely. The inflow flood peak of 5,280 $m^3/s$ will be reduced on routing to a maximum spillway discharge of 2,470 $m^3/s$, even if the flood comes when the water in the reservoir is at the normal high water level of El. 823.5 m. In this case, the corresponding surcharge storage will raise the reservoir to a maximum flood level of El. 828.5 m.

The spillway chute is designed to reduce gradually in its width and the widths at the top of the powerhouse is 25.0 meters. Spillway flow will jump into the stilling basin at about 70 meters from the end of the spillway chute. The stilling basin will consist of a slub, side walls and end sill made of concrete. About 35 meter section of the downstream part of the stilling basin is designed strong enough to cope with a shock of water. Rock bolting is provided for a slab and side walls of the stilling basin.

G4.2.5 Outlet Works

Outlet works will be incorporated in the powerhouse. The power intake structure located on the upstream face of the dam and the 2.6-meter-diameter penstock will serve both for power generation and for outlet works. The penstock pipe is gradually reduced in its diameter and will have a diameter of 1.8 meters at the end. A 1.2-meter-diameter outlet pipe is branched off from the penstock just before a turbine inlet valve. A 1.0-meter-diameter Howell-Bunger valve will dissipate energy in a concrete outlet chamber, which will be lined with steel. A 1.2-meter-diameter Butterfly valve will be provided on the upstream side of the Howell-Bunger valve to permit repair and maintenance of the Howell-Bunger valve.

G4.2.6 Power Facilities

G4.2.6.1 Civil works

The power intake will be a concrete structure provided on the upstream face of the dam with a bellmouth shaped opening located under a spillway pier. The conduit center line is at El. 791.0 m, permitting intake at the low water level of El. 794.5 m. The intake structure will include intake gate and guides and trashracks and guides. Stop-logs to be fitted into trashrack guides are provided for emergency use. The guides extend from the intake opening to an operation deck on the spillway pier. The intake gate, 5-meter wide and 5-meter high, will be operated by a movable crane from the operation deck provided at the top of the spillway pier.

The penstock layout is shown in Plate No. 11 of the main report. The penstock will be about 112.5 meters in length having a gradually reduced diameter of 2.6 meters to 1.8 meters. It will have two bends and completely encased in the dam.

The powerhouse is located at the toe of the dam under the downstream end of the spillway chute. The powerhouse will be of reinforced concrete structure. Protection from tailwater will be provided by the outer walls. A space between the spillway chute and the powerhouse will be utilized for office, transformer room, control room and other mechanical and electrical auxiliaries. The general layout of the equipment is shown in Plate No. 13 of the main report.

G4.2.6.2 Generating Equipment

To generate 14 MW output at the maximum, one unit of 14 MW generating unit is provided in this powerhouse.

Vertical shaft Francis turbine is selected as the most suitable type for the water discharge and the range of net head variation planned for this powerhouse. To meet the maximum output of 14,000 KW generating unit, the capacity is rated at 14,500 KW at the rated head of 62 m.

The speed is selected at 360 rpm for which the specific speed is 245 m-KW. This is the allowable highest speed of the Francis type turbine to be coupled with a 60 Hz generator under the rated head, considering the operation under considerable low head.

The generator is selected as a synchronous alternator rated at 17,500 KVA, 0.8 P.F., 11 KW, three phase and 60 Hz.

The elevation of the turbine casing is set at El. 740.5 m to have sufficient level difference below the tailwater level to secure cavitation-free operation of the turbine.

A butterfly valve is provided at the inlet of the turbine so that the water can be discharged through a branch pipe with a Howell-Burger valve when the turbine is not operated. Two draft tube gates are provided to be supported from guides in the draft tube pier to close the outlet of the draft tube for inspection of the turbine.

Auxiliary equipment of the turbine such as speed governor, pressure oil system, cooling water system, etc. together with their controls are arranged in the turbine room. Cooling water will be supplied from a head tank to which water is branched from the penstock.

A 80 ton overhead travelling crane is provided for the erection and maintenance of the turbine generator.

A main transformer will be three phase oil immersed indoor type rated at 17.5 MVA. To limit the weight and size, forced oil water cooled type is selected to be installed in the powerhouse. Station service transformer is rated at 300 KVA. A diesel generator rated at 125 KVA will be provided for emergency power supply.

The generator circuit switchgear cubicles and excitation cubicles will be installed at the level of turbine room. The main transformer is installed in the transformer room at the generator floor level above the cubicle room. The station service transformer is also located on the same floor.

The diesel generator and its control switchgear is located in the diesel generator room adjacent to the transformer room.

The control switchboard will be installed in the control room located upstream side of the generator room.

The 69 KV switchgear for the outgoing line will be arranged in an outdoor switchyard on the left side hill of the powerhouse. The switchgear will be connected with the powerhouse by an overhead line which is terminated at the outside wall of the powerhouse. 69 KV cables will be laid between the cable heads and the main transformer.

Skeleton connection diagram of the powerhouse is shown on Plate No. 13 of the main report.

### G4.2.6.3 Transmission Line and Receiving Substation

Considering the line length of 25 km from this powerhouse to the load center at Tegucigalpa, and maximum output of 14 MW of the powerhouse, the transmission line is selected to be a 69 KV single circuit line of 120 $mm^2$ or 266.8 MCM ACSR conductors supported on the steel poles.

69 KV is the standard voltage of the existing transmission network of this area.

A receiving substation will be provided at Tegucigalpa with a 3-phase 17.5 MVA step-down transformer complete with all necessary switchgear and controls.

G4.2.7 Access and Preparatory Works

Permanent access to the damsite will be provided by relocation of the Olancho highway, which will pass over the San Fernando dam, as shown in Plate No. 9 of the main report. The road to be newly constructed will be about 10 km in length and designed as a gravel metalled all-weather road with an effective width of about 6.0 meters like the existing Olancho highway.

Another permanent road will be constructed from the relocated Olancho road down to riverbed level to access the powerhouse.

To connect the Olancho highway with new high grade highway constructed from Tegucigalpa to Talanga in 1976, along which the several quarry sites are proposed as the source of concrete aggregates, the existing road passing through Las Canadas village will be rehabilitated to facilitate transportation during construction. The length of the connecting road is about 4.0 km.

Office facilities and living quarters will be constructed for general administration and supervision of the construction work, near the damsite, probably in the open space extended near La Venta village along the relocated Olancho highway. The space for a contractor's temporary facilities and camps will also be prepared at the same time.

The access and preparatory works described above is proposed to be constructed under the local contract basis prior to the selection of ammain contractor for dam construction to expedite the progress of the project implementation.

G.4.2.8 Highway Relocation

A new highway from Tegurigalpa to Talanga constructed in 1976 will be inundated in about 3 km section at two river crossings. The highway relocation is planned with a length of about 8 km as shown in Plate No. 9 of the main report. The design interia of the highway should be the same as the existing Tegurigalpa-Talanga highway.

Table-G1 COST ESTIMATE OF SAN FERNANDO IRRIGATION DAM

(Unit : 1,000 US$)

| Item | Type of Dam | | |
|---|---|---|---|
| | Concrete Arch | Concrete Gravity | Rockfill with Asphalt Facing |
| Access road and Preparatery works | 1,640 | 1,640 | 1,640 |
| River diversion and coffering | 470 | 640 | 3,570 |
| Dam and spillway | 16,660 | 19,910 | 19,780 |
| Outlet works | 280 | 280 | 500 |
| Highway relocation | 1,320 | 1,320 | 1,320 |
| Sub-total | 20,370 | 23,790 | 26,810 |
| Engineering and General expense (15%) | 3,060 | 3,570 | 4,020 |
| Land compensation | 610 | 610 | 610 |
| Sub-total | 24,040 | 27,970 | 31,440 |
| Physical contingency (10%) | 2,400 | 2,800 | 3,140 |
| Sub-total | 26,440 | 30,770 | 34,580 |
| Price contingency (20%) | 5,230 | 6,150 | 6,920 |
| Total | 31,680 | 36,920 | 41,500 |

Table-G2 SCALE OPTIMIZATION OF SAN FERNANDO DAM

| Case No. | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| HWL (El. m) | 817.5 | 821.5 | 823.5 | 826.5 |
| LWL (El. m) | 794.5 | 794.5 | 794.5 | 794.5 |
| Net Storage (MCM) | 210 | 285 | 330 | 400 |
| Dam Height (m) | 88.0 | 92.0 | 93.5 | 97.0 |
| Power | | | | |
| Installed Cap'y (kW) | 9,000 | 10,000 | 14,000 | 17,000 |
| Dependable Peak (kW) | - | 10,000 | 14,000 | 17,000 |
| Annual Energy Output (GWh) | 45.01 | 52.00 | 58.35 | 61.96 |
| Maximum Discharge ($m^3/s$) | 19.47 | 19.57 | 27.05 | 32.12 |
| Power Benefit (1,000 US$) | | | | |
| Capacity Benefit | - | 7,010 | 9,810 | 11,920 |
| Energy Benefit | 6,260 | 7,230 | 8,120 | 8,620 |
| Total | 6,260 | 14,240 | 17,930 | 20,540 |
| Cost Additional to Irrigation Dam (1,000 US$) | | | | |
| Dam cost increase | - | 1,970 | 3,010 | 4,630 |
| Other Civilworks | 1,900 | 1,900 | 2,230 | 2,430 |
| Equipment | 3,570 | 3,630 | 4,640 | 5,400 |
| Sub-total | 5,470 | 7,500 | 9,880 | 12,460 |
| Eng. & Contingency | 1,450 | 1,990 | 2,620 | 3,300 |
| Interest during construction | 800 | 1,100 | 1,450 | 1,830 |
| O & M Cost of P.S. | 780 | 780 | 780 | 780 |
| Total | 8,500 | 11,370 | 14,730 | 18.370 |
| Net Benefit (1,000 US$) | -2,240 | 2,870 | 3,200 | 2,170 |

Table-G3 COST ESTIMATE OF MOROLICA IRRIGATION DAM

| Item | Cost (1,000 US$) |
|---|---|
| Access road and Preparatory works | 530 |
| River diversion and Coffering | 5,830 |
| Dam | 22,160 |
| Spillway | 5,780 |
| Outlet works | 410 |
| Sub-total | 34,710 |
| Engineering and General expense (15%) | 5,210 |
| Land compensation | 1,820 |
| Sub-total | 41,740 |
| Physical contingency (10%) | 4,170 |
| Sub-total | 45,910 |
| Price contingency (20%) | 9,180 |
| Total | 55,090 |

Table-G4 SCALE OPTIMIZATION OF MOROLICA DAM

| Case No. | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| HWL (El.m) | 219.0 | 225.0 | 231.0 | 237.0 |
| LWL (El.m) | 204.0 | 204.0 | 204.0 | 204.0 |
| Net Storage (MCM) | 208 | 312 | 445 | 595 |
| Dam Height (m) | 76.0 | 82.0 | 88.0 | 94.0 |
| Power | | | | |
| Installed Capacity (kW) | 26,000 | 40,000 | 50,000 | 60,000 |
| Dependable Peak (kW) | 24,190 | 38,550 | 50,000 | 60,000 |
| Annual Energy Output (GWh) | 109.59 | 140.36 | 161.40 | 181.18 |
| Maximum Discharge ($m^3/s$) | 55.78 | 81.88 | 97.61 | 111.91 |
| Power Benefit (1,000 US$) | | | | |
| Capacity Benefit | 16,960 | 27,020 | 35,050 | 42,060 |
| Energy Benefit | 15,240 | 19,520 | 22,450 | 25,290 |
| Total | 32,200 | 46,540 | 57,500 | 67,350 |
| Cost Additional to Irrigation Dam (1,000 US$) | | | | |
| Dam Cost Increase | - | 4,390 | 9,300 | 14,730 |
| Other Civilworks | 5,150 | 6,240 | 6,810 | 7,290 |
| Equipment | 8,860 | 13,120 | 15,010 | 17,140 |
| Sub-total | 14,010 | 23,750 | 31,120 | 39,160 |
| Eng. & Contingency | 3,710 | 6,290 | 8,250 | 10,380 |
| Interest during Construction | 2,060 | 3,490 | 4,570 | 5,750 |
| O & M Cost of P.S. | 780 | 1,070 | 1,070 | 1,070 |
| Total | 20,560 | 34,600 | 45,010 | 56,360 |
| Net Benefit (1,000 US$) | 11,640 | 11,940 | 12,490 | 10,990 |

Table-G5 IRRIGATION WATER REQUIREMENT

| Month | S.J. de Flores (1,480ha) | Oropoli (180ha) | Morolica (300ha) | Orocuina (1,370ha) | Choluteca Western Plain (16,000ha) | San Fernando | Morolica |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Jan. | 1.3 | 0.4 | 0.8 | 3.8 | 46.6 | 52.9 | 50.4 |
| Feb. | 1.9 | 0.3 | 0.6 | 2.8 | 31.8 | 37.4 | 34.6 |
| Mar. | 2.6 | 0.5 | 1.1 | 4.8 | 32.6 | 41.6 | 37.4 |
| Apr. | 2.8 | 0.6 | 1.3 | 6.1 | 45.7 | 56.5 | 51.8 |
| May | 1.1 | 0.2 | 0.5 | 2.2 | 15.2 | 19.2 | 17.4 |
| Jun. | 0.2 | 0.1 | 0.3 | 1.4 | 3.2 | 5.2 | 4.6 |
| Jul. | 1.5 | 0.1 | 0.2 | 1.1 | 9.3 | 12.2 | 10.4 |
| Aug. | 1.0 | 0 | 0 | 0 | 0 | 1.0 | 0 |
| Sep. | 1.8 | 0 | 0 | 0 | 0 | 1.8 | 0 |
| Oct. | 1.9 | 0.1 | 0.2 | 0.7 | 1.6 | 4.5 | 2.3 |
| Nov. | 1.2 | 0.3 | 0.7 | 3.2 | 29.4 | 34.8 | 32.6 |
| Dec. | 1.7 | 0.5 | 1.0 | 4.8 | 59.1 | 67.1 | 63.9 |
| Annual | 19.0 | 3.1 | 6.7 | 30.9 | 274.5 | 334.2 | 305.4 |

Remarks:

6 = 1 + 2 + 3 + 4 + 5 , water requirement to be met by San Fernando dam.

7 = 4 + 5 , water requirement to be met by Morolica dam. Inflow discharge to Morolica reservoir is reduced by 1 + 2 every month.

Table-G6 SALIENT FEATURES OF SAN FERNANDO AND POWER STATION SCHEME

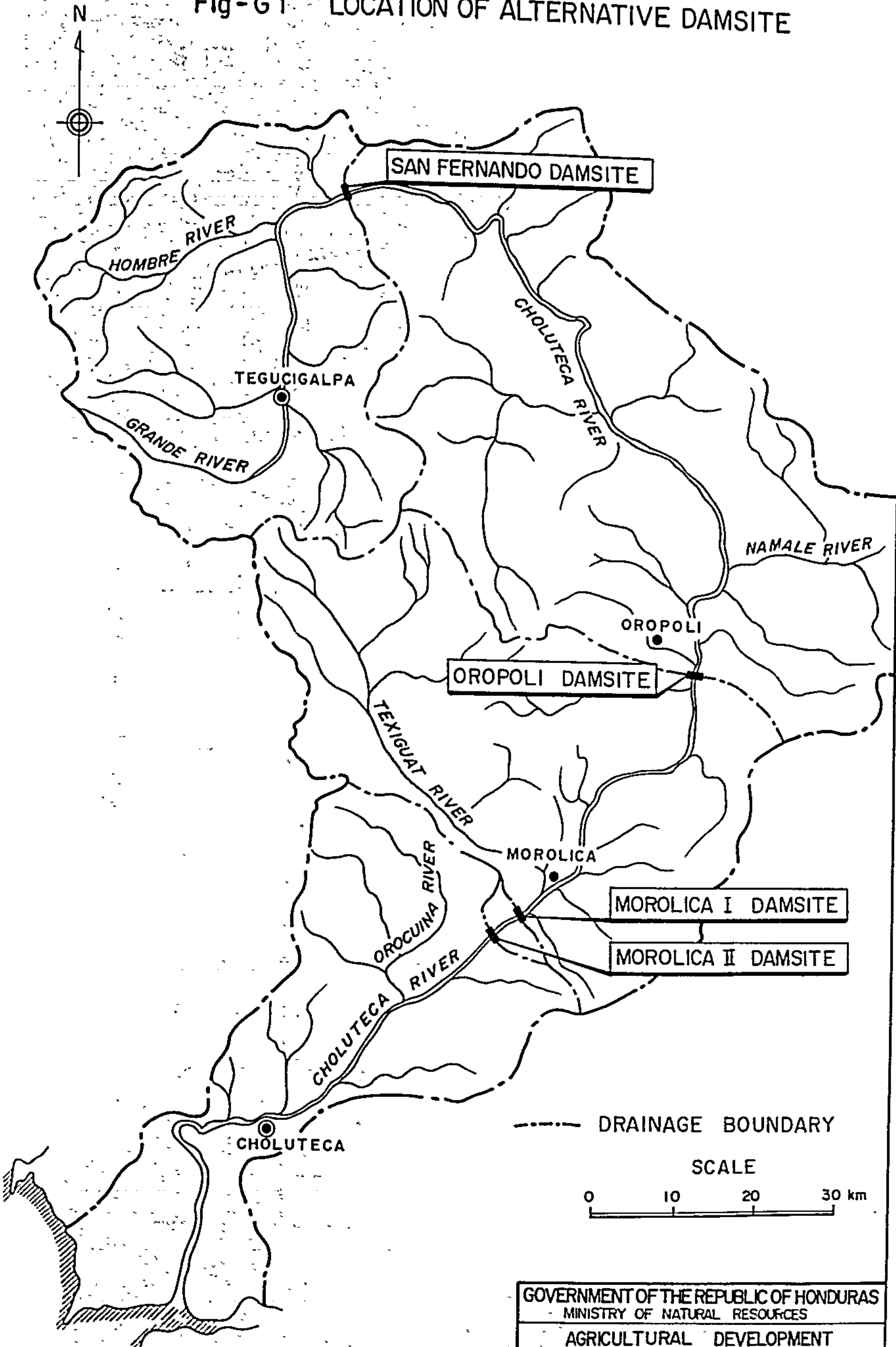
| | |
|---|---|
| DAM | Type: Concrete gravity dam |
| | Height: 93.5 m (maximum) |
| | Crest length: 217.5 m |
| | Crest elevation: El. 829.0 m |
| | Upstream slope: 1 : 0.15 |
| | Downstream slope: 1 : 0.8 |
| | Fillet slope: 1 : 0.8 below El. 775 m |
| | Concrete volume: 310,000 $m^3$ |
| RESERVOIR | Drainage area: 1,665 $km^2$ |
| | Ave. annual inflow: 13.5 $m^3/s$ or 425 MCM |
| | Normal high water surface:El. 823.5 m |
| | Max. flood water surface:El. 828.5 m |
| | Planned low water surface:El. 794.5 m |
| | Gross storage capacity: 385 MCM |
| | Active storage capacity: 330 MCM |
| | Reservoir area: 2,170 ha at Max. F.W.L.<br>1,880 ha at N.H.W.L. |
| DIVERSION TUNNEL | Length: 310 m |
| | Diameter: 3.6 m, Circular section |
| | Normal capacity: 40 $m^3/s$ |
| SPILLWAY | Type: Open chute as a part of the dam |
| | Crest elevation: El. 816.5 m |
| | Width: 39 meters including 9 meter width for two spillway piers and reduced to 25 meters at the downstream end |
| | Capacity: 2,470 $m^3/s$ (Max. inflow of 5,280 $m^3/s$ is routed) |
| | Gates: 3 sets of radial gates<br>10 meter wide, 8 meter high |
| | Energy dissipater: Stilling basin with end sill<br>Crest elevation of end sill at El. 748 m |

OUTLET Howell-Bunger valve at El. 742 m
1.0 meter diameter

POWER PLANT (14,000 kW Installed Capacity)
Gross head: 47.6 m to 76.6 m
Turbine: Francis, Vertical axis, 14,500 kW
Generator: 17,500 kVA
Transformers: 17,500 kVA
Overhead crane: 80 ton
Draft tube gate: 2 sets of 3 m wide, 2.5 m high
Penstock: 2.6 m to 1.8 m dia. 112.5 m long
Intake gate: 5 m wide, 5 m high

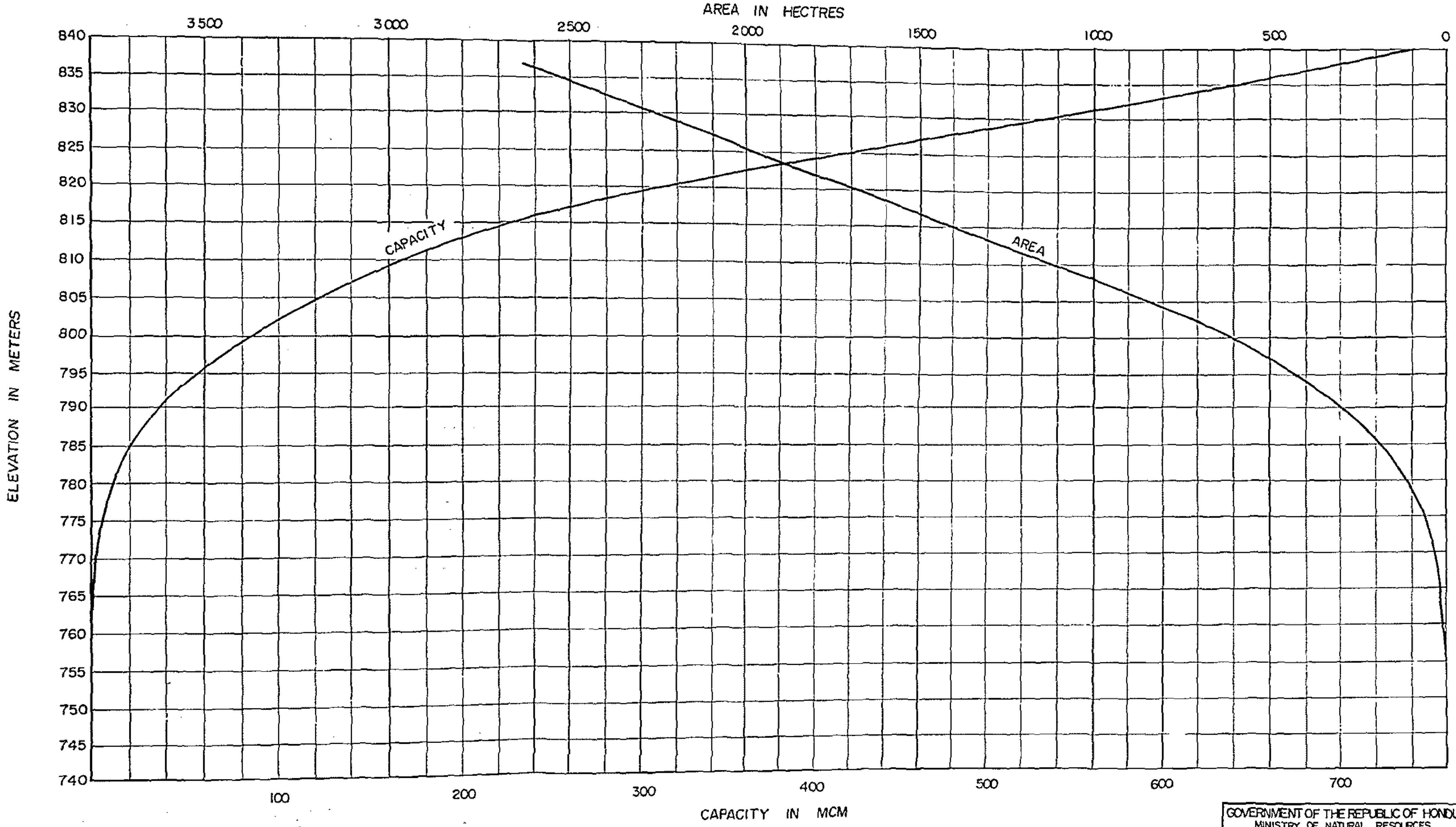
TRANSMISSION LINE AND SUBSTATION
69 kV, 25 km long, Single circuit line
One transformer: 17,500 kVA, 3-phase

# Fig-G 1 LOCATION OF ALTERNATIVE DAMSITE




| |
|---|
| GOVERNMENT OF THE REPUBLIC OF HONDURAS<br>MINISTRY OF NATURAL RESOURCES |
| AGRICULTURAL DEVELOPMENT<br>IN THE CHOLUTECA RIVER BASIN |
| JAPAN INTERNATIONAL COOPERATION AGENCY |

Fig.-G2 AREA-CAPACITY CURVES AT SAN FERNANDO DAMSITE

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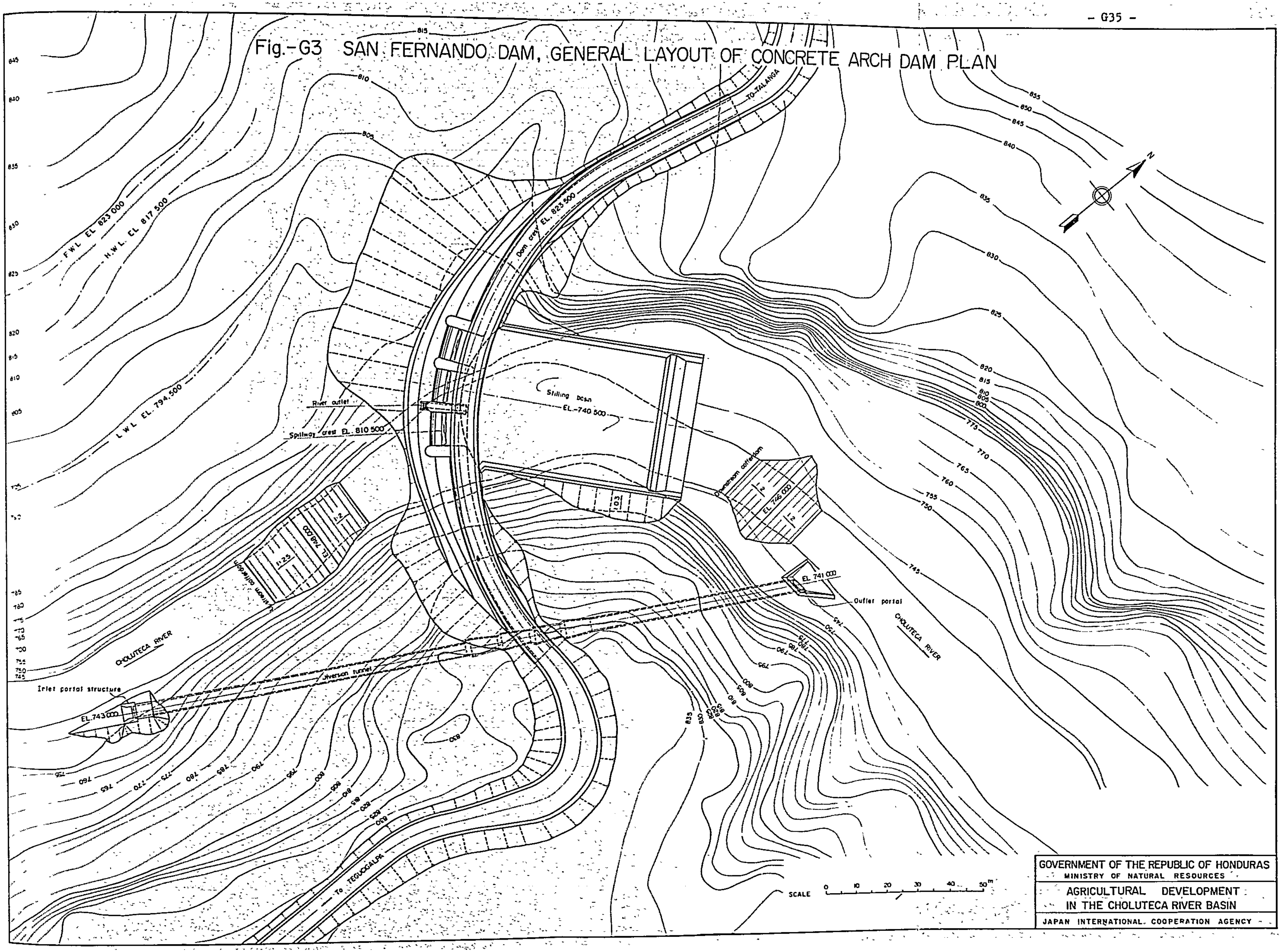
JAPAN INTERNATIONAL COOPERATION AGENCY

# Fig.-G3 SAN FERNANDO DAM, GENERAL LAYOUT OF CONCRETE ARCH DAM PLAN




GOVERNMENT OF THE REPUBLIC OF HONDURAS
MINISTRY OF NATURAL RESOURCES

AGRICULTURAL DEVELOPMENT IN THE CHOLUTECA RIVER BASIN

JAPAN INTERNATIONAL COOPERATION AGENCY

# Fig.-G4 SAN FERNANDO DAM, SECTIONS OF CONCRETE ARCH DAM PLAN

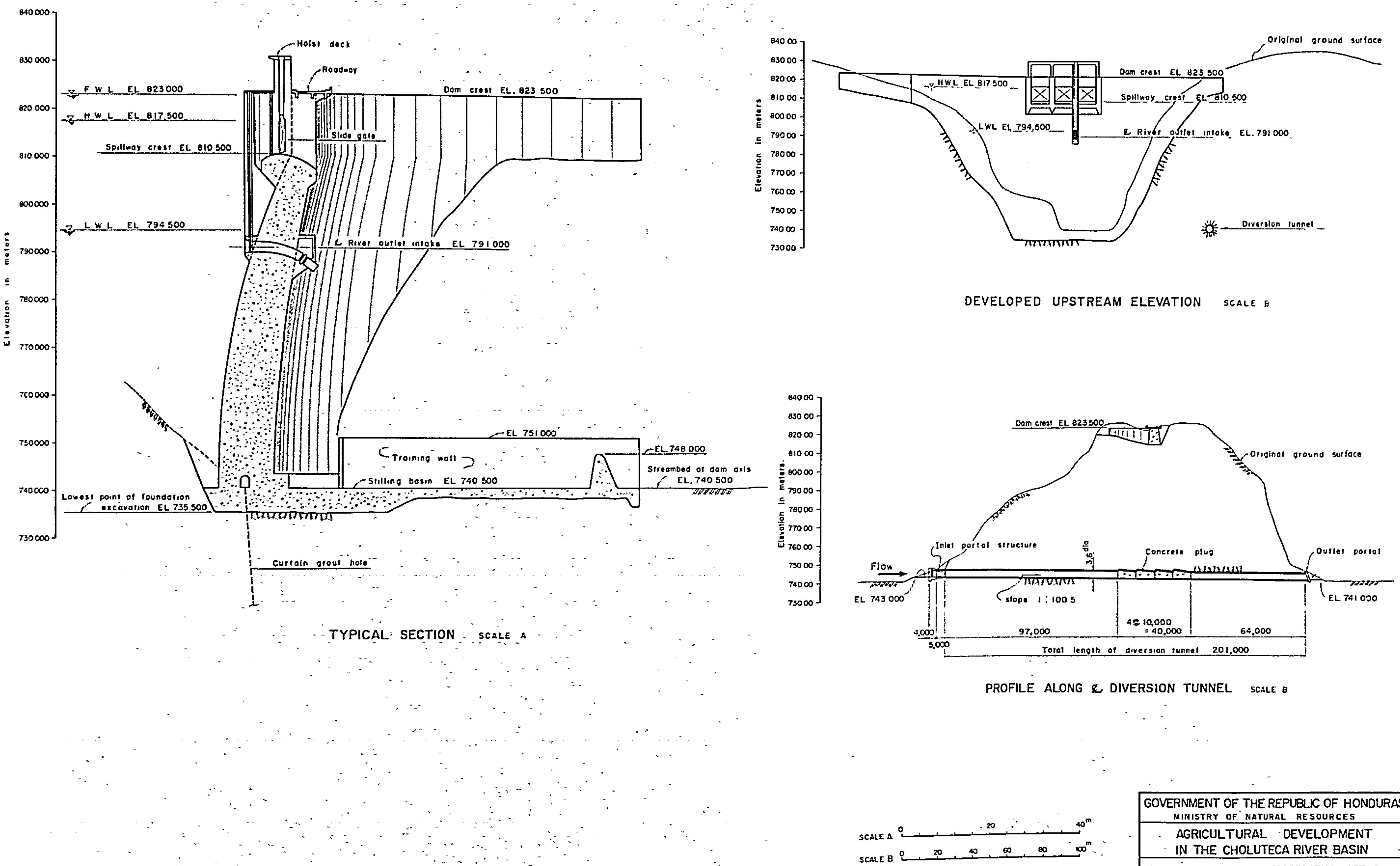



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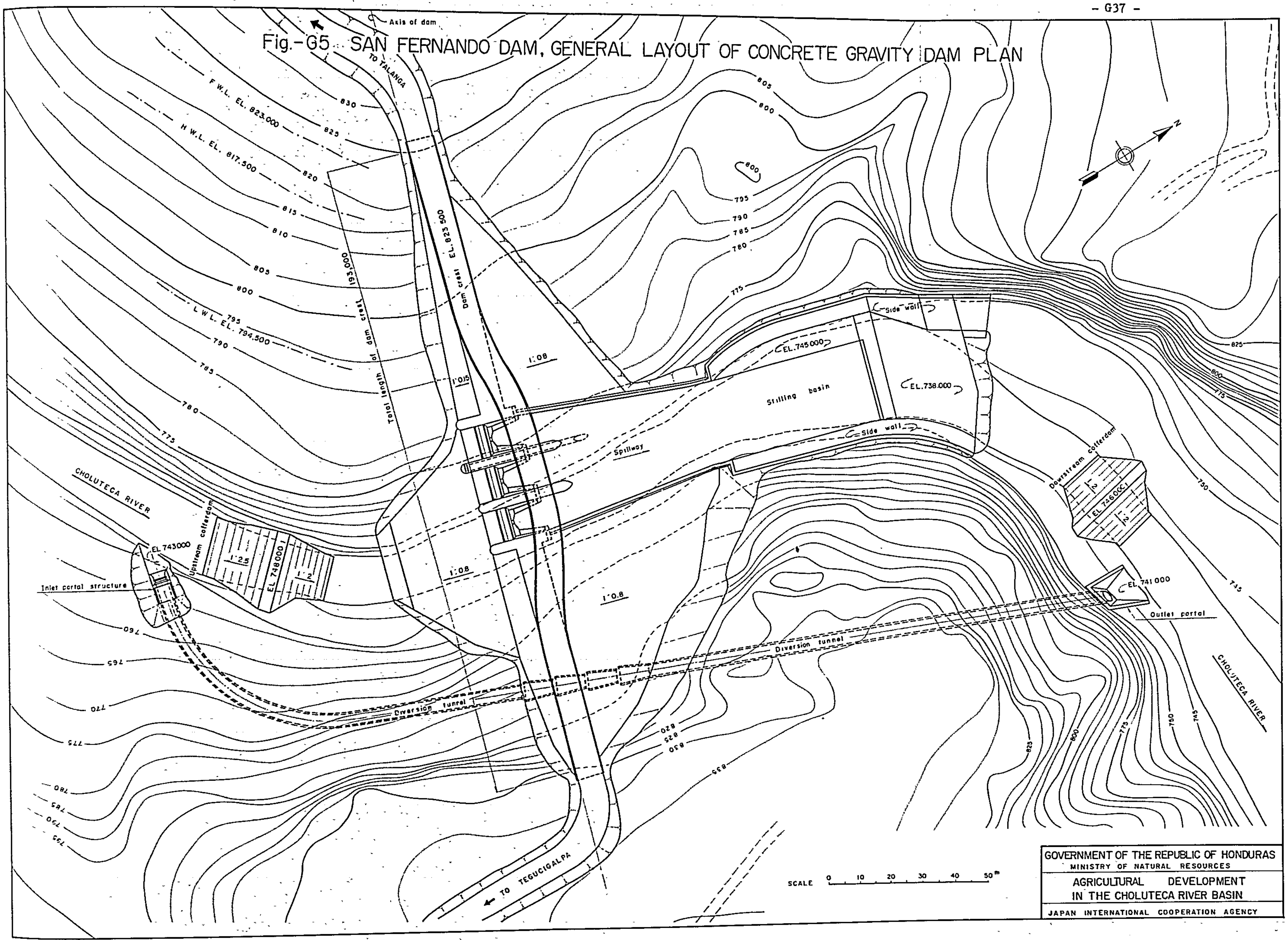
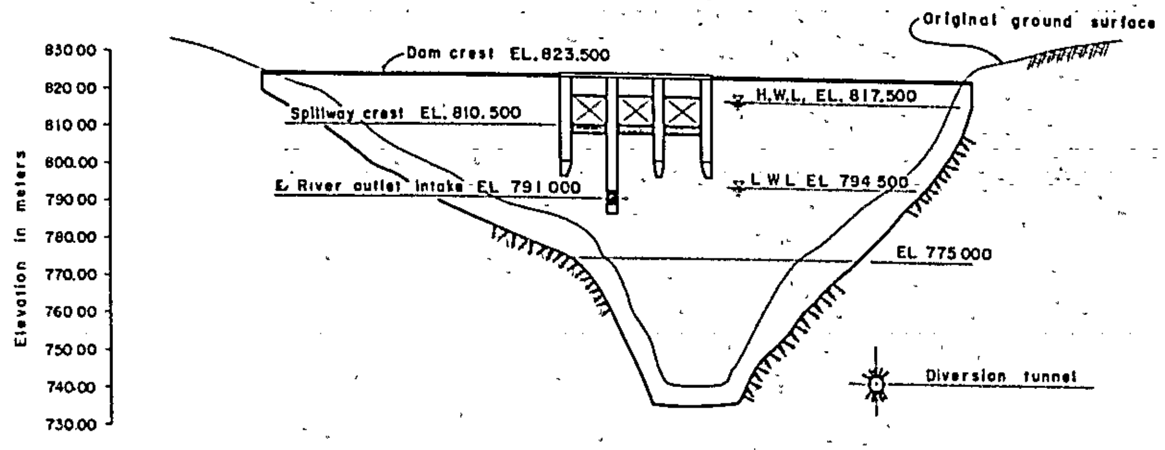
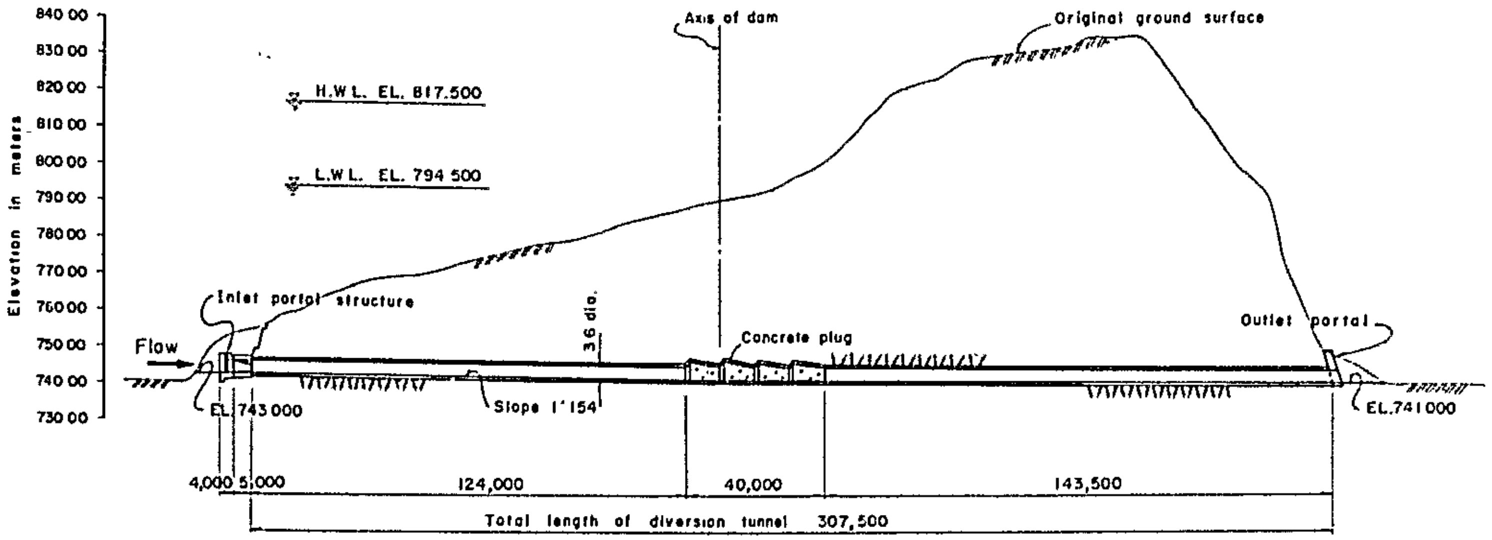
Fig.-G5 SAN FERNANDO DAM, GENERAL LAYOUT OF CONCRETE GRAVITY DAM PLAN



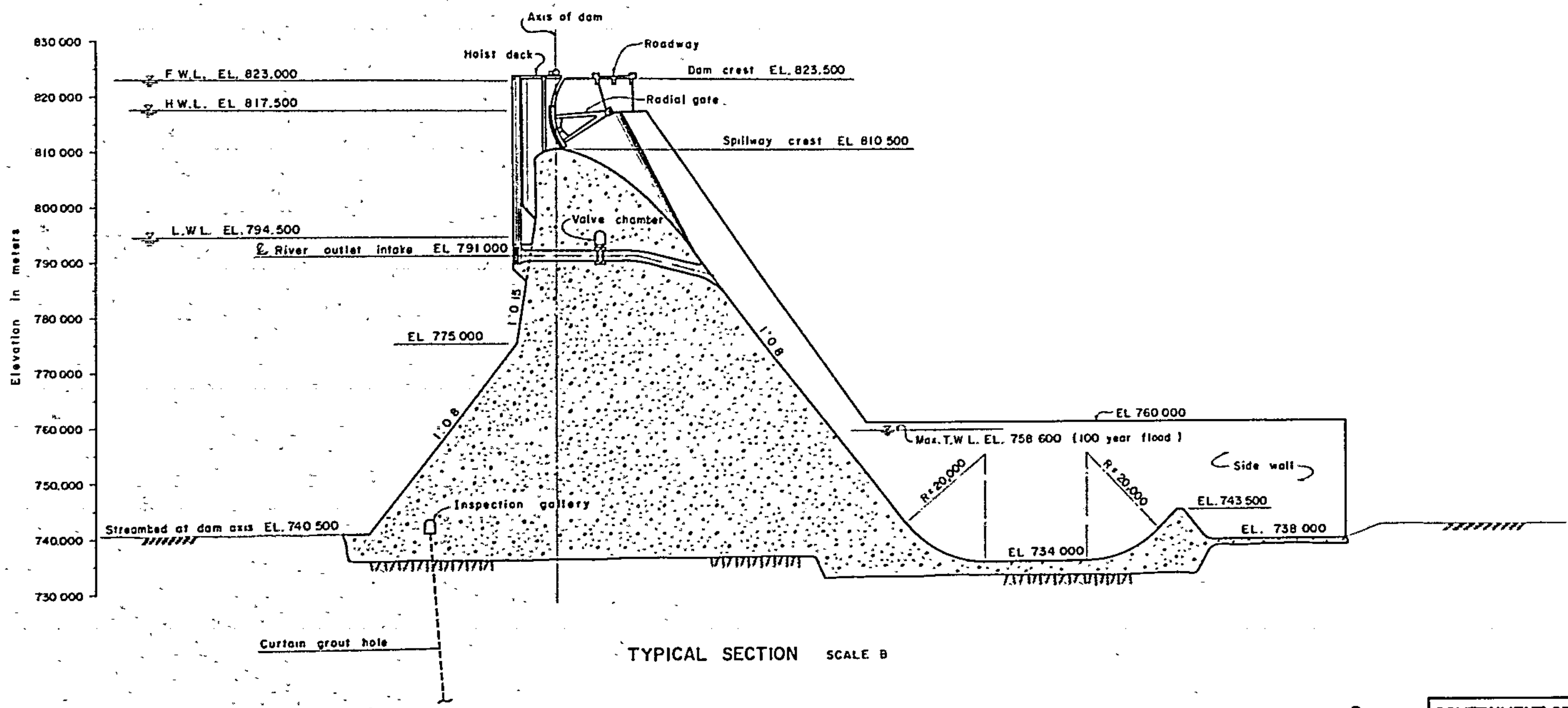
# Fig.- G6 SAN FERNANDO DAM, SECTIONS OF CONCRETE GRAVITY DAM PLAN



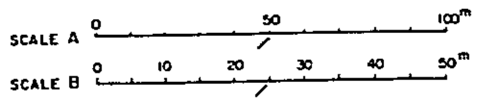

UPSTREAM ELEVATION SCALE A




PROFILE ALONG ℄ DIVERSION TUNNEL SCALE A




TYPICAL SECTION SCALE B

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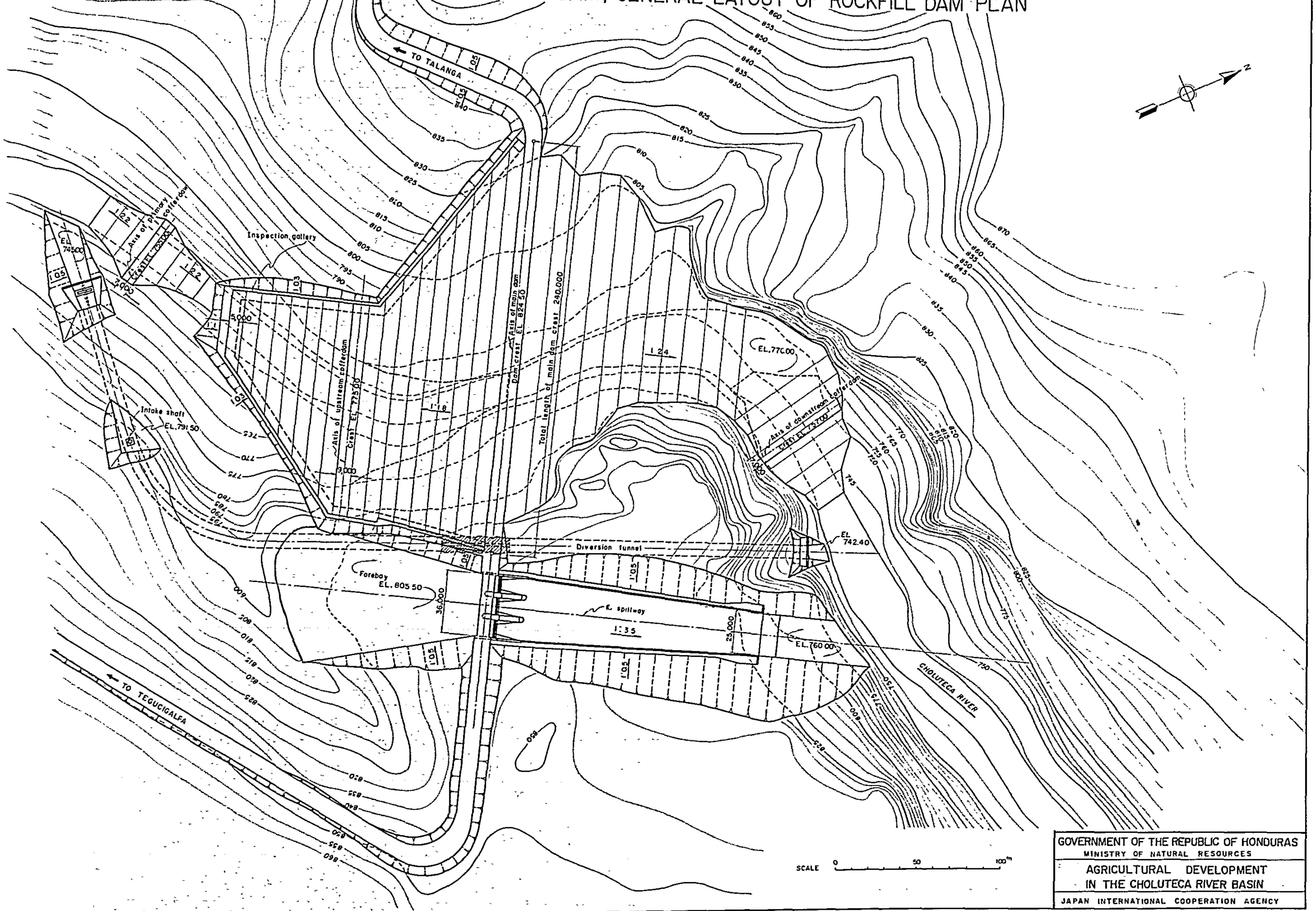
# Fig.-G7 SAN FERNANDO DAM, GENERAL LAYOUT OF ROCKFILL DAM PLAN

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# Fig.-G8 SAN FERNANDO DAM, SECTIONS OF ROCKFILL DAM PLAN

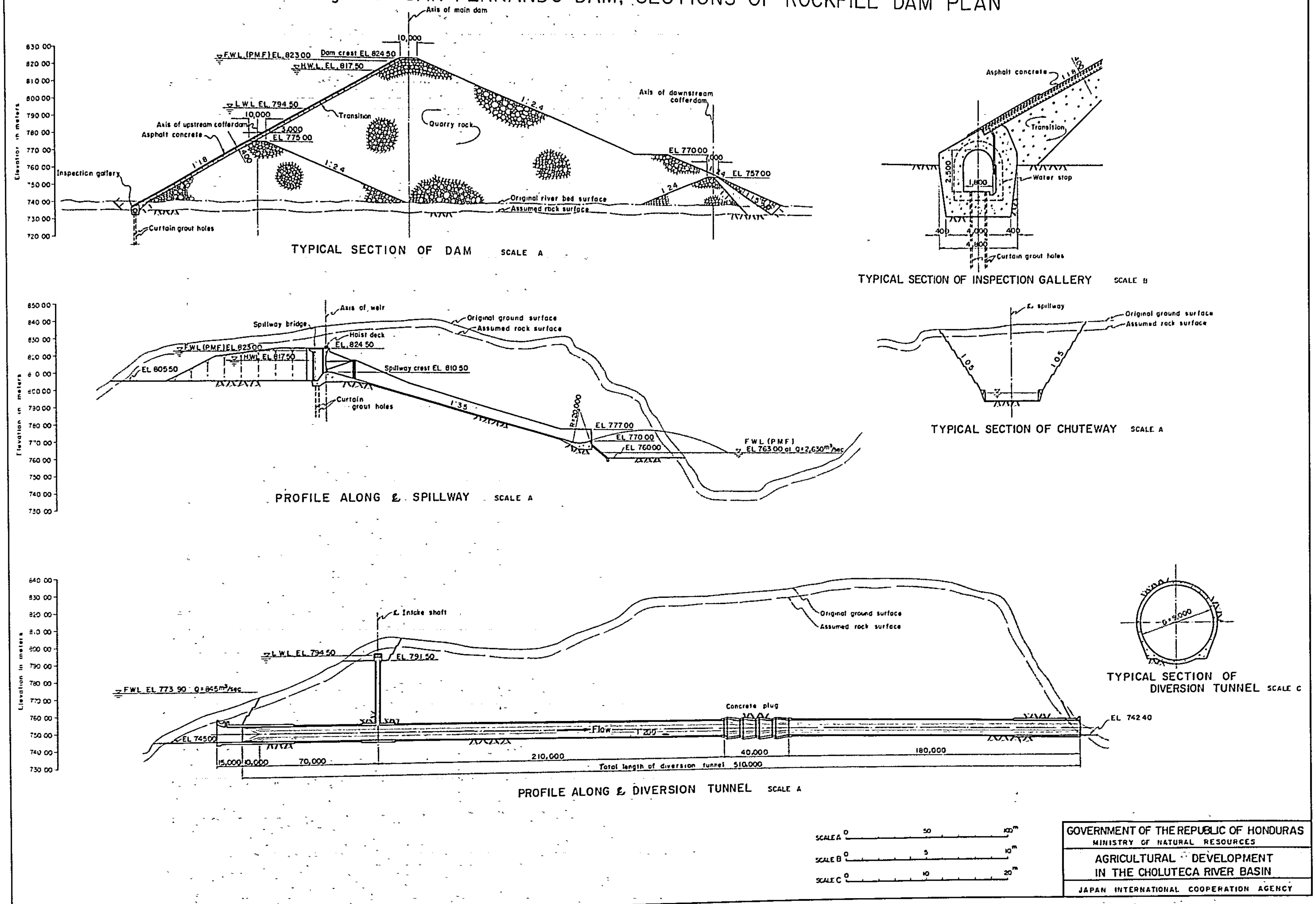


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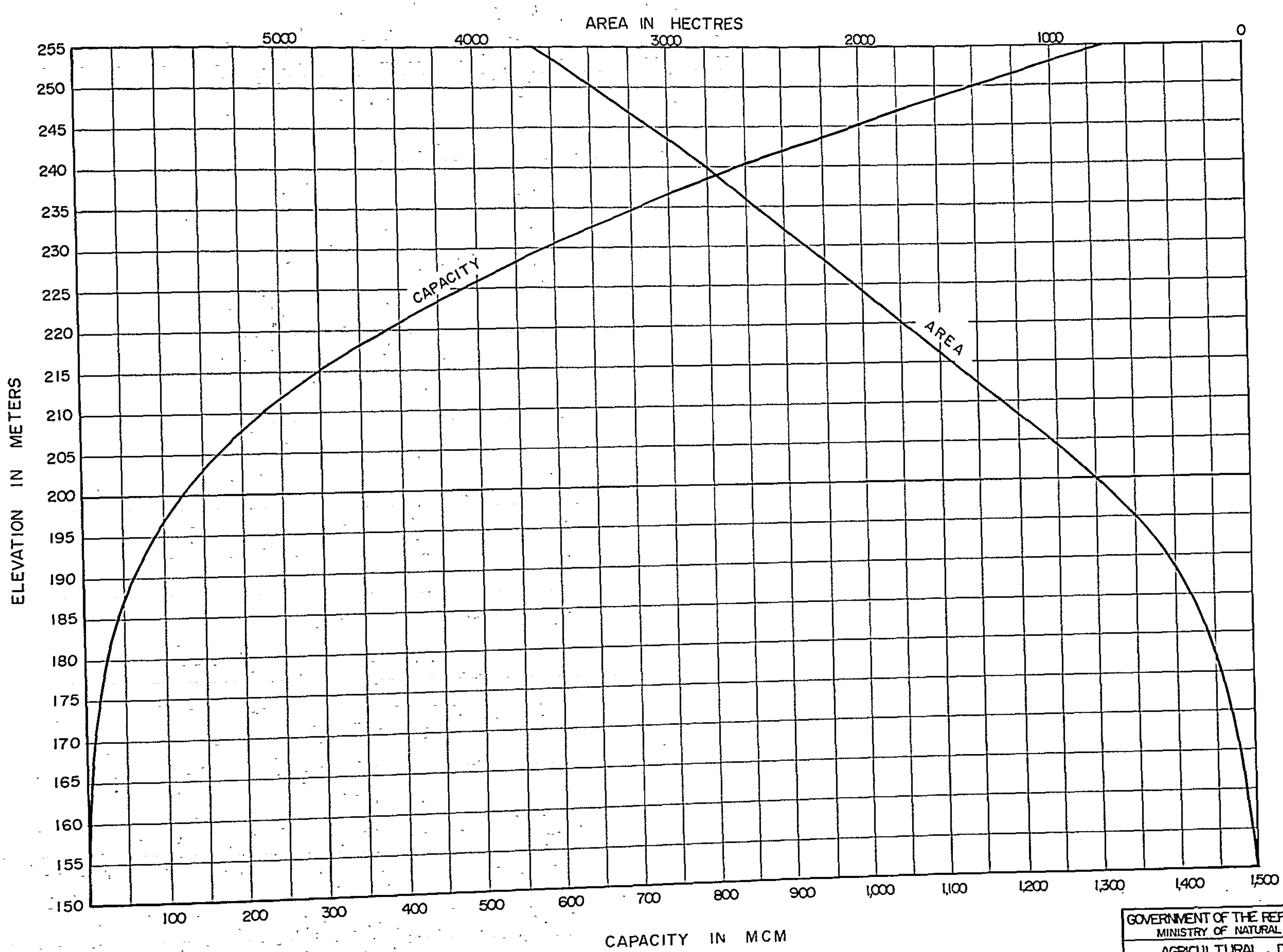
Fig.-G9 AREA-CAPACITY CURVES AT MOROLICA DAMSITE

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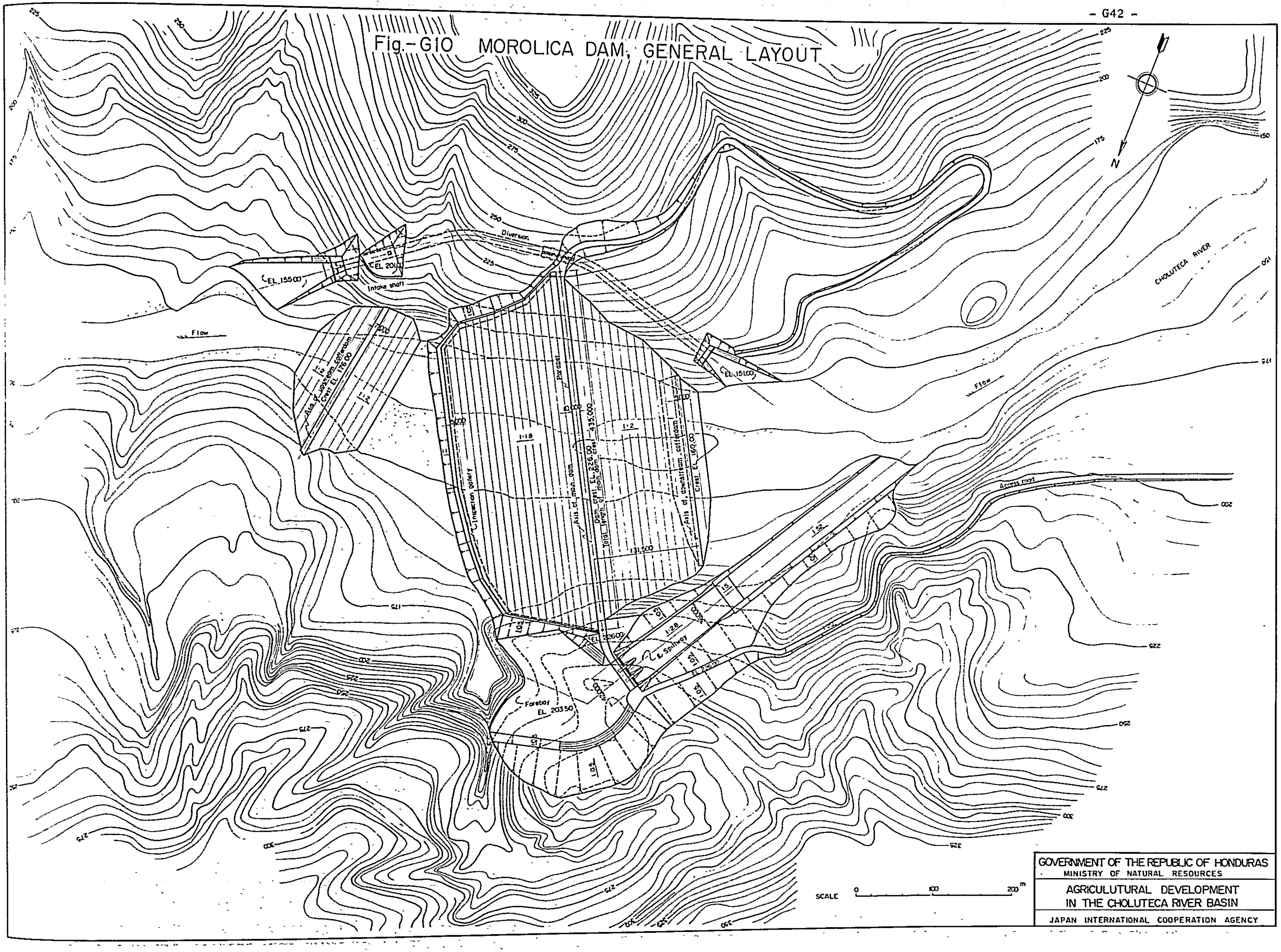
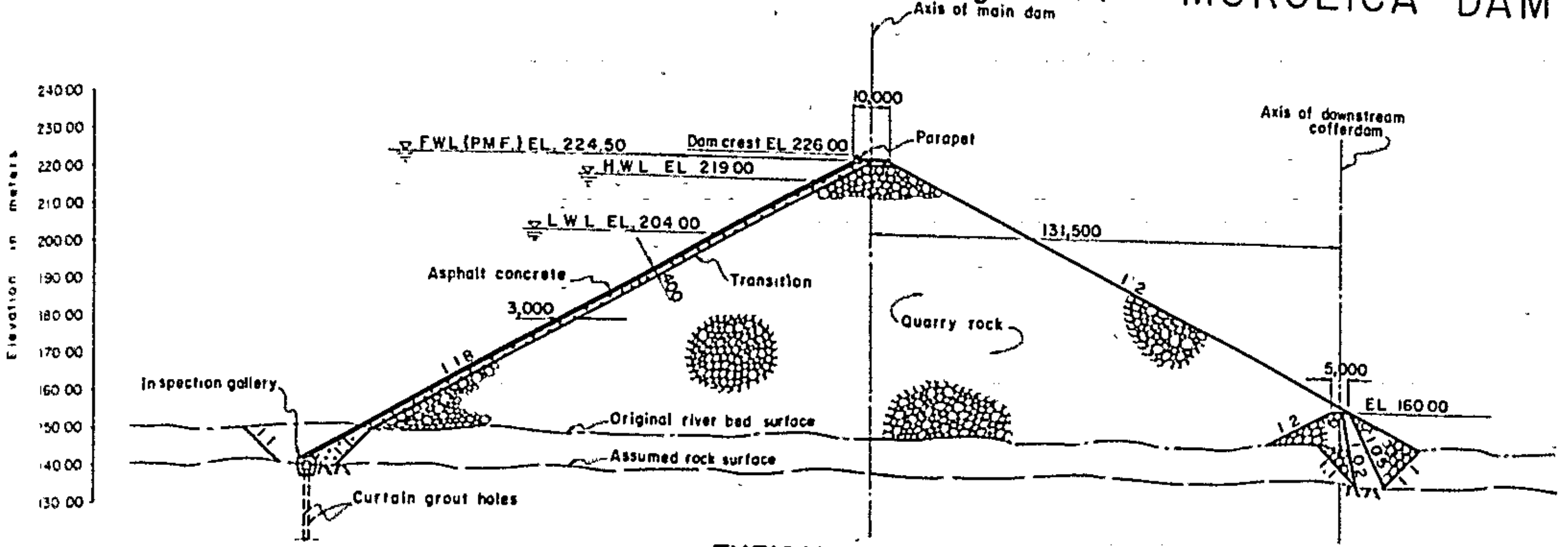
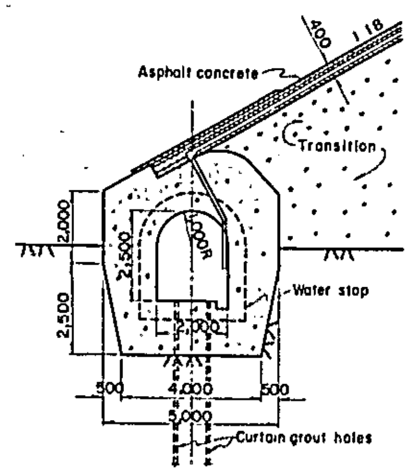



Fig.-G10 MOROLICA DAM, GENERAL LAYOUT

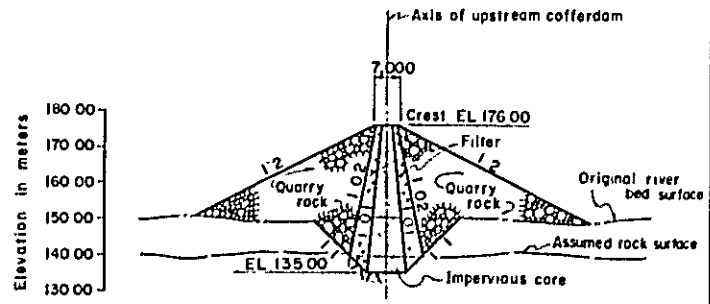
# Fig.-G11 MOROLICA DAM, SECTIONS



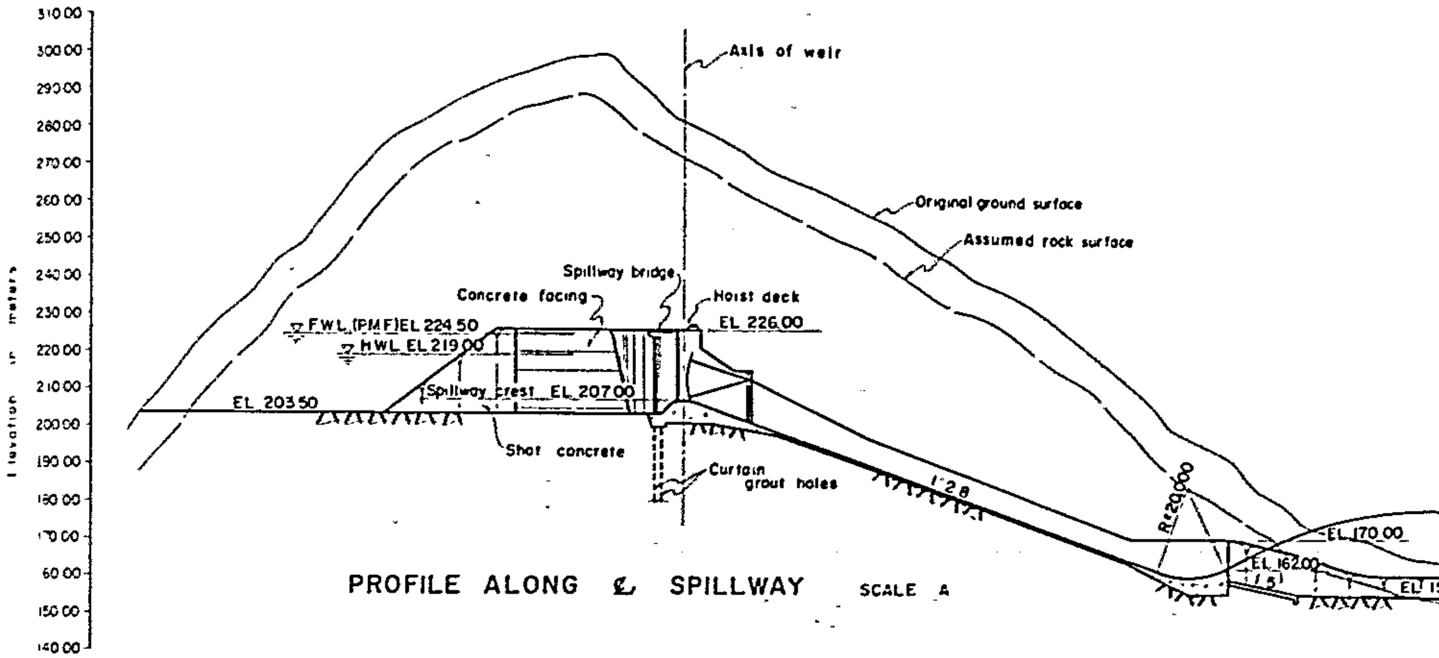

TYPICAL SECTION OF MAIN DAM SCALE A



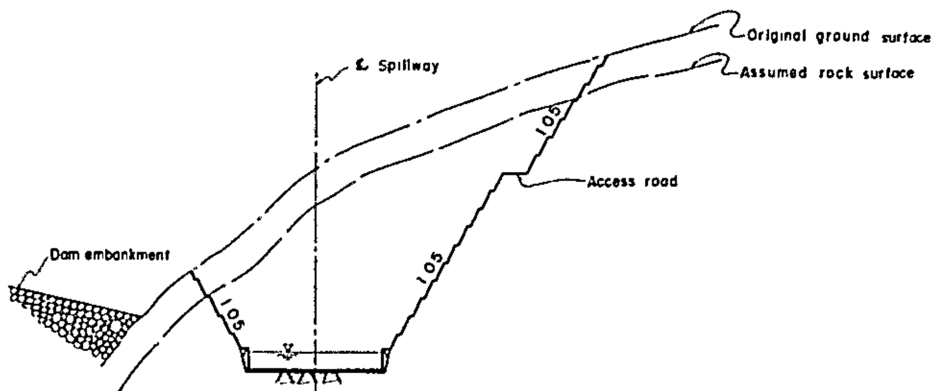

TYPICAL SECTION OF INSPECTION GALLERY SCALE B



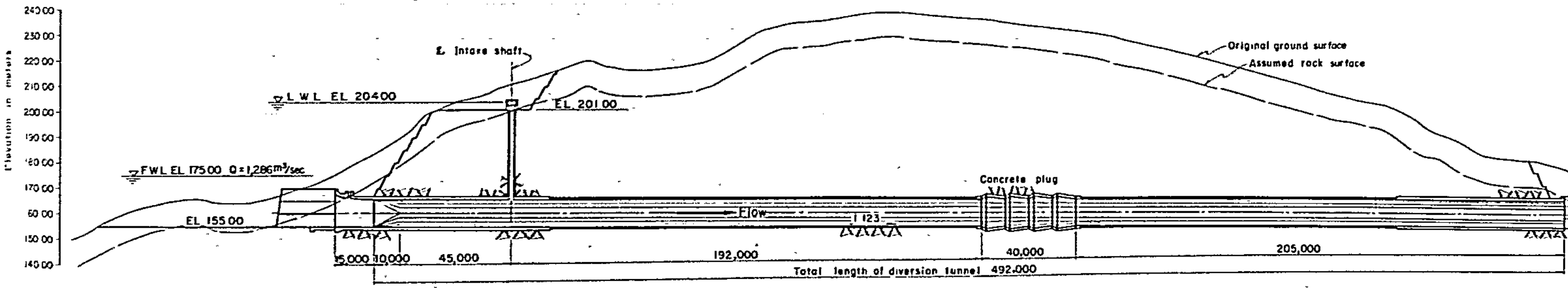

TYPICAL SECTION OF UPSTREAM COFFERDAM SCALE A



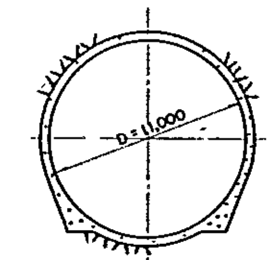

PROFILE ALONG ℄ SPILLWAY SCALE A




TYPICAL SECTION OF CHUTEWAY SCALE A




PROFILE ALONG ℄ DIVERSION TUNNEL SCALE A




TYPICAL SECTION OF DIVERSION TUNNEL SCALE C

SCALE A 0 50 100m
SCALE B 0 5 10m
SCALE C 0 10 20m

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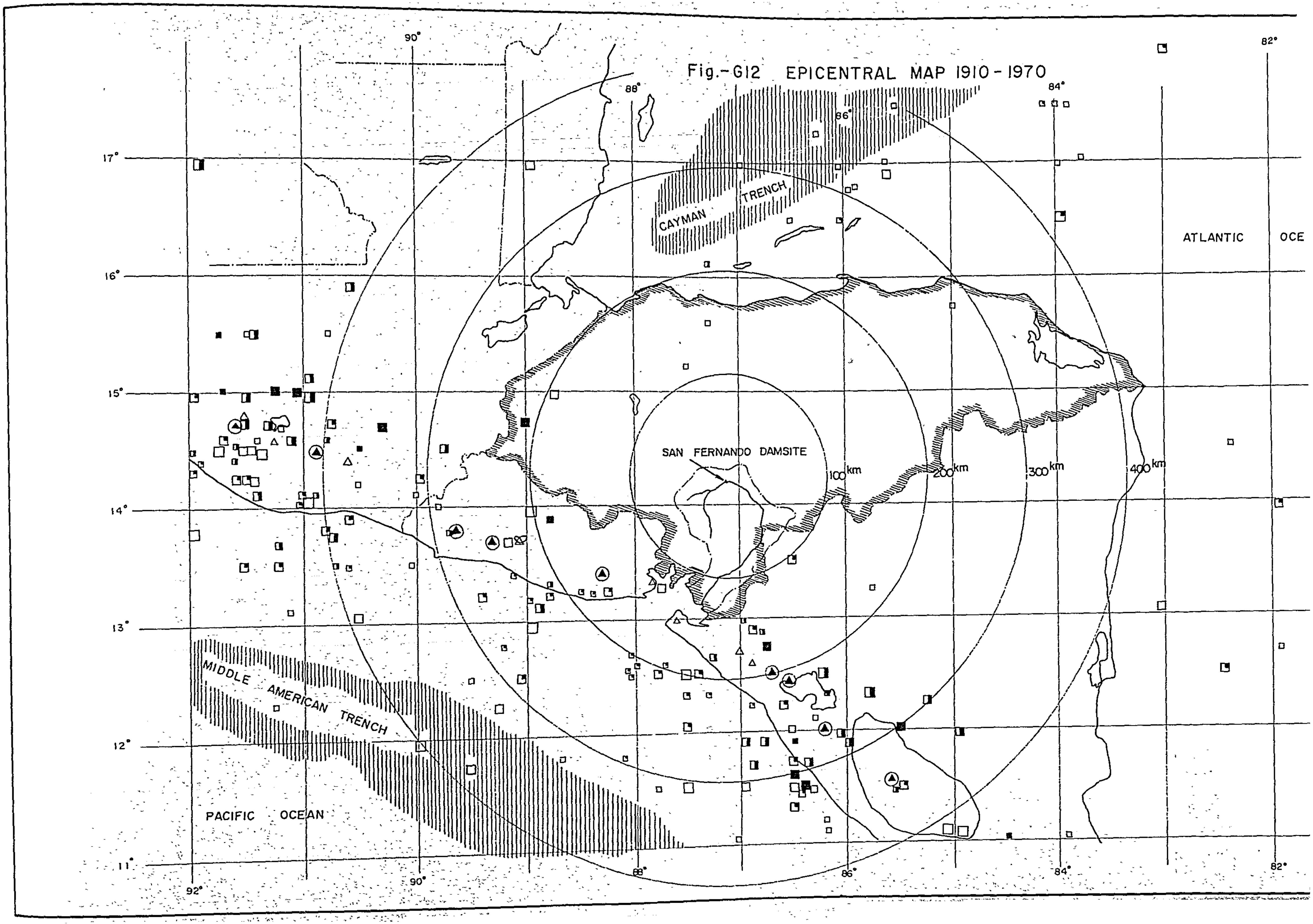
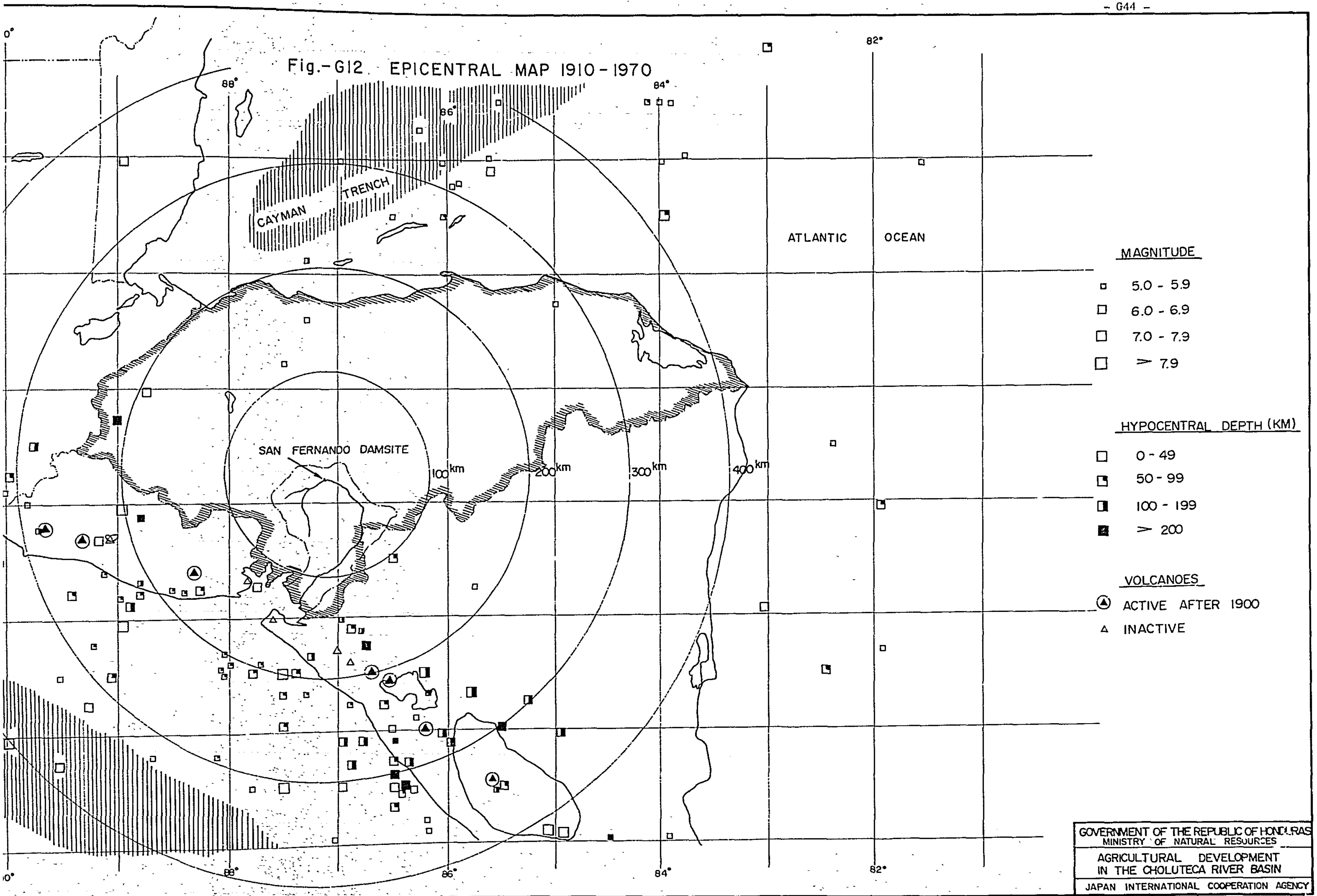


Fig.-G12 EPICENTRAL MAP 1910-1970
CAYMAN TRENCH
ATLANTIC OCE
SAN FERNANDO DAMSITE
100 km
200 km
300 km
400 km
MIDDLE AMERICAN TRENCH
PACIFIC OCEAN
17°
16°
15°
14°
13°
12°
11°
92°
90°
88°
86°
84°
82°

Fig.-G12 EPICENTRAL MAP 1910-1970

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# RESERVOIR OPERATION

RESERVOIR OPERATION    SAN FERNANDO DAM PLAN

HIGH WATER LEVEL    817.50    LOW WATER LEVEL    794.50

GROSS STORAGE CAPACITY    265.00 MCM

DEAD STORAGE CAPACITY    55.00 MCM

EVAPORATION DATA IN MM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 64.0 | 95.0 | 125.0 | 130.0 | 118.0 | 90.0 | 83.0 | 88.0 | 91.0 | 76.0 | 57.0 | 58.0 |

MAXIMUM DISCHARGE FOR POWER GENERATION    19.47 CMS

POWER INSTALLED CAPACITY    9000. KW

RATED HEAD FOR POWER GENERATION    58.5 M

GUARANTEED MINIMUM DISCHARGE FOR POWER GENERATION    0.    CMS

SEASONAL MINIMUM STORAGE IN MCM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 157.90 | 137.10 | 55.00 | 55.00 | 55.00 | 55.00 | 55.00 | 120.00 | 155.00 | 191.60 | 191.60 | 181.60 |

MONTHLY IRRIGATION WATER REQUIREMENT

UPSTREAM OF DAMSITE IN MCM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |

DOWNSTREAM OF DAMSITE IN MCM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 52.90 | 37.40 | 41.40 | 56.50 | 19.20 | 5.20 | 12.20 | 1.00 | 1.80 | 4.50 | 34.80 | 67.10 |

RESERVOIR OPERATION SAN FERNANDO DAM PLAN

| YEAR | MONTH | WATER LEVEL | GROSS STORAGE | INFLOW | OUTFLOW | SPILL-OUT | DIS-CHARGE | WATER USED FOR IRRIGATION | RIVER FLOW | OUTFLOW FOR POWER | HEAD FOR POWER | POWER PEAKING CAPACITY | ENERGY OUTPUT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | MCM | MCM | MCM | MCM | MCM | MCM | CMS | CMS | M | MW | GWH |
| | | 815.00 | 228.98 | | | | | | | | | | |
| 1954 | AUG. | 817.50 | 265.00 | 38.60 | 1.39 | 0. | 103.89 | 1.00 | 38.41 | 0.52 | 73.08 | 9.00 | 0.23 |
| | SEP. | 817.50 | 265.00 | 207.00 | 50.46 | 154.89 | 708.35 | 1.80 | 272.59 | 19.47 | 73.03 | 9.00 | 6.48 |
| | OCT. | 817.50 | 265.00 | 172.00 | 52.14 | 118.53 | 775.57 | 4.50 | 287.88 | 19.47 | 73.22 | 9.00 | 6.70 |
| | NOV. | 817.50 | 265.00 | 20.40 | 19.56 | 0. | 80.76 | 34.80 | 17.73 | 7.55 | 74.32 | 9.00 | 3.29 |
| | DEC. | 814.69 | 224.78 | 8.40 | 47.84 | 0. | 68.44 | 67.10 | 0.50 | 17.86 | 72.93 | 9.00 | 6.70 |
| 1955 | JAN. | 812.29 | 194.38 | 6.90 | 36.54 | 0. | 54.24 | 52.90 | 0.50 | 13.64 | 70.33 | 9.00 | 5.78 |
| | FEB. | 810.38 | 172.45 | 6.20 | 27.21 | 0. | 38.61 | 37.40 | 0.50 | 11.25 | 68.12 | 9.00 | 4.16 |
| | MAR. | 808.05 | 148.40 | 6.10 | 28.94 | 0. | 42.94 | 41.60 | 0.50 | 10.80 | 66.05 | 9.00 | 4.27 |
| | APR. | 803.43 | 108.43 | 5.70 | 44.60 | 0. | 57.80 | 56.50 | 0.50 | 17.21 | 62.56 | 9.00 | 6.19 |
| | MAY | 802.93 | 104.65 | 5.30 | 9.24 | 0. | 20.54 | 19.20 | 0.50 | 3.08 | 60.01 | 9.00 | 1.09 |
| | JUN. | 803.82 | 111.40 | 7.40 | 0. | 0. | 18.60 | 5.20 | 5.17 | 0. | 60.19 | 0. | 0. |
| | JUL. | 815.69 | 238.55 | 125.00 | 0. | 0. | 257.50 | 12.20 | 91.58 | 0. | 66.59 | 0. | 0. |
| | AUG. | 817.50 | 265.00 | 71.80 | 44.06 | 0. | 234.76 | 1.00 | 87.28 | 16.45 | 73.43 | 9.00 | 6.70 |
| | SEP. | 817.50 | 265.00 | 137.00 | 50.46 | 85.00 | 468.36 | 1.80 | 180.00 | 19.47 | 73.39 | 9.00 | 6.48 |
| | OCT. | 817.50 | 265.00 | 246.00 | 52.14 | 192.43 | 1109.57 | 4.50 | 412.59 | 19.47 | 72.91 | 9.00 | 6.70 |
| | NOV. | 817.50 | 265.00 | 58.60 | 50.46 | 7.26 | 232.52 | 34.80 | 76.28 | 19.47 | 74.17 | 9.00 | 6.48 |
| | DEC. | 817.50 | 265.00 | 21.00 | 20.17 | 0. | 70.47 | 67.10 | 1.26 | 7.53 | 74.33 | 9.00 | 3.39 |
| 1956 | JAN. | 816.66 | 257.46 | 12.10 | 23.74 | 0. | 54.24 | 52.90 | 0.50 | 8.86 | 73.92 | 9.00 | 3.96 |
| | FEB. | 815.55 | 236.57 | 8.50 | 23.25 | 0. | 38.65 | 37.40 | 0.50 | 9.28 | 72.91 | 9.00 | 3.82 |
| | MAR. | 813.70 | 211.86 | 6.00 | 29.14 | 0. | 42.94 | 41.60 | 0.50 | 10.88 | 71.46 | 9.00 | 4.69 |
| | APR. | 810.27 | 171.22 | 5.60 | 44.80 | 0. | 57.80 | 56.50 | 0.50 | 17.28 | 68.80 | 9.00 | 6.48 |
| | MAY | 811.51 | 185.17 | 15.20 | 0. | 0. | 34.50 | 19.20 | 5.71 | 0. | 67.72 | 0. | 0. |
| | JUN. | 817.50 | 265.00 | 94.40 | 13.42 | 0. | 248.82 | 5.20 | 93.99 | 5.18 | 71.33 | 9.00 | 2.16 |
| | JUL. | 817.50 | 265.00 | 51.70 | 50.43 | 0. | 154.53 | 12.20 | 53.14 | 18.83 | 74.33 | 9.00 | 6.70 |
| | AUG. | 817.50 | 265.00 | 16.40 | 15.12 | 0. | 58.72 | 1.00 | 21.55 | 5.64 | 74.33 | 9.00 | 2.54 |
| | SEP. | 817.50 | 265.00 | 41.90 | 40.53 | 0. | 142.33 | 1.80 | 54.22 | 15.64 | 74.32 | 9.00 | 6.48 |
| | OCT. | 817.50 | 265.00 | 38.50 | 37.36 | 0. | 172.86 | 4.50 | 62.86 | 13.95 | 74.33 | 9.00 | 6.27 |
| | NOV. | 817.50 | 265.00 | 15.60 | 14.77 | 0. | 63.47 | 34.80 | 11.06 | 5.70 | 74.32 | 9.00 | 2.48 |
| | DEC. | 815.20 | 231.77 | 13.50 | 45.94 | 0. | 68.44 | 67.10 | 0.50 | 17.15 | 73.19 | 9.00 | 6.70 |
| 1957 | JAN. | 814.39 | 220.83 | 13.30 | 23.44 | 0. | 54.24 | 52.90 | 0.50 | 8.75 | 71.43 | 9.00 | 3.78 |
| | FEB. | 813.63 | 210.86 | 9.10 | 17.01 | 0. | 38.61 | 37.40 | 0.50 | 7.03 | 70.80 | 9.00 | 2.71 |
| | MAR. | 811.83 | 188.90 | 5.90 | 26.44 | 0. | 42.94 | 41.60 | 0.50 | 9.87 | 69.56 | 9.00 | 4.13 |
| | APR. | 808.30 | 150.86 | 5.40 | 42.10 | 0. | 57.80 | 56.50 | 0.50 | 16.24 | 66.89 | 9.00 | 6.30 |
| | MAY | 811.02 | 179.61 | 29.90 | 0. | 0. | 116.90 | 19.20 | 36.48 | 0. | 66.50 | 0. | 0. |
| | JUN. | 817.09 | 258.80 | 60.30 | 0. | 0. | 147.80 | 5.20 | 55.02 | 0. | 70.88 | 0. | 0. |
| | JUL. | 817.50 | 265.00 | 19.60 | 12.21 | 0. | 38.61 | 12.20 | 9.86 | 4.56 | 74.13 | 9.00 | 2.04 |
| | AUG. | 817.50 | 265.00 | 20.60 | 19.31 | 0. | 61.21 | 1.00 | 22.48 | 7.21 | 74.33 | 9.00 | 3.24 |
| | SEP. | 817.50 | 265.00 | 53.70 | 50.46 | 1.85 | 236.61 | 1.80 | 90.59 | 19.47 | 74.28 | 9.00 | 6.48 |
| | OCT. | 817.50 | 265.00 | 43.40 | 42.25 | 0. | 200.25 | 4.50 | 73.09 | 15.78 | 74.33 | 9.00 | 6.70 |
| | NOV. | 817.50 | 265.00 | 11.20 | 10.36 | 0. | 39.98 | 34.80 | 2.00 | 4.01 | 74.32 | 9.00 | 1.74 |
| | DEC. | 814.64 | 224.18 | 10.10 | 50.14 | 0. | 68.44 | 67.10 | 0.50 | 18.72 | 72.91 | 9.00 | 6.70 |
| 1958 | JAN. | 811.81 | 188.69 | 6.10 | 40.94 | 0. | 54.24 | 52.90 | 0.50 | 15.25 | 70.06 | 9.00 | 6.43 |
| | FEB. | 809.25 | 160.50 | 4.00 | 31.31 | 0. | 38.61 | 37.40 | 0.50 | 12.94 | 67.32 | 9.00 | 4.72 |
| | MAR. | 805.70 | 126.84 | 5.90 | 36.44 | 0. | 42.94 | 41.60 | 0.50 | 13.60 | 64.31 | 9.00 | 5.22 |
| | APR. | 798.83 | 77.45 | 3.20 | 51.70 | 0. | 57.80 | 56.50 | 0.50 | 19.47 | 59.08 | 9.00 | 6.48 |
| | JUN. | 816.58 | 220.64 | 146.00 | 0. | 0. | 239.40 | 5.20 | 90.35 | 0. | 63.42 | 0. | 0. |
| | MAY | 817.50 | 265.00 | 60.41 | 20.41 | 0. | 125.31 | 19.20 | 39.62 | 7.62 | 72.77 | 9.00 | 3.35 |

| YEAR | MONTH | WATER LEVEL (M) | GROSS STORAGE (MCM) | INFLOW (MCM) | OUTFLOW (MCM) | SPILL-OUT (MCM) | DIS-CHARGE (MCM) | WATER USED FOR IRRIGATION (MCM) | RIVER FLOW (CMS) | OUTFLOW FOR POWER (CMS) | HEAD FOR POWER (M) | POWER PEAKING CAPACITY (MW) | ENERGY OUTPUT (GWH) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 817.50 | 265.00 | | | | | | | | | | |
| | JUL. | 817.50 | 265.00 | 65.40 | 52.14 | 11.97 | 250.81 | 12.20 | 89.09 | 19.47 | 74.10 | 9.00 | 6.70 |
| | AUG. | 817.50 | 265.00 | 34.00 | 32.69 | 0. | 124.79 | 1.00 | 46.22 | 12.20 | 74.33 | 9.00 | 5.49 |
| | SEP. | 817.50 | 265.00 | 27.00 | 25.66 | 0. | 84.06 | 1.80 | 31.73 | 9.90 | 74.32 | 9.00 | 4.31 |
| | OCT. | 817.50 | 265.00 | 66.80 | 52.14 | 13.48 | 229.22 | 4.50 | 83.90 | 19.47 | 74.08 | 9.00 | 6.70 |
| | NOV. | 817.50 | 265.00 | 10.60 | 9.78 | 0. | 43.28 | 34.80 | 3.27 | 3.77 | 74.32 | 9.00 | 1.64 |
| | DEC. | 814.28 | 219.29 | 14.00 | 57.94 | 0. | 68.44 | 67.10 | 0.50 | 19.47 | 72.72 | 9.00 | 6.70 |
| 1959 | JAN. | 811.63 | 186.51 | 8.20 | 40.24 | 0. | 54.24 | 52.90 | 0.50 | 15.02 | 69.79 | 9.00 | 6.31 |
| | FEB. | 809.37 | 161.71 | 5.90 | 29.81 | 0. | 38.61 | 37.40 | 0.50 | 12.32 | 67.29 | 9.00 | 4.49 |
| | MAR. | 805.80 | 127.75 | 4.80 | 37.64 | 0. | 42.94 | 41.60 | 0.50 | 14.05 | 64.42 | 9.00 | 5.40 |
| | APR. | 798.71 | 76.76 | 4.10 | 54.20 | 0. | 57.80 | 56.50 | 0.50 | 19.47 | 59.08 | 9.00 | 6.48 |
| | MAY | 802.49 | 101.42 | 25.40 | 0. | 0. | 24.40 | 19.20 | 1.94 | 0. | 57.44 | 0. | 0. |
| | JUN. | 807.07 | 139.12 | 38.40 | 0. | 0. | 44.80 | 5.20 | 15.28 | 0. | 61.60 | 0. | 0. |
| | JUL. | 807.91 | 147.04 | 13.20 | 4.54 | 0. | 13.54 | 12.20 | 0.50 | 1.69 | 64.32 | 9.00 | 0.65 |
| | AUG. | 810.24 | 170.99 | 24.80 | 0. | 0. | 24.80 | 1.00 | 8.89 | 0. | 65.91 | 0. | 0. |
| | SEP. | 811.94 | 190.12 | 20.10 | 0. | 0. | 26.40 | 1.80 | 9.49 | 0. | 67.91 | 0. | 0. |
| | OCT. | 816.31 | 247.38 | 58.20 | 0. | 0. | 182.50 | 4.50 | 66.46 | 0. | 70.96 | 0. | 0. |
| | NOV. | 816.72 | 254.01 | 17.70 | 10.30 | 0. | 56.10 | 34.80 | 0.50 | 3.97 | 73.36 | 9.00 | 1.70 |
| | DEC. | 813.00 | 203.03 | 11.20 | 61.44 | 0. | 68.44 | 67.10 | 0.50 | 19.47 | 71.72 | 9.00 | 6.70 |
| 1960 | JAN. | 809.57 | 163.80 | 5.30 | 43.84 | 0. | 54.24 | 52.90 | 0.50 | 16.37 | 68.12 | 9.00 | 6.70 |
| | FEB. | 806.35 | 132.57 | 3.90 | 34.35 | 0. | 38.65 | 37.40 | 0.50 | 13.71 | 64.76 | 9.00 | 4.96 |
| | MAR. | 801.86 | 96.92 | 3.50 | 38.21 | 0. | 40.71 | 39.37* | 0.50 | 14.26 | 60.94 | 9.00 | 5.15 |
| | APR. | 794.50 | 55.00 | 3.30 | 44.50 | 0. | 47.20 | 45.91* | 0.50 | 17.17 | 55.00 | 8.20 | 5.37 |
| | MAY | 797.34 | 69.04 | 14.60 | 0. | 0. | 94.10 | 19.20 | 27.96 | 0. | 52.75 | 0. | 0. |
| | JUN. | 811.00 | 179.33 | 111.00 | 0. | 0. | 154.70 | 5.20 | 57.68 | 0. | 60.99 | 0. | 0. |
| | JUL. | 812.65 | 198.72 | 20.30 | 0. | 0. | 119.00 | 12.20 | 39.87 | 0. | 68.66 | 0. | 0. |
| | AUG. | 815.78 | 239.43 | 42.20 | 0. | 0. | 173.80 | 1.00 | 64.52 | 0. | 71.05 | 0. | 0. |
| | SEP. | 817.50 | 265.00 | 93.70 | 50.46 | 16.70 | 233.56 | 1.80 | 89.41 | 19.47 | 73.16 | 9.00 | 6.48 |
| | OCT. | 817.50 | 265.00 | 131.00 | 52.14 | 77.58 | 345.63 | 4.50 | 127.36 | 19.47 | 73.46 | 9.00 | 6.70 |
| | NOV. | 817.50 | 265.00 | 18.60 | 17.77 | 0. | 106.97 | 34.80 | 27.84 | 6.85 | 74.32 | 9.00 | 2.98 |
| | DEC. | 815.43 | 234.87 | 11.00 | 40.34 | 0. | 68.44 | 67.10 | 0.50 | 15.06 | 73.30 | 9.00 | 6.67 |
| 1961 | JAN. | 813.85 | 213.73 | 10.40 | 30.74 | 0. | 54.24 | 52.90 | 0.50 | 11.48 | 71.47 | 9.00 | 4.95 |
| | FEB. | 812.86 | 201.31 | 8.40 | 19.81 | 0. | 38.61 | 37.40 | 0.50 | 8.19 | 70.14 | 9.00 | 3.12 |
| | MAR. | 810.92 | 178.39 | 7.30 | 28.84 | 0. | 42.94 | 41.60 | 0.50 | 10.77 | 68.72 | 9.00 | 4.45 |
| | APR. | 806.75 | 136.15 | 5.70 | 46.70 | 0. | 57.80 | 56.50 | 0.50 | 18.02 | 65.65 | 9.00 | 6.48 |
| | MAY | 806.00 | 129.51 | 5.90 | 11.54 | 0. | 20.54 | 19.20 | 0.50 | 4.31 | 63.21 | 9.00 | 1.62 |
| | JUN. | 808.60 | 153.81 | 25.10 | 0. | 0. | 139.00 | 5.20 | 51.62 | 0. | 64.12 | 0. | 0. |
| | JUL. | 811.50 | 185.07 | 32.10 | 0. | 0. | 142.80 | 12.20 | 48.76 | 0. | 66.88 | 0. | 0. |
| | AUG. | 812.81 | 200.48 | 16.60 | 0. | 0. | 73.40 | 1.00 | 27.03 | 0. | 68.99 | 0. | 0. |
| | SEP. | 815.89 | 241.35 | 41.80 | 0. | 0. | 101.80 | 1.80 | 38.58 | 0. | 71.17 | 0. | 0. |
| | OCT. | 817.50 | 265.00 | 33.00 | 8.29 | 0. | 138.79 | 4.50 | 50.14 | 3.10 | 73.53 | 9.00 | 1.38 |
| | NOV. | 817.50 | 265.00 | 30.70 | 29.85 | 0. | 104.95 | 34.80 | 27.07 | 11.52 | 74.32 | 9.00 | 5.01 |
| | DEC. | 815.07 | 229.88 | 12.20 | 46.54 | 0. | 68.44 | 67.10 | 0.50 | 17.38 | 73.12 | 9.00 | 6.70 |
| 1962 | JAN. | 813.10 | 204.25 | 11.60 | 36.44 | 0. | 54.24 | 52.90 | 0.50 | 13.60 | 70.92 | 9.00 | 5.82 |
| | FEB. | 811.43 | 184.29 | 7.60 | 26.61 | 0. | 38.61 | 37.40 | 0.50 | 11.00 | 69.06 | 9.00 | 4.13 |
| | MAR. | 808.53 | 153.18 | 6.00 | 35.84 | 0. | 42.94 | 41.60 | 0.50 | 13.38 | 66.82 | 9.00 | 5.36 |
| | APR. | 803.06 | 105.61 | 5.60 | 52.10 | 0. | 57.80 | 56.50 | 0.50 | 19.47 | 62.62 | 9.00 | 6.48 |
| | MAY | 805.73 | 127.11 | 22.40 | 0. | 0. | 54.50 | 19.20 | 13.18 | 0. | 61.23 | 0. | 0. |
| | JUN. | 812.30 | 194.44 | 68.20 | 0. | 0. | 109.70 | 5.20 | 40.32 | 0. | 65.83 | 0. | 0. |

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DIS-CHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 812.30 | 194.44 | | | | | | | | | | |
| | JUL. | 813.72 | 212.07 | 18.60 | 0. | 0. | 82.10 | 12.20 | 26.10 | 0. | 69.84 | 0. | 0. |
| | AUG. | 816.16 | 245.15 | 34.20 | 0. | 0. | 61.20 | 1.00 | 22.48 | 0. | 71.77 | 0. | 0. |
| | SEP. | 817.50 | 265.00 | 73.70 | 50.46 | 2.03 | 136.29 | 1.80 | 51.89 | 19.47 | 73.60 | 9.00 | 6.48 |
| | OCT. | 817.50 | 265.00 | 137.00 | 52.14 | 83.58 | 213.92 | 4.50 | 78.19 | 19.47 | 73.42 | 9.00 | 6.70 |
| | NOV. | 817.35 | 262.69 | 13.00 | 14.50 | 0. | 36.10 | 34.80 | 0.50 | 5.59 | 74.24 | 9.00 | 2.43 |
| | DEC. | 814.21 | 219.39 | 11.50 | 55.04 | 0. | 68.44 | 67.10 | 0.50 | 19.47 | 72.61 | 9.00 | 6.70 |
| 1963 | JAN. | 811.51 | 185.11 | 8.60 | 41.14 | 0. | 54.24 | 52.90 | 0.50 | 15.36 | 69.69 | 9.00 | 6.44 |
| | FEB. | 809.10 | 159.92 | 6.00 | 31.31 | 0. | 38.61 | 37.40 | 0.50 | 12.94 | 67.09 | 9.00 | 4.70 |
| | MAR. | 805.71 | 126.97 | 5.20 | 36.04 | 0. | 42.94 | 41.60 | 0.50 | 13.46 | 64.24 | 9.00 | 5.16 |
| | APR. | 799.20 | 79.67 | 4.80 | 51.20 | 0. | 57.80 | 56.50 | 0.50 | 19.47 | 59.28 | 9.00 | 6.48 |
| | MAY | 797.27 | 68.69 | 4.70 | 15.04 | 0. | 20.54 | 19.20 | 0.50 | 5.61 | 55.07 | 8.22 | 1.82 |
| | JUN. | 801.56 | 94.87 | 26.70 | 0. | 0. | 71.00 | 5.20 | 25.39 | 0. | 56.24 | 0. | 0. |
| | JUL. | 805.63 | 126.26 | 32.00 | 0. | 0. | 73.40 | 12.20 | 22.85 | 0. | 60.43 | 0. | 0. |
| | AUG. | 807.02 | 138.61 | 13.10 | 0. | 0. | 43.00 | 1.00 | 15.68 | 0. | 63.16 | 0. | 0. |
| | SEP. | 810.20 | 170.45 | 32.70 | 0. | 0. | 102.20 | 1.80 | 38.73 | 0. | 65.43 | 0. | 0. |
| | OCT. | 814.21 | 218.40 | 48.80 | 0. | 0. | 183.70 | 4.50 | 66.91 | 0. | 69.04 | 0. | 0. |
| | NOV. | 817.35 | 262.74 | 45.10 | 0. | 0. | 129.50 | 34.80 | 36.54 | 0. | 72.60 | 0. | 0. |
| | DEC. | 814.61 | 223.73 | 6.60 | 44.84 | 0. | 68.44 | 67.10 | 0.50 | 16.74 | 72.82 | 9.00 | 6.70 |
| 1964 | JAN. | 811.94 | 190.23 | 5.40 | 38.14 | 0. | 54.24 | 52.90 | 0.50 | 14.24 | 70.11 | 9.00 | 6.01 |
| | FEB. | 809.62 | 164.29 | 3.90 | 28.95 | 0. | 38.65 | 37.40 | 0.50 | 11.56 | 67.59 | 9.00 | 4.38 |
| | MAR. | 806.44 | 133.40 | 3.70 | 33.44 | 0. | 42.94 | 41.60 | 0.50 | 12.48 | 64.87 | 9.00 | 4.84 |
| | APR. | 800.33 | 86.46 | 3.30 | 49.10 | 0. | 57.80 | 56.50 | 0.50 | 18.94 | 60.21 | 9.00 | 6.48 |
| | MAY | 798.61 | 76.13 | 3.10 | 12.94 | 0. | 20.54 | 19.20 | 0.50 | 4.83 | 56.30 | 8.50 | 1.60 |
| | JUN. | 809.78 | 166.03 | 90.60 | 0. | 0. | 284.00 | 5.20 | 107.56 | 0. | 61.01 | 0. | 0. |
| | JUL. | 817.50 | 265.00 | 111.00 | 11.00 | 0. | 175.40 | 12.20 | 60.93 | 4.11 | 70.48 | 9.00 | 1.74 |
| | AUG. | 817.50 | 265.00 | 16.10 | 14.82 | 0. | 61.92 | 1.00 | 30.21 | 5.53 | 74.33 | 9.00 | 2.49 |
| | SEP. | 817.50 | 265.00 | 58.20 | 50.46 | 6.34 | 184.80 | 1.80 | 70.60 | 19.47 | 74.19 | 9.00 | 6.48 |
| | OCT. | 817.50 | 265.00 | 74.60 | 52.14 | 21.26 | 325.21 | 4.50 | 119.74 | 19.47 | 73.97 | 9.00 | 6.70 |
| | NOV. | 817.50 | 265.00 | 7.60 | 6.78 | 0. | 45.28 | 34.80 | 4.04 | 2.62 | 74.32 | 9.00 | 1.14 |
| | DEC. | 814.79 | 226.08 | 6.20 | 44.34 | 0. | 68.44 | 67.10 | 0.50 | 16.55 | 72.98 | 9.00 | 6.70 |
| 1965 | JAN. | 811.45 | 184.49 | 2.80 | 43.64 | 0. | 54.24 | 52.90 | 0.50 | 16.29 | 69.95 | 9.00 | 6.70 |
| | FEB. | 806.31 | 150.92 | 3.00 | 35.71 | 0. | 38.61 | 37.40 | 0.50 | 14.76 | 66.67 | 9.00 | 5.32 |
| | MAR. | 803.96 | 112.54 | 1.90 | 39.24 | 0. | 42.94 | 41.60 | 0.50 | 14.65 | 62.97 | 9.00 | 5.49 |
| | APR. | 795.31 | 58.76 | 1.60 | 54.60 | 0. | 57.80 | 56.50 | 0.50 | 19.47 | 56.46 | 8.53 | 6.25 |
| | MAY | 799.42 | 80.95 | 22.80 | 0. | 0. | 71.20 | 19.20 | 19.41 | 0. | 54.20 | 0. | 0. |
| | JUN. | 805.60 | 126.02 | 45.70 | 0. | 0. | 103.60 | 5.20 | 37.96 | 0. | 59.33 | 0. | 0. |
| | JUL. | 807.48 | 142.92 | 17.60 | 0. | 0. | 43.40 | 12.20 | 11.65 | 0. | 63.37 | 0. | 0. |
| | AUG. | 808.65 | 154.31 | 12.20 | 0. | 0. | 44.60 | 1.00 | 16.28 | 0. | 64.90 | 0. | 0. |
| | SEP. | 817.50 | 265.00 | 263.00 | 50.46 | 100.50 | 299.16 | 1.80 | 114.72 | 19.47 | 68.87 | 9.00 | 6.48 |
| | OCT. | 817.50 | 265.00 | 83.20 | 52.14 | 29.85 | 312.99 | 4.50 | 115.18 | 19.47 | 73.86 | 9.00 | 6.70 |
| | NOV. | 817.50 | 265.00 | 37.60 | 36.75 | 0. | 95.55 | 34.80 | 23.44 | 14.18 | 74.32 | 9.00 | 6.17 |
| | DEC. | 815.30 | 233.07 | 13.30 | 44.44 | 0. | 68.44 | 67.10 | 0.50 | 16.59 | 73.23 | 9.00 | 6.70 |
| 1966 | JAN. | 813.08 | 203.95 | 7.90 | 36.24 | 0. | 54.24 | 52.90 | 0.50 | 13.53 | 71.02 | 9.00 | 5.79 |
| | FEB. | 811.08 | 180.29 | 4.80 | 27.51 | 0. | 38.61 | 37.40 | 0.50 | 11.37 | 68.87 | 9.00 | 4.25 |
| | MAR. | 808.23 | 150.20 | 4.90 | 33.74 | 0. | 42.94 | 41.60 | 0.50 | 12.60 | 66.49 | 9.00 | 5.02 |
| | APR. | 803.68 | 110.33 | 4.70 | 43.50 | 0. | 57.80 | 56.50 | 0.50 | 16.78 | 62.77 | 9.00 | 6.06 |
| | MAY | 809.24 | 160.72 | 51.40 | 0. | 0. | 144.50 | 19.20 | 46.78 | 0. | 63.31 | 0. | 0. |
| | JUN. | 816.17 | 245.27 | 85.60 | 0. | 0. | 398.10 | 5.20 | 151.58 | 0. | 69.54 | 0. | 0. |

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DIS-CHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 816.17 | 245.27 | | | | | | | | | | |
| | JUL. | 817.50 | 265.00 | 78.80 | 52.14 | 5.69 | 298.43 | 12.20 | 106.87 | 19.47 | 73.55 | 9.00 | 6.70 |
| | AUG. | 817.50 | 265.00 | 28.00 | 26.70 | 0. | 133.00 | 1.00 | 49.28 | 9.97 | 74.33 | 9.00 | 4.48 |
| | SEP. | 817.50 | 265.00 | 41.60 | 40.23 | 0. | 200.13 | 1.80 | 76.52 | 15.52 | 74.32 | 9.00 | 6.48 |
| | OCT. | 817.50 | 265.00 | 67.00 | 52.14 | 13.68 | 426.02 | 4.50 | 157.38 | 19.47 | 74.08 | 9.00 | 6.70 |
| | NOV. | 817.50 | 265.00 | 13.50 | 12.67 | 0. | 68.47 | 34.80 | 12.99 | 4.89 | 74.32 | 9.00 | 2.13 |
| | DEC. | 815.43 | 234.87 | 8.40 | 37.74 | 0. | 68.44 | 67.10 | 0.50 | 14.09 | 73.30 | 9.00 | 6.24 |
| 1967 | JAN. | 813.21 | 205.64 | 7.20 | 35.64 | 0. | 54.24 | 52.90 | 0.50 | 13.31 | 71.16 | 9.00 | 5.71 |
| | FEB. | 811.68 | 187.16 | 5.50 | 23.01 | 0. | 38.61 | 37.40 | 0.50 | 9.51 | 69.24 | 9.00 | 3.58 |
| | MAR. | 809.33 | 161.23 | 4.80 | 29.44 | 0. | 42.94 | 41.60 | 0.50 | 10.99 | 67.34 | 9.00 | 4.44 |
| | APR. | 807.17 | 140.02 | 11.10 | 31.10 | 0. | 57.80 | 56.50 | 0.50 | 12.00 | 65.07 | 9.00 | 4.51 |
| | MAY | 806.51 | 133.97 | 3.70 | 8.74 | 0. | 20.54 | 19.20 | 0.50 | 3.26 | 63.67 | 9.00 | 1.24 |
| | JUN. | 807.93 | 147.27 | 14.10 | 0. | 0. | 95.90 | 5.20 | 34.99 | 0. | 64.04 | 0. | 0. |
| | JUL. | 809.36 | 161.59 | 15.10 | 0. | 0. | 45.30 | 12.20 | 12.36 | 0. | 65.48 | 0. | 0. |
| | AUG. | 810.22 | 170.70 | 10.00 | 0. | 0. | 39.50 | 1.00 | 14.37 | 0. | 66.62 | 0. | 0. |
| | SEP. | 813.13 | 204.61 | 34.90 | 0. | 0. | 144.10 | 1.80 | 54.90 | 0. | 68.49 | 0. | 0. |
| | OCT. | 815.71 | 238.76 | 35.10 | 0. | 0. | 89.60 | 4.50 | 31.77 | 0. | 71.25 | 0. | 0. |
| | NOV. | 816.07 | 243.91 | 10.60 | 4.70 | 0. | 36.10 | 34.80 | 0.50 | 1.81 | 72.71 | 9.00 | 0.77 |
| | DEC. | 812.66 | 198.85 | 6.10 | 50.44 | 0. | 68.44 | 67.10 | 0.50 | 18.83 | 71.20 | 9.00 | 6.70 |
| 1968 | JAN. | 809.70 | 165.12 | 4.80 | 37.84 | 0. | 54.24 | 52.90 | 0.50 | 14.13 | 68.01 | 9.00 | 5.77 |
| | FEB. | 807.09 | 139.27 | 2.70 | 27.95 | 0. | 38.65 | 37.40 | 0.50 | 11.16 | 65.20 | 9.00 | 4.07 |
| | MAR. | 802.92 | 104.55 | 2.00 | 35.74 | 0. | 42.94 | 41.60 | 0.50 | 13.34 | 61.84 | 9.00 | 4.90 |
| | APR. | 794.50 | 55.01 | 1.90 | 50.70 | 0. | 57.80 | 56.50 | 0.50 | 19.47 | 55.53 | 8.32 | 6.15 |
| | MAY | 803.56 | 109.43 | 55.10 | 0. | 0. | 104.80 | 19.20 | 31.96 | 0. | 55.87 | 0. | 0. |
| | JUN. | 817.50 | 265.00 | 170.00 | 13.43 | 0. | 465.03 | 5.20 | 177.40 | 5.18 | 67.35 | 9.00 | 2.03 |
| | JUL. | 817.50 | 265.00 | 29.40 | 28.17 | 0. | 108.67 | 12.20 | 36.02 | 10.52 | 74.33 | 9.00 | 4.73 |
| | AUG. | 817.50 | 265.00 | 23.30 | 22.01 | 0. | 73.41 | 1.00 | 27.03 | 8.72 | 74.33 | 9.00 | 3.70 |
| | SEP. | 817.50 | 265.00 | 92.10 | 50.46 | 40.18 | 363.84 | 1.80 | 139.66 | 19.47 | 73.74 | 9.00 | 6.48 |
| | OCT. | 817.50 | 265.00 | 68.30 | 52.14 | 14.97 | 361.52 | 4.50 | 133.29 | 19.47 | 74.06 | 9.00 | 6.70 |
| | NOV. | 817.50 | 265.00 | 40.00 | 39.14 | 0. | 123.44 | 34.80 | 34.20 | 15.10 | 74.32 | 9.00 | 6.48 |
| | DEC. | 816.01 | 243.06 | 12.70 | 33.84 | 0. | 68.44 | 67.10 | 0.50 | 12.63 | 73.59 | 9.00 | 5.62 |
| 1969 | JAN. | 814.99 | 228.89 | 10.20 | 23.54 | 0. | 54.24 | 52.90 | 0.50 | 8.79 | 72.34 | 9.00 | 3.84 |
| | FEB. | 813.25 | 206.13 | 4.10 | 25.81 | 0. | 38.61 | 37.40 | 0.50 | 10.67 | 70.91 | 9.00 | 4.12 |
| | MAR. | 810.76 | 176.70 | 4.20 | 31.24 | 0. | 42.94 | 41.60 | 0.50 | 11.66 | 68.84 | 9.00 | 4.83 |
| | APR. | 806.13 | 130.58 | 2.00 | 46.90 | 0. | 57.80 | 54.50 | 0.50 | 18.09 | 65.26 | 9.00 | 6.48 |
| | MAY | 807.95 | 147.45 | 17.90 | 0. | 0. | 43.40 | 19.20 | 9.04 | 0. | 63.87 | 0. | 0. |
| | JUN. | 817.50 | 265.00 | 217.00 | 50.46 | 47.76 | 543.32 | 5.20 | 207.61 | 19.47 | 68.89 | 9.00 | 6.48 |
| | JUL. | 817.50 | 265.00 | 77.00 | 52.14 | 23.55 | 214.79 | 12.20 | 75.64 | 19.47 | 73.94 | 9.00 | 6.70 |
| | AUG. | 817.50 | 265.00 | 138.00 | 52.14 | 84.37 | 558.51 | 1.00 | 208.15 | 19.47 | 73.41 | 9.00 | 6.70 |
| | SEP. | 817.50 | 265.00 | 193.00 | 50.46 | 140.21 | 654.37 | 1.80 | 251.76 | 19.47 | 73.09 | 9.00 | 6.48 |
| | OCT. | 817.50 | 265.00 | 216.00 | 52.14 | 162.47 | 900.91 | 4.50 | 334.68 | 19.47 | 73.03 | 9.00 | 6.70 |
| | NOV. | 817.50 | 265.00 | 41.00 | 40.14 | 0. | 198.44 | 34.80 | 63.13 | 15.49 | 74.32 | 9.00 | 6.48 |
| | DEC. | 814.26 | 244.66 | 22.70 | 40.24 | 0. | 68.44 | 67.10 | 0.50 | 15.02 | 73.72 | 9.00 | 6.70 |
| 1970 | JAN. | 814.18 | 218.09 | 10.30 | 38.04 | 0. | 54.24 | 52.90 | 0.50 | 14.20 | 72.06 | 9.00 | 6.18 |
| | FEB. | 812.04 | 191.39 | 6.60 | 32.31 | 0. | 38.61 | 37.40 | 0.50 | 13.36 | 69.90 | 9.00 | 5.08 |
| | MAR. | 808.87 | 156.55 | 4.10 | 37.64 | 0. | 42.94 | 41.60 | 0.50 | 14.05 | 67.29 | 9.00 | 5.67 |
| | APR. | 803.34 | 107.77 | 8.60 | 56.30 | 0. | 57.80 | 56.50 | 0.50 | 19.47 | 62.93 | 9.00 | 6.48 |
| | MAY | 805.28 | 123.27 | 16.40 | 0. | 0. | 21.90 | 19.20 | 1.01 | 0. | 61.15 | 0. | 0. |
| | JUN. | 807.56 | 143.71 | 21.70 | 0. | 0. | 15.90 | 5.20 | 4.13 | 0. | 63.24 | 0. | 0. |

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DIS-CHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 807.56 | 143.71 | | | | | | | | | | |
| | JUL. | 812.48 | 196.66 | 53.80 | 0. | 0. | 88.10 | 12.70 | 28.34 | 0. | 66.86 | 0. | 0. |
| | AUG. | 817.50 | 265.00 | 97.00 | 27.49 | 0. | 213.09 | 1.00 | 79.18 | 10.26 | 71.83 | 9.00 | 4.45 |
| | SEP. | 817.50 | 265.00 | 187.00 | 50.46 | 134.92 | 545.68 | 1.80 | 209.83 | 19.47 | 73.12 | 9.00 | 6.48 |
| | OCT. | 817.50 | 265.00 | 80.40 | 57.14 | 27.06 | 400.10 | 4.50 | 147.70 | 19.47 | 73.90 | 9.00 | 6.70 |
| | NOV. | 817.50 | 265.00 | 30.30 | 29.45 | 0. | 123.95 | 34.80 | 34.40 | 11.36 | 74.32 | 9.00 | 4.95 |
| | DEC. | 816.28 | 246.86 | 15.40 | 32.74 | 0. | 68.44 | 67.10 | 0.50 | 12.22 | 73.72 | 9.00 | 5.45 |
| 1971 | JAN. | 814.71 | 225.08 | 7.20 | 28.14 | 0. | 54.24 | 52.90 | 0.50 | 10.51 | 72.33 | 9.00 | 4.59 |
| | FEB. | 813.33 | 207.13 | 4.90 | 21.81 | 0. | 38.61 | 37.40 | 0.50 | 9.02 | 70.81 | 9.00 | 3.48 |
| | MAR. | 811.07 | 180.09 | 3.40 | 29.04 | 0. | 42.94 | 41.60 | 0.50 | 10.84 | 69.03 | 9.00 | 4.50 |
| | APR. | 806.59 | 134.75 | 3.00 | 47.10 | 0. | 57.80 | 56.50 | 0.50 | 18.17 | 65.65 | 9.00 | 6.48 |
| | MAY | 809.08 | 158.67 | 25.00 | 0. | 0. | 54.90 | 19.20 | 13.33 | 0. | 64.67 | 0. | 0. |
| | JUN. | 810.66 | 175.57 | 17.80 | 0. | 0. | 41.20 | 5.20 | 13.89 | 0. | 66.69 | 0. | 0. |
| | JUL. | 812.08 | 191.77 | 17.10 | 0. | 0. | 19.60 | 12.20 | 2.76 | 0. | 68.20 | 0. | 0. |
| | AUG. | 815.37 | 234.11 | 43.40 | 0. | 0. | 81.00 | 1.00 | 29.87 | 0. | 70.56 | 0. | 0. |
| | SEP. | 817.50 | 265.00 | 109.00 | 50.46 | 26.27 | 323.83 | 1.80 | 124.24 | 19.47 | 72.82 | 9.00 | 6.48 |
| | OCT. | 817.50 | 265.00 | 102.00 | 52.14 | 48.62 | 393.67 | 4.50 | 145.30 | 19.47 | 73.68 | 9.00 | 6.70 |
| | NOV. | 817.50 | 265.00 | 19.70 | 18.87 | 0. | 75.57 | 34.80 | 15.73 | 7.28 | 74.32 | 9.00 | 3.17 |
| | DEC. | 815.17 | 231.27 | 8.30 | 41.24 | 0. | 68.44 | 67.10 | 0.50 | 15.40 | 73.17 | 9.00 | 6.70 |
| 1972 | JAN. | 812.78 | 200.25 | 5.90 | 36.14 | 0. | 54.24 | 52.90 | 0.50 | 13.49 | 70.81 | 9.00 | 5.76 |
| | FEB. | 810.73 | 176.37 | 3.40 | 26.35 | 0. | 38.65 | 37.40 | 0.50 | 10.52 | 68.56 | 9.00 | 4.05 |
| | MAR. | 807.50 | 143.11 | 2.30 | 34.34 | 0. | 42.94 | 41.60 | 0.50 | 12.82 | 65.95 | 9.00 | 5.06 |
| | APR. | 801.42 | 93.92 | 2.60 | 50.80 | 0. | 57.80 | 56.50 | 0.50 | 19.47 | 61.28 | 9.00 | 6.48 |
| | MAY | 803.36 | 107.91 | 14.90 | 0. | 0. | 41.00 | 19.20 | 8.14 | 0. | 59.23 | 0. | 0. |
| | JUN. | 807.93 | 147.27 | 40.10 | 0. | 0. | 110.10 | 5.20 | 40.47 | 0. | 62.47 | 0. | 0. |
| | JUL. | 808.69 | 154.70 | 8.20 | 0. | 0. | 12.50 | 12.20 | 1.98 | 0. | 65.14 | 0. | 0. |
| | AUG. | 809.47 | 162.75 | 8.90 | 0. | 0. | 22.80 | 1.00 | 8.14 | 0. | 65.91 | 0. | 0. |
| | SEP. | 810.35 | 172.13 | 10.30 | 0. | 0. | 21.90 | 1.80 | 7.75 | 0. | 66.73 | 0. | 0. |
| | OCT. | 811.09 | 180.34 | 9.00 | 0. | 0. | 27.60 | 4.50 | 8.62 | 0. | 67.55 | 0. | 0. |
| | NOV. | 809.96 | 167.87 | 5.00 | 16.88 | 0. | 34.58 | 33.28* | 0.50 | 6.51 | 67.34 | 9.00 | 2.55 |
| | DEC. | 805.17 | 122.39 | 3.50 | 48.45 | 0. | 58.25 | 56.91* | 0.50 | 18.09 | 64.40 | 9.00 | 6.70 |
| 1973 | JAN. | 802.29 | 100.01 | 3.40 | 25.31 | 0. | 32.01 | 30.67* | 0.50 | 9.45 | 60.57 | 9.00 | 3.38 |
| | FEB. | 800.37 | 86.93 | 3.00 | 15.53 | 0. | 18.63 | 17.42* | 0.50 | 6.42 | 58.12 | 8.91 | 1.98 |
| | MAR. | 798.10 | 73.26 | 3.20 | 16.16 | 0. | 17.56 | 16.22* | 0.50 | 6.03 | 56.07 | 8.45 | 1.99 |
| | APR. | 794.50 | 55.00 | 3.00 | 20.62 | 0. | 23.72 | 22.43* | 0.50 | 7.96 | 53.12 | 7.79 | 2.41 |
| | MAY | 797.77 | 71.39 | 18.40 | 1.44 | 0. | 20.54 | 19.20 | 0.50 | 0.54 | 52.97 | 7.75 | 0.17 |
| | JUN. | 804.79 | 119.21 | 48.40 | 0. | 0. | 51.40 | 5.20 | 17.82 | 0. | 58.10 | 0. | 0. |
| | JUL. | 809.63 | 164.37 | 45.90 | 0. | 0. | 62.60 | 12.20 | 18.82 | 0. | 64.04 | 0. | 0. |
| | AUG. | 812.31 | 194.54 | 31.10 | 0. | 0. | 50.00 | 1.00 | 18.29 | 0. | 67.80 | 0. | 0. |
| | SEP. | 817.50 | 265.00 | 94.40 | 22.93 | 0. | 196.73 | 1.80 | 75.21 | 8.85 | 71.72 | 9.00 | 3.71 |
| | OCT. | 817.50 | 265.00 | 186.00 | 52.14 | 132.51 | 659.85 | 4.50 | 244.68 | 19.47 | 73.15 | 9.00 | 6.70 |
| | NOV. | 817.50 | 265.00 | 43.00 | 42.14 | 0. | 189.34 | 34.80 | 59.62 | 16.26 | 74.32 | 9.00 | 6.48 |
| | DEC. | 815.48 | 235.57 | 10.40 | 39.04 | 0. | 68.44 | 67.10 | 0.50 | 14.58 | 73.32 | 9.00 | 6.46 |
| 1974 | JAN. | 812.86 | 201.24 | 6.40 | 39.94 | 0. | 54.24 | 52.90 | 0.50 | 14.91 | 71.00 | 9.00 | 6.38 |
| | FEB. | 810.31 | 171.70 | 5.40 | 34.01 | 0. | 38.61 | 37.40 | 0.50 | 14.06 | 68.37 | 9.00 | 5.21 |
| | MAR. | 806.66 | 135.39 | 4.80 | 39.94 | 0. | 42.94 | 41.60 | 0.50 | 14.91 | 65.32 | 9.00 | 5.82 |
| | APR. | 799.85 | 83.65 | 3.40 | 54.20 | 0. | 57.80 | 56.50 | 0.50 | 19.47 | 60.08 | 9.00 | 6.48 |
| | MAY | 810.63 | 175.18 | 92.50 | 0. | 0. | 174.30 | 19.20 | 57.91 | 0. | 62.07 | 0. | 0. |
| | JUN. | 814.22 | 218.56 | 44.40 | 0. | 0. | 184.80 | 5.20 | 69.29 | 0. | 69.24 | 0. | 0. |

| YEAR | MONTH | WATER LEVEL | GROSS STORAGE | INFLOW | OUTFLOW | SPILL-OUT | DIS-CHARGE | WATER USED FOR IRRIGATION | RIVER FLOW | OUTFLOW FOR POWER | HEAD FOR POWER | POWER PEAKING CAPACITY | ENERGY OUTPUT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | MCM | MCM | MCM | MCM | MCM | MCM | CMS | CMS | M | MW | GWH |
| | | 814.22 | 218.56 | | | | | | | | | | |
| | JUL. | 815.65 | 238.00 | 20.50 | 0. | 0. | 94.90 | 12.20 | 30.88 | 0. | 71.77 | 0. | 0. |
| | AUG. | 816.20 | 245.73 | 8.90 | 0. | 0. | 108.80 | 1.00 | 40.25 | 0. | 72.76 | 0. | 0. |
| | SEP. | 817.50 | 265.00 | 111.40 | 50.46 | 40.25 | 546.51 | 1.80 | 210.15 | 19.47 | 73.08 | 9.00 | 6.48 |
| | OCT. | 817.50 | 265.00 | 42.40 | 41.25 | 0. | 372.55 | 4.50 | 137.42 | 15.40 | 74.33 | 9.00 | 6.70 |
| | NOV. | 817.50 | 265.00 | 12.80 | 11.97 | 0. | 81.87 | 34.80 | 18.16 | 14.62 | 74.32 | 9.00 | 2.01 |
| | DEC. | 814.34 | 220.09 | 10.50 | 54.64 | 0. | 68.44 | 67.10 | 0.50 | 19.47 | 72.75 | 9.00 | 6.70 |
| 1975 | JAN. | 810.97 | 179.01 | 9.70 | 50.04 | 0. | 54.24 | 52.90 | 0.50 | 18.68 | 69.49 | 9.00 | 6.70 |
| | FEB. | 807.92 | 147.17 | 6.90 | 37.91 | 0. | 38.61 | 37.40 | 0.50 | 15.67 | 66.23 | 9.00 | 5.61 |
| | MAR. | 803.71 | 110.60 | 5.20 | 40.74 | 0. | 42.94 | 41.60 | 0.50 | 15.21 | 62.65 | 9.00 | 5.66 |
| | APR. | 795.45 | 59.42 | 3.80 | 54.20 | 0. | 57.80 | 56.50 | 0.50 | 19.47 | 56.40 | 8.52 | 6.25 |
| | MAY | 797.41 | 69.41 | 15.20 | 4.64 | 0. | 20.54 | 19.20 | 0.50 | 1.73 | 53.26 | 7.82 | 0.54 |
| | JUN. | 797.92 | 72.24 | 8.50 | 5.20 | 0. | 6.50 | 5.20 | 0.50 | 2.00 | 54.48 | 8.09 | 0.62 |
| | JUL. | 800.74 | 89.36 | 17.60 | 0. | 0. | 20.20 | 12.20 | 2.99 | 0. | 56.17 | 0. | 0. |
| | AUG. | 801.48 | 94.30 | 5.50 | 0. | 0. | 51.60 | 1.00 | 18.89 | 0. | 57.95 | 0. | 0. |
| | SEP. | 817.50 | 265.00 | 234.30 | 50.46 | 12.08 | 489.64 | 1.80 | 188.21 | 19.47 | 66.07 | 9.00 | 6.48 |
| | OCT. | 817.50 | 265.00 | 164.00 | 57.14 | 110.54 | 606.38 | 4.50 | 224.72 | 19.47 | 73.26 | 9.00 | 6.70 |
| | NOV. | 817.50 | 265.00 | 187.00 | 50.46 | 135.53 | 418.49 | 34.80 | 148.03 | 19.47 | 73.12 | 9.00 | 6.48 |
| | DEC. | 817.50 | 265.00 | 13.40 | 12.56 | 0. | 81.46 | 67.10 | 5.36 | 4.69 | 74.33 | 9.00 | 2.11 |
| 1976 | JAN. | 815.62 | 237.48 | 9.00 | 35.64 | 0. | 54.24 | 52.90 | 0.50 | 13.31 | 73.39 | 9.00 | 5.90 |
| | FEB. | 813.80 | 213.16 | 6.40 | 29.65 | 0. | 38.65 | 37.40 | 0.50 | 11.83 | 71.51 | 9.00 | 4.78 |
| | MAR. | 810.91 | 178.31 | 5.40 | 38.84 | 0. | 42.94 | 41.60 | 0.50 | 14.50 | 69.19 | 9.00 | 6.03 |
| | APR. | 805.75 | 127.29 | 5.20 | 55.00 | 0. | 57.80 | 56.50 | 0.50 | 19.47 | 65.15 | 9.00 | 6.48 |
| | | | | | | | | | | | | | 989.00 |

RESERVOIR OPERATION SAN FERNANDO DAM PLAN



HIGH WATER LEVEL 821.50 LOW WATER LEVEL 794.50

GROSS STORAGE CAPACITY 340.00 MCM

DEAD STORAGE CAPACITY . 55.00 MCM

EVAPORATION DATA IN MM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 64.0 | 85.0 | 125.0 | 130.0 | 118.0 | 90.0 | 83.0 | 88.0 | 91.0 | 76.0 | 57.0 | 58.0 |

MAXIMUM DISCHARGE FOR POWER GENERATION 19.57 CMS

POWER INSTALLED CAPACITY 10000. KW

RATED HEAD FOR POWER GENERATION 64.3 M

GUARANTEED MINIMUM DISCHARGE FOR POWER GENERATION 4.08 CMS

SEASONAL MINIMUM STORAGE IN MCM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 157.90 | 137.10 | 55.00 | 55.00 | 55.00 | 55.00 | 55.00 | 120.00 | 155.00 | 191.60 | 191.60 | 181.60 |

MONTHLY IRRIGATION WATER REQUIREMENT

UPSTREAM OF DAMSITE IN MCM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |

DOWNSTREAM OF DAMSITE IN MCM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 52.90 | 37.40 | 41.60 | 56.50 | 19.20 | 5.20 | 12.20 | 1.00 | 1.80 | 4.50 | 34.80 | 67.10 |

RESERVOIR OPERATIO  SAN FERNANDO DAM PLAN

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DISCHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 820.00 | 312.65 | | | | | | | | | | |
| 1954 | AUG. | 821.44 | 338.89 | 38.60 | 10.92 | 0. | 113.42 | 1.00 | 41.97 | 4.08 | 77.55 | 10.00 | 1.91 |
| | SEP. | 821.50 | 340.00 | 207.00 | 50.74 | 153.31 | 707.05 | 1.80 | 272.09 | 19.57 | 77.01 | 10.00 | 7.20 |
| | OCT. | 821.50 | 340.00 | 172.00 | 52.43 | 118.07 | 775.40 | 4.50 | 287.82 | 19.57 | 77.22 | 10.00 | 7.44 |
| | NOV. | 821.50 | 340.00 | 20.40 | 19.43 | 0. | 80.63 | 34.80 | 17.68 | 7.50 | 78.32 | 10.00 | 3.43 |
| | DEC. | 819.75 | 299.63 | 8.40 | 47.84 | 0. | 68.44 | 67.10 | 0.50 | 17.86 | 77.21 | 10.00 | 7.44 |
| 1955 | JAN. | 817.38 | 269.04 | 6.90 | 36.54 | 0. | 54.24 | 52.90 | 0.50 | 13.64 | 75.15 | 10.00 | 6.17 |
| | FEB. | 815.92 | 246.86 | 6.20 | 27.21 | 0. | 38.61 | 37.40 | 0.50 | 11.25 | 73.44 | 10.00 | 4.48 |
| | MAR. | 814.19 | 222.42 | 6.10 | 28.94 | 0. | 42.94 | 41.60 | 0.50 | 10.80 | 71.89 | 10.00 | 4.66 |
| | APR. | 810.97 | 182.04 | 5.70 | 44.60 | 0. | 57.80 | 56.50 | 0.50 | 17.21 | 69.40 | 10.00 | 6.90 |
| | MAY | 810.38 | 175.18 | 5.30 | 10.92 | 0. | 23.22 | 19.20 | 1.50 | 4.08 | 67.51 | 10.00 | 1.64 |
| | JUN. | 810.01 | 171.10 | 7.40 | 10.57 | 0. | 29.17 | 5.20 | 9.25 | 4.08 | 67.01 | 10.00 | 1.57 |
| | JUL. | 818.51 | 287.14 | 128.00 | 10.92 | 0. | 268.42 | 12.20 | 95.66 | 4.08 | 71.09 | 10.00 | 1.74 |
| | AUG. | 821.50 | 340.00 | 71.80 | 17.53 | 0. | 208.23 | 1.00 | 77.37 | 6.54 | 76.84 | 10.00 | 3.03 |
| | SEP. | 821.50 | 340.00 | 137.00 | 50.74 | 84.52 | 468.16 | 1.80 | 179.92 | 19.57 | 77.39 | 10.00 | 7.20 |
| | OCT. | 821.50 | 340.00 | 246.00 | 52.43 | 191.98 | 1109.41 | 4.50 | 412.53 | 19.57 | 76.91 | 10.00 | 7.44 |
| | NOV. | 821.50 | 340.00 | 58.60 | 50.74 | 6.85 | 232.39 | 34.80 | 76.23 | 19.57 | 78.17 | 10.00 | 7.20 |
| | DEC. | 821.50 | 340.00 | 21.00 | 20.02 | 0. | 70.32 | 67.10 | 1.20 | 7.47 | 78.33 | 10.00 | 3.54 |
| 1956 | JAN. | 820.82 | 327.29 | 12.10 | 23.74 | 0. | 54.24 | 52.90 | 0.50 | 8.86 | 77.99 | 10.00 | 4.18 |
| | FEB. | 819.92 | 311.17 | 8.50 | 23.25 | 0. | 38.65 | 37.40 | 0.50 | 9.28 | 77.17 | 10.00 | 4.04 |
| | MAR. | 818.44 | 286.12 | 6.00 | 29.14 | 0. | 42.94 | 41.60 | 0.50 | 10.88 | 76.01 | 10.00 | 4.99 |
| | APR. | 815.80 | 245.10 | 5.60 | 44.80 | 0. | 57.80 | 56.50 | 0.50 | 17.28 | 73.94 | 10.00 | 7.20 |
| | MAY | 815.99 | 247.81 | 15.20 | 10.92 | 0. | 45.42 | 19.20 | 9.79 | 4.08 | 72.73 | 10.00 | 1.78 |
| | JUN. | 820.98 | 330.29 | 94.40 | 10.57 | 0. | 245.97 | 5.20 | 92.89 | 4.08 | 75.30 | 10.00 | 1.79 |
| | JUL. | 821.50 | 340.00 | 51.70 | 40.56 | 0. | 144.66 | 12.20 | 49.45 | 15.14 | 78.07 | 10.00 | 7.14 |
| | AUG. | 821.50 | 340.00 | 14.40 | 14.91 | 0. | 58.51 | 1.00 | 21.47 | 5.57 | 78.33 | 10.00 | 2.64 |
| | SEP. | 821.50 | 340.00 | 41.90 | 40.31 | 0. | 142.11 | 1.80 | 54.13 | 15.55 | 78.32 | 10.00 | 7.12 |
| | OCT. | 821.50 | 340.00 | 38.50 | 37.18 | 0. | 172.68 | 4.50 | 62.79 | 13.88 | 78.33 | 10.00 | 6.57 |
| | NOV. | 821.50 | 340.00 | 15.60 | 14.63 | 0. | 63.33 | 34.80 | 11.01 | 5.65 | 78.32 | 10.00 | 2.59 |
| | DEC. | 819.66 | 306.62 | 13.50 | 45.96 | 0. | 68.44 | 67.10 | 0.50 | 17.15 | 77.41 | 10.00 | 7.44 |
| 1957 | JAN. | 819.01 | 295.49 | 13.30 | 23.44 | 0. | 54.24 | 52.90 | 0.50 | 8.75 | 76.16 | 10.00 | 4.02 |
| | FEB. | 818.39 | 285.30 | 8.10 | 17.01 | 0. | 38.61 | 37.40 | 0.50 | 7.03 | 75.49 | 10.00 | 2.89 |
| | MAR. | 816.99 | 262.97 | 5.90 | 26.44 | 0. | 42.94 | 41.60 | 0.50 | 9.87 | 74.53 | 10.00 | 4.43 |
| | APR. | 814.35 | 224.56 | 5.40 | 42.10 | 0. | 57.80 | 56.50 | 0.50 | 16.24 | 72.49 | 10.00 | 6.84 |
| | MAY | 815.59 | 242.03 | 29.90 | 10.92 | 0. | 127.82 | 19.20 | 40.55 | 4.08 | 71.80 | 10.00 | 1.76 |
| | JUN. | 819.88 | 310.46 | 80.30 | 10.57 | 0. | 158.37 | 5.20 | 59.09 | 4.08 | 74.55 | 10.00 | 1.77 |
| | JUL. | 820.29 | 317.82 | 19.60 | 10.92 | 0. | 37.32 | 12.20 | 9.38 | 4.08 | 76.92 | 10.00 | 1.89 |
| | AUG. | 820.75 | 326.07 | 20.60 | 10.92 | 0. | 52.82 | 1.00 | 19.35 | 4.08 | 77.35 | 10.00 | 1.90 |
| | SEP. | 821.50 | 340.00 | 53.70 | 38.21 | 0. | 222.51 | 1.80 | 85.15 | 14.74 | 77.94 | 10.00 | 6.72 |
| | OCT. | 821.50 | 340.00 | 43.40 | 42.07 | 0. | 200.07 | 4.50 | 73.02 | 15.71 | 78.33 | 10.00 | 7.44 |
| | NOV. | 821.48 | 339.67 | 11.20 | 10.57 | 0. | 40.17 | 34.80 | 2.07 | 4.08 | 78.31 | 10.00 | 1.87 |
| | DEC. | 819.19 | 298.69 | 10.10 | 50.14 | 0. | 68.44 | 67.10 | 0.50 | 18.72 | 77.17 | 10.00 | 7.44 |
| 1958 | JAN. | 817.00 | 263.02 | 6.10 | 40.84 | 0. | 54.24 | 52.90 | 0.50 | 15.25 | 74.93 | 10.00 | 6.88 |
| | FEB. | 815.07 | 234.57 | 4.00 | 31.31 | 0. | 38.61 | 37.40 | 0.50 | 12.94 | 72.82 | 10.00 | 5.11 |
| | MAR. | 812.51 | 200.52 | 3.90 | 36.44 | 0. | 42.94 | 41.60 | 0.50 | 13.60 | 70.62 | 10.00 | 5.75 |
| | APR. | 808.07 | 150.69 | 3.20 | 51.70 | 0. | 57.80 | 56.50 | 0.50 | 19.57 | 67.11 | 10.00 | 7.20 |
| | JUN. | 818.26 | 283.04 | 144.00 | 10.57 | 0. | 249.97 | 5.20 | 94.43 | 4.08 | 69.98 | 10.00 | 1.65 |
| | MAY | 821.32 | 336.66 | 66.40 | 10.92 | 0. | 115.82 | 19.20 | 36.07 | 4.08 | 76.62 | 10.00 | 1.89 |

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DIS-CHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 821.32 | 336.66 | | | | | | | | | | |
| | JUL. | 821.50 | 340.00 | 65.40 | 52.43 | 8.16 | 247.29 | 12.20 | 87.77 | 19.57 | 78.08 | 10.00 | 7.44 |
| | AUG. | 821.50 | 340.00 | 34.00 | 32.48 | 0. | 124.58 | 1.00 | 46.14 | 12.13 | 78.33 | 10.00 | 5.74 |
| | SEP. | 821.50 | 340.00 | 27.00 | 25.44 | 0. | 83.84 | 1.80 | 31.65 | 9.81 | 78.32 | 10.00 | 4.50 |
| | OCT. | 821.50 | 340.00 | 66.80 | 52.43 | 13.01 | 229.04 | 4.50 | 83.83 | 19.57 | 78.09 | 10.00 | 7.44 |
| | NOV. | 821.45 | 339.07 | 10.60 | 10.57 | 0. | 44.07 | 34.80 | 3.58 | 4.08 | 78.29 | 10.00 | 1.87 |
| | DEC. | 818.87 | 293.20 | 8.00 | 52.94 | 0. | 68.44 | 67.10 | 0.50 | 19.57 | 76.99 | 10.00 | 7.44 |
| 1959 | JAN. | 816.81 | 260.74 | 8.20 | 40.74 | 0. | 54.24 | 52.90 | 0.50 | 15.02 | 74.67 | 10.00 | 6.75 |
| | FEB. | 815.11 | 235.19 | 5.90 | 29.81 | 0. | 38.61 | 37.40 | 0.50 | 12.32 | 72.75 | 10.00 | 4.86 |
| | MAR. | 812.53 | 200.84 | 4.80 | 37.64 | 0. | 42.94 | 41.60 | 0.50 | 14.05 | 70.66 | 10.00 | 5.94 |
| | APR. | 807.94 | 149.41 | 4.10 | 54.20 | 0. | 57.80 | 56.50 | 0.50 | 19.57 | 67.06 | 10.00 | 7.20 |
| | MAY | 809.24 | 162.77 | 25.40 | 10.92 | 0. | 35.32 | 19.20 | 6.02 | 4.08 | 65.42 | 10.00 | 1.58 |
| | JUN. | 811.62 | 189.67 | 38.40 | 10.57 | 0. | 55.37 | 5.20 | 19.36 | 4.08 | 67.25 | 10.00 | 1.58 |
| | JUL. | 811.74 | 191.04 | 13.20 | 10.92 | 0. | 19.92 | 17.20 | 2.88 | 4.08 | 68.51 | 10.00 | 1.67 |
| | AUG. | 812.78 | 203.93 | 24.80 | 10.92 | 0. | 35.72 | 1.00 | 12.96 | 4.08 | 69.09 | 10.00 | 1.68 |
| | SEP. | 813.44 | 212.39 | 20.10 | 10.57 | 0. | 36.97 | 1.80 | 13.57 | 4.08 | 69.93 | 10.00 | 1.65 |
| | OCT. | 816.71 | 258.69 | 58.20 | 10.92 | 0. | 193.42 | 4.50 | 70.54 | 4.08 | 71.91 | 10.00 | 1.76 |
| | NOV. | 817.13 | 265.03 | 17.70 | 10.57 | 0. | 36.37 | 34.80 | 0.61 | 4.08 | 73.74 | 10.00 | 1.75 |
| | DEC. | 813.56 | 214.04 | 11.20 | 61.44 | 0. | 68.44 | 67.10 | 0.50 | 19.57 | 72.18 | 10.00 | 7.44 |
| 1960 | JAN. | 810.34 | 174.79 | 5.30 | 43.84 | 0. | 54.24 | 52.90 | 0.50 | 16.37 | 68.78 | 10.00 | 6.72 |
| | FEB. | 807.34 | 143.52 | 3.90 | 34.35 | 0. | 38.65 | 37.40 | 0.50 | 13.71 | 65.64 | 10.00 | 4.99 |
| | MAR. | 802.93 | 105.59 | 3.50 | 40.44 | 0. | 42.94 | 41.60 | 0.50 | 15.10 | 61.97 | 9.45 | 5.53 |
| | APR. | 794.50 | 55.00 | 3.30 | 53.15 | 0. | 55.85 | 54.55* | 0.50 | 19.57 | 55.53 | 8.02 | 6.22 |
| | MAY | 795.17 | 58.16 | 14.60 | 10.92 | 0. | 105.02 | 19.20 | 32.04 | 4.08 | 51.67 | 7.20 | 1.24 |
| | JUN. | 808.78 | 157.95 | 111.00 | 10.57 | 0. | 165.27 | 5.20 | 61.76 | 4.08 | 58.80 | 8.74 | 1.37 |
| | JUL. | 809.59 | 166.52 | 20.30 | 10.92 | 0. | 129.92 | 12.20 | 43.95 | 4.08 | 66.02 | 10.00 | 1.60 |
| | AUG. | 812.22 | 196.87 | 42.70 | 10.92 | 0. | 184.72 | 1.00 | 68.59 | 4.08 | 67.73 | 10.00 | 1.64 |
| | SEP. | 818.00 | 278.83 | 93.70 | 10.57 | 0. | 176.97 | 1.80 | 67.58 | 4.08 | 71.92 | 10.00 | 1.70 |
| | OCT. | 821.50 | 340.00 | 131.00 | 52.43 | 16.13 | 284.45 | 4.50 | 104.52 | 19.57 | 76.29 | 10.00 | 7.44 |
| | NOV. | 821.50 | 340.00 | 18.60 | 17.63 | 0. | 106.83 | 34.80 | 27.79 | 6.80 | 78.32 | 10.00 | 3.12 |
| | DEC. | 819.83 | 309.71 | 11.00 | 40.34 | 0. | 68.44 | 67.10 | 0.50 | 15.06 | 77.50 | 10.00 | 7.05 |
| 1961 | JAN. | 818.58 | 288.39 | 10.40 | 30.74 | 0. | 54.24 | 52.90 | 0.50 | 11.48 | 76.04 | 10.00 | 5.26 |
| | FEB. | 817.80 | 275.73 | 8.40 | 19.81 | 0. | 38.61 | 37.40 | 0.50 | 8.19 | 74.98 | 10.00 | 3.34 |
| | MAR. | 816.30 | 252.45 | 7.50 | 28.84 | 0. | 42.94 | 41.60 | 0.50 | 10.77 | 73.88 | 10.00 | 4.78 |
| | APR. | 813.24 | 209.81 | 5.70 | 46.70 | 0. | 57.80 | 56.50 | 0.50 | 18.02 | 71.59 | 10.00 | 7.20 |
| | MAY | 812.69 | 202.79 | 5.90 | 11.54 | 0. | 20.54 | 19.20 | 0.50 | 4.31 | 69.80 | 10.00 | 1.80 |
| | JUN. | 813.73 | 216.27 | 25.10 | 10.57 | 0. | 149.57 | 5.20 | 55.70 | 4.08 | 70.03 | 10.00 | 1.65 |
| | JUL. | 815.20 | 236.41 | 32.10 | 10.92 | 0. | 153.72 | 12.20 | 52.84 | 4.08 | 71.30 | 10.00 | 1.74 |
| | AUG. | 815.52 | 240.95 | 16.60 | 10.92 | 0. | 84.32 | 1.00 | 31.11 | 4.08 | 72.19 | 10.00 | 1.77 |
| | SEP. | 817.50 | 270.93 | 41.80 | 10.57 | 0. | 112.37 | 1.80 | 42.66 | 4.08 | 73.33 | 10.00 | 1.74 |
| | OCT. | 818.79 | 291.90 | 33.00 | 10.92 | 0. | 141.42 | 4.50 | 51.12 | 4.08 | 74.98 | 10.00 | 1.84 |
| | NOV. | 819.91 | 311.14 | 30.70 | 10.57 | 0. | 85.67 | 34.80 | 19.63 | 4.08 | 76.17 | 10.00 | 1.81 |
| | DEC. | 817.82 | 275.93 | 12.20 | 46.54 | 0. | 68.44 | 67.10 | 0.50 | 17.38 | 75.70 | 10.00 | 7.44 |
| 1962 | JAN. | 816.15 | 250.20 | 11.60 | 36.44 | 0. | 54.24 | 52.90 | 0.50 | 13.60 | 73.81 | 10.00 | 6.04 |
| | FEB. | 814.75 | 230.08 | 7.60 | 26.61 | 0. | 38.61 | 37.40 | 0.50 | 11.00 | 72.23 | 10.00 | 4.31 |
| | MAR. | 812.37 | 198.74 | 6.00 | 35.84 | 0. | 42.94 | 41.60 | 0.50 | 13.38 | 70.39 | 10.00 | 5.63 |
| | APR. | 808.09 | 150.92 | 5.60 | 52.10 | 0. | 57.80 | 56.50 | 0.50 | 19.57 | 67.05 | 10.00 | 7.20 |
| | MAY | 809.10 | 161.28 | 22.40 | 10.92 | 0. | 65.42 | 19.20 | 17.26 | 4.08 | 65.43 | 10.00 | 1.58 |
| | JUN. | 813.86 | 217.91 | 68.20 | 10.57 | 0. | 120.27 | 5.20 | 44.39 | 4.08 | 68.30 | 10.00 | 1.61 |

| YEAR | MONTH | WATER LEVEL | GROSS STORAGE | INFLOW | OUTFLOW | SPILL-OUT | DIS-CHARGE | WATER USED FOR IRRIGATION | RIVER FLOW | OUTFLOW FOR POWER | HEAD FOR POWER | POWER PEAKING CAPACITY | ENERGY OUTPUT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | MCM | MCM | MCM | MCM | MCM | MCM | CMS | CMS | M | MW | GWH |
| | | 813.86 | 217.93 | | | | | | | | | | |
| | JUL. | 814.35 | 224.59 | 18.60 | 10.92 | 0. | 93.02 | 12.20 | 30.18 | 4.08 | 70.94 | 10.00 | 1.73 |
| | AUG. | 815.91 | 246.74 | 34.20 | 10.92 | 0. | 72.12 | 1.00 | 26.55 | 4.08 | 71.96 | 10.00 | 1.76 |
| | SEP. | 819.77 | 308.55 | 73.70 | 10.57 | 0. | 94.37 | 1.80 | 35.71 | 4.08 | 74.66 | 10.00 | 1.77 |
| | OCT. | 821.50 | 340.00 | 137.00 | 52.43 | 51.75 | 182.38 | 4.50 | 66.41 | 19.57 | 76.78 | 10.00 | 7.44 |
| | NOV. | 821.37 | 337.54 | 13.00 | 14.50 | 0. | 36.10 | 34.80 | 0.50 | 5.59 | 78.25 | 10.00 | 2.56 |
| | DEC. | 818.86 | 293.08 | 11.50 | 55.04 | 0. | 68.44 | 67.10 | 0.50 | 19.57 | 76.95 | 10.00 | 7.44 |
| 1963 | JAN. | 816.77 | 259.61 | 8.60 | 41.14 | 0. | 54.24 | 52.90 | 0.50 | 15.36 | 74.65 | 10.00 | 6.90 |
| | FEB. | 814.97 | 233.18 | 6.00 | 31.31 | 0. | 38.61 | 37.40 | 0.50 | 12.94 | 72.66 | 10.00 | 5.10 |
| | MAR. | 812.53 | 200.83 | 5.20 | 36.04 | 0. | 42.94 | 41.60 | 0.50 | 13.46 | 70.58 | 10.00 | 5.68 |
| | APR. | 808.31 | 153.09 | 4.80 | 51.20 | 0. | 57.80 | 56.50 | 0.50 | 19.57 | 67.24 | 10.00 | 7.20 |
| | MAY | 807.15 | 141.68 | 4.70 | 15.04 | 0. | 20.54 | 19.20 | 0.50 | 5.61 | 64.56 | 10.00 | 2.14 |
| | JUN. | 808.69 | 156.99 | 26.70 | 10.57 | 0. | 81.57 | 5.20 | 29.46 | 4.08 | 64.74 | 10.00 | 1.51 |
| | JUL. | 810.56 | 177.24 | 32.00 | 10.92 | 0. | 84.32 | 12.20 | 26.93 | 4.08 | 66.46 | 10.00 | 1.61 |
| | AUG. | 810.67 | 178.50 | 13.10 | 10.92 | 0. | 53.92 | 1.00 | 19.76 | 4.08 | 67.44 | 10.00 | 1.64 |
| | SEP. | 812.44 | 199.64 | 32.70 | 10.57 | 0. | 112.77 | 1.80 | 42.81 | 4.08 | 68.37 | 10.00 | 1.61 |
| | OCT. | 815.21 | 236.60 | 48.80 | 10.92 | 0. | 194.62 | 4.50 | 70.98 | 4.08 | 70.66 | 10.00 | 1.72 |
| | NOV. | 817.47 | 270.35 | 45.10 | 10.57 | 0. | 140.07 | 34.80 | 40.61 | 4.08 | 73.16 | 10.00 | 1.73 |
| | DEC. | 814.84 | 231.33 | 6.60 | 44.84 | 0. | 68.44 | 67.10 | 0.50 | 16.74 | 72.98 | 10.00 | 7.34 |
| 1964 | JAN. | 812.29 | 197.83 | 5.40 | 38.14 | 0. | 54.24 | 52.90 | 0.50 | 14.24 | 70.40 | 10.00 | 6.00 |
| | FEB. | 810.08 | 171.87 | 3.90 | 28.95 | 0. | 38.65 | 37.40 | 0.50 | 11.56 | 67.99 | 10.00 | 4.38 |
| | MAR. | 807.07 | 140.95 | 3.70 | 33.44 | 0. | 42.94 | 41.60 | 0.50 | 12.48 | 65.41 | 10.00 | 4.84 |
| | APR. | 801.36 | 94.16 | 3.30 | 49.10 | 0. | 57.80 | 56.50 | 0.50 | 18.94 | 61.03 | 9.24 | 6.61 |
| | MAY | 799.77 | 83.59 | 3.10 | 12.94 | 0. | 20.54 | 19.20 | 0.50 | 4.83 | 57.39 | 8.43 | 1.64 |
| | JUN. | 809.25 | 162.91 | 90.50 | 10.57 | 0. | 294.57 | 5.20 | 111.64 | 4.08 | 61.33 | 9.31 | 1.43 |
| | JUL. | 816.93 | 262.01 | 111.00 | 10.92 | 0. | 175.32 | 12.20 | 60.90 | 4.08 | 69.92 | 10.00 | 1.70 |
| | AUG. | 817.19 | 265.96 | 16.10 | 10.92 | 0. | 78.02 | 1.00 | 28.76 | 4.08 | 73.89 | 10.00 | 1.81 |
| | SEP. | 819.98 | 312.23 | 58.20 | 10.57 | 0. | 138.57 | 1.80 | 52.77 | 4.08 | 75.40 | 10.00 | 1.79 |
| | OCT. | 821.50 | 340.00 | 74.60 | 45.53 | 0. | 297.33 | 4.50 | 109.33 | 17.00 | 77.57 | 10.00 | 7.44 |
| | NOV. | 821.29 | 336.07 | 7.60 | 10.57 | 0. | 49.07 | 34.80 | 5.51 | 4.08 | 78.21 | 10.00 | 1.87 |
| | DEC. | 819.10 | 297.00 | 6.20 | 44.34 | 0. | 68.44 | 67.10 | 0.50 | 16.55 | 77.03 | 10.00 | 7.44 |
| 1965 | JAN. | 816.49 | 255.74 | 7.80 | 43.64 | 0. | 54.24 | 52.90 | 0.50 | 16.29 | 74.62 | 10.00 | 7.32 |
| | FEB. | 814.12 | 221.43 | 5.00 | 35.71 | 0. | 38.61 | 37.40 | 0.50 | 14.76 | 72.09 | 10.00 | 5.76 |
| | MAR. | 811.03 | 187.66 | 1.90 | 39.24 | 0. | 42.94 | 41.60 | 0.50 | 14.65 | 69.41 | 10.00 | 6.07 |
| | APR. | 805.71 | 128.44 | 1.60 | 54.60 | 0. | 57.80 | 56.50 | 0.50 | 19.57 | 65.19 | 10.00 | 7.20 |
| | MAY | 806.90 | 139.33 | 27.80 | 10.92 | 0. | 87.12 | 19.20 | 23.49 | 4.08 | 63.14 | 9.72 | 1.52 |
| | JUN. | 810.23 | 173.61 | 45.70 | 10.57 | 0. | 114.17 | 5.20 | 42.04 | 4.08 | 65.38 | 10.00 | 1.53 |
| | JUL. | 810.75 | 179.43 | 17.60 | 10.92 | 0. | 54.32 | 12.20 | 15.73 | 4.08 | 67.32 | 10.00 | 1.63 |
| | AUG. | 810.78 | 179.78 | 12.20 | 10.92 | 0. | 55.52 | 1.00 | 20.36 | 4.08 | 67.60 | 10.00 | 1.64 |
| | SEP. | 821.50 | 340.00 | 265.00 | 50.74 | 50.65 | 249.58 | 1.80 | 95.60 | 19.57 | 72.28 | 10.00 | 7.20 |
| | OCT. | 821.50 | 340.00 | 83.20 | 52.43 | 29.39 | 312.82 | 4.50 | 115.11 | 19.57 | 77.87 | 10.00 | 7.44 |
| | NOV. | 821.50 | 340.00 | 37.60 | 36.61 | 0. | 95.41 | 34.80 | 23.38 | 14.12 | 78.32 | 10.00 | 6.47 |
| | DEC. | 819.73 | 307.92 | 11.30 | 44.44 | 0. | 68.44 | 67.10 | 0.50 | 16.59 | 77.45 | 10.00 | 7.44 |
| 1966 | JAN. | 817.98 | 279.61 | 7.90 | 36.24 | 0. | 54.24 | 52.90 | 0.50 | 13.53 | 75.69 | 10.00 | 6.17 |
| | FEB. | 816.45 | 254.70 | 4.80 | 27.51 | 0. | 38.61 | 37.40 | 0.50 | 11.37 | 74.00 | 10.00 | 4.57 |
| | MAR. | 814.32 | 224.74 | 4.90 | 33.74 | 0. | 42.94 | 41.60 | 0.50 | 12.60 | 72.22 | 10.00 | 5.46 |
| | APR. | 811.14 | 183.94 | 4.70 | 43.50 | 0. | 57.80 | 56.50 | 0.50 | 16.78 | 69.55 | 10.00 | 6.75 |
| | MAY | 814.24 | 223.06 | 51.40 | 10.92 | 0. | 155.42 | 19.20 | 50.86 | 4.08 | 69.52 | 10.00 | 1.69 |
| | JUN. | 819.09 | 296.85 | 85.60 | 10.57 | 0. | 408.67 | 5.20 | 155.66 | 4.08 | 73.48 | 10.00 | 1.74 |

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DIS-CHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 819.09 | 296.85 | | | | | | | | | | |
| | JUL. | 821.50 | 340.00 | 78.30 | 34.28 | 0. | 274.88 | 12.20 | 98.07 | 12.80 | 77.13 | 10.00 | 5.96 |
| | AUG. | 821.50 | 340.00 | 28.00 | 26.49 | 0. | 132.79 | 1.00 | 49.20 | 9.89 | 78.33 | 10.00 | 4.68 |
| | SEP. | 821.50 | 340.00 | 41.60 | 40.01 | 0. | 199.91 | 1.80 | 76.43 | 15.44 | 78.32 | 10.00 | 7.07 |
| | OCT. | 821.50 | 340.00 | 67.00 | 52.43 | 13.21 | 425.84 | 4.50 | 157.31 | 19.57 | 78.08 | 10.00 | 7.44 |
| | NOV. | 821.50 | 340.00 | 13.50 | 12.53 | 0. | 68.33 | 34.80 | 12.94 | 4.84 | 78.32 | 10.00 | 2.22 |
| | DEC. | 819.83 | 309.71 | 8.40 | 37.74 | 0. | 68.44 | 67.10 | 0.50 | 14.09 | 77.50 | 10.00 | 6.59 |
| 1967 | JAN. | 818.09 | 280.30 | 7.20 | 35.64 | 0. | 54.24 | 52.90 | 0.50 | 13.31 | 75.79 | 10.00 | 6.08 |
| | FEB. | 816.90 | 261.58 | 5.50 | 23.01 | 0. | 38.61 | 37.40 | 0.50 | 9.51 | 74.28 | 10.00 | 3.84 |
| | MAR. | 815.12 | 235.27 | 4.80 | 29.44 | 0. | 42.94 | 41.60 | 0.50 | 10.99 | 72.84 | 10.00 | 4.81 |
| | APR. | 813.53 | 213.67 | 11.10 | 31.10 | 0. | 57.80 | 56.50 | 0.50 | 12.00 | 71.14 | 10.00 | 4.95 |
| | MAY | 812.87 | 205.06 | 3.70 | 10.92 | 0. | 22.72 | 19.20 | 1.32 | 4.08 | 70.03 | 10.00 | 1.71 |
| | JUN. | 813.06 | 207.54 | 14.10 | 10.57 | 0. | 106.47 | 5.20 | 39.07 | 4.08 | 69.78 | 10.00 | 1.65 |
| | JUL. | 813.31 | 210.74 | 15.10 | 10.92 | 0. | 56.22 | 12.20 | 16.44 | 4.08 | 70.02 | 10.00 | 1.71 |
| | AUG. | 813.16 | 208.78 | 10.00 | 10.92 | 0. | 50.42 | 1.00 | 18.45 | 4.08 | 70.07 | 10.00 | 1.71 |
| | SEP. | 814.89 | 232.00 | 34.90 | 10.57 | 0. | 154.67 | 1.80 | 58.98 | 4.08 | 70.84 | 10.00 | 1.67 |
| | OCT. | 816.48 | 255.18 | 35.10 | 10.92 | 0. | 100.52 | 4.50 | 35.85 | 4.08 | 72.52 | 10.00 | 1.77 |
| | NOV. | 816.43 | 254.43 | 10.60 | 10.57 | 0. | 41.97 | 34.80 | 2.77 | 4.08 | 73.27 | 10.00 | 1.74 |
| | DEC. | 813.20 | 209.36 | 6.10 | 50.44 | 0. | 68.44 | 67.10 | 0.50 | 18.83 | 71.65 | 10.00 | 7.44 |
| 1968 | JAN. | 810.41 | 175.61 | 4.80 | 37.84 | 0. | 54.24 | 52.90 | 0.50 | 14.13 | 68.64 | 10.00 | 5.78 |
| | FEB. | 807.97 | 149.73 | 2.90 | 27.95 | 0. | 38.65 | 37.40 | 0.50 | 11.16 | 66.00 | 10.00 | 4.09 |
| | MAR. | 804.12 | 114.95 | 2.00 | 35.74 | 0. | 42.94 | 41.60 | 0.50 | 13.34 | 62.88 | 9.66 | 4.96 |
| | APR. | 796.61 | 65.35 | 1.90 | 50.70 | 0. | 57.80 | 56.50 | 0.50 | 19.56 | 57.18 | 8.38 | 6.39 |
| | MAY | 803.35 | 108.81 | 55.10 | 10.92 | 0. | 115.72 | 19.20 | 36.04 | 4.08 | 56.81 | 8.30 | 1.37 |
| | JUN. | 817.27 | 267.28 | 170.00 | 10.57 | 0. | 462.17 | 5.20 | 176.30 | 4.08 | 67.13 | 10.00 | 1.58 |
| | JUL. | 818.35 | 284.56 | 29.40 | 10.92 | 0. | 91.42 | 12.20 | 29.58 | 4.08 | 74.64 | 10.00 | 1.83 |
| | AUG. | 819.01 | 295.61 | 23.30 | 10.92 | 0. | 62.32 | 1.00 | 22.90 | 4.08 | 75.51 | 10.00 | 1.86 |
| | SEP. | 821.50 | 340.00 | 92.10 | 46.19 | 0. | 319.39 | 1.80 | 122.53 | 17.82 | 77.07 | 10.00 | 7.20 |
| | OCT. | 821.50 | 340.00 | 68.30 | 52.43 | 14.51 | 361.34 | 4.50 | 133.23 | 19.57 | 78.06 | 10.00 | 7.44 |
| | NOV. | 821.50 | 340.00 | 40.00 | 39.01 | 0. | 123.31 | 34.80 | 34.15 | 15.05 | 78.32 | 10.00 | 6.89 |
| | DEC. | 820.30 | 317.90 | 12.70 | 33.84 | 0. | 68.44 | 67.10 | 0.50 | 12.63 | 77.73 | 10.00 | 5.93 |
| 1969 | JAN. | 819.48 | 303.55 | 10.20 | 23.54 | 0. | 54.24 | 52.90 | 0.50 | 8.79 | 76.72 | 10.00 | 4.07 |
| | FEB. | 818.10 | 280.56 | 4.10 | 25.81 | 0. | 38.61 | 37.40 | 0.50 | 10.67 | 75.58 | 10.00 | 4.39 |
| | MAR. | 816.19 | 250.77 | 3.20 | 31.24 | 0. | 42.94 | 41.60 | 0.50 | 11.66 | 73.98 | 10.00 | 5.19 |
| | APR. | 812.81 | 204.25 | 12.00 | 46.90 | 0. | 57.80 | 56.50 | 0.50 | 18.09 | 71.31 | 10.00 | 7.20 |
| | MAY | 813.24 | 209.85 | 17.90 | 10.92 | 0. | 54.32 | 19.20 | 13.11 | 4.08 | 69.86 | 10.00 | 1.70 |
| | JUN. | 821.50 | 340.00 | 217.00 | 50.74 | 34.70 | 530.54 | 5.20 | 202.68 | 19.57 | 73.66 | 10.00 | 7.20 |
| | JUL. | 821.50 | 340.00 | 77.00 | 52.43 | 23.07 | 214.60 | 12.20 | 75.57 | 19.57 | 77.94 | 10.00 | 7.44 |
| | AUG. | 821.50 | 340.00 | 138.00 | 52.43 | 83.89 | 558.32 | 1.00 | 208.08 | 19.57 | 77.42 | 10.00 | 7.44 |
| | SEP. | 821.50 | 340.00 | 193.00 | 50.74 | 140.44 | 654.17 | 1.80 | 251.69 | 19.57 | 77.09 | 10.00 | 7.20 |
| | OCT. | 821.50 | 340.00 | 216.00 | 52.43 | 162.02 | 900.75 | 4.50 | 334.62 | 19.57 | 77.03 | 10.00 | 7.44 |
| | NOV. | 821.50 | 340.00 | 41.00 | 40.01 | 0. | 198.31 | 34.80 | 63.08 | 15.43 | 78.32 | 10.00 | 7.07 |
| | DEC. | 820.50 | 321.50 | 22.70 | 40.24 | 0. | 68.44 | 67.10 | 0.50 | 15.02 | 77.83 | 10.00 | 7.06 |
| 1970 | JAN. | 818.84 | 292.76 | 10.30 | 38.04 | 0. | 54.24 | 52.90 | 0.50 | 14.20 | 76.50 | 10.00 | 6.55 |
| | FEB. | 817.18 | 265.81 | 6.60 | 32.31 | 0. | 38.61 | 37.40 | 0.50 | 13.36 | 74.79 | 10.00 | 5.43 |
| | MAR. | 814.79 | 230.60 | 4.10 | 37.64 | 0. | 42.94 | 41.60 | 0.50 | 14.05 | 72.81 | 10.00 | 6.14 |
| | APR. | 810.92 | 141.40 | 8.60 | 56.30 | 0. | 57.80 | 56.50 | 0.50 | 19.57 | 69.67 | 10.00 | 7.20 |
| | MAY | 811.28 | 185.62 | 16.40 | 10.92 | 0. | 32.82 | 19.20 | 5.09 | 4.08 | 67.93 | 10.00 | 1.65 |
| | JUN. | 812.08 | 195.26 | 21.20 | 10.57 | 0. | 26.47 | 5.20 | 8.21 | 4.08 | 68.50 | 10.00 | 1.61 |

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DIS-CHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 812.08 | 195.26 | | | | | | | | | | |
| | JUL. | 815.25 | 237.14 | 53.80 | 10.92 | 0. | 99.02 | 12.20 | 32.42 | 4.08 | 70.50 | 10.00 | 1.72 |
| | AUG. | 820.52 | 321.94 | 97.00 | 10.92 | 0. | 196.52 | 1.00 | 73.00 | 4.08 | 74.72 | 10.00 | 1.83 |
| | SEP. | 821.50 | 340.00 | 187.00 | 50.74 | 116.44 | 527.46 | 1.80 | 202.81 | 19.57 | 76.72 | 10.00 | 7.20 |
| | OCT. | 821.50 | 340.00 | 80.40 | 57.43 | 26.59 | 399.97 | 4.50 | 147.63 | 19.57 | 77.90 | 10.00 | 7.44 |
| | NOV. | 821.50 | 340.00 | 30.30 | 29.32 | 0. | 123.82 | 34.80 | 34.34 | 11.31 | 78.32 | 10.00 | 5.18 |
| | DEC. | 820.51 | 321.70 | 15.40 | 32.74 | 0. | 68.44 | 67.10 | 0.50 | 12.22 | 77.84 | 10.00 | 5.75 |
| 1971 | JAN. | 819.26 | 299.75 | 7.20 | 28.14 | 0. | 54.24 | 52.90 | 0.50 | 10.51 | 76.71 | 10.00 | 4.86 |
| | FEB. | 818.17 | 281.56 | 4.90 | 21.81 | 0. | 38.61 | 37.40 | 0.50 | 9.02 | 75.50 | 10.00 | 3.70 |
| | MAR. | 816.41 | 254.16 | 3.40 | 29.04 | 0. | 42.94 | 41.60 | 0.50 | 10.84 | 74.12 | 10.00 | 4.83 |
| | APR. | 813.13 | 208.42 | 3.00 | 47.10 | 0. | 57.80 | 56.50 | 0.50 | 18.17 | 71.59 | 10.00 | 7.20 |
| | MAY | 814.09 | 221.08 | 25.00 | 10.92 | 0. | 65.82 | 19.20 | 17.41 | 4.08 | 70.44 | 10.00 | 1.72 |
| | JUN. | 814.54 | 227.20 | 17.80 | 10.57 | 0. | 51.77 | 5.20 | 17.97 | 4.08 | 71.13 | 10.00 | 1.68 |
| | JUL. | 814.91 | 232.33 | 17.10 | 10.92 | 0. | 30.52 | 12.20 | 6.84 | 4.08 | 71.56 | 10.00 | 1.75 |
| | AUG. | 817.04 | 263.63 | 43.40 | 10.92 | 0. | 91.92 | 1.00 | 33.95 | 4.08 | 72.80 | 10.00 | 1.78 |
| | SEP. | 821.50 | 340.00 | 109.00 | 31.19 | 0. | 278.29 | 1.80 | 106.67 | 12.03 | 76.08 | 10.00 | 5.34 |
| | OCT. | 821.50 | 340.00 | 102.00 | 52.43 | 48.17 | 393.49 | 4.50 | 145.23 | 19.57 | 77.66 | 10.00 | 7.44 |
| | NOV. | 821.50 | 340.00 | 19.70 | 18.73 | 0. | 75.43 | 34.80 | 15.67 | 7.23 | 78.32 | 10.00 | 3.31 |
| | DEC. | 819.63 | 306.12 | 8.30 | 41.24 | 0. | 68.44 | 67.10 | 0.50 | 15.40 | 77.40 | 10.00 | 7.20 |
| 1972 | JAN. | 817.75 | 274.92 | 5.90 | 36.14 | 0. | 54.24 | 52.90 | 0.50 | 13.49 | 75.52 | 10.00 | 6.14 |
| | FEB. | 816.19 | 250.78 | 3.40 | 26.35 | 0. | 38.65 | 37.40 | 0.50 | 10.52 | 73.77 | 10.00 | 4.36 |
| | MAR. | 813.80 | 217.14 | 2.30 | 34.34 | 0. | 42.94 | 41.60 | 0.50 | 12.82 | 71.83 | 10.00 | 5.52 |
| | APR. | 809.65 | 167.52 | 2.60 | 50.80 | 0. | 57.80 | 56.50 | 0.50 | 19.57 | 68.56 | 10.00 | 7.20 |
| | MAY | 809.93 | 170.21 | 14.80 | 10.92 | 0. | 51.92 | 19.20 | 12.22 | 4.08 | 66.64 | 10.00 | 1.61 |
| | JUN. | 812.37 | 198.78 | 40.10 | 10.57 | 0. | 120.67 | 5.20 | 44.55 | 4.08 | 67.97 | 10.00 | 1.60 |
| | JUL. | 812.07 | 195.12 | 8.20 | 10.92 | 0. | 28.42 | 12.20 | 6.06 | 4.08 | 69.05 | 10.00 | 1.68 |
| | AUG. | 811.83 | 192.13 | 8.90 | 10.92 | 0. | 33.72 | 1.00 | 12.22 | 4.08 | 68.78 | 10.00 | 1.67 |
| | SEP. | 811.72 | 190.86 | 10.30 | 10.57 | 0. | 32.47 | 1.80 | 11.83 | 4.08 | 68.59 | 10.00 | 1.61 |
| | OCT. | 811.49 | 188.10 | 9.00 | 10.92 | 0. | 38.52 | 4.50 | 12.70 | 4.08 | 68.44 | 10.00 | 1.66 |
| | NOV. | 810.32 | 174.58 | 5.00 | 17.93 | 0. | 35.63 | 34.33* | 0.50 | 6.92 | 67.72 | 10.00 | 2.70 |
| | DEC. | 805.46 | 126.21 | 3.50 | 51.33 | 0. | 61.13 | 59.79* | 0.50 | 19.16 | 64.72 | 10.00 | 7.34 |
| 1973 | JAN. | 802.50 | 102.39 | 3.40 | 26.74 | 0. | 33.44 | 52.10* | 0.50 | 9.98 | 60.81 | 9.19 | 3.59 |
| | FEB. | 800.52 | 88.46 | 3.00 | 16.36 | 0. | 19.46 | 18.25* | 0.50 | 6.76 | 58.30 | 8.63 | 2.10 |
| | MAR. | 798.18 | 74.02 | 3.20 | 16.94 | 0. | 18.34 | 17.00* | 0.50 | 6.33 | 56.19 | 8.16 | 2.10 |
| | APR. | 794.50 | 55.00 | 3.00 | 21.39 | 0. | 24.49 | 23.19* | 0.50 | 8.25 | 53.16 | 7.51 | 2.51 |
| | MAY | 795.95 | 61.94 | 18.40 | 10.92 | 0. | 30.02 | 19.20 | 4.04 | 4.08 | 57.05 | 7.28 | 1.25 |
| | JUN. | 802.07 | 99.26 | 48.40 | 10.57 | 0. | 61.97 | 5.20 | 21.90 | 4.08 | 55.83 | 8.08 | 1.30 |
| | JUL. | 806.28 | 133.61 | 45.00 | 10.92 | 0. | 73.52 | 12.20 | 22.90 | 4.08 | 61.01 | 9.24 | 1.47 |
| | AUG. | 808.30 | 154.00 | 51.10 | 10.92 | 0. | 60.92 | 1.00 | 22.37 | 4.08 | 64.12 | 9.95 | 1.55 |
| | SEP. | 815.17 | 236.03 | 34.60 | 10.57 | 0. | 184.37 | 1.80 | 70.44 | 4.08 | 68.55 | 10.00 | 1.61 |
| | OCT. | 821.50 | 340.00 | 186.00 | 52.43 | 28.37 | 556.00 | 4.50 | 205.91 | 19.57 | 74.72 | 10.00 | 7.44 |
| | NOV. | 821.50 | 340.00 | 43.00 | 42.00 | 0. | 189.20 | 34.80 | 59.57 | 16.21 | 78.32 | 10.00 | 7.20 |
| | DEC. | 819.87 | 319.41 | 10.40 | 59.06 | 0. | 68.44 | 67.10 | 0.50 | 14.58 | 77.52 | 10.00 | 6.82 |
| 1974 | JAN. | 817.82 | 275.91 | 6.40 | 59.94 | 0. | 54.24 | 52.90 | 0.50 | 14.91 | 75.68 | 10.00 | 6.80 |
| | FEB. | 815.87 | 246.12 | 5.40 | 54.01 | 0. | 38.61 | 37.40 | 0.50 | 14.06 | 73.63 | 10.00 | 5.62 |
| | MAR. | 813.21 | 209.41 | 4.80 | 39.94 | 0. | 42.94 | 41.60 | 0.50 | 14.91 | 71.37 | 10.00 | 6.38 |
| | APR. | 808.71 | 157.24 | 3.40 | 54.20 | 0. | 57.80 | 56.50 | 0.50 | 19.57 | 67.78 | 10.00 | 7.20 |
| | MAY | 815.28 | 237.49 | 92.50 | 10.92 | 0. | 185.22 | 19.20 | 61.99 | 4.08 | 68.83 | 10.00 | 1.67 |
| | JUN. | 817.45 | 270.10 | 44.40 | 10.57 | 0. | 195.37 | 5.20 | 73.37 | 4.08 | 73.18 | 10.00 | 1.73 |

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DIS-CHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 817.45 | 270.10 | | | | | | | | | | |
| | JUL. | 817.98 | 278.48 | 20.50 | 10.92 | 0. | 105.82 | 12.20 | 34.95 | 4.08 | 74.54 | 10.00 | 1.83 |
| | AUG. | 817.77 | 275.19 | 8.90 | 10.92 | 0. | 119.72 | 1.00 | 44.33 | 4.08 | 74.71 | 10.00 | 1.83 |
| | SEP. | 821.50 | 340.00 | 111.40 | 45.10 | 0. | 500.90 | 1.80 | 192.56 | 17.40 | 76.45 | 10.00 | 7.20 |
| | OCT. | 821.50 | 340.00 | 42.40 | 41.07 | 0. | 372.37 | 4.50 | 137.35 | 15.34 | 78.33 | 10.00 | 7.26 |
| | NOV. | 821.50 | 340.00 | 12.80 | 11.84 | 0. | 81.74 | 34.80 | 18.11 | 4.57 | 78.32 | 10.00 | 2.09 |
| | DEC. | 818.97 | 294.93 | 10.50 | 54.64 | 0. | 68.44 | 67.10 | 0.50 | 19.57 | 77.07 | 10.00 | 7.44 |
| 1975 | JAN. | 816.38 | 253.67 | 9.70 | 50.04 | 0. | 54.24 | 52.90 | 0.50 | 18.68 | 74.51 | 10.00 | 7.44 |
| | FEB. | 814.13 | 221.56 | 6.90 | 37.91 | 0. | 38.61 | 37.40 | 0.50 | 15.67 | 72.04 | 10.00 | 6.12 |
| | MAR. | 811.19 | 184.59 | 5.20 | 40.74 | 0. | 42.94 | 41.60 | 0.50 | 15.21 | 69.49 | 10.00 | 6.31 |
| | APR. | 806.21 | 132.95 | 3.80 | 54.20 | 0. | 57.80 | 56.50 | 0.50 | 19.57 | 65.52 | 10.00 | 7.20 |
| | MAY | 806.57 | 136.23 | 15.20 | 10.92 | 0. | 26.82 | 19.20 | 2.85 | 4.08 | 63.22 | 9.74 | 1.52 |
| | JUN. | 806.26 | 133.40 | 8.50 | 10.57 | 0. | 11.87 | 5.20 | 2.57 | 4.08 | 63.23 | 9.75 | 1.47 |
| | JUL. | 806.91 | 139.37 | 17.60 | 10.92 | 0. | 31.12 | 12.20 | 7.06 | 4.08 | 63.42 | 9.79 | 1.53 |
| | AUG. | 806.24 | 133.20 | 5.50 | 10.92 | 0. | 62.52 | 1.00 | 22.97 | 4.08 | 63.40 | 9.79 | 1.53 |
| | SEP. | 821.50 | 340.00 | 234.30 | 26.32 | 0. | 453.42 | 1.80 | 174.24 | 10.15 | 70.69 | 10.00 | 4.16 |
| | OCT. | 821.50 | 340.00 | 164.00 | 52.43 | 110.08 | 606.21 | 4.50 | 224.65 | 19.57 | 77.27 | 10.00 | 7.44 |
| | NOV. | 821.50 | 340.00 | 187.00 | 50.74 | 135.13 | 418.36 | 34.80 | 147.98 | 19.57 | 77.12 | 10.00 | 7.20 |
| | DEC. | 821.50 | 340.00 | 13.40 | 12.42 | 0. | 81.32 | 67.10 | 5.31 | 4.64 | 78.33 | 10.00 | 2.20 |
| 1976 | JAN. | 819.98 | 312.31 | 9.00 | 35.64 | 0. | 54.24 | 52.90 | 0.50 | 13.31 | 77.57 | 10.00 | 6.23 |
| | FEB. | 818.54 | 287.75 | 6.40 | 29.65 | 0. | 38.65 | 37.40 | 0.50 | 11.83 | 76.06 | 10.00 | 5.08 |
| | MAR. | 816.31 | 252.54 | 5.40 | 38.84 | 0. | 42.94 | 41.60 | 0.50 | 14.50 | 74.26 | 10.00 | 6.48 |
| | APR. | 812.56 | 201.12 | 5.20 | 55.00 | 0. | 57.80 | 56.50 | 0.50 | 19.57 | 71.25 | 10.00 | 7.20 |
| | | | | | | | | | | | | | 1141.53 |

[illegible] [illegible] SAN FERNANDO DAM PLAN

HIGH WATER LEVEL 823.50 M LOW WATER LEVEL 794.50 M

GROSS STORAGE CAPACITY 385.30 MCM

DEAD STORAGE CAPACITY 55.00 MCM

EVAPORATION DATA IN MM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 64.0 | 45.0 | 125.0 | 130.0 | 118.0 | 90.0 | 93.0 | 88.0 | 91.0 | 76.0 | 57.0 | 58.0 |

MAXIMUM DISCHARGE FOR POWER GENERATION 27.05 CMS

POWER INSTALLED CAPACITY 14000. KW

RATED HEAD FOR POWER GENERATION 65.1 M

GUARANTEED MINIMUM DISCHARGE FOR POWER GENERATION 5.63 CMS

SEASONAL MINIMUM STORAGE IN MCM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 157.90 | 137.10 | 55.00 | 55.00 | 55.00 | 55.00 | 55.00 | 120.00 | 155.00 | 191.60 | 191.60 | 181.60 |

MONTHLY IRRIGATION WATER REQUIREMENTS

UPSTREAM OF DAMSITE IN MCM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |

DOWNSTREAM OF DAMSITE IN MCM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 52.90 | 17.40 | 41.60 | 56.50 | 19.20 | 5.20 | 12.20 | 1.00 | 1.80 | 4.50 | 34.80 | 67.10 |

RESERVOIR OPERATION SAN FERNANDO DAM PLAN

| YEAR | MONTH | WATER LEVEL | GROSS STORAGE | INFLOW | OUTFLOW | SPILL-OUT | DIS-CHARGE | WATER USED FOR IRRIGATION | RIVER FLOW | OUTFLOW FOR POWER | HEAD FOR POWER | POWER PEAKING CAPACITY | ENERGY OUTPUT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | MCM | MCM | MCM | MCM | MCM | MCM | CMS | CMS | M | MW | GWH |
| | | 820.00 | 316.87 | | | | | | | | | | |
| 1954 | AUG. | 821.19 | 338.94 | 38.60 | 15.09 | 0. | 117.59 | 1.00 | 43.53 | 5.63 | 77.28 | 14.00 | 2.63 |
| | SEP. | 823.50 | 385.00 | 207.00 | 70.10 | 89.02 | 662.13 | 1.80 | 254.76 | 27.05 | 78.16 | 14.00 | 10.08 |
| | OCT. | 823.50 | 385.00 | 172.00 | 72.44 | 97.97 | 775.31 | 4.50 | 287.79 | 27.05 | 79.29 | 14.00 | 10.42 |
| | NOV. | 823.50 | 385.00 | 20.40 | 19.35 | 0. | 80.55 | 34.80 | 17.65 | 7.47 | 80.16 | 14.00 | 3.50 |
| | DEC. | 821.49 | 344.54 | 8.40 | 47.84 | 0. | 68.44 | 67.10 | 0.50 | 17.86 | 79.17 | 14.00 | 8.55 |
| 1955 | JAN. | 819.83 | 313.86 | 6.90 | 36.54 | 0. | 54.24 | 52.90 | 0.50 | 13.64 | 77.34 | 14.00 | 6.37 |
| | FEB. | 818.55 | 291.54 | 6.20 | 27.21 | 0. | 38.61 | 37.40 | 0.50 | 11.25 | 75.82 | 14.00 | 4.64 |
| | MAR. | 817.04 | 266.90 | 6.10 | 28.94 | 0. | 42.94 | 41.60 | 0.50 | 10.80 | 74.47 | 14.00 | 4.84 |
| | APR. | 814.30 | 226.29 | 5.70 | 44.60 | 0. | 57.80 | 56.50 | 0.50 | 17.21 | 72.33 | 14.00 | 7.22 |
| | MAY | 813.47 | 215.07 | 5.30 | 15.09 | 0. | 27.39 | 19.20 | 3.06 | 5.63 | 70.56 | 14.00 | 2.38 |
| | JUN. | 812.84 | 206.81 | 7.40 | 14.61 | 0. | 33.21 | 5.20 | 10.80 | 5.63 | 69.82 | 14.00 | 2.27 |
| | JUL. | 820.09 | 319.57 | 128.00 | 15.09 | 0. | 272.59 | 12.20 | 97.22 | 5.63 | 73.15 | 14.00 | 2.47 |
| | AUG. | 822.96 | 373.79 | 71.80 | 15.09 | 0. | 205.79 | 1.00 | 76.46 | 5.63 | 78.21 | 14.00 | 2.66 |
| | SEP. | 823.50 | 385.00 | 137.00 | 70.10 | 53.87 | 456.87 | 1.80 | 175.57 | 27.05 | 79.28 | 14.00 | 10.08 |
| | OCT. | 823.50 | 385.00 | 246.00 | 72.44 | 171.88 | 1109.32 | 4.50 | 412.49 | 27.05 | 78.96 | 14.00 | 10.42 |
| | NOV. | 823.50 | 385.00 | 58.60 | 57.51 | 0. | 232.31 | 34.80 | 76.20 | 22.19 | 80.16 | 14.00 | 10.08 |
| | DEC. | 823.50 | 385.00 | 21.00 | 19.93 | 0. | 70.23 | 67.10 | 1.17 | 7.44 | 80.18 | 14.00 | 3.61 |
| 1956 | JAN. | 822.89 | 372.20 | 12.10 | 23.74 | 0. | 54.24 | 52.90 | 0.50 | 8.86 | 79.87 | 14.00 | 4.28 |
| | FEB. | 822.07 | 355.95 | 8.50 | 23.25 | 0. | 38.65 | 37.40 | 0.50 | 9.28 | 79.12 | 14.00 | 4.15 |
| | MAR. | 820.76 | 330.71 | 6.00 | 29.14 | 0. | 42.94 | 41.60 | 0.50 | 10.88 | 78.09 | 14.00 | 5.13 |
| | APR. | 818.43 | 289.49 | 5.60 | 44.80 | 0. | 57.80 | 56.50 | 0.50 | 17.28 | 76.25 | 14.00 | 7.69 |
| | MAY | 818.33 | 287.85 | 15.20 | 15.09 | 0. | 49.59 | 19.20 | 11.35 | 5.63 | 75.06 | 14.00 | 2.54 |
| | JUN. | 822.58 | 366.18 | 94.40 | 14.61 | 0. | 250.01 | 5.20 | 94.45 | 5.63 | 77.12 | 14.00 | 2.54 |
| | JUL. | 823.50 | 385.00 | 51.70 | 31.36 | 0. | 135.46 | 12.20 | 46.02 | 11.71 | 79.72 | 14.00 | 5.65 |
| | AUG. | 823.49 | 384.70 | 16.40 | 15.09 | 0. | 58.69 | 1.00 | 21.54 | 5.63 | 80.17 | 14.00 | 2.73 |
| | SEP. | 823.50 | 385.00 | 41.90 | 39.89 | 0. | 141.69 | 1.80 | 53.97 | 15.39 | 80.16 | 14.00 | 7.22 |
| | OCT. | 823.50 | 385.00 | 38.50 | 37.08 | 0. | 172.58 | 4.50 | 62.75 | 13.84 | 80.18 | 14.00 | 6.72 |
| | NOV. | 823.50 | 384.95 | 15.60 | 14.61 | 0. | 63.31 | 34.80 | 11.00 | 5.63 | 80.16 | 14.00 | 2.65 |
| | DEC. | 821.84 | 351.48 | 13.50 | 45.94 | 0. | 68.44 | 67.10 | 0.50 | 17.15 | 79.35 | 14.00 | 8.23 |
| 1957 | JAN. | 821.26 | 340.26 | 13.30 | 23.44 | 0. | 54.24 | 52.90 | 0.50 | 8.75 | 78.23 | 14.00 | 4.13 |
| | FEB. | 820.71 | 329.94 | 8.10 | 17.01 | 0. | 38.61 | 37.40 | 0.50 | 7.03 | 77.62 | 14.00 | 2.98 |
| | MAR. | 819.47 | 307.41 | 5.90 | 26.44 | 0. | 42.94 | 41.60 | 0.50 | 9.87 | 76.77 | 14.00 | 4.57 |
| | APR. | 817.16 | 268.90 | 5.40 | 42.10 | 0. | 57.80 | 56.50 | 0.50 | 16.24 | 74.98 | 14.00 | 7.09 |
| | MAY | 817.97 | 281.92 | 29.90 | 15.09 | 0. | 131.99 | 19.20 | 42.11 | 5.63 | 74.24 | 14.00 | 2.51 |
| | JUN. | 821.57 | 346.19 | 80.30 | 14.61 | 0. | 162.41 | 5.20 | 60.65 | 5.63 | 76.43 | 14.00 | 2.51 |
| | JUL. | 821.73 | 349.29 | 19.60 | 15.09 | 0. | 41.49 | 12.70 | 10.94 | 5.63 | 78.33 | 14.00 | 2.67 |
| | AUG. | 821.94 | 353.29 | 20.60 | 15.09 | 0. | 56.99 | 1.00 | 20.90 | 5.63 | 78.51 | 14.00 | 2.67 |
| | SEP. | 823.50 | 385.00 | 53.70 | 20.37 | 0. | 204.67 | 1.80 | 78.27 | 7.86 | 79.38 | 14.00 | 3.65 |
| | OCT. | 823.50 | 385.00 | 43.40 | 41.97 | 0. | 199.97 | 4.50 | 72.98 | 15.67 | 80.18 | 14.00 | 7.60 |
| | NOV. | 823.29 | 380.55 | 11.20 | 14.61 | 0. | 44.21 | 34.80 | 3.63 | 5.63 | 80.06 | 14.00 | 2.64 |
| | DEC. | 821.22 | 339.50 | 10.10 | 50.14 | 0. | 68.44 | 67.10 | 0.50 | 18.72 | 78.93 | 14.00 | 8.93 |
| 1958 | JAN. | 819.26 | 303.74 | 6.10 | 40.84 | 0. | 54.24 | 52.90 | 0.50 | 15.25 | 76.92 | 14.00 | 7.07 |
| | FEB. | 817.56 | 275.17 | 4.00 | 31.31 | 0. | 38.61 | 37.40 | 0.50 | 12.94 | 75.04 | 14.00 | 5.28 |
| | MAR. | 815.33 | 240.93 | 3.90 | 36.44 | 0. | 42.94 | 41.60 | 0.50 | 13.60 | 73.12 | 14.00 | 5.97 |
| | APR. | 811.57 | 190.84 | 3.20 | 51.70 | 0. | 57.80 | 56.50 | 0.50 | 19.94 | 70.11 | 14.00 | 8.08 |
| | JUN. | 820.12 | 319.07 | 144.0 | 14.61 | 0. | 254.01 | 5.20 | 95.99 | 5.63 | 72.51 | 14.00 | 2.37 |
| | MAY | 822.60 | 368.19 | 66.40 | 15.09 | 0. | 119.99 | 19.20 | 37.63 | 5.63 | 78.09 | 14.00 | 2.66 |

| YEAR | MONTH | WATER LEVEL | GROSS STORAGE | INFLOW | OUTFLOW | SPILL-OUT | DIS-CHARGE | WATER USED FOR IRRIGATION | RIVER FLOW | OUTFLOW FOR POWER | HEAD FOR POWER | POWER PEAKING CAPACITY | ENERGY OUTPUT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | MCM | MCM | MCM | MCM | MCM | MCM | CMS | CMS | M | MW | GWH |
| | | 822.69 | 358.39 | | | | | | | | | | |
| | JUL. | 823.50 | 385.00 | 65.40 | 47.24 | 0. | 233.94 | 12.20 | 82.79 | 17.64 | 79.78 | 14.00 | 8.51 |
| | AUG. | 823.50 | 385.00 | 34.00 | 32.36 | 0. | 124.46 | 1.00 | 46.09 | 12.08 | 80.18 | 14.00 | 5.86 |
| | SEP. | 823.50 | 385.00 | 27.00 | 25.31 | 0. | 83.71 | 1.80 | 31.60 | 9.77 | 80.16 | 14.00 | 4.58 |
| | OCT. | 823.50 | 385.00 | 66.80 | 65.34 | 0. | 229.94 | 4.50 | 83.80 | 24.40 | 80.18 | 14.00 | 10.42 |
| | NOV. | 823.26 | 379.96 | 10.60 | 14.61 | 0. | 49.11 | 34.80 | 5.13 | 5.63 | 80.04 | 14.00 | 2.64 |
| | DEC. | 820.93 | 334.01 | 9.00 | 52.94 | 0. | 68.44 | 67.10 | 0.50 | 19.77 | 78.77 | 14.00 | 9.41 |
| 1959 | JAN. | 819.10 | 300.95 | 8.20 | 40.24 | 0. | 54.24 | 52.90 | 0.50 | 15.02 | 76.69 | 14.00 | 6.95 |
| | FEB. | 817.60 | 275.79 | 5.90 | 29.81 | 0. | 38.61 | 37.40 | 0.50 | 12.32 | 74.98 | 14.00 | 5.02 |
| | MAR. | 815.35 | 241.24 | 4.50 | 37.64 | 0. | 42.94 | 41.60 | 0.50 | 14.05 | 73.15 | 14.00 | 6.17 |
| | APR. | 811.47 | 189.60 | 4.10 | 54.20 | 0. | 57.80 | 56.50 | 0.50 | 20.91 | 70.07 | 14.00 | 8.47 |
| | MAY | 812.20 | 198.61 | 25.40 | 15.09 | 0. | 39.49 | 19.20 | 7.58 | 5.63 | 68.51 | 14.00 | 2.30 |
| | JUN. | 813.94 | 221.35 | 38.40 | 14.61 | 0. | 59.41 | 5.20 | 20.91 | 5.63 | 69.73 | 14.00 | 2.27 |
| | JUL. | 813.72 | 218.45 | 13.20 | 15.09 | 0. | 24.09 | 17.20 | 4.44 | 5.63 | 70.51 | 14.00 | 2.37 |
| | AUG. | 814.35 | 227.09 | 24.90 | 15.09 | 0. | 39.89 | 1.00 | 14.52 | 5.63 | 70.72 | 14.00 | 2.38 |
| | SEP. | 814.67 | 231.44 | 20.10 | 14.61 | 0. | 41.01 | 1.80 | 15.13 | 5.63 | 71.17 | 14.00 | 2.32 |
| | OCT. | 817.46 | 273.53 | 58.20 | 15.09 | 0. | 197.59 | 4.50 | 72.09 | 5.63 | 72.74 | 14.00 | 2.46 |
| | NOV. | 817.60 | 275.82 | 17.70 | 14.61 | 0. | 40.41 | 34.80 | 2.16 | 5.63 | 74.19 | 14.00 | 2.43 |
| | DEC. | 814.19 | 224.81 | 11.20 | 61.44 | 0. | 68.44 | 67.10 | 0.50 | 22.94 | 72.57 | 14.00 | 9.98 |
| 1960 | JAN. | 811.13 | 155.53 | 5.30 | 43.84 | 0. | 54.24 | 52.90 | 0.50 | 16.37 | 69.34 | 14.00 | 6.77 |
| | FEB. | 808.30 | 154.23 | 3.90 | 34.35 | 0. | 38.65 | 37.40 | 0.50 | 13.71 | 66.36 | 14.00 | 5.05 |
| | MAR. | 804.20 | 114.24 | 3.50 | 40.44 | 0. | 42.94 | 41.60 | 0.50 | 15.10 | 62.93 | 13.29 | 5.62 |
| | APR. | 796.27 | 63.64 | 3.30 | 55.10 | 0. | 57.80 | 56.50 | 0.50 | 21.26 | 56.89 | 11.43 | 6.92 |
| | MAY | 796.06 | 62.58 | 14.60 | 15.09 | 0. | 107.19 | 19.20 | 33.60 | 5.63 | 52.84 | 10.23 | 1.76 |
| | JUN. | 808.70 | 158.33 | 111.00 | 14.61 | 0. | 169.31 | 5.20 | 63.31 | 5.63 | 59.04 | 12.08 | 1.90 |
| | JUL. | 809.11 | 162.75 | 20.30 | 15.09 | 0. | 134.09 | 12.20 | 45.51 | 5.63 | 65.58 | 14.00 | 2.19 |
| | AUG. | 811.41 | 188.95 | 47.20 | 15.09 | 0. | 188.89 | 1.00 | 70.15 | 5.63 | 66.94 | 14.00 | 2.24 |
| | SEP. | 817.04 | 266.92 | 93.70 | 14.61 | 0. | 181.01 | 1.80 | 69.14 | 5.63 | 70.89 | 14.00 | 2.31 |
| | OCT. | 823.34 | 381.60 | 131.00 | 15.09 | 0. | 230.99 | 4.50 | 84.56 | 5.63 | 76.87 | 14.00 | 2.61 |
| | NOV. | 823.48 | 384.56 | 18.60 | 14.61 | 0. | 103.81 | 34.80 | 26.62 | 5.63 | 80.07 | 14.00 | 2.64 |
| | DEC. | 821.94 | 354.19 | 11.00 | 40.34 | 0. | 68.44 | 67.10 | 0.50 | 15.06 | 79.41 | 14.00 | 7.23 |
| 1961 | JAN. | 820.87 | 332.77 | 10.40 | 30.74 | 0. | 54.24 | 52.90 | 0.50 | 11.48 | 78.10 | 14.00 | 5.41 |
| | FEB. | 820.17 | 319.94 | 8.40 | 19.91 | 0. | 38.61 | 37.40 | 0.50 | 8.19 | 77.15 | 14.00 | 3.44 |
| | MAR. | 818.84 | 296.50 | 7.30 | 28.84 | 0. | 42.94 | 41.60 | 0.50 | 10.77 | 76.18 | 14.00 | 4.94 |
| | APR. | 816.18 | 253.65 | 5.70 | 46.70 | 0. | 57.80 | 56.50 | 0.50 | 18.02 | 74.17 | 14.00 | 7.77 |
| | MAY | 815.46 | 242.89 | 5.90 | 15.09 | 0. | 24.09 | 19.20 | 1.83 | 5.63 | 72.50 | 14.00 | 2.45 |
| | JUN. | 816.09 | 252.20 | 25.10 | 14.61 | 0. | 153.61 | 5.20 | 57.26 | 5.63 | 72.44 | 14.00 | 2.37 |
| | JUL. | 817.11 | 269.07 | 32.10 | 15.09 | 0. | 157.89 | 17.20 | 54.40 | 5.63 | 73.28 | 14.00 | 2.48 |
| | AUG. | 817.15 | 268.34 | 16.60 | 15.09 | 0. | 88.49 | 1.00 | 32.67 | 5.63 | 73.80 | 14.00 | 2.50 |
| | SEP. | 818.71 | 294.72 | 41.80 | 14.61 | 0. | 116.41 | 1.80 | 44.21 | 5.63 | 74.58 | 14.00 | 2.45 |
| | OCT. | 819.67 | 310.96 | 33.00 | 15.09 | 0. | 145.59 | 4.50 | 52.68 | 5.63 | 75.87 | 14.00 | 2.57 |
| | NOV. | 820.51 | 326.15 | 30.70 | 14.61 | 0. | 89.71 | 34.80 | 21.18 | 5.63 | 76.75 | 14.00 | 2.52 |
| | DEC. | 818.51 | 290.91 | 12.20 | 46.54 | 0. | 68.44 | 67.10 | 0.50 | 17.38 | 76.19 | 14.00 | 7.98 |
| 1962 | JAN. | 816.93 | 265.15 | 11.40 | 36.44 | 0. | 54.24 | 52.90 | 0.50 | 13.60 | 74.40 | 14.00 | 6.09 |
| | FEB. | 815.60 | 244.99 | 7.50 | 26.61 | 0. | 38.61 | 37.40 | 0.50 | 11.00 | 72.89 | 14.00 | 4.34 |
| | MAR. | 813.36 | 213.59 | 6.90 | 35.84 | 0. | 42.94 | 41.60 | 0.50 | 13.38 | 71.16 | 14.00 | 5.70 |
| | APR. | 809.38 | 165.08 | 5.60 | 52.10 | 0. | 57.80 | 56.50 | 0.50 | 20.10 | 68.03 | 14.00 | 7.87 |
| | MAY | 809.94 | 171.82 | 22.40 | 15.09 | 0. | 59.59 | 19.20 | 18.81 | 5.63 | 66.34 | 14.00 | 2.22 |
| | JUN. | 814.16 | 224.41 | 68.20 | 14.61 | 0. | 124.31 | 5.20 | 45.95 | 5.63 | 68.71 | 14.00 | 2.23 |

| YEAR | MONTH | WATER LEVEL | GROSS STORAGE | INFLOW | OUTFLOW | SPILL-OUT | DIS-CHARGE | WATER USED FOR IRRIGATION | RIVER FLOW | OUTFLOW FOR POWER | HEAD FOR POWER | POWER PEAKING CAPACITY | ENERGY OUTPUT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | MCM | MCM | MCM | MCM | MCM | MCM | CMS | CMS | M | MW | GWH |
| | | 814.16 | 224.41 | | | | | | | | | | |
| | JUL. | 814.34 | 226.89 | 18.60 | 15.09 | 0. | 97.19 | 12.70 | 31.73 | 5.63 | 70.93 | 14.00 | 2.39 |
| | AUG. | 815.60 | 244.88 | 34.20 | 15.09 | 0. | 76.29 | 1.00 | 28.11 | 5.63 | 71.65 | 14.00 | 2.42 |
| | SEP. | 819.20 | 302.48 | 73.70 | 14.61 | 0. | 98.41 | 1.80 | 37.27 | 5.63 | 74.06 | 14.00 | 2.43 |
| | OCT. | 823.50 | 385.00 | 137.00 | 53.35 | 0. | 131.55 | 4.50 | 47.43 | 19.92 | 78.03 | 14.00 | 9.38 |
| | NOV. | 823.37 | 382.35 | 13.00 | 14.61 | 0. | 36.21 | 34.80 | 0.54 | 5.63 | 80.10 | 14.00 | 2.64 |
| | DEC. | 821.13 | 337.80 | 11.50 | 55.04 | 0. | 68.44 | 67.10 | 0.50 | 20.55 | 78.93 | 14.00 | 9.80 |
| 1963 | JAN. | 819.29 | 304.24 | 8.60 | 41.14 | 0. | 54.24 | 52.90 | 0.50 | 15.36 | 76.89 | 14.00 | 7.12 |
| | FEB. | 817.71 | 277.66 | 6.00 | 31.31 | 0. | 38.61 | 37.40 | 0.50 | 12.94 | 75.13 | 14.00 | 5.29 |
| | MAR. | 815.61 | 245.10 | 5.20 | 36.04 | 0. | 47.94 | 41.60 | 0.50 | 13.46 | 73.34 | 14.00 | 5.92 |
| | APR. | 812.08 | 197.13 | 4.80 | 51.20 | 0. | 57.80 | 56.50 | 0.50 | 19.75 | 70.51 | 14.00 | 8.06 |
| | MAY | 811.12 | 185.45 | 4.70 | 15.09 | 0. | 20.59 | 19.20 | 0.52 | 5.63 | 68.28 | 14.00 | 2.29 |
| | JUN. | 812.03 | 196.56 | 26.70 | 14.61 | 0. | 85.61 | 5.20 | 31.02 | 5.63 | 68.24 | 14.00 | 2.22 |
| | JUL. | 813.28 | 212.52 | 32.00 | 15.09 | 0. | 88.49 | 12.20 | 28.48 | 5.63 | 69.34 | 14.00 | 2.33 |
| | AUG. | 813.05 | 209.50 | 13.10 | 15.09 | 0. | 58.09 | 1.00 | 21.32 | 5.63 | 69.84 | 14.00 | 2.35 |
| | SEP. | 814.31 | 226.50 | 32.70 | 14.61 | 0. | 116.81 | 1.80 | 44.37 | 5.63 | 70.34 | 14.00 | 2.29 |
| | OCT. | 816.55 | 259.22 | 48.80 | 15.09 | 0. | 198.79 | 4.50 | 72.54 | 5.63 | 72.11 | 14.00 | 2.43 |
| | NOV. | 818.39 | 288.90 | 45.10 | 14.61 | 0. | 144.11 | 34.80 | 42.17 | 5.63 | 74.13 | 14.00 | 2.43 |
| | DEC. | 815.93 | 249.84 | 6.60 | 44.84 | 0. | 68.44 | 67.10 | 0.50 | 16.74 | 73.84 | 14.00 | 7.43 |
| 1964 | JAN. | 813.56 | 216.30 | 5.40 | 38.14 | 0. | 54.24 | 52.90 | 0.50 | 14.24 | 71.43 | 14.00 | 6.09 |
| | FEB. | 811.52 | 190.27 | 3.90 | 28.95 | 0. | 38.65 | 37.40 | 0.50 | 11.56 | 69.19 | 14.00 | 4.46 |
| | MAR. | 808.78 | 159.26 | 3.70 | 33.44 | 0. | 42.94 | 41.60 | 0.50 | 12.48 | 66.83 | 14.00 | 4.95 |
| | APR. | 803.72 | 112.37 | 3.30 | 49.10 | 0. | 57.80 | 56.50 | 0.50 | 18.94 | 62.91 | 13.29 | 6.82 |
| | MAY | 802.05 | 99.54 | 3.10 | 15.09 | 0. | 22.69 | 19.20 | 1.30 | 5.63 | 59.57 | 12.24 | 1.98 |
| | JUN. | 810.20 | 174.78 | 90.60 | 14.61 | 0. | 298.61 | 5.20 | 113.20 | 5.63 | 62.79 | 13.25 | 2.02 |
| | JUL. | 817.21 | 269.68 | 111.00 | 15.09 | 0. | 179.49 | 12.20 | 62.46 | 5.63 | 70.39 | 14.00 | 2.37 |
| | AUG. | 817.20 | 269.45 | 16.10 | 15.09 | 0. | 82.19 | 1.00 | 30.31 | 5.63 | 73.89 | 14.00 | 2.50 |
| | SEP. | 819.71 | 311.69 | 58.20 | 14.61 | 0. | 142.61 | 1.80 | 54.32 | 5.63 | 75.12 | 14.00 | 2.46 |
| | OCT. | 822.77 | 369.97 | 74.60 | 15.09 | 0. | 266.89 | 4.50 | 97.97 | 5.63 | 77.92 | 14.00 | 2.65 |
| | NOV. | 822.37 | 361.91 | 7.60 | 14.61 | 0. | 53.11 | 34.80 | 7.06 | 5.63 | 79.23 | 14.00 | 2.61 |
| | DEC. | 820.33 | 322.80 | 6.20 | 44.34 | 0. | 68.44 | 67.10 | 0.50 | 16.55 | 78.03 | 14.00 | 7.80 |
| 1965 | JAN. | 817.91 | 280.98 | 2.80 | 43.64 | 0. | 54.24 | 52.90 | 0.50 | 16.29 | 75.80 | 14.00 | 7.44 |
| | FEB. | 815.75 | 247.09 | 3.00 | 35.71 | 0. | 38.61 | 37.40 | 0.50 | 14.76 | 73.46 | 14.00 | 5.88 |
| | MAR. | 812.95 | 208.20 | 1.90 | 39.24 | 0. | 42.94 | 41.60 | 0.50 | 14.65 | 71.03 | 14.00 | 6.23 |
| | APR. | 806.26 | 153.85 | 1.60 | 54.60 | 0. | 57.80 | 56.50 | 0.50 | 21.06 | 67.27 | 14.00 | 8.15 |
| | MAY | 808.90 | 160.44 | 27.80 | 15.09 | 0. | 86.29 | 19.20 | 25.05 | 5.63 | 65.26 | 14.00 | 2.17 |
| | JUN. | 811.55 | 190.62 | 45.70 | 14.61 | 0. | 118.21 | 5.20 | 43.60 | 5.63 | 66.89 | 14.00 | 2.16 |
| | JUL. | 811.68 | 192.22 | 17.60 | 15.09 | 0. | 58.49 | 12.20 | 17.28 | 5.63 | 68.29 | 14.00 | 2.29 |
| | AUG. | 811.36 | 188.37 | 17.20 | 15.09 | 0. | 59.69 | 1.00 | 21.91 | 5.63 | 68.20 | 14.00 | 2.29 |
| | SEP. | 823.50 | 385.00 | 263.00 | 64.97 | 0. | 213.17 | 1.80 | 81.55 | 25.06 | 74.09 | 14.00 | 10.08 |
| | OCT. | 823.50 | 385.00 | 83.20 | 72.44 | 9.28 | 312.72 | 4.50 | 115.08 | 27.05 | 80.03 | 14.00 | 10.42 |
| | NOV. | 823.50 | 385.00 | 37.60 | 36.53 | 0. | 95.33 | 34.80 | 23.35 | 14.09 | 80.16 | 14.00 | 6.62 |
| | DEC. | 821.91 | 352.83 | 13.30 | 44.44 | 0. | 68.44 | 67.10 | 0.50 | 16.59 | 79.39 | 14.00 | 7.96 |
| 1966 | JAN. | 820.36 | 323.43 | 7.90 | 36.24 | 0. | 54.24 | 52.90 | 0.50 | 13.53 | 77.82 | 14.00 | 6.36 |
| | FEB. | 819.01 | 299.39 | 4.80 | 27.51 | 0. | 38.61 | 37.40 | 0.50 | 11.37 | 76.31 | 14.00 | 4.72 |
| | MAR. | 817.15 | 268.72 | 4.90 | 33.74 | 0. | 42.94 | 41.60 | 0.50 | 12.60 | 74.76 | 14.00 | 5.66 |
| | APR. | 814.43 | 228.70 | 4.70 | 43.50 | 0. | 57.80 | 56.50 | 0.50 | 16.78 | 72.46 | 14.00 | 7.06 |
| | MAY | 816.79 | 262.96 | 51.40 | 15.09 | 0. | 159.59 | 19.20 | 52.42 | 5.63 | 72.29 | 14.00 | 2.44 |
| | JUN. | 820.86 | 332.59 | 85.60 | 14.61 | 0. | 417.71 | 5.20 | 157.22 | 5.63 | 75.48 | 14.00 | 2.48 |

| YEAR | MONTH | WATER LEVEL (M) | GROSS STORAGE (MCM) | INFLOW (MCM) | OUTFLOW (MCM) | SPILL-OUT (MCM) | DIS-CHARGE (MCM) | WATER USED FOR IRRIGATION (MCM) | RIVER FLOW (CMS) | OUTFLOW FOR POWER (CMS) | HEAD FOR POWER (M) | POWER PEAKING CAPACITY (MW) | ENERGY OUTPUT (GWH) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 820.86 | 332.59 | | | | | | | | | | |
| | JUL. | 823.50 | 385.00 | 78.80 | 24.93 | 0. | 265.53 | 12.20 | 94.58 | 9.31 | 78.86 | 14.00 | 4.44 |
| | AUG. | 823.50 | 385.00 | 28.00 | 26.37 | 0. | 132.67 | 1.00 | 49.16 | 9.85 | 80.18 | 14.00 | 4.78 |
| | SEP. | 823.50 | 385.00 | 41.60 | 39.89 | 0. | 199.79 | 1.80 | 76.39 | 15.39 | 80.16 | 14.00 | 7.22 |
| | OCT. | 823.50 | 385.00 | 67.00 | 65.54 | 0. | 425.74 | 4.50 | 157.27 | 24.47 | 80.18 | 14.00 | 10.42 |
| | NOV. | 823.40 | 382.85 | 13.50 | 14.61 | 0. | 70.41 | 34.80 | 13.74 | 5.63 | 80.11 | 14.00 | 2.64 |
| | DEC. | 821.90 | 352.49 | 8.40 | 37.74 | 0. | 68.44 | 67.10 | 0.50 | 14.09 | 79.33 | 14.00 | 6.76 |
| 1967 | JAN. | 820.34 | 322.98 | 7.20 | 35.64 | 0. | 54.24 | 52.90 | 0.50 | 13.31 | 77.79 | 14.00 | 6.25 |
| | FEB. | 819.28 | 304.13 | 5.50 | 23.01 | 0. | 38.61 | 37.40 | 0.50 | 9.51 | 76.44 | 14.00 | 3.96 |
| | MAR. | 817.71 | 277.63 | 4.80 | 29.44 | 0. | 42.94 | 41.60 | 0.50 | 10.99 | 75.17 | 14.00 | 4.97 |
| | APR. | 816.33 | 255.82 | 11.10 | 31.10 | 0. | 57.80 | 56.50 | 0.50 | 12.00 | 73.68 | 14.00 | 5.14 |
| | MAY | 815.46 | 247.86 | 3.70 | 15.09 | 0. | 26.89 | 19.20 | 2.87 | 5.63 | 72.57 | 14.00 | 2.45 |
| | JUN. | 815.34 | 241.19 | 14.10 | 14.61 | 0. | 110.51 | 5.20 | 40.63 | 5.63 | 72.06 | 14.00 | 2.35 |
| | JUL. | 815.27 | 240.12 | 15.10 | 15.09 | 0. | 60.39 | 12.20 | 17.99 | 5.63 | 71.99 | 14.00 | 2.43 |
| | AUG. | 814.84 | 233.91 | 10.00 | 15.09 | 0. | 54.59 | 1.00 | 20.01 | 5.63 | 71.73 | 14.00 | 2.42 |
| | SEP. | 816.14 | 253.01 | 34.90 | 14.61 | 0. | 158.71 | 1.80 | 60.53 | 5.63 | 72.15 | 14.00 | 2.36 |
| | OCT. | 817.36 | 271.97 | 35.10 | 15.09 | 0. | 104.69 | 4.50 | 37.41 | 5.63 | 73.43 | 14.00 | 2.48 |
| | NOV. | 817.06 | 267.16 | 10.60 | 14.61 | 0. | 46.01 | 34.80 | 4.32 | 5.63 | 73.87 | 14.00 | 2.42 |
| | DEC. | 813.99 | 222.07 | 6.10 | 50.44 | 0. | 68.44 | 67.10 | 0.50 | 18.83 | 72.20 | 14.00 | 8.15 |
| 1968 | JAN. | 811.36 | 185.29 | 4.80 | 37.84 | 0. | 54.24 | 52.90 | 0.50 | 14.13 | 69.35 | 14.00 | 5.84 |
| | FEB. | 809.08 | 162.37 | 2.90 | 27.95 | 0. | 38.65 | 37.40 | 0.50 | 11.16 | 66.86 | 14.00 | 4.14 |
| | MAR. | 805.51 | 127.52 | 2.00 | 35.74 | 0. | 42.94 | 41.60 | 0.50 | 13.34 | 63.97 | 13.63 | 5.05 |
| | APR. | 798.80 | 77.84 | 1.90 | 50.70 | 0. | 57.80 | 56.50 | 0.50 | 19.56 | 58.82 | 12.01 | 6.58 |
| | MAY | 804.30 | 117.07 | 55.10 | 15.09 | 0. | 119.89 | 19.20 | 37.59 | 5.63 | 58.23 | 11.83 | 1.94 |
| | JUN. | 817.33 | 271.48 | 170.00 | 14.61 | 0. | 466.21 | 5.20 | 177.86 | 5.63 | 67.47 | 14.00 | 2.19 |
| | JUL. | 818.13 | 284.60 | 29.40 | 15.09 | 0. | 95.59 | 12.20 | 31.13 | 5.63 | 74.41 | 14.00 | 2.52 |
| | AUG. | 818.55 | 291.50 | 25.30 | 15.09 | 0. | 66.49 | 1.00 | 24.45 | 5.63 | 75.02 | 14.00 | 2.54 |
| | SEP. | 822.65 | 367.51 | 92.10 | 14.61 | 0. | 287.81 | 1.80 | 110.34 | 5.63 | 77.26 | 14.00 | 2.54 |
| | OCT. | 823.50 | 385.00 | 68.30 | 49.40 | 0. | 343.80 | 4.50 | 126.68 | 18.44 | 79.75 | 14.00 | 8.90 |
| | NOV. | 823.50 | 385.00 | 40.00 | 38.93 | 0. | 123.23 | 34.80 | 34.12 | 15.02 | 80.16 | 14.00 | 7.05 |
| | DEC. | 822.42 | 362.82 | 12.70 | 33.84 | 0. | 68.44 | 67.10 | 0.50 | 12.63 | 79.64 | 14.00 | 6.09 |
| 1969 | JAN. | 821.68 | 348.38 | 10.20 | 23.54 | 0. | 54.24 | 52.90 | 0.50 | 8.79 | 78.73 | 14.00 | 4.18 |
| | FEB. | 820.46 | 325.25 | 4.10 | 25.81 | 0. | 38.61 | 37.40 | 0.50 | 10.67 | 77.70 | 14.00 | 4.52 |
| | MAR. | 818.77 | 295.26 | 5.20 | 31.24 | 0. | 42.94 | 41.60 | 0.50 | 11.66 | 76.29 | 14.00 | 5.36 |
| | APR. | 815.84 | 248.53 | 2.00 | 46.90 | 0. | 57.80 | 56.50 | 0.50 | 18.09 | 73.97 | 14.00 | 7.78 |
| | MAY | 815.92 | 249.77 | 17.90 | 15.09 | 0. | 58.49 | 19.20 | 14.67 | 5.63 | 72.56 | 14.00 | 2.45 |
| | JUN. | 823.50 | 385.00 | 217.00 | 70.10 | 10.14 | 525.34 | 5.20 | 200.67 | 27.05 | 76.21 | 14.00 | 10.08 |
| | JUL. | 823.50 | 385.00 | 77.00 | 72.44 | 2.95 | 214.49 | 12.20 | 75.53 | 27.05 | 80.13 | 14.00 | 10.42 |
| | AUG. | 823.50 | 385.00 | 138.00 | 72.44 | 63.76 | 558.21 | 1.00 | 208.04 | 27.05 | 79.50 | 14.00 | 10.42 |
| | SEP. | 823.50 | 385.00 | 193.00 | 70.10 | 120.96 | 654.06 | 1.80 | 251.64 | 27.05 | 79.15 | 14.00 | 10.08 |
| | OCT. | 823.50 | 385.00 | 216.00 | 72.44 | 141.91 | 900.65 | 4.50 | 334.59 | 27.05 | 79.08 | 14.00 | 10.42 |
| | NOV. | 823.50 | 385.00 | 41.00 | 39.95 | 0. | 198.23 | 34.80 | 63.05 | 15.40 | 80.16 | 14.00 | 7.23 |
| | DEC. | 822.60 | 364.42 | 22.70 | 40.24 | 0. | 68.44 | 67.10 | 0.50 | 15.02 | 79.73 | 14.00 | 7.25 |
| 1970 | JAN. | 821.12 | 337.58 | 10.30 | 38.04 | 0. | 54.24 | 52.90 | 0.50 | 14.20 | 78.54 | 14.00 | 6.74 |
| | FEB. | 819.64 | 310.50 | 6.60 | 32.31 | 0. | 38.61 | 37.40 | 0.50 | 13.36 | 77.01 | 14.00 | 5.60 |
| | MAR. | 817.55 | 275.09 | 4.10 | 37.46 | 0. | 42.94 | 41.60 | 0.50 | 14.05 | 75.28 | 14.00 | 6.37 |
| | APR. | 814.25 | 225.66 | 8.60 | 56.30 | 0. | 57.80 | 56.50 | 0.50 | 21.72 | 72.56 | 14.00 | 9.15 |
| | MAY | 814.24 | 225.52 | 16.40 | 15.09 | 0. | 36.99 | 19.20 | 6.64 | 5.63 | 70.92 | 14.00 | 2.39 |
| | JUN. | 814.63 | 230.99 | 21.20 | 14.61 | 0. | 30.51 | 5.20 | 9.76 | 5.63 | 71.10 | 14.00 | 2.32 |

| YEAR | MONTH | WATER LEVEL | GROSS STORAGE | INFLOW | OUTFLOW | SPILL-OUT | DIS-CHARGE | WATER USED FOR IRRIGATION | RIVER FLOW | OUTFLOW FOR POWER | HEAD FOR POWER | POWER PEAKING CAPACITY | ENERGY OUTPUT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | MCM | MCM | MCM | MCM | MCM | MCM | CMS | CMS | M | MW | GWH |
| | | 814.63 | 230.99 | | | | | | | | | | |
| | JUL. | 817.15 | 268.60 | 53.80 | 15.09 | 0. | 103.19 | 12.20 | 33.97 | 5.63 | 72.57 | 14.00 | 2.45 |
| | AUG. | 821.72 | 349.14 | 97.00 | 15.09 | 0. | 200.69 | 1.00 | 74.56 | 5.63 | 76.11 | 14.00 | 2.58 |
| | SEP. | 823.50 | 385.00 | 187.00 | 70.10 | 79.21 | 509.62 | 1.80 | 195.92 | 27.05 | 78.49 | 14.00 | 10.08 |
| | OCT. | 823.50 | 385.00 | 60.40 | 72.44 | 6.48 | 399.82 | 4.50 | 147.60 | 27.05 | 80.07 | 14.00 | 10.42 |
| | NOV. | 823.50 | 385.00 | 30.30 | 29.74 | 0. | 123.74 | 34.80 | 34.31 | 11.28 | 80.16 | 14.00 | 5.30 |
| | DEC. | 822.61 | 366.62 | 15.40 | 32.74 | 0. | 68.44 | 67.10 | 0.50 | 12.22 | 79.73 | 14.00 | 5.90 |
| 1971 | JAN. | 821.49 | 344.57 | 7.20 | 28.14 | 0. | 54.24 | 52.90 | 0.50 | 10.51 | 78.73 | 14.00 | 5.00 |
| | FEB. | 820.52 | 326.25 | 4.90 | 21.81 | 0. | 38.61 | 37.40 | 0.50 | 9.02 | 77.63 | 14.00 | 3.82 |
| | MAR. | 818.97 | 298.65 | 3.40 | 29.04 | 0. | 42.94 | 41.60 | 0.50 | 10.84 | 76.42 | 14.00 | 4.99 |
| | APR. | 816.12 | 252.70 | 3.00 | 47.10 | 0. | 57.80 | 56.50 | 0.50 | 18.17 | 74.21 | 14.00 | 7.84 |
| | MAY | 816.66 | 261.00 | 25.00 | 15.09 | 0. | 69.99 | 19.20 | 18.96 | 5.63 | 73.07 | 14.00 | 2.47 |
| | JUN. | 816.79 | 262.96 | 17.80 | 14.61 | 0. | 55.81 | 5.20 | 19.52 | 5.63 | 73.39 | 14.00 | 2.40 |
| | JUL. | 816.84 | 263.82 | 17.10 | 15.09 | 0. | 34.69 | 12.20 | 8.40 | 5.63 | 73.49 | 14.00 | 2.49 |
| | AUG. | 818.51 | 290.86 | 43.40 | 15.09 | 0. | 96.09 | 1.00 | 35.50 | 5.63 | 74.35 | 14.00 | 2.52 |
| | SEP. | 823.44 | 383.75 | 109.00 | 14.61 | 0. | 261.71 | 1.80 | 100.27 | 5.63 | 77.64 | 14.00 | 2.56 |
| | OCT. | 823.50 | 385.00 | 102.00 | 72.44 | 26.80 | 392.15 | 4.50 | 144.73 | 27.05 | 79.78 | 14.00 | 10.42 |
| | NOV. | 823.50 | 385.00 | 19.70 | 18.65 | 0. | 75.35 | 34.80 | 15.64 | 7.20 | 80.16 | 14.00 | 3.38 |
| | DEC. | 821.82 | 351.03 | 8.30 | 41.24 | 0. | 68.44 | 67.10 | 0.50 | 15.40 | 79.34 | 14.00 | 7.39 |
| 1972 | JAN. | 820.16 | 319.73 | 5.90 | 36.14 | 0. | 54.24 | 52.90 | 0.50 | 13.49 | 77.67 | 14.00 | 6.33 |
| | FEB. | 818.78 | 295.46 | 3.40 | 26.35 | 0. | 38.65 | 37.40 | 0.50 | 10.52 | 76.11 | 14.00 | 4.51 |
| | MAR. | 816.70 | 261.62 | 2.30 | 34.34 | 0. | 42.94 | 41.60 | 0.50 | 12.82 | 74.42 | 14.00 | 5.74 |
| | APR. | 813.22 | 211.77 | 2.60 | 50.80 | 0. | 57.80 | 56.50 | 0.50 | 19.60 | 71.62 | 14.00 | 8.13 |
| | MAY | 813.09 | 210.09 | 14.80 | 15.09 | 0. | 56.09 | 19.20 | 13.77 | 5.63 | 69.84 | 14.00 | 2.35 |
| | JUN. | 814.88 | 234.49 | 40.10 | 14.61 | 0. | 124.71 | 5.20 | 46.11 | 5.63 | 70.65 | 14.00 | 2.30 |
| | JUL. | 814.32 | 226.55 | 8.20 | 15.09 | 0. | 32.59 | 12.20 | 7.61 | 5.63 | 71.28 | 14.00 | 2.40 |
| | AUG. | 813.79 | 219.29 | 8.90 | 15.09 | 0. | 37.89 | 1.00 | 13.77 | 5.63 | 70.73 | 14.00 | 2.38 |
| | SEP. | 813.36 | 213.89 | 10.30 | 14.61 | 0. | 36.51 | 1.80 | 13.39 | 5.63 | 70.25 | 14.00 | 2.29 |
| | OCT. | 812.85 | 206.91 | 9.00 | 15.09 | 0. | 42.69 | 4.50 | 14.26 | 5.63 | 69.80 | 14.00 | 2.35 |
| | NOV. | 811.74 | 192.87 | 5.00 | 18.40 | 0. | 36.10 | 34.80 | 0.50 | 7.10 | 68.96 | 14.00 | 2.82 |
| | DEC. | 806.57 | 137.17 | 3.50 | 58.64 | 0. | 68.44 | 67.10 | 0.50 | 21.89 | 65.83 | 14.00 | 8.53 |
| 1973 | JAN. | 803.32 | 109.21 | 3.40 | 30.85 | 0. | 37.55 | 36.22* | 0.50 | 11.52 | 61.62 | 12.88 | 4.20 |
| | FEB. | 801.12 | 92.92 | 3.00 | 18.71 | 0. | 21.81 | 20.60* | 0.50 | 7.73 | 58.85 | 12.02 | 2.43 |
| | MAR. | 798.53 | 76.19 | 3.20 | 19.19 | 0. | 20.59 | 19.25* | 0.50 | 7.16 | 56.50 | 11.31 | 2.39 |
| | APR. | 794.50 | 55.00 | 3.00 | 23.55 | 0. | 26.65 | 25.36* | 0.50 | 9.09 | 53.18 | 10.33 | 2.76 |
| | MAY | 795.09 | 57.79 | 18.40 | 15.09 | 0. | 34.19 | 19.20 | 5.60 | 5.63 | 51.47 | 9.83 | 1.71 |
| | JUN. | 800.86 | 91.10 | 48.40 | 14.61 | 0. | 66.01 | 5.20 | 23.46 | 5.63 | 54.64 | 10.75 | 1.76 |
| | JUL. | 804.80 | 121.32 | 45.90 | 15.09 | 0. | 77.69 | 17.20 | 24.45 | 5.63 | 59.51 | 12.22 | 1.98 |
| | AUG. | 806.51 | 136.61 | 31.10 | 15.09 | 0. | 65.09 | 1.00 | 23.93 | 5.63 | 62.33 | 13.10 | 2.08 |
| | SEP. | 813.52 | 215.68 | 94.60 | 14.61 | 0. | 188.41 | 1.80 | 71.99 | 5.63 | 66.68 | 14.00 | 2.16 |
| | OCT. | 823.50 | 385.00 | 186.00 | 15.53 | 0. | 490.73 | 4.50 | 181.54 | 5.80 | 75.19 | 14.00 | 2.62 |
| | NOV. | 823.50 | 365.00 | 43.00 | 41.93 | 0. | 189.13 | 34.80 | 59.54 | 16.18 | 80.16 | 14.00 | 7.59 |
| | DEC. | 822.04 | 355.33 | 10.40 | 39.04 | 0. | 68.44 | 67.10 | 0.50 | 14.58 | 79.45 | 14.00 | 7.00 |
| 1974 | JAN. | 820.71 | 320.72 | 4.40 | 39.94 | 0. | 54.24 | 52.90 | 0.50 | 14.91 | 77.81 | 14.00 | 7.00 |
| | FEB. | 818.50 | 290.80 | 5.40 | 34.01 | 0. | 38.61 | 37.40 | 0.50 | 14.06 | 75.99 | 14.00 | 5.81 |
| | MAR. | 816.20 | 251.89 | 4.90 | 39.94 | 0. | 42.94 | 41.60 | 0.50 | 14.91 | 74.03 | 14.00 | 6.63 |
| | APR. | 812.43 | 201.44 | 3.60 | 54.20 | 0. | 57.50 | 56.50 | 0.50 | 20.91 | 70.97 | 14.00 | 8.59 |
| | MAY | 812.64 | 277.37 | 92.50 | 15.09 | 0. | 189.39 | 19.20 | 63.54 | 5.63 | 71.74 | 14.00 | 2.42 |
| | [illegible] | [illegible] | [illegible] | 44.60 | 14.61 | 0. | 199.41 | 5.20 | 74.92 | 5.63 | 75.20 | 14.00 | 2.47 |

| YEAR | MONTH | WATER LEVEL | GROSS STORAGE | INFLOW | OUTFLOW | SPILL-OUT | DIS-CHARGE | WATER USED FOR IRRIGATION | RIVER FLOW | OUTFLOW FOR POWER | HEAD FOR POWER | POWER PEAKING CAPACITY | ENERGY OUTPUT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | MCM | MCM | MCM | MCM | MCM | MCM | CMS | CMS | M | MW | GWH |
| | | 819.36 | 305.82 | | | | | | | | | | |
| | JUL. | 819.61 | 309.94 | 20.50 | 15.09 | 0. | 109.99 | 12.20 | 36.51 | 5.63 | 76.17 | 14.00 | 2.59 |
| | AUG. | 819.18 | 302.39 | 8.90 | 15.09 | 0. | 123.89 | 1.00 | 45.88 | 5.63 | 76.08 | 14.00 | 2.58 |
| | SEP. | 823.50 | 385.00 | 111.40 | 27.24 | 0. | 483.04 | 1.80 | 185.66 | 10.51 | 78.00 | 14.00 | 4.79 |
| | OCT. | 823.50 | 385.00 | 42.40 | 40.97 | 0. | 372.27 | 4.50 | 137.31 | 15.30 | 80.18 | 14.00 | 7.42 |
| | NOV. | 823.36 | 382.15 | 12.80 | 14.61 | 0. | 84.51 | 34.80 | 19.18 | 5.63 | 80.09 | 14.00 | 2.64 |
| | DEC. | 821.09 | 337.00 | 10.50 | 54.64 | 0. | 68.44 | 67.10 | 0.50 | 20.40 | 78.91 | 14.00 | 9.73 |
| 1975 | JAN. | 818.79 | 295.65 | 9.70 | 50.04 | 0. | 54.24 | 52.90 | 0.50 | 18.68 | 76.62 | 14.00 | 8.63 |
| | FEB. | 816.82 | 263.41 | 6.90 | 37.91 | 0. | 38.61 | 37.40 | 0.50 | 15.67 | 74.43 | 14.00 | 6.33 |
| | MAR. | 814.29 | 226.24 | 5.20 | 40.74 | 0. | 42.94 | 41.60 | 0.50 | 15.21 | 72.23 | 14.00 | 6.59 |
| | APR. | 810.17 | 174.37 | 3.90 | 54.20 | 0. | 57.80 | 56.50 | 0.50 | 20.91 | 68.89 | 14.00 | 8.31 |
| | MAY. | 810.07 | 173.28 | 15.20 | 15.09 | 0. | 30.99 | 19.20 | 4.40 | 5.63 | 66.80 | 14.00 | 2.23 |
| | JUN. | 809.44 | 166.28 | 8.50 | 14.61 | 0. | 15.91 | 5.20 | 4.13 | 5.63 | 66.42 | 14.00 | 2.15 |
| | JUL. | 809.59 | 167.97 | 17.70 | 15.09 | 0. | 35.29 | 12.20 | 8.62 | 5.63 | 66.19 | 14.00 | 2.21 |
| | AUG. | 808.62 | 157.52 | 5.50 | 15.09 | 0. | 66.69 | 1.00 | 24.53 | 5.63 | 65.78 | 14.00 | 2.19 |
| | SEP. | 823.07 | 375.97 | 234.30 | 14.61 | 0. | 441.71 | 1.80 | 169.72 | 5.63 | 72.50 | 14.00 | 2.37 |
| | OCT. | 823.50 | 385.00 | 164.00 | 72.44 | 80.97 | 597.11 | 4.50 | 221.25 | 27.05 | 79.17 | 14.00 | 10.42 |
| | NOV. | 823.50 | 385.00 | 187.00 | 70.10 | 115.69 | 418.29 | 34.80 | 147.95 | 27.05 | 79.18 | 14.00 | 10.08 |
| | DEC. | 823.37 | 382.75 | 13.40 | 15.09 | 0. | 83.99 | 67.10 | 6.31 | 5.63 | 80.11 | 14.00 | 2.73 |
| 1976 | JAN. | 822.00 | 354.47 | 9.00 | 35.64 | 0. | 54.74 | 52.90 | 0.50 | 13.31 | 79.36 | 14.00 | 6.39 |
| | FEB. | 820.71 | 329.79 | 6.40 | 29.65 | 0. | 38.65 | 37.40 | 0.50 | 11.83 | 78.00 | 14.00 | 5.21 |
| | MAR. | 818.72 | 294.39 | 5.40 | 38.84 | 0. | 42.94 | 41.60 | 0.50 | 14.50 | 76.39 | 14.00 | 6.68 |
| | APR. | 815.45 | 242.77 | 5.20 | 55.00 | 0. | 57.80 | 56.50 | 0.50 | 21.22 | 73.75 | 14.00 | 9.10 |
| | | | | | | | | | | | | | 1283.51 |

RESERVOIR OPERATION   SAN FERNANDO DAM PLAN

HIGH WATER LEVEL   826.50   LOW WATER LEVEL   794.50

GROSS STORAGE CAPACITY   455.00 MCM

DEAD STORAGE CAPACITY   55.00 MCM

EVAPORATION DATA IN MM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 64.0 | 85.0 | 125.0 | 130.0 | 118.0 | 90.0 | 83.0 | 88.0 | 91.0 | 76.0 | 57.0 | 58.0 |

MAXIMUM DISCHARGE FOR POWER GENERATION   32.12 CMS

POWER INSTALLED CAPACITY   17000. KW

RATED HEAD FOR POWER GENERATION   66.5 M

GUARANTEED MINIMUM DISCHARGE FOR POWER GENERATION   6.69 CMS

SEASONAL MINIMUM STORAGE IN MCM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 157.90 | 137.10 | 55.00 | 55.00 | 55.00 | 55.00 | 55.00 | 120.00 | 155.00 | 191.60 | 191.60 | 181.60 |

MONTHLY IRRIGATION WATER REQUIREMENT

UPSTREAM OF DAMSITE IN MCM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |

DOWNSTREAM OF DAMSITE IN MCM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 52.90 | 37.40 | 41.60 | 56.50 | 19.20 | 5.70 | 12.20 | 1.00 | 1.80 | 4.50 | 34.80 | 67.10 |

RESERVOIR OPERATION    SAN FERNANDO DAM PLAN

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DIS-CHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 820.00 | 318.60 | | | | | | | | | | |
| 1954 | AUG. | 821.03 | 337.85 | 38.60 | 17.92 | 0. | 120.42 | 1.00 | 44.59 | 6.69 | 77.11 | 17.00 | 3.11 |
| | SEP. | 826.50 | 455.00 | 207.00 | 83.26 | 4.79 | 591.05 | 1.80 | 227.34 | 32.12 | 80.27 | 17.00 | 12.24 |
| | OCT. | 826.50 | 455.00 | 172.00 | 86.03 | 84.21 | 775.14 | 4.50 | 287.73 | 32.12 | 82.34 | 17.00 | 12.65 |
| | NOV. | 826.50 | 455.00 | 20.40 | 19.22 | 0. | 80.42 | 34.80 | 17.60 | 7.42 | 83.08 | 17.00 | 3.61 |
| | DEC. | 824.75 | 414.40 | 8.40 | 47.84 | 0. | 68.44 | 67.10 | 0.50 | 17.86 | 82.22 | 17.00 | 8.89 |
| 1955 | JAN. | 823.32 | 383.56 | 6.90 | 36.54 | 0. | 54.24 | 52.90 | 0.50 | 13.64 | 80.63 | 17.00 | 6.65 |
| | FEB. | 822.22 | 361.04 | 6.20 | 27.21 | 0. | 38.61 | 37.40 | 0.50 | 11.25 | 79.31 | 17.00 | 4.87 |
| | MAR. | 820.94 | 336.08 | 6.10 | 28.94 | 0. | 42.94 | 41.60 | 0.50 | 10.80 | 78.17 | 17.00 | 5.09 |
| | APR. | 818.67 | 295.14 | 5.70 | 44.60 | 0. | 57.80 | 56.50 | 0.50 | 17.21 | 76.38 | 17.00 | 7.65 |
| | MAY | 817.82 | 280.78 | 5.30 | 17.92 | 0. | 30.22 | 19.20 | 4.12 | 6.69 | 74.84 | 17.00 | 3.01 |
| | JUN. | 817.12 | 269.55 | 7.40 | 17.35 | 0. | 35.95 | 5.20 | 11.86 | 6.69 | 74.05 | 17.00 | 2.88 |
| | JUL. | 823.07 | 378.30 | 128.00 | 17.92 | 0. | 275.42 | 12.20 | 98.28 | 6.69 | 76.69 | 17.00 | 3.09 |
| | AUG. | 825.46 | 430.51 | 71.80 | 17.92 | 0. | 208.62 | 1.00 | 77.52 | 6.69 | 80.86 | 17.00 | 3.27 |
| | SEP. | 826.50 | 455.00 | 137.00 | 83.26 | 27.27 | 443.43 | 1.80 | 170.38 | 32.12 | 82.22 | 17.00 | 12.24 |
| | OCT. | 826.50 | 455.00 | 246.00 | 86.03 | 158.17 | 1109.16 | 4.50 | 412.43 | 32.12 | 81.99 | 17.00 | 12.65 |
| | NOV. | 826.50 | 455.00 | 58.60 | 57.39 | 0. | 232.19 | 34.80 | 76.15 | 22.14 | 83.08 | 17.00 | 10.79 |
| | DEC. | 826.50 | 455.00 | 21.00 | 19.80 | 0. | 70.10 | 67.10 | 1.12 | 7.39 | 83.09 | 17.00 | 3.72 |
| 1956 | JAN. | 825.95 | 442.05 | 12.10 | 23.74 | 0. | 54.24 | 52.90 | 0.50 | 8.86 | 82.82 | 17.00 | 4.45 |
| | FEB. | 825.24 | 425.61 | 8.50 | 23.25 | 0. | 38.65 | 37.40 | 0.50 | 9.28 | 82.16 | 17.00 | 4.32 |
| | MAR. | 824.09 | 400.06 | 6.00 | 29.14 | 0. | 42.94 | 41.60 | 0.50 | 10.88 | 81.26 | 17.00 | 5.35 |
| | APR. | 822.10 | 358.52 | 5.60 | 44.80 | 0. | 57.80 | 56.50 | 0.50 | 17.28 | 79.67 | 17.00 | 8.05 |
| | MAY. | 821.86 | 353.77 | 15.20 | 17.92 | 0. | 52.42 | 19.20 | 12.40 | 6.69 | 78.57 | 17.00 | 3.17 |
| | JUN. | 825.40 | 429.16 | 94.40 | 17.35 | 0. | 252.75 | 5.20 | 95.50 | 6.69 | 80.20 | 17.00 | 3.14 |
| | JUL. | 826.50 | 455.00 | 51.70 | 24.17 | 0. | 128.27 | 12.20 | 43.34 | 9.03 | 82.54 | 17.00 | 4.51 |
| | AUG. | 826.36 | 451.66 | 16.40 | 17.92 | 0. | 61.52 | 1.00 | 22.60 | 6.69 | 83.02 | 17.00 | 3.37 |
| | SEP. | 826.50 | 455.00 | 41.90 | 36.66 | 0. | 138.46 | 1.80 | 52.72 | 14.14 | 83.01 | 17.00 | 6.89 |
| | OCT. | 826.50 | 455.00 | 38.50 | 36.91 | 0. | 172.41 | 4.50 | 62.69 | 13.78 | 83.09 | 17.00 | 6.94 |
| | NOV. | 826.38 | 452.08 | 15.60 | 17.35 | 0. | 66.05 | 34.80 | 12.05 | 6.69 | 83.01 | 17.00 | 3.26 |
| | DEC. | 824.93 | 418.48 | 13.50 | 45.94 | 0. | 68.44 | 67.10 | 0.50 | 17.15 | 82.25 | 17.00 | 8.54 |
| 1957 | JAN. | 824.42 | 407.11 | 13.30 | 23.44 | 0. | 54.24 | 52.90 | 0.50 | 8.75 | 81.26 | 17.00 | 4.30 |
| | FEB. | 823.93 | 396.60 | 8.10 | 17.01 | 0. | 38.61 | 37.40 | 0.50 | 7.03 | 80.71 | 17.00 | 3.10 |
| | MAR. | 822.85 | 373.78 | 5.90 | 26.44 | 0. | 42.94 | 41.60 | 0.50 | 9.87 | 79.98 | 17.00 | 4.77 |
| | APR. | 820.88 | 334.85 | 5.40 | 42.10 | 0. | 57.80 | 56.50 | 0.50 | 16.24 | 78.44 | 17.00 | 7.44 |
| | MAY | 821.40 | 344.87 | 29.90 | 17.92 | 0. | 134.82 | 19.20 | 43.17 | 6.69 | 77.73 | 17.00 | 3.14 |
| | JUN. | 824.37 | 406.21 | 60.30 | 17.35 | 0. | 165.15 | 5.20 | 61.71 | 6.69 | 79.46 | 17.00 | 3.11 |
| | JUL. | 824.38 | 406.31 | 19.60 | 17.92 | 0. | 44.32 | 12.20 | 11.99 | 6.69 | 80.97 | 17.00 | 3.28 |
| | AUG. | 824.43 | 407.31 | 20.60 | 17.92 | 0. | 59.82 | 1.00 | 21.96 | 6.69 | 80.99 | 17.00 | 3.28 |
| | SEP. | 825.95 | 441.88 | 51.70 | 17.35 | 0. | 201.65 | 1.80 | 77.10 | 6.69 | 81.76 | 17.00 | 3.21 |
| | OCT. | 826.50 | 455.00 | 43.40 | 28.72 | 0. | 186.72 | 4.50 | 68.03 | 10.72 | 82.82 | 17.00 | 5.38 |
| | NOV. | 826.19 | 447.68 | 11.20 | 17.35 | 0. | 46.95 | 34.80 | 4.69 | 6.69 | 82.92 | 17.00 | 3.25 |
| | DEC. | 824.39 | 406.50 | 19.10 | 50.14 | 0. | 68.44 | 67.10 | 0.50 | 18.72 | 81.88 | 17.00 | 9.28 |
| 1958 | JAN. | 822.69 | 370.59 | 6.10 | 40.84 | 0. | 54.24 | 52.90 | 0.50 | 15.25 | 80.13 | 17.00 | 7.39 |
| | FEB. | 821.24 | 341.81 | 4.00 | 31.31 | 0. | 38.61 | 37.40 | 0.50 | 12.94 | 78.51 | 17.00 | 5.54 |
| | MAR. | 819.37 | 307.26 | 3.90 | 36.44 | 0. | 42.94 | 41.60 | 0.50 | 13.60 | 76.90 | 17.00 | 6.30 |
| | APR. | 816.31 | 256.88 | 3.20 | 51.70 | 0. | 57.80 | 56.50 | 0.50 | 19.94 | 74.42 | 17.00 | 8.62 |
| | JUN. | 823.25 | 382.11 | 144.00 | 17.35 | 0. | 256.75 | 5.20 | 97.05 | 6.69 | 76.36 | 17.00 | 2.98 |
| | MAY | 825.36 | 428.35 | 66.40 | 17.92 | 0. | 122.82 | 19.20 | 38.69 | 6.69 | 80.90 | 17.00 | 3.27 |

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DISCHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 825.36 | 428.35 | | | | | | | | | | |
| | JUL. | 826.50 | 455.00 | 65.40 | 37.05 | 0. | 223.75 | 12.20 | 78.98 | 13.83 | 82.52 | 17.00 | 6.92 |
| | AUG. | 826.50 | 455.00 | 34.00 | 32.16 | 0. | 124.26 | 1.00 | 46.02 | 12.01 | 83.09 | 17.00 | 6.05 |
| | SEP. | 826.50 | 455.00 | 27.00 | 25.11 | 0. | 83.51 | 1.80 | 31.52 | 9.69 | 83.08 | 17.00 | 4.72 |
| | OCT. | 826.50 | 455.00 | 66.80 | 65.12 | 0. | 228.77 | 4.50 | 83.73 | 24.33 | 83.09 | 17.00 | 12.25 |
| | NOV. | 826.17 | 447.08 | 10.60 | 17.35 | 0. | 50.85 | 34.80 | 6.19 | 6.69 | 82.91 | 17.00 | 3.25 |
| | DEC. | 824.14 | 401.01 | 8.00 | 52.94 | 0. | 68.44 | 67.10 | 0.50 | 19.77 | 81.74 | 17.00 | 9.78 |
| 1959 | JAN. | 822.56 | 367.80 | 8.20 | 40.24 | 0. | 54.24 | 52.90 | 0.50 | 15.02 | 79.94 | 17.00 | 7.26 |
| | FEB. | 821.27 | 342.43 | 5.90 | 29.81 | 0. | 38.61 | 37.40 | 0.50 | 12.32 | 78.46 | 17.00 | 5.27 |
| | MAR. | 819.39 | 307.58 | 4.80 | 37.64 | 0. | 42.94 | 41.60 | 0.50 | 14.05 | 76.92 | 17.00 | 6.51 |
| | APR. | 816.23 | 255.60 | 4.10 | 54.20 | 0. | 57.80 | 56.50 | 0.50 | 20.91 | 74.38 | 17.00 | 9.04 |
| | MAY | 816.61 | 261.48 | 25.40 | 17.92 | 0. | 42.32 | 19.20 | 8.63 | 6.69 | 73.01 | 17.00 | 2.93 |
| | JUN. | 817.84 | 281.26 | 38.40 | 17.35 | 0. | 62.15 | 5.20 | 21.97 | 6.69 | 73.80 | 17.00 | 2.87 |
| | JUL. | 817.48 | 275.35 | 13.20 | 17.92 | 0. | 26.92 | 17.20 | 5.50 | 6.69 | 74.26 | 17.00 | 2.98 |
| | AUG. | 817.83 | 280.96 | 24.80 | 17.92 | 0. | 42.72 | 1.00 | 15.58 | 6.69 | 74.25 | 17.00 | 2.98 |
| | SEP. | 817.91 | 282.40 | 20.10 | 17.35 | 0. | 43.75 | 1.80 | 16.18 | 6.69 | 74.45 | 17.00 | 2.89 |
| | OCT. | 820.16 | 321.51 | 58.20 | 17.92 | 0. | 200.42 | 4.50 | 73.15 | 6.69 | 75.63 | 17.00 | 3.04 |
| | NOV. | 820.13 | 320.96 | 17.70 | 17.35 | 0. | 43.15 | 34.80 | 3.22 | 6.69 | 76.72 | 17.00 | 2.99 |
| | DEC. | 817.14 | 269.85 | 11.20 | 61.44 | 0. | 68.44 | 67.10 | 0.50 | 22.94 | 75.23 | 17.00 | 10.37 |
| 1960 | JAN. | 814.52 | 230.46 | 5.30 | 43.84 | 0. | 54.24 | 52.90 | 0.50 | 16.37 | 72.42 | 17.00 | 7.10 |
| | FEB. | 812.17 | 199.00 | 3.90 | 34.35 | 0. | 38.65 | 37.40 | 0.50 | 13.71 | 69.90 | 17.00 | 5.34 |
| | MAR. | 808.88 | 160.76 | 3.50 | 40.44 | 0. | 42.94 | 41.60 | 0.50 | 15.10 | 67.11 | 17.00 | 6.00 |
| | APR. | 803.13 | 107.88 | 3.30 | 55.10 | 0. | 57.80 | 56.50 | 0.50 | 21.26 | 62.58 | 15.51 | 7.62 |
| | MAY | 802.59 | 103.73 | 14.40 | 17.92 | 0. | 112.02 | 19.20 | 34.66 | 6.69 | 59.45 | 14.36 | 2.35 |
| | JUN. | 811.97 | 196.57 | 111.00 | 17.35 | 0. | 172.05 | 5.20 | 64.37 | 6.69 | 63.86 | 15.98 | 2.45 |
| | JUL. | 812.09 | 198.02 | 20.30 | 17.92 | 0. | 136.92 | 12.20 | 46.57 | 6.69 | 68.62 | 17.00 | 2.73 |
| | AUG. | 813.86 | 221.28 | 42.20 | 17.92 | 0. | 191.72 | 1.00 | 71.21 | 6.69 | 69.57 | 17.00 | 2.77 |
| | SEP. | 818.74 | 296.40 | 93.70 | 17.35 | 0. | 183.75 | 1.80 | 70.20 | 6.69 | 72.88 | 17.00 | 2.83 |
| | OCT. | 824.46 | 406.18 | 131.00 | 17.92 | 0. | 233.82 | 4.50 | 85.62 | 6.69 | 78.20 | 17.00 | 3.16 |
| | NOV. | 824.47 | 408.34 | 19.60 | 17.35 | 0. | 106.55 | 34.80 | 27.68 | 6.69 | 81.04 | 17.00 | 3.18 |
| | DEC. | 823.05 | 377.93 | 11.00 | 40.34 | 0. | 68.44 | 67.10 | 0.50 | 15.06 | 80.35 | 17.00 | 7.32 |
| 1961 | JAN. | 821.99 | 356.46 | 10.40 | 30.74 | 0. | 54.24 | 52.90 | 0.50 | 11.48 | 79.11 | 17.00 | 5.48 |
| | FEB. | 821.34 | 343.61 | 8.40 | 19.81 | 0. | 38.61 | 37.40 | 0.50 | 8.19 | 78.20 | 17.00 | 3.49 |
| | MAR. | 820.08 | 320.07 | 7.30 | 28.84 | 0. | 42.94 | 41.60 | 0.50 | 10.77 | 77.30 | 17.00 | 5.02 |
| | APR. | 817.59 | 277.06 | 5.70 | 46.70 | 0. | 57.80 | 56.50 | 0.50 | 18.02 | 75.41 | 17.00 | 7.90 |
| | MAY | 816.73 | 263.38 | 5.90 | 17.92 | 0. | 26.92 | 19.20 | 2.88 | 6.69 | 73.75 | 17.00 | 2.96 |
| | JUN. | 817.14 | 269.88 | 25.10 | 17.35 | 0. | 156.35 | 5.20 | 58.31 | 6.69 | 73.51 | 17.00 | 2.85 |
| | JUL. | 817.94 | 282.88 | 32.10 | 17.92 | 0. | 160.72 | 12.20 | 55.45 | 6.69 | 74.14 | 17.00 | 2.98 |
| | AUG. | 817.78 | 280.28 | 16.50 | 17.92 | 0. | 91.32 | 1.00 | 33.72 | 6.69 | 74.46 | 17.00 | 2.99 |
| | SEP. | 819.15 | 305.38 | 41.80 | 17.35 | 0. | 119.15 | 1.80 | 45.27 | 6.69 | 75.04 | 17.00 | 2.92 |
| | OCT. | 819.93 | 317.27 | 33.00 | 17.92 | 0. | 148.42 | 4.50 | 53.73 | 6.69 | 76.13 | 17.00 | 3.07 |
| | NOV. | 820.60 | 329.71 | 30.70 | 17.35 | 0. | 92.45 | 34.80 | 22.24 | 6.69 | 76.84 | 17.00 | 3.00 |
| | DEC. | 818.63 | 294.47 | 12.70 | 44.54 | 0. | 68.44 | 67.10 | 0.50 | 17.38 | 76.21 | 17.00 | 7.97 |
| 1962 | JAN. | 817.07 | 268.70 | 11.60 | 36.44 | 0. | 54.24 | 52.90 | 0.50 | 13.60 | 74.44 | 17.00 | 6.08 |
| | FEB. | 815.76 | 248.53 | 7.60 | 26.61 | 0. | 38.61 | 37.40 | 0.50 | 11.00 | 72.96 | 17.00 | 4.34 |
| | MAR. | 813.56 | 217.12 | 6.00 | 35.84 | 0. | 42.94 | 41.60 | 0.50 | 13.38 | 71.25 | 17.00 | 5.70 |
| | APR. | 809.65 | 169.20 | 5.60 | 52.10 | 0. | 57.80 | 56.50 | 0.50 | 20.10 | 68.18 | 17.00 | 7.88 |
| | MAY | 809.95 | 172.5[illegible] | 22.40 | 17.92 | 0. | 72.42 | 19.20 | 19.87 | 6.69 | 66.39 | 16.94 | 2.63 |
| | JUN. | 811.94 | 222.55 | 19.20 | 17.35 | 0. | 127.05 | 5.20 | 47.01 | 6.69 | 68.52 | 17.00 | 2.64 |

| YEAR | MONTH | WATER LEVEL | GROSS STORAGE | INFLOW | OUTFLOW | SPILL-OUT | DIS-CHARGE | WATER USED FOR IRRIGATION | RIVER FLOW | OUTFLOW FOR POWER | HEAD FOR POWER | POWER PEAKING CAPACITY | ENERGY OUTPUT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | MCM | MCM | MCM | MCM | MCM | MCM | CMS | CMS | M | MW | GWH |
| | | 813.94 | 222.35 | | | | | | | | | | |
| | JUL. | 813.92 | 222.02 | 18.40 | 17.92 | 0. | 100.02 | 12.20 | 32.79 | 6.69 | 70.52 | 17.00 | 2.82 |
| | AUG. | 814.99 | 237.20 | 34.20 | 17.92 | 0. | 79.12 | 1.00 | 29.17 | 6.69 | 71.05 | 17.00 | 2.84 |
| | SEP. | 818.50 | 292.30 | 73.70 | 17.35 | 0. | 101.15 | 1.80 | 38.33 | 6.69 | 73.32 | 17.00 | 2.85 |
| | OCT. | 824.55 | 410.06 | 137.00 | 17.92 | 0. | 96.12 | 4.50 | 34.71 | 6.69 | 78.12 | 17.00 | 3.15 |
| | NOV. | 824.30 | 404.65 | 13.00 | 17.35 | 0. | 38.95 | 34.80 | 1.60 | 6.69 | 81.00 | 17.00 | 3.17 |
| | DEC. | 822.17 | 360.06 | 11.50 | 55.04 | 0. | 68.44 | 67.10 | 0.50 | 20.55 | 79.83 | 17.00 | 9.91 |
| 1963 | JAN. | 820.43 | 326.45 | 9.60 | 41.14 | 0. | 54.24 | 52.90 | 0.50 | 15.36 | 77.89 | 17.00 | 7.21 |
| | FEB. | 818.94 | 299.81 | 6.00 | 31.31 | 0. | 38.61 | 37.40 | 0.50 | 12.94 | 76.22 | 17.00 | 5.36 |
| | MAR. | 816.97 | 267.15 | 5.20 | 36.04 | 0. | 42.94 | 41.60 | 0.50 | 13.46 | 74.55 | 17.00 | 6.02 |
| | APR. | 813.70 | 219.06 | 4.80 | 51.20 | 0. | 57.50 | 56.50 | 0.50 | 19.75 | 71.91 | 17.00 | 8.22 |
| | MAY | 812.59 | 204.46 | 4.70 | 17.92 | 0. | 23.42 | 19.20 | 1.56 | 6.69 | 69.74 | 17.00 | 2.78 |
| | JUN. | 813.23 | 212.77 | 26.70 | 17.35 | 0. | 88.35 | 5.20 | 32.08 | 6.69 | 69.49 | 17.00 | 2.68 |
| | JUL. | 814.19 | 225.84 | 32.00 | 17.92 | 0. | 91.32 | 12.20 | 29.54 | 6.69 | 70.30 | 17.00 | 2.81 |
| | AUG. | 813.76 | 219.95 | 13.10 | 17.92 | 0. | 60.92 | 1.00 | 22.37 | 6.69 | 70.57 | 17.00 | 2.82 |
| | SEP. | 814.78 | 234.18 | 32.70 | 17.35 | 0. | 119.55 | 1.80 | 45.43 | 6.69 | 70.85 | 17.00 | 2.74 |
| | OCT. | 816.78 | 264.05 | 48.80 | 17.92 | 0. | 201.62 | 4.50 | 73.60 | 6.69 | 72.37 | 17.00 | 2.90 |
| | NOV. | 818.43 | 290.99 | 45.10 | 17.35 | 0. | 146.85 | 34.80 | 43.23 | 6.69 | 74.18 | 17.00 | 2.88 |
| | DEC. | 815.99 | 251.93 | 6.60 | 44.84 | 0. | 68.44 | 67.10 | 0.50 | 16.74 | 73.80 | 17.00 | 7.41 |
| 1964 | JAN. | 813.65 | 218.38 | 5.40 | 38.14 | 0. | 54.24 | 52.90 | 0.50 | 14.24 | 71.41 | 17.00 | 6.08 |
| | FEB. | 811.63 | 192.35 | 3.90 | 28.95 | 0. | 38.65 | 37.40 | 0.50 | 11.56 | 69.20 | 17.00 | 4.45 |
| | MAR. | 808.93 | 161.33 | 3.70 | 33.44 | 0. | 42.94 | 41.60 | 0.50 | 12.48 | 66.87 | 17.00 | 4.94 |
| | APR. | 803.94 | 114.43 | 3.30 | 49.10 | 0. | 57.80 | 56.50 | 0.50 | 18.94 | 63.01 | 15.67 | 6.84 |
| | MAY | 801.92 | 98.77 | 3.10 | 17.92 | 0. | 25.52 | 19.20 | 2.36 | 6.69 | 59.53 | 14.39 | 2.36 |
| | JUN. | 809.84 | 171.27 | 90.60 | 17.35 | 0. | 301.35 | 5.20 | 114.25 | 6.69 | 62.45 | 15.46 | 2.39 |
| | JUL. | 816.73 | 263.36 | 111.00 | 17.92 | 0. | 182.32 | 12.20 | 63.52 | 6.69 | 69.88 | 17.00 | 2.79 |
| | AUG. | 816.54 | 260.33 | 14.10 | 17.92 | 0. | 85.02 | 1.00 | 31.37 | 6.69 | 73.23 | 17.00 | 2.94 |
| | SEP. | 818.95 | 299.87 | 58.20 | 17.35 | 0. | 145.35 | 1.80 | 55.38 | 6.69 | 74.32 | 17.00 | 2.89 |
| | OCT. | 821.94 | 355.32 | 74.60 | 17.92 | 0. | 269.72 | 4.50 | 99.02 | 6.69 | 77.03 | 17.00 | 3.11 |
| | NOV. | 821.39 | 344.60 | 7.60 | 17.35 | 0. | 55.85 | 34.80 | 8.12 | 6.69 | 78.24 | 17.00 | 3.06 |
| | DEC. | 819.27 | 305.53 | 6.20 | 44.34 | 0. | 68.44 | 67.10 | 0.50 | 16.55 | 76.92 | 17.00 | 7.67 |
| 1965 | JAN. | 816.76 | 263.76 | 2.80 | 43.64 | 0. | 54.24 | 52.90 | 0.50 | 16.29 | 74.61 | 17.00 | 7.30 |
| | FEB. | 814.48 | 229.93 | 3.00 | 35.71 | 0. | 38.61 | 37.40 | 0.50 | 14.76 | 72.16 | 17.00 | 5.76 |
| | MAR. | 811.53 | 191.13 | 1.90 | 39.24 | 0. | 42.94 | 41.60 | 0.50 | 14.65 | 69.60 | 17.00 | 6.07 |
| | APR. | 806.50 | 136.88 | 1.60 | 54.60 | 0. | 57.80 | 56.50 | 0.50 | 21.06 | 65.59 | 16.64 | 7.91 |
| | MAY | 806.90 | 140.74 | 22.80 | 17.92 | 0. | 69.12 | 19.20 | 26.11 | 6.69 | 63.29 | 15.77 | 2.51 |
| | JUN. | 809.57 | 168.26 | 45.70 | 17.35 | 0. | 120.95 | 5.20 | 44.65 | 6.69 | 64.81 | 16.34 | 2.48 |
| | JUL. | 809.46 | 167.12 | 17.60 | 17.92 | 0. | 61.32 | 12.20 | 18.34 | 6.69 | 66.11 | 16.84 | 2.62 |
| | AUG. | 808.85 | 160.54 | 12.20 | 17.92 | 0. | 62.52 | 1.00 | 22.97 | 6.69 | 65.75 | 16.70 | 2.60 |
| | SEP. | 824.32 | 404.90 | 263.00 | 17.35 | 0. | 165.55 | 1.80 | 63.17 | 6.69 | 73.16 | 17.00 | 2.84 |
| | OCT. | 826.50 | 455.00 | 53.20 | 31.57 | 0. | 262.57 | 4.50 | 96.35 | 11.79 | 82.00 | 17.00 | 5.85 |
| | NOV. | 826.50 | 455.00 | 37.60 | 36.40 | 0. | 95.20 | 34.80 | 23.30 | 14.05 | 83.08 | 17.00 | 6.84 |
| | DEC. | 825.11 | 422.69 | 13.30 | 44.44 | 0. | 68.44 | 67.10 | 0.50 | 16.59 | 82.40 | 17.00 | 8.28 |
| 1966 | JAN. | 823.77 | 393.14 | 7.90 | 36.24 | 0. | 54.24 | 52.90 | 0.50 | 13.53 | 81.04 | 17.00 | 6.63 |
| | FEB. | 822.61 | 368.89 | 4.80 | 27.51 | 0. | 38.61 | 37.40 | 0.50 | 11.37 | 79.73 | 17.00 | 4.95 |
| | MAR. | 821.04 | 337.91 | 4.90 | 33.74 | 0. | 42.94 | 41.60 | 0.50 | 12.60 | 78.42 | 17.00 | 5.96 |
| | APR. | 818.78 | 297.05 | 4.70 | 43.50 | 0. | 57.80 | 56.50 | 0.50 | 16.78 | 76.49 | 17.00 | 7.48 |
| | MAY | 820.55 | 328.68 | 51.40 | 17.92 | 0. | 162.42 | 19.20 | 53.47 | 6.69 | 76.26 | 17.00 | 3.07 |
| | JUN. | 823.88 | 395.37 | 85.60 | 17.35 | 0. | 415.45 | 5.20 | 158.27 | 6.69 | 78.79 | 17.00 | 3.08 |

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DIS-CHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 823.88 | 395.37 | | | | | | | | | | |
| | JUL. | 826.48 | 454.62 | 79.80 | 17.92 | 0. | 258.52 | 12.20 | 91.97 | 6.69 | 81.77 | 17.00 | 3.31 |
| | AUG. | 826.50 | 455.00 | 28.00 | 25.79 | 0. | 132.09 | 1.00 | 48.94 | 9.63 | 83.08 | 17.00 | 4.85 |
| | SEP. | 826.50 | 455.00 | 41.60 | 39.69 | 0. | 199.59 | 1.80 | 76.31 | 15.31 | 83.08 | 17.00 | 7.46 |
| | OCT. | 826.50 | 455.00 | 67.00 | 65.37 | 0. | 425.57 | 4.50 | 157.21 | 24.41 | 83.09 | 17.00 | 12.29 |
| | NOV. | 826.29 | 449.98 | 13.50 | 17.35 | 0. | 73.15 | 34.80 | 14.79 | 6.69 | 82.97 | 17.00 | 3.26 |
| | DEC. | 824.97 | 419.49 | 8.40 | 37.74 | 0. | 68.44 | 67.10 | 0.50 | 14.09 | 82.22 | 17.00 | 7.02 |
| 1967 | JAN. | 823.62 | 389.83 | 7.20 | 35.64 | 0. | 54.24 | 52.90 | 0.50 | 13.31 | 80.89 | 17.00 | 6.51 |
| | FEB. | 822.70 | 370.79 | 5.50 | 23.01 | 0. | 38.61 | 37.40 | 0.50 | 9.51 | 79.70 | 17.00 | 4.14 |
| | MAR. | 821.36 | 343.99 | 4.80 | 29.44 | 0. | 42.94 | 41.60 | 0.50 | 10.99 | 78.62 | 17.00 | 5.21 |
| | APR. | 820.18 | 321.86 | 11.10 | 31.10 | 0. | 57.80 | 56.50 | 0.50 | 12.00 | 77.34 | 17.00 | 5.41 |
| | MAY | 819.28 | 305.79 | 3.70 | 17.92 | 0. | 29.72 | 19.20 | 3.93 | 6.69 | 76.32 | 17.00 | 3.07 |
| | JUN. | 819.02 | 301.16 | 14.10 | 17.35 | 0. | 113.25 | 5.20 | 41.68 | 6.69 | 75.73 | 17.00 | 2.95 |
| | JUL. | 818.78 | 297.08 | 15.10 | 17.92 | 0. | 63.22 | 12.20 | 19.05 | 6.69 | 75.49 | 17.00 | 3.04 |
| | AUG. | 818.24 | 287.85 | 10.00 | 17.92 | 0. | 57.42 | 1.00 | 21.07 | 6.69 | 75.10 | 17.00 | 3.02 |
| | SEP. | 819.18 | 304.04 | 34.90 | 17.35 | 0. | 161.45 | 1.80 | 61.59 | 6.69 | 75.29 | 17.00 | 2.93 |
| | OCT. | 820.08 | 320.02 | 35.10 | 17.92 | 0. | 107.52 | 4.50 | 38.46 | 6.69 | 76.22 | 17.00 | 3.07 |
| | NOV. | 819.65 | 312.38 | 10.60 | 17.35 | 0. | 48.75 | 34.80 | 5.38 | 6.69 | 76.44 | 17.00 | 2.98 |
| | DEC. | 816.97 | 267.18 | 6.10 | 50.44 | 0. | 68.44 | 67.10 | 0.50 | 18.83 | 74.91 | 17.00 | 8.47 |
| 1968 | JAN. | 814.72 | 233.29 | 4.80 | 37.84 | 0. | 54.24 | 52.90 | 0.50 | 14.13 | 72.44 | 17.00 | 6.13 |
| | FEB. | 812.81 | 207.22 | 2.90 | 27.95 | 0. | 38.65 | 37.40 | 0.50 | 11.16 | 70.32 | 17.00 | 4.38 |
| | MAR. | 809.91 | 172.13 | 2.00 | 35.74 | 0. | 42.94 | 41.60 | 0.50 | 13.34 | 67.95 | 17.00 | 5.38 |
| | APR. | 804.86 | 122.17 | 1.90 | 50.70 | 0. | 57.80 | 56.50 | 0.50 | 19.56 | 63.96 | 16.02 | 7.16 |
| | MAY | 808.65 | 158.32 | 55.10 | 17.92 | 0. | 122.72 | 19.20 | 38.65 | 6.69 | 63.35 | 15.79 | 2.51 |
| | JUN. | 819.51 | 309.85 | 170.00 | 17.35 | 0. | 468.95 | 5.20 | 178.91 | 6.69 | 70.66 | 17.00 | 2.73 |
| | JUL. | 820.08 | 320.02 | 29.40 | 17.92 | 0. | 98.42 | 12.20 | 32.19 | 6.69 | 76.39 | 17.00 | 3.08 |
| | AUG. | 820.29 | 323.99 | 23.50 | 17.92 | 0. | 69.32 | 1.00 | 25.51 | 6.69 | 76.78 | 17.00 | 3.09 |
| | SEP. | 823.96 | 397.17 | 92.10 | 17.35 | 0. | 290.55 | 1.80 | 111.40 | 6.69 | 78.70 | 17.00 | 3.08 |
| | OCT. | 826.12 | 446.06 | 68.30 | 17.92 | 0. | 312.32 | 4.50 | 114.93 | 6.69 | 81.63 | 17.00 | 3.31 |
| | NOV. | 826.50 | 455.00 | 40.00 | 29.88 | 0. | 114.18 | 34.80 | 30.62 | 11.53 | 82.89 | 17.00 | 5.60 |
| | DEC. | 825.55 | 432.68 | 12.70 | 33.84 | 0. | 68.44 | 67.10 | 0.50 | 12.63 | 82.62 | 17.00 | 6.32 |
| 1969 | JAN. | 824.91 | 418.09 | 10.20 | 23.54 | 0. | 54.24 | 52.90 | 0.50 | 8.79 | 81.82 | 17.00 | 4.35 |
| | FEB. | 823.85 | 394.76 | 4.10 | 25.81 | 0. | 38.61 | 37.40 | 0.50 | 10.67 | 80.92 | 17.00 | 4.72 |
| | MAR. | 822.39 | 364.47 | 3.20 | 31.24 | 0. | 42.94 | 41.60 | 0.50 | 11.66 | 79.71 | 17.00 | 5.62 |
| | APR. | 819.93 | 317.40 | 2.00 | 46.90 | 0. | 57.80 | 56.50 | 0.50 | 18.09 | 77.74 | 17.00 | 8.21 |
| | MAY | 819.83 | 315.52 | 17.90 | 17.92 | 0. | 61.32 | 19.20 | 15.73 | 6.69 | 76.47 | 17.00 | 3.08 |
| | JUN. | 826.50 | 455.00 | 217.00 | 75.79 | 0. | 520.89 | 5.20 | 198.96 | 29.24 | 79.74 | 17.00 | 12.24 |
| | JUL. | 826.50 | 455.00 | 77.00 | 75.21 | 0. | 214.31 | 12.20 | 75.46 | 28.08 | 83.09 | 17.00 | 12.65 |
| | AUG. | 826.50 | 455.00 | 138.00 | 86.03 | 49.98 | 558.01 | 1.00 | 207.97 | 32.12 | 82.56 | 17.00 | 12.65 |
| | SEP. | 826.50 | 455.00 | 193.00 | 83.26 | 107.61 | 653.87 | 1.80 | 251.57 | 32.12 | 82.19 | 17.00 | 12.24 |
| | OCT. | 826.50 | 455.00 | 216.00 | 86.03 | 128.16 | 900.49 | 4.50 | 334.53 | 32.12 | 82.12 | 17.00 | 12.65 |
| | NOV. | 826.50 | 455.00 | 41.00 | 39.80 | 0. | 198.10 | 34.80 | 63.00 | 15.36 | 83.08 | 17.00 | 7.48 |
| | DEC. | 825.71 | 436.28 | 22.70 | 40.74 | 0. | 68.44 | 67.10 | 0.50 | 15.02 | 82.70 | 17.00 | 7.53 |
| 1970 | JAN. | 824.42 | 407.79 | 10.30 | 38.04 | 0. | 54.24 | 52.90 | 0.50 | 14.20 | 81.66 | 17.00 | 7.02 |
| | FEB. | 823.15 | 380.01 | 6.60 | 32.31 | 0. | 38.61 | 37.40 | 0.50 | 13.36 | 80.33 | 17.00 | 5.86 |
| | MAR. | 821.37 | 344.79 | 4.10 | 37.64 | 0. | 42.94 | 41.60 | 0.50 | 14.05 | 78.85 | 17.00 | 6.69 |
| | APR. | 818.63 | 294.53 | 8.60 | 56.30 | 0. | 57.80 | 56.50 | 0.50 | 21.72 | 76.58 | 17.00 | 9.69 |
| | MAY | 818.44 | 291.24 | 14.40 | 17.92 | 0. | 39.82 | 19.20 | 7.70 | 6.69 | 75.13 | 17.00 | 3.02 |
| | JUN. | 818.59 | 293.76 | 21.20 | 17.35 | 0. | 33.25 | 5.20 | 10.82 | 6.69 | 75.09 | 17.00 | 2.92 |

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DIS-CHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 818.59 | 293.76 | | | | | | | | | | |
| | JUL. | 820.53 | 328.34 | 53.80 | 17.92 | 0. | 106.02 | 12.20 | 35.03 | 6.69 | 76.15 | 17.00 | 3.07 |
| | AUG. | 824.36 | 405.87 | 97.00 | 17.92 | 0. | 203.52 | 1.00 | 75.61 | 6.69 | 79.04 | 17.00 | 3.19 |
| | SEP. | 826.50 | 455.00 | 167.00 | 83.26 | 52.63 | 496.19 | 1.80 | 190.74 | 32.12 | 81.45 | 17.00 | 12.24 |
| | OCT. | 826.50 | 455.00 | 60.40 | 78.75 | 0. | 399.65 | 4.50 | 147.53 | 29.40 | 83.09 | 17.00 | 12.65 |
| | NOV. | 826.50 | 455.00 | 30.30 | 29.11 | 0. | 173.61 | 34.80 | 34.26 | 11.23 | 83.08 | 17.00 | 5.47 |
| | DEC. | 825.72 | 436.48 | 15.40 | 32.74 | 0. | 68.44 | 67.10 | 0.50 | 12.22 | 82.70 | 17.00 | 6.12 |
| 1971 | JAN. | 824.74 | 414.28 | 7.20 | 28.14 | 0. | 54.24 | 52.90 | 0.50 | 10.51 | 81.82 | 17.00 | 5.20 |
| | FEB. | 823.89 | 395.76 | 4.90 | 21.81 | 0. | 38.61 | 37.40 | 0.50 | 9.02 | 80.86 | 17.00 | 3.98 |
| | MAR. | 822.56 | 367.86 | 3.40 | 29.04 | 0. | 42.94 | 41.60 | 0.50 | 10.84 | 79.82 | 17.00 | 5.23 |
| | APR. | 820.16 | 321.58 | 3.00 | 47.10 | 0. | 57.80 | 56.50 | 0.50 | 18.17 | 77.94 | 17.00 | 8.26 |
| | MAY. | 820.44 | 326.76 | 25.00 | 17.92 | 0. | 72.82 | 19.20 | 20.02 | 6.69 | 76.90 | 17.00 | 3.10 |
| | JUN. | 820.39 | 325.76 | 17.80 | 17.35 | 0. | 58.55 | 5.20 | 20.58 | 6.69 | 76.99 | 17.00 | 3.00 |
| | JUL. | 820.27 | 323.60 | 17.10 | 17.97 | 0. | 37.52 | 12.70 | 9.45 | 6.69 | 76.92 | 17.00 | 3.10 |
| | AUG. | 821.54 | 347.62 | 43.40 | 17.92 | 0. | 98.92 | 1.00 | 36.56 | 6.69 | 77.50 | 17.00 | 3.13 |
| | SEP. | 825.76 | 437.59 | 109.00 | 17.35 | 0. | 264.45 | 1.80 | 101.33 | 6.69 | 80.23 | 17.00 | 3.14 |
| | OCT. | 826.50 | 455.00 | 102.00 | 82.97 | 0. | 375.87 | 4.50 | 138.65 | 30.98 | 82.72 | 17.00 | 12.65 |
| | NOV. | 826.50 | 455.00 | 19.70 | 18.52 | 0. | 75.72 | 34.80 | 15.59 | 7.15 | 83.08 | 17.00 | 3.48 |
| | DEC. | 825.03 | 420.90 | 6.30 | 41.74 | 0. | 68.44 | 67.10 | 0.50 | 15.40 | 82.36 | 17.00 | 7.68 |
| 1972 | JAN. | 823.60 | 389.44 | 5.90 | 36.14 | 0. | 54.24 | 52.90 | 0.50 | 13.49 | 80.91 | 17.00 | 6.60 |
| | FEB. | 822.42 | 364.96 | 1.40 | 26.35 | 0. | 38.65 | 37.40 | 0.50 | 10.52 | 79.57 | 17.00 | 4.73 |
| | MAR. | 820.46 | 310.81 | 2.30 | 34.34 | 0. | 42.94 | 41.60 | 0.50 | 12.87 | 78.13 | 17.00 | 6.04 |
| | APR. | 817.81 | 280.61 | 2.60 | 50.80 | 0. | 57.80 | 56.50 | 0.50 | 19.60 | 75.81 | 17.00 | 8.65 |
| | MAY | 817.51 | 275.80 | 14.80 | 17.92 | 0. | 58.92 | 19.20 | 14.83 | 6.69 | 74.25 | 17.00 | 2.98 |
| | JUN. | 818.79 | 297.23 | 40.10 | 17.35 | 0. | 127.45 | 5.20 | 47.16 | 6.69 | 74.73 | 17.00 | 2.91 |
| | JUL. | 818.15 | 286.27 | 8.70 | 17.97 | 0. | 35.42 | 17.20 | 8.67 | 6.69 | 75.06 | 17.00 | 3.02 |
| | AUG. | 817.52 | 275.98 | 8.90 | 17.92 | 0. | 40.72 | 1.00 | 14.83 | 6.69 | 74.43 | 17.00 | 2.99 |
| | SEP. | 817.00 | 267.65 | 10.30 | 17.35 | 0. | 39.25 | 1.80 | 14.45 | 6.69 | 73.84 | 17.00 | 2.87 |
| | OCT. | 816.37 | 257.68 | 9.00 | 17.92 | 0. | 45.52 | 4.50 | 15.32 | 6.69 | 73.28 | 17.00 | 2.94 |
| | NOV. | 815.43 | 243.52 | 5.00 | 19.40 | 0. | 36.10 | 34.80 | 0.50 | 7.10 | 72.47 | 17.00 | 2.98 |
| | DEC. | 811.25 | 187.70 | 3.50 | 58.64 | 0. | 68.44 | 67.10 | 0.50 | 21.89 | 69.93 | 17.00 | 9.13 |
| 1973 | JAN. | 807.13 | 142.93 | 3.40 | 47.54 | 0. | 54.24 | 52.90 | 0.50 | 17.75 | 65.78 | 16.71 | 6.91 |
| | FEB. | 804.00 | 114.90 | 3.00 | 30.34 | 0. | 33.44 | 32.23* | 0.50 | 12.54 | 62.10 | 15.33 | 4.16 |
| | MAR. | 800.22 | 86.95 | 5.20 | 30.31 | 0. | 31.71 | 30.37* | 0.50 | 11.31 | 58.70 | 14.09 | 3.93 |
| | APR. | 794.50 | 55.00 | 3.00 | 34.27 | 0. | 37.37 | 36.07* | 0.50 | 13.22 | 53.94 | 12.41 | 4.08 |
| | MAY | 794.50 | 55.00 | 18.40 | 17.89 | 0. | 34.99 | 19.20 | 6.64 | 6.68* | 51.09 | 11.44 | 2.02 |
| | JUN. | 800.02 | 85.59 | 48.40 | 17.35 | 0. | 68.75 | 5.20 | 24.52 | 6.69 | 53.83 | 12.37 | 2.06 |
| | JUL. | 803.77 | 113.01 | 45.90 | 17.92 | 0. | 80.52 | 12.20 | 25.51 | 6.69 | 58.49 | 14.01 | 2.32 |
| | AUG. | 805.25 | 125.51 | 31.10 | 17.92 | 0. | 67.92 | 1.00 | 24.99 | 6.69 | 61.10 | 14.96 | 2.42 |
| | SEP. | 812.39 | 201.89 | 94.60 | 17.35 | 0. | 191.15 | 1.80 | 73.05 | 6.69 | 65.40 | 16.57 | 2.51 |
| | OCT. | 822.61 | 368.86 | 186.00 | 17.92 | 0. | 493.12 | 4.50 | 182.43 | 6.69 | 74.09 | 17.00 | 2.98 |
| | NOV. | 823.79 | 393.48 | 43.00 | 17.35 | 0. | 164.55 | 34.80 | 50.06 | 6.69 | 79.77 | 17.00 | 3.12 |
| | DEC. | 822.36 | 363.80 | 10.40 | 39.04 | 0. | 68.44 | 67.10 | 0.50 | 14.58 | 79.67 | 17.00 | 7.02 |
| 1974 | JAN. | 820.57 | 329.18 | 6.40 | 39.94 | 0. | 54.24 | 52.90 | 0.50 | 14.91 | 78.06 | 17.00 | 7.02 |
| | FEB. | 818.91 | 299.24 | 5.40 | 34.01 | 0. | 38.61 | 37.40 | 0.50 | 14.06 | 76.28 | 17.00 | 5.83 |
| | MAR. | 816.66 | 262.29 | 4.80 | 39.94 | 0. | 42.94 | 41.60 | 0.50 | 14.91 | 74.38 | 17.00 | 6.66 |
| | APR. | 813.01 | 209.84 | 3.40 | 54.20 | 0. | 57.80 | 56.50 | 0.50 | 20.91 | 71.41 | 17.00 | 8.64 |
| | MAY | 817.94 | 282.87 | 92.50 | 17.92 | 0. | 192.22 | 19.20 | 64.60 | 6.69 | 72.07 | 17.00 | 2.89 |
| | JUN. | 819.44 | 308.58 | 44.40 | 17.35 | 0. | 202.15 | 5.20 | 75.98 | 6.69 | 75.27 | 17.00 | 2.93 |

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLO. MCM | OUTFLOW MCM | SPILL-OUT MCM | DIS-CHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 819.44 | 308.58 | | | | | | | | | | |
| | JUL. | 819.51 | 309.87 | 20.50 | 17.92 | 0. | 112.82 | 12.20 | 37.57 | 6.69 | 76.07 | 17.00 | 3.06 |
| | AUG. | 818.92 | 299.49 | 8.90 | 17.92 | 0. | 126.72 | 1.00 | 46.94 | 6.69 | 75.81 | 17.00 | 3.05 |
| | SEP. | 823.72 | 392.01 | 111.40 | 17.35 | 0. | 473.15 | 1.80 | 181.85 | 6.69 | 77.90 | 17.00 | 3.04 |
| | OCT. | 824.77 | 415.05 | 42.40 | 17.92 | 0. | 349.22 | 4.50 | 128.71 | 6.69 | 80.84 | 17.00 | 3.27 |
| | NOV. | 824.52 | 409.41 | 12.80 | 17.35 | 0. | 87.25 | 34.80 | 20.23 | 6.69 | 81.22 | 17.00 | 3.18 |
| | DEC. | 822.38 | 364.21 | 10.50 | 54.64 | 0. | 68.44 | 67.10 | 0.50 | 20.40 | 80.04 | 17.00 | 9.87 |
| 1975 | JAN. | 820.23 | 322.80 | 9.70 | 50.04 | 0. | 54.24 | 52.90 | 0.50 | 18.68 | 77.90 | 17.00 | 8.78 |
| | FEB. | 818.40 | 290.48 | 6.90 | 37.91 | 0. | 38.61 | 37.40 | 0.50 | 15.67 | 75.85 | 17.00 | 6.46 |
| | MAR. | 816.07 | 253.18 | 5.20 | 40.74 | 0. | 42.94 | 41.60 | 0.50 | 15.21 | 73.83 | 17.00 | 6.74 |
| | APR. | 812.34 | 201.18 | 3.80 | 54.20 | 0. | 57.80 | 56.50 | 0.50 | 20.91 | 70.78 | 17.00 | 8.55 |
| | MAY | 812.02 | 197.13 | 15.20 | 17.92 | 0. | 33.82 | 19.20 | 5.46 | 6.69 | 68.77 | 17.00 | 2.74 |
| | JUN. | 811.22 | 187.30 | 8.50 | 17.35 | 0. | 18.65 | 5.20 | 5.19 | 6.69 | 68.19 | 17.00 | 2.62 |
| | JUL. | 811.12 | 186.09 | 17.60 | 17.92 | 0. | 38.12 | 12.20 | 9.68 | 6.69 | 67.76 | 17.00 | 2.69 |
| | AUG. | 809.97 | 172.76 | 5.50 | 17.92 | 0. | 69.52 | 1.00 | 25.58 | 6.69 | 67.13 | 17.00 | 2.66 |
| | SEP. | 823.55 | 388.41 | 234.30 | 17.35 | 0. | 444.45 | 1.80 | 170.77 | 6.69 | 73.33 | 17.00 | 2.85 |
| | OCT. | 826.50 | 455.00 | 164.00 | 86.03 | 9.80 | 539.53 | 4.50 | 199.76 | 32.12 | 81.48 | 17.00 | 12.65 |
| | NOV. | 826.50 | 455.00 | 187.00 | 83.26 | 102.41 | 418.17 | 34.80 | 147.90 | 32.12 | 82.22 | 17.00 | 12.24 |
| | DEC. | 826.26 | 449.28 | 13.40 | 17.92 | 0. | 86.82 | 67.10 | 7.36 | 6.69 | 82.97 | 17.00 | 3.36 |
| 1976 | JAN. | 825.06 | 421.37 | 9.00 | 35.64 | 0. | 54.74 | 52.90 | 0.50 | 13.31 | 82.25 | 17.00 | 6.63 |
| | FEB. | 823.93 | 398.49 | 6.40 | 29.65 | 0. | 38.65 | 37.40 | 0.50 | 11.83 | 81.05 | 17.00 | 5.43 |
| | MAR. | 822.21 | 360.80 | 5.40 | 38.84 | 0. | 42.94 | 41.60 | 0.50 | 14.50 | 79.66 | 17.00 | 6.98 |
| | APR. | 819.46 | 308.86 | 5.20 | 55.00 | 0. | 57.80 | 56.50 | 0.50 | 21.22 | 77.41 | 17.00 | 9.58 |
| | | | | | | | | | | | | | 1365.99 |

RESERVOIR OPERATION MONOLICA LOW DAM PLAN

HIGH WATER LEVEL 219.00 LOW WATER LEVEL 204.00

GROSS STORAGE CAPACITY 368.00 MCM

DEAD STORAGE CAPACITY 160.00 MCM

EVAPORATION DATA IN MM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 169.0 | 172.0 | 200.0 | 176.0 | 167.0 | 128.0 | 132.0 | 130.0 | 111.0 | 107.0 | 120.0 | 150.0 |

MAXIMUM DISCHARGE FOR POWER GENERATION 21.21 CMS

POWER INSTALLED CAPACITY 10000. KW

RATED HEAD FOR POWER GENERATION 59.6 M

GUARANTEED MINIMUM DISCHARGE FOR POWER GENERATION 0. CMS

SEASONAL MINIMUM STORAGE IN MCM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 244.10 | 227.50 | 201.00 | 160.00 | 160.00 | 160.00 | 160.00 | 205.00 | 280.00 | 295.00 | 280.00 | 264.40 |

MONTHLY IRRIGATION WATER REQUIREMENT

UPSTREAM OF DAMSITE IN MCM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.70 | 2.20 | 3.10 | 3.40 | 1.30 | 0.30 | 1.60 | 1.00 | 1.80 | 2.00 | 1.50 | 2.20 |

DOWNSTREAM OF DAMSITE IN MCM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 50.40 | 34.60 | 37.40 | 51.80 | 17.40 | 4.60 | 10.40 | 0. | 0. | 2.30 | 32.60 | 63.90 |

RESERVOIR OPERATION   MOROLICA LOW DAM PLAN

| YEAR | MONTH | WATER LEVEL | GROSS STORAGE | INFLOW | OUTFLOW | SPILL-OUT | DIS-CHARGE | WATER USED FOR IRRIGATION | RIVER FLOW | OUTFLOW FOR POWER | HEAD FOR POWER | POWER PEAKING CAPACITY | ENERGY OUTPUT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | MCM | MCM | MCM | MCM | MCM | MCM | CMS | CMS | M | MW | GWH |
| | | 219.00 | 368.00 | | | | | | | | | | |
| 1956 | NOV. | 219.00 | 368.00 | 56.29 | 54.34 | 0. | 60.85 | 32.60 | 10.90 | 20.97 | 67.57 | 10.00 | 7.20 |
| | DEC. | 217.07 | 334.25 | 29.07 | 60.51 | 0. | 65.24 | 63.90 | 0.50 | 21.21 | 66.62 | 10.00 | 7.44 |
| 1957 | JAN. | 216.37 | 322.42 | 40.58 | 49.92 | 0. | 51.74 | 50.40 | 0.50 | 18.64 | 65.30 | 10.00 | 7.26 |
| | FEB. | 215.70 | 311.62 | 26.47 | 34.78 | 0. | 35.81 | 34.60 | 0.50 | 14.38 | 64.57 | 10.00 | 5.00 |
| | MAR. | 214.29 | 289.39 | 18.42 | 37.86 | 0. | 38.74 | 37.40 | 0.50 | 14.14 | 63.58 | 10.00 | 5.34 |
| | APR. | 211.70 | 251.70 | 15.27 | 50.67 | 0. | 53.10 | 51.80 | 0.50 | 19.55 | 61.56 | 10.00 | 6.89 |
| | MAY | 219.00 | 368.00 | 139.07 | 20.38 | 0. | 26.81 | 17.40 | 3.52 | 7.61 | 63.93 | 10.00 | 2.90 |
| | JUN. | 219.00 | 368.00 | 217.93 | 54.98 | 160.58 | 225.43 | 4.60 | 85.20 | 21.21 | 66.28 | 10.00 | 7.20 |
| | JUL. | 219.00 | 368.00 | 41.45 | 39.30 | 0. | 42.25 | 10.40 | 11.89 | 14.67 | 67.58 | 10.00 | 5.94 |
| | AUG. | 219.00 | 368.00 | 58.20 | 56.04 | 0. | 59.34 | 0. | 22.16 | 20.92 | 67.58 | 10.00 | 7.44 |
| | SEP. | 219.00 | 368.00 | 211.42 | 54.98 | 154.39 | 234.15 | 0. | 90.34 | 21.21 | 66.30 | 10.00 | 7.20 |
| | OCT. | 219.00 | 368.00 | 191.20 | 56.81 | 132.44 | 197.45 | 2.30 | 72.86 | 21.21 | 66.43 | 10.00 | 7.44 |
| | NOV. | 219.00 | 368.00 | 36.91 | 35.00 | 0. | 37.39 | 32.60 | 1.85 | 13.50 | 67.57 | 10.00 | 5.29 |
| | DEC. | 216.62 | 326.67 | 24.56 | 63.60 | 0. | 65.24 | 63.90 | 0.50 | 21.21 | 66.39 | 10.00 | 7.44 |
| 1958 | JAN. | 214.35 | 290.33 | 16.16 | 50.10 | 0. | 51.74 | 50.40 | 0.50 | 18.71 | 64.07 | 10.00 | 7.13 |
| | FEB. | 212.39 | 261.35 | 8.24 | 34.95 | 0. | 35.81 | 34.60 | 0.50 | 14.45 | 61.91 | 10.00 | 4.78 |
| | MAR. | 209.89 | 227.46 | 6.27 | 37.71 | 0. | 38.74 | 37.40 | 0.50 | 14.08 | 59.72 | 10.00 | 4.95 |
| | APR. | 205.75 | 178.35 | 5.00 | 52.20 | 0. | 53.10 | 51.80 | 0.50 | 20.14 | 56.39 | 9.20 | 6.47 |
| | MAY | 216.67 | 327.54 | 159.71 | 8.45 | 0. | 18.74 | 17.40 | 0.50 | 3.15 | 59.80 | 10.00 | 1.11 |
| | JUN. | 219.00 | 368.00 | 359.28 | 54.98 | 261.39 | 340.19 | 4.60 | 129.47 | 21.21 | 64.73 | 10.00 | 7.20 |
| | JUL. | 219.00 | 368.00 | 240.00 | 56.81 | 180.71 | 248.02 | 10.40 | 88.72 | 21.21 | 66.22 | 10.00 | 7.44 |
| | AUG. | 219.00 | 368.00 | 119.60 | 56.81 | 60.53 | 122.84 | 0. | 45.86 | 21.21 | 66.88 | 10.00 | 7.44 |
| | SEP. | 219.00 | 368.00 | 77.62 | 54.98 | 20.77 | 81.73 | 0. | 31.53 | 21.21 | 67.24 | 10.00 | 7.20 |
| | OCT. | 219.00 | 368.00 | 215.51 | 56.81 | 156.71 | 226.42 | 2.30 | 83.68 | 21.21 | 66.32 | 10.00 | 7.44 |
| | NOV. | 219.00 | 368.00 | 39.84 | 37.93 | 0. | 40.69 | 32.60 | 3.12 | 14.63 | 67.57 | 10.00 | 5.73 |
| | DEC. | 216.33 | 321.78 | 19.53 | 63.47 | 0. | 65.24 | 63.90 | 0.50 | 21.21 | 66.25 | 10.00 | 7.44 |
| 1959 | JAN. | 214.21 | 288.16 | 16.56 | 47.82 | 0. | 51.74 | 50.40 | 0.50 | 17.85 | 63.85 | 10.00 | 6.78 |
| | FEB. | 212.48 | 262.58 | 9.60 | 32.91 | 0. | 35.81 | 34.60 | 0.50 | 13.60 | 61.88 | 10.00 | 4.50 |
| | MAR. | 209.96 | 228.38 | 4.70 | 36.44 | 0. | 38.74 | 37.40 | 0.50 | 13.60 | 59.80 | 10.00 | 4.79 |
| | APR. | 205.69 | 177.67 | 2.07 | 50.86 | 0. | 53.10 | 51.80 | 0.50 | 19.62 | 56.40 | 9.21 | 6.30 |
| | MAY | 205.14 | 205.66 | 38.69 | 8.93 | 0. | 18.74 | 17.40 | 0.50 | 3.34 | 55.50 | 8.99 | 1.09 |
| | JUN. | 213.19 | 272.97 | 68.84 | 0. | 0. | 14.06 | 4.60 | 3.65 | 0. | 59.24 | 0. | 0. |
| | JUL. | 213.67 | 280.06 | 17.35 | 8.49 | 0. | 11.74 | 10.40 | 0.50 | 3.17 | 62.02 | 10.00 | 1.16 |
| | AUG. | 216.29 | 321.17 | 42.90 | 0. | 0. | 5.70 | 0. | 2.13 | 0. | 63.56 | 0. | 0. |
| | SEP. | 218.47 | 359.56 | 39.06 | 0. | 0. | 5.64 | 0. | 2.17 | 0. | 65.95 | 0. | 0. |
| | OCT. | 219.00 | 368.00 | 197.90 | 56.81 | 129.71 | 227.32 | 2.30 | 84.01 | 21.21 | 66.19 | 10.00 | 7.44 |
| | NOV. | 219.00 | 368.00 | 36.07 | 34.16 | 0. | 40.09 | 32.60 | 2.89 | 13.18 | 67.57 | 10.00 | 5.16 |
| | DEC. | 216.00 | 316.49 | 13.04 | 62.28 | 0. | 65.24 | 63.90 | 0.50 | 21.21 | 66.09 | 10.00 | 7.44 |
| 1960 | JAN. | 213.43 | 276.41 | 11.97 | 49.71 | 0. | 51.74 | 50.40 | 0.50 | 18.56 | 63.30 | 10.00 | 6.98 |
| | FEB. | 211.17 | 244.37 | 4.99 | 34.84 | 0. | 35.85 | 34.60 | 0.50 | 13.91 | 60.85 | 10.00 | 4.68 |
| | MAR. | 208.19 | 206.20 | 2.29 | 38.13 | 0. | 38.74 | 37.40 | 0.50 | 14.23 | 58.26 | 9.67 | 4.88 |
| | APR. | 204.00 | 160.00 | 1.96 | 46.37 | 0. | 47.01 | 45.71* | 0.50 | 17.89 | 54.66 | 8.78 | 5.57 |
| | MAY | 211.35 | 246.85 | 93.28 | 4.62 | 0. | 18.74 | 17.40 | 0.50 | 1.73 | 56.26 | 9.17 | 0.57 |
| | JUN. | 219.00 | 368.00 | 230.72 | 54.98 | 52.60 | 142.26 | 4.60 | 53.11 | 21.21 | 63.10 | 10.00 | 7.20 |
| | JUL. | 219.00 | 368.00 | 119.51 | 56.81 | 60.40 | 135.41 | 10.40 | 46.67 | 21.21 | 66.88 | 10.00 | 7.44 |
| | AUG. | 219.00 | 368.00 | [illegible] | 56.81 | 127.69 | 212.64 | 0. | 79.39 | 21.21 | 66.46 | 10.00 | 7.44 |
| | [illegible] | [illegible] | [illegible] | [illegible] | 54.98 | [illegible] | 256.23 | 0. | 98.86 | 21.21 | 66.25 | 10.00 | 7.20 |

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DIS-CHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 219.00 | 368.00 | | | | | | | | | | |
| | OCT. | 219.00 | 368.00 | 299.64 | 56.81 | 240.75 | 342.82 | 2.30 | 127.14 | 21.21 | 65.99 | 10.00 | 7.44 |
| | NOV. | 219.00 | 368.00 | 92.33 | 54.98 | 55.34 | 104.29 | 32.60 | 27.66 | 21.21 | 67.08 | 10.00 | 7.20 |
| | DEC. | 217.26 | 337.35 | 31.90 | 60.23 | 0. | 65.24 | 63.90 | 0.50 | 21.21 | 66.71 | 10.00 | 7.44 |
| 1961 | JAN. | 215.93 | 315.32 | 27.79 | 47.33 | 0. | 51.74 | 50.40 | 0.50 | 17.67 | 65.18 | 10.00 | 6.87 |
| | FEB. | 215.11 | 302.07 | 21.55 | 32.36 | 0. | 35.81 | 34.60 | 0.50 | 13.37 | 64.06 | 10.00 | 4.61 |
| | MAR. | 213.59 | 278.90 | 15.59 | 36.05 | 0. | 38.74 | 37.40 | 0.50 | 13.45 | 62.93 | 10.00 | 5.03 |
| | APR. | 210.62 | 236.97 | 11.39 | 51.09 | 0. | 53.10 | 51.80 | 0.50 | 19.71 | 60.67 | 10.00 | 6.83 |
| | MAY | 210.07 | 229.84 | 11.77 | 16.91 | 0. | 18.74 | 17.40 | 0.50 | 6.31 | 58.93 | 9.83 | 2.19 |
| | JUN. | 219.00 | 368.00 | 147.39 | 2.46 | 0. | 23.87 | 4.60 | 7.43 | 0.95 | 63.11 | 10.00 | 0.34 |
| | JUL. | 219.00 | 368.00 | 150.52 | 56.81 | 91.36 | 170.96 | 10.40 | 59.95 | 21.21 | 66.66 | 10.00 | 7.44 |
| | AUG. | 219.00 | 368.00 | 77.27 | 56.81 | 18.27 | 86.81 | 0. | 32.41 | 21.21 | 67.29 | 10.00 | 7.44 |
| | SEP. | 219.00 | 368.00 | 123.09 | 54.98 | 66.18 | 139.87 | 0. | 53.96 | 21.21 | 66.81 | 10.00 | 7.20 |
| | OCT. | 219.00 | 368.00 | 140.17 | 56.81 | 81.47 | 159.61 | 2.30 | 58.73 | 21.21 | 66.73 | 10.00 | 7.44 |
| | NOV. | 219.00 | 368.00 | 90.55 | 54.98 | 33.56 | 102.29 | 32.60 | 26.89 | 21.21 | 67.10 | 10.00 | 7.20 |
| | DEC. | 216.96 | 332.36 | 27.50 | 60.83 | 0. | 65.24 | 63.90 | 0.50 | 21.21 | 66.56 | 10.00 | 7.44 |
| 1962 | JAN. | 215.35 | 305.87 | 23.92 | 47.96 | 0. | 51.74 | 50.40 | 0.50 | 17.90 | 64.74 | 10.00 | 6.91 |
| | FEB. | 214.01 | 285.08 | 14.95 | 33.35 | 0. | 35.81 | 34.60 | 0.50 | 13.79 | 63.21 | 10.00 | 4.68 |
| | MAR. | 211.85 | 253.74 | 8.76 | 37.00 | 0. | 38.74 | 37.40 | 0.50 | 13.81 | 61.51 | 10.00 | 5.03 |
| | APR. | 208.21 | 206.47 | 6.47 | 51.67 | 0. | 53.10 | 51.80 | 0.50 | 19.93 | 58.60 | 9.75 | 6.65 |
| | MAY | 212.39 | 261.34 | 65.62 | 8.76 | 0. | 18.74 | 17.40 | 0.50 | 3.27 | 58.88 | 9.82 | 1.13 |
| | JUN. | 219.00 | 368.00 | 154.44 | 45.87 | 0. | 69.03 | 4.60 | 24.86 | 17.70 | 64.26 | 10.00 | 6.55 |
| | JUL. | 219.00 | 368.00 | 65.98 | 56.81 | 26.93 | 96.86 | 10.40 | 32.28 | 21.21 | 67.19 | 10.00 | 7.44 |
| | AUG. | 219.00 | 368.00 | 81.98 | 56.81 | 22.97 | 92.20 | 0. | 34.42 | 21.21 | 67.23 | 10.00 | 7.44 |
| | SEP. | 219.00 | 368.00 | 135.14 | 54.98 | 78.21 | 153.75 | 0. | 59.32 | 21.21 | 66.73 | 10.00 | 7.20 |
| | OCT. | 219.00 | 368.00 | 185.12 | 56.81 | 126.37 | 211.26 | 2.30 | 78.02 | 21.21 | 66.47 | 10.00 | 7.44 |
| | NOV. | 218.85 | 365.31 | 28.63 | 29.45 | 0. | 33.90 | 32.60 | 0.50 | 11.35 | 67.49 | 10.00 | 4.44 |
| | DEC. | 216.25 | 320.49 | 19.53 | 62.07 | 0. | 65.24 | 63.90 | 0.50 | 21.21 | 66.13 | 10.00 | 7.44 |
| 1963 | JAN. | 214.09 | 286.38 | 17.21 | 48.95 | 0. | 51.74 | 50.40 | 0.50 | 18.28 | 63.75 | 10.00 | 6.93 |
| | FEB. | 212.75 | 259.41 | 9.50 | 34.21 | 0. | 35.81 | 34.60 | 0.50 | 14.14 | 61.71 | 10.00 | 4.67 |
| | MAR. | 209.87 | 227.23 | 7.53 | 37.27 | 0. | 38.74 | 37.40 | 0.50 | 13.91 | 59.65 | 10.00 | 4.88 |
| | APR. | 205.92 | 180.21 | 6.57 | 51.67 | 0. | 53.10 | 51.80 | 0.50 | 19.93 | 56.47 | 9.22 | 6.41 |
| | MAY | 204.85 | 168.72 | 7.68 | 17.52 | 0. | 18.74 | 17.40 | 0.50 | 6.54 | 53.97 | 8.62 | 2.08 |
| | JUN. | 211.72 | 251.96 | 84.60 | 0. | 0. | 12.74 | 4.60 | 3.14 | 0. | 56.85 | 0. | 0. |
| | JUL. | 217.42 | 340.70 | 90.06 | 0. | 0. | 13.74 | 10.40 | 1.25 | 0. | 63.15 | 0. | 0. |
| | AUG. | 219.00 | 368.00 | 47.77 | 17.88 | 0. | 25.25 | 0. | 9.43 | 6.67 | 66.79 | 10.00 | 2.67 |
| | SEP. | 219.00 | 368.00 | 115.55 | 54.98 | 58.65 | 131.18 | 0. | 50.61 | 21.21 | 66.87 | 10.00 | 7.20 |
| | OCT. | 219.00 | 368.00 | 200.21 | 56.81 | 141.44 | 228.54 | 2.30 | 84.47 | 21.21 | 66.39 | 10.00 | 7.44 |
| | NOV. | 219.00 | 368.00 | 150.17 | 54.98 | 93.08 | 170.99 | 32.60 | 53.39 | 21.21 | 66.63 | 10.00 | 7.20 |
| | DEC. | 216.73 | 329.46 | 24.14 | 61.38 | 0. | 65.24 | 63.90 | 0.50 | 21.21 | 66.45 | 10.00 | 7.44 |
| 1964 | JAN. | 214.60 | 294.11 | 17.00 | 48.94 | 0. | 51.74 | 50.40 | 0.50 | 18.27 | 64.25 | 10.00 | 6.99 |
| | FEB. | 212.81 | 267.36 | 9.60 | 34.05 | 0. | 35.85 | 34.60 | 0.50 | 13.59 | 62.26 | 10.00 | 4.69 |
| | MAR. | 210.56 | 236.23 | 8.47 | 37.11 | 0. | 38.74 | 37.40 | 0.50 | 13.85 | 60.27 | 10.00 | 4.92 |
| | APR. | 206.78 | 189.75 | 7.20 | 51.70 | 0. | 53.10 | 51.80 | 0.50 | 19.95 | 57.24 | 9.41 | 6.50 |
| | MAY | 205.79 | 178.70 | 7.99 | 17.33 | 0. | 18.74 | 17.40 | 0.50 | 6.47 | 54.87 | 8.83 | 2.09 |
| | JUN. | 219.00 | 368.00 | 325.43 | 54.98 | 79.28 | 183.12 | 4.60 | 68.87 | 21.21 | 60.11 | 10.00 | 7.20 |
| | JUL. | 219.00 | 368.00 | 237.90 | 56.81 | 178.61 | 271.32 | 10.40 | 97.42 | 21.21 | 66.22 | 10.00 | 7.44 |
| | AUG. | 219.00 | 368.00 | 71.40 | 56.81 | 12.41 | 80.02 | 0. | 29.88 | 21.21 | 67.37 | 10.00 | 7.44 |
| | SEP. | 219.00 | 368.00 | 160.08 | 54.98 | 103.12 | 187.42 | 0. | 70.38 | 21.21 | 66.57 | 10.00 | 7.20 |

| YEAR | MONTH | WATER LEVEL (M) | GROSS STORAGE (MCM) | INFLOW (MCM) | OUTFLOW (MCM) | SPILL-OUT (MCM) | DIS-CHARGE (MCM) | WATER USED FOR IRRIGATION (MCM) | RIVER FLOW (CMS) | OUTFLOW FOR POWER (CMS) | HEAD FOR POWER (M) | POWER PEAKING CAPACITY (MW) | ENERGY OUTPUT (GWH) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 219.00 | 368.00 | | | | | | | | | | |
| | OCT. | 219.00 | 368.00 | 261.83 | 56.81 | 222.96 | 322.34 | 2.30 | 119.49 | 21.21 | 66.05 | 10.00 | 7.44 |
| | NOV. | 219.00 | 368.00 | 38.58 | 36.67 | 0. | 42.68 | 32.60 | 3.89 | 14.15 | 67.57 | 10.00 | 5.54 |
| | DEC. | 216.74 | 328.56 | 24.25 | 61.39 | 0. | 65.24 | 63.90 | 0.50 | 21.21 | 66.45 | 10.00 | 7.44 |
| 1965 | JAN. | 214.07 | 286.13 | 10.09 | 50.13 | 0. | 51.74 | 50.40 | 0.50 | 18.71 | 63.99 | 10.00 | 7.13 |
| | FEB. | 211.71 | 251.79 | 2.90 | 35.01 | 0. | 35.81 | 34.60 | 0.50 | 14.47 | 61.43 | 10.00 | 4.75 |
| | MAR. | 208.76 | 213.17 | 1.87 | 38.11 | 0. | 38.74 | 37.40 | 0.50 | 14.23 | 58.82 | 9.80 | 4.93 |
| | APR. | 204.00 | 160.04 | 1.29 | 52.61 | 0. | 53.10 | 51.80 | 0.50 | 20.30 | 54.95 | 8.85 | 6.35 |
| | MAY | 210.76 | 232.23 | 80.50 | 6.54 | 0. | 18.74 | 17.40 | 0.50 | 2.44 | 55.71 | 9.04 | 0.80 |
| | JUN. | 218.56 | 360.07 | 129.61 | 0. | 0. | 19.39 | 4.60 | 5.71 | 0. | 62.98 | 0. | 0. |
| | JUL. | 219.00 | 368.00 | 51.40 | 41.33 | 0. | 49.33 | 10.40 | 14.53 | 15.43 | 67.36 | 10.00 | 6.22 |
| | AUG. | 219.00 | 368.00 | 48.45 | 46.31 | 0. | 53.66 | 0. | 20.03 | 17.29 | 67.58 | 10.00 | 7.00 |
| | SEP. | 219.00 | 368.00 | 355.70 | 54.96 | 298.49 | 407.17 | 0. | 157.09 | 21.21 | 65.77 | 10.00 | 7.20 |
| | OCT. | 219.00 | 368.00 | 271.25 | 56.81 | 212.39 | 310.15 | 2.30 | 114.94 | 21.21 | 66.09 | 10.00 | 7.44 |
| | NOV. | 219.00 | 368.00 | 90.45 | 54.98 | 33.47 | 92.90 | 32.60 | 23.27 | 21.21 | 67.10 | 10.00 | 7.20 |
| | DEC. | 217.15 | 335.55 | 33.47 | 63.61 | 0. | 65.24 | 63.90 | 0.50 | 21.21 | 66.66 | 10.00 | 7.44 |
| 1966 | JAN. | 215.33 | 305.55 | 20.98 | 48.52 | 0. | 51.74 | 50.40 | 0.50 | 18.12 | 64.82 | 10.00 | 7.00 |
| | FEB. | 213.74 | 281.08 | 11.70 | 33.81 | 0. | 35.81 | 34.60 | 0.50 | 13.97 | 63.07 | 10.00 | 4.73 |
| | MAR. | 211.63 | 250.76 | 9.20 | 36.94 | 0. | 38.74 | 37.40 | 0.50 | 13.79 | 61.27 | 10.00 | 5.00 |
| | APR. | 208.60 | 211.18 | 13.18 | 50.67 | 0. | 53.10 | 51.80 | 0.50 | 19.55 | 58.68 | 9.77 | 6.53 |
| | MAY | 217.54 | 342.29 | 133.31 | 0. | 0. | 61.29 | 17.40 | 16.39 | 0. | 61.65 | 0. | 0. |
| | JUN. | 219.00 | 368.00 | 382.54 | 54.98 | 299.32 | 455.17 | 4.60 | 173.83 | 21.21 | 65.04 | 10.00 | 7.20 |
| | JUL. | 219.00 | 368.00 | 276.98 | 56.81 | 217.64 | 315.27 | 10.40 | 113.82 | 21.21 | 66.07 | 10.00 | 7.44 |
| | AUG. | 219.00 | 368.00 | 123.37 | 56.81 | 64.79 | 131.04 | 0. | 48.92 | 21.21 | 66.85 | 10.00 | 7.44 |
| | SEP. | 219.00 | 368.00 | 168.15 | 54.98 | 111.17 | 197.71 | 0. | 76.28 | 21.21 | 66.52 | 10.00 | 7.20 |
| | OCT. | 219.00 | 368.00 | 380.53 | 56.81 | 321.54 | 423.03 | 2.30 | 157.08 | 21.21 | 65.74 | 10.00 | 7.44 |
| | NOV. | 219.00 | 368.00 | 62.47 | 54.98 | 5.54 | 65.85 | 32.60 | 12.83 | 21.21 | 67.47 | 10.00 | 7.20 |
| | DEC. | 217.26 | 337.35 | 32.63 | 60.97 | 0. | 65.24 | 63.90 | 0.50 | 21.21 | 66.71 | 10.00 | 7.44 |
| 1967 | JAN. | 215.43 | 307.24 | 24.34 | 51.97 | 0. | 51.74 | 50.40 | 0.50 | 19.41 | 64.93 | 10.00 | 7.44 |
| | FEB. | 214.19 | 287.95 | 17.04 | 33.95 | 0. | 35.81 | 34.60 | 0.50 | 14.03 | 63.35 | 10.00 | 4.77 |
| | MAR. | 212.42 | 261.77 | 13.39 | 36.93 | 0. | 38.74 | 37.40 | 0.50 | 13.79 | 61.89 | 10.00 | 5.05 |
| | APR. | 210.91 | 240.88 | 31.62 | 50.31 | 0. | 53.10 | 51.80 | 0.50 | 19.41 | 60.23 | 10.00 | 6.67 |
| | MAY | 210.42 | 234.33 | 13.02 | 17.56 | 0. | 18.74 | 17.40 | 0.50 | 6.56 | 59.25 | 9.91 | 2.29 |
| | JUN. | 216.18 | 319.39 | 66.75 | 0. | 0. | 22.95 | 4.60 | 7.08 | 0. | 61.87 | 0. | 0. |
| | JUL. | 218.80 | 364.45 | 53.19 | 6.12 | 0. | 11.74 | 10.40 | 0.50 | 2.29 | 66.08 | 10.00 | 0.90 |
| | AUG. | 219.00 | 368.00 | 46.25 | 40.58 | 0. | 42.82 | 0. | 15.99 | 15.15 | 67.48 | 10.00 | 6.12 |
| | SEP. | 219.00 | 368.00 | 147.19 | 54.98 | 90.25 | 175.23 | 0. | 67.61 | 21.21 | 66.65 | 10.00 | 7.20 |
| | OCT. | 219.00 | 368.00 | 106.12 | 56.81 | 47.47 | 120.86 | 2.30 | 44.26 | 21.21 | 66.98 | 10.00 | 7.44 |
| | NOV. | 219.00 | 368.00 | 36.91 | 35.00 | 0. | 38.59 | 32.60 | 2.31 | 13.50 | 67.57 | 10.00 | 5.29 |
| | DEC. | 216.36 | 322.38 | 19.74 | 63.08 | 0. | 65.24 | 63.90 | 0.50 | 21.21 | 66.26 | 10.00 | 7.44 |
| 1968 | JAN. | 214.18 | 287.76 | 17.84 | 50.08 | 0. | 51.74 | 50.40 | 0.50 | 18.70 | 63.86 | 10.00 | 7.10 |
| | FEB. | 212.37 | 261.04 | 10.73 | 34.68 | 0. | 35.85 | 34.60 | 0.50 | 13.84 | 61.83 | 10.00 | 4.76 |
| | MAR. | 209.77 | 225.95 | 5.22 | 37.86 | 0. | 38.74 | 37.40 | 0.50 | 14.14 | 59.65 | 10.00 | 4.96 |
| | APR. | 205.59 | 176.55 | 5.00 | 52.50 | 0. | 53.10 | 51.80 | 0.50 | 20.25 | 56.25 | 9.17 | 6.49 |
| | MAY | 215.85 | 314.01 | 139.49 | 0. | 0. | 19.11 | 17.40 | 0.64 | 0. | 59.30 | 0. | 0. |
| | JUN. | 219.00 | 368.00 | 543.68 | 54.98 | 432.07 | 564.66 | 4.60 | 216.07 | 21.21 | 63.84 | 10.00 | 7.20 |
| | JUL. | 219.00 | 368.00 | 103.65 | 56.81 | 44.62 | 106.04 | 10.40 | 35.71 | 21.21 | 67.01 | 10.00 | 7.44 |
| | AUG. | 219.00 | 368.00 | 71.40 | 56.81 | 12.41 | 71.52 | 0. | 26.70 | 21.21 | 67.37 | 10.00 | 7.44 |
| | SEP. | 219.00 | 368.00 | 317.98 | 54.98 | 260.82 | 361.32 | 0. | 139.40 | 21.21 | 65.89 | 10.00 | 7.20 |

| YEAR | MONTH | WATER LEVEL | GROSS STORAGE | INFLOW | OUTFLOW | SPILL-OUT | DIS-CHARGE | WATER USED FOR IRRIGATION | RIVER FLOW | OUTFLOW FOR POWER | HEAD FOR POWER | POWER PEAKING CAPACITY | ENERGY OUTPUT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | MCM | MCM | MCM | MCM | MCM | MCM | CMS | CMS | M | MW | GWH |
| | | 219.00 | 368.00 | | | | | | | | | | |
| | OCT. | 219.00 | 368.00 | 298.07 | 54.81 | 239.18 | 358.62 | 2.30 | 133.03 | 21.21 | 66.00 | 10.00 | 7.44 |
| | NOV. | 219.00 | 368.00 | 113.06 | 54.98 | 56.06 | 120.76 | 32.60 | 34.01 | 21.21 | 66.89 | 10.00 | 7.20 |
| | DEC. | 217.73 | 345.53 | 42.27 | 62.41 | 0. | 65.24 | 63.90 | 0.50 | 21.21 | 66.95 | 10.00 | 7.44 |
| 1969 | JAN. | 216.85 | 330.45 | 36.18 | 48.71 | 0. | 51.74 | 50.40 | 0.50 | 18.19 | 65.87 | 10.00 | 7.16 |
| | FEB. | 215.41 | 306.85 | 14.00 | 35.11 | 0. | 35.81 | 34.60 | 0.50 | 14.51 | 64.67 | 10.00 | 5.05 |
| | MAR. | 213.48 | 277.17 | 11.19 | 38.13 | 0. | 38.74 | 37.40 | 0.50 | 14.24 | 63.02 | 10.00 | 5.33 |
| | APR. | 210.19 | 231.36 | 8.95 | 52.56 | 0. | 53.10 | 51.80 | 0.50 | 20.29 | 60.40 | 10.00 | 7.00 |
| | MAY | 213.03 | 270.54 | 48.96 | 7.70 | 0. | 18.74 | 17.40 | 0.50 | 2.88 | 60.19 | 10.00 | 1.02 |
| | JUN. | 219.00 | 368.00 | 563.80 | 54.98 | 408.83 | 561.81 | 4.60 | 214.97 | 21.21 | 62.49 | 10.00 | 7.20 |
| | JUL. | 219.00 | 368.00 | 198.72 | 56.81 | 139.49 | 212.08 | 10.40 | 75.30 | 21.21 | 66.40 | 10.00 | 7.44 |
| | AUG. | 219.00 | 368.00 | 456.87 | 56.81 | 397.32 | 556.26 | 0. | 207.68 | 21.21 | 65.54 | 10.00 | 7.44 |
| | SEP. | 219.00 | 368.00 | 516.84 | 54.98 | 459.45 | 651.79 | 0. | 251.46 | 21.21 | 65.35 | 10.00 | 7.20 |
| | OCT. | 219.00 | 368.00 | 760.34 | 56.81 | 700.97 | 897.74 | 2.30 | 334.32 | 21.21 | 64.92 | 10.00 | 7.44 |
| | NOV. | 219.00 | 368.00 | 148.81 | 54.98 | 91.70 | 195.67 | 32.60 | 62.91 | 21.21 | 66.64 | 10.00 | 7.20 |
| | DEC. | 217.94 | 349.12 | 40.70 | 57.24 | 0. | 65.24 | 63.90 | 0.50 | 21.21 | 67.05 | 10.00 | 7.44 |
| 1970 | JAN. | 216.20 | 319.46 | 15.64 | 42.58 | 0. | 51.74 | 50.40 | 0.50 | 15.90 | 65.65 | 10.00 | 6.23 |
| | FEB. | 214.47 | 292.12 | 6.98 | 37.09 | 0. | 35.81 | 34.60 | 0.50 | 13.27 | 63.87 | 10.00 | 4.55 |
| | MAR. | 212.08 | 257.05 | 3.65 | 36.09 | 0. | 38.74 | 37.40 | 0.50 | 13.47 | 61.86 | 10.00 | 4.94 |
| | APR. | 208.38 | 208.56 | 4.16 | 50.56 | 0. | 53.10 | 51.80 | 0.50 | 19.51 | 58.80 | 9.80 | 6.53 |
| | MAY | 209.69 | 224.92 | 31.78 | 13.52 | 0. | 18.74 | 17.40 | 0.50 | 5.05 | 57.62 | 9.51 | 1.71 |
| | JUN. | 211.89 | 254.28 | 30.91 | 0.00 | 0. | 5.90 | 4.60 | 0.50 | 0.00 | 59.36 | 9.94 | 0.00 |
| | JUL. | 219.00 | 368.00 | 131.76 | 16.14 | 0. | 24.68 | 10.40 | 5.33 | 6.03 | 64.03 | 10.00 | 2.30 |
| | AUG. | 219.00 | 368.00 | 211.07 | 56.81 | 151.86 | 279.20 | 0. | 104.24 | 21.21 | 66.34 | 10.00 | 7.44 |
| | SEP. | 219.00 | 368.00 | 422.44 | 54.98 | 365.16 | 543.20 | 0. | 209.57 | 21.21 | 65.58 | 10.00 | 7.20 |
| | OCT. | 219.00 | 368.00 | 318.06 | 56.81 | 259.17 | 397.20 | 2.30 | 147.44 | 21.21 | 65.93 | 10.00 | 7.44 |
| | NOV. | 219.00 | 368.00 | 103.07 | 54.98 | 46.00 | 121.26 | 32.60 | 34.21 | 21.21 | 66.98 | 10.00 | 7.20 |
| | DEC. | 217.95 | 349.32 | 41.54 | 57.87 | 0. | 65.24 | 63.90 | 0.50 | 21.21 | 67.06 | 10.00 | 7.44 |
| 1971 | JAN. | 216.62 | 326.64 | 26.54 | 46.68 | 0. | 51.74 | 50.40 | 0.50 | 17.43 | 65.87 | 10.00 | 6.86 |
| | FEB. | 215.47 | 307.85 | 14.95 | 31.25 | 0. | 35.81 | 34.60 | 0.50 | 12.92 | 64.58 | 10.00 | 4.49 |
| | MAR. | 213.70 | 280.55 | 9.41 | 33.95 | 0. | 38.74 | 37.40 | 0.50 | 12.68 | 63.17 | 10.00 | 4.76 |
| | APR. | 210.51 | 235.53 | 6.36 | 49.16 | 0. | 53.10 | 51.80 | 0.50 | 18.97 | 60.68 | 10.00 | 6.57 |
| | MAY | 214.54 | 293.24 | 68.24 | 8.38 | 0. | 18.74 | 17.40 | 0.50 | 3.13 | 61.11 | 10.00 | 1.13 |
| | JUN. | 217.55 | 342.42 | 51.02 | 0. | 0. | 7.68 | 4.60 | 1.19 | 0. | 64.61 | 0. | 0. |
| | JUL. | 218.76 | 363.74 | 30.34 | 6.98 | 0. | 11.74 | 10.40 | 0.50 | 2.61 | 66.74 | 10.00 | 1.04 |
| | AUG. | 219.00 | 368.00 | 107.23 | 56.81 | 43.93 | 116.91 | 0. | 43.65 | 21.21 | 66.90 | 10.00 | 7.44 |
| | SEP. | 219.00 | 368.00 | 307.81 | 54.98 | 250.66 | 352.13 | 0. | 135.85 | 21.21 | 65.93 | 10.00 | 7.20 |
| | OCT. | 219.00 | 368.00 | 341.45 | 56.81 | 282.51 | 390.77 | 2.30 | 145.04 | 21.21 | 65.85 | 10.00 | 7.44 |
| | NOV. | 219.00 | 368.00 | 64.99 | 54.98 | 8.04 | 72.93 | 32.60 | 15.56 | 21.21 | 67.42 | 10.00 | 7.20 |
| | DEC. | 217.04 | 333.75 | 28.75 | 60.69 | 0. | 65.24 | 63.90 | 0.50 | 21.21 | 66.61 | 10.00 | 7.44 |
| 1972 | JAN. | 215.09 | 301.87 | 19.31 | 48.75 | 0. | 51.74 | 50.40 | 0.50 | 18.20 | 64.65 | 10.00 | 7.01 |
| | FEB. | 213.48 | 277.17 | 11.49 | 33.84 | 0. | 35.85 | 34.60 | 0.50 | 13.51 | 62.84 | 10.00 | 4.71 |
| | MAR. | 211.12 | 243.68 | 6.37 | 37.31 | 0. | 38.74 | 37.40 | 0.50 | 13.93 | 60.88 | 10.00 | 5.01 |
| | APR. | 207.22 | 194.76 | 5.00 | 51.90 | 0. | 53.10 | 51.80 | 0.50 | 20.02 | 57.74 | 9.54 | 6.58 |
| | MAY | 209.95 | 228.67 | 47.29 | 11.52 | 0. | 18.74 | 17.40 | 0.50 | 4.30 | 57.18 | 9.40 | 1.45 |
| | JUN. | 218.40 | 357.26 | 130.34 | 0. | 0. | 19.56 | 4.60 | 5.77 | 0. | 62.76 | 0. | 0. |
| | JUL. | 218.98 | 367.55 | 20.70 | 8.34 | 0. | 11.74 | 10.40 | 0.50 | 3.11 | 67.27 | 10.00 | 1.25 |
| | AUG. | 219.00 | 368.00 | 26.56 | 24.00 | 0. | 28.14 | 0. | 10.51 | 8.96 | 67.57 | 10.00 | 3.63 |
| | SEP. | 219.00 | 368.00 | 26.18 | 24.38 | 0. | 28.60 | 0. | 11.04 | 9.41 | 67.57 | 10.00 | 3.68 |

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DIS-CHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 219.00 | 368.00 | | | | | | | | | | |
| | OCT. | 219.00 | 368.00 | 29.84 | 28.11 | 0. | 32.86 | 2.30 | 11.41 | 10.49 | 67.58 | 10.00 | 4.25 |
| | NOV. | 218.18 | 353.42 | 18.36 | 31.06 | 0. | 33.90 | 32.60 | 0.50 | 11.98 | 67.16 | 10.00 | 4.66 |
| | DEC. | 214.79 | 297.09 | 9.47 | 63.61 | 0. | 65.24 | 63.90 | 0.50 | 21.21 | 65.07 | 10.00 | 7.44 |
| 1973 | JAN. | 211.69 | 251.52 | 2.15 | 50.49 | 0. | 51.74 | 50.40 | 0.50 | 18.85 | 61.82 | 10.00 | 6.90 |
| | FEB. | 209.11 | 217.56 | 3.11 | 35.01 | 0. | 35.81 | 34.60 | 0.50 | 14.47 | 58.94 | 9.84 | 4.53 |
| | MAR. | 206.27 | 184.00 | 1.24 | 32.63 | 0. | 33.10 | 31.764 | 0.50 | 12.18 | 56.27 | 9.18 | 4.04 |
| | APR. | 204.00 | 160.00 | 2.07 | 24.34 | 0. | 24.97 | 23.684 | 0.50 | 9.39 | 53.70 | 8.55 | 2.87 |
| | MAY | 205.52 | 175.85 | 31.36 | 13.90 | 0. | 18.74 | 17.40 | 0.50 | 5.19 | 53.34 | 8.47 | 1.63 |
| | JUN. | 212.36 | 260.93 | 86.54 | 0. | 0. | 12.96 | 4.60 | 3.22 | 0. | 57.51 | 0. | 0. |
| | JUL. | 218.10 | 351.86 | 92.79 | 0. | 0. | 14.11 | 10.40 | 1.39 | 0. | 63.81 | 0. | 0. |
| | AUG. | 219.00 | 368.00 | 69.51 | 51.25 | 0. | 61.84 | 0. | 23.09 | 19.14 | 67.13 | 10.00 | 7.44 |
| | SEP. | 219.00 | 368.00 | 231.64 | 54.98 | 174.59 | 264.53 | 0. | 102.05 | 21.21 | 66.21 | 10.00 | 7.20 |
| | OCT. | 219.00 | 368.00 | 573.00 | 56.81 | 513.81 | 656.82 | 2.30 | 244.37 | 21.21 | 65.27 | 10.00 | 7.44 |
| | NOV. | 219.00 | 368.00 | 163.90 | 54.98 | 106.78 | 186.56 | 32.60 | 59.40 | 21.21 | 66.55 | 10.00 | 7.20 |
| | DEC. | 217.30 | 338.04 | 32.52 | 60.16 | 0. | 65.24 | 63.90 | 0.50 | 21.21 | 66.73 | 10.00 | 7.44 |
| 1974 | JAN. | 215.15 | 302.85 | 16.37 | 49.11 | 0. | 51.74 | 50.40 | 0.50 | 18.34 | 64.81 | 10.00 | 7.08 |
| | FEB. | 213.16 | 272.50 | 6.56 | 34.57 | 0. | 35.81 | 34.60 | 0.50 | 14.29 | 62.70 | 10.00 | 4.80 |
| | MAR. | 210.54 | 235.95 | 3.75 | 37.79 | 0. | 38.74 | 37.40 | 0.50 | 14.11 | 60.43 | 10.00 | 5.03 |
| | APR. | 206.31 | 184.50 | 2.80 | 52.30 | 0. | 53.10 | 51.80 | 0.50 | 20.18 | 57.00 | 9.35 | 6.55 |
| | MAY | 219.00 | 368.00 | 230.75 | 44.97 | 0. | 79.72 | 17.40 | 23.27 | 16.79 | 61.24 | 10.00 | 6.08 |
| | JUN. | 219.00 | 368.00 | 198.97 | 54.98 | 141.64 | 226.56 | 4.60 | 85.63 | 21.21 | 66.36 | 10.00 | 7.20 |
| | JUL. | 219.00 | 368.00 | 98.76 | 56.81 | 39.69 | 111.54 | 10.40 | 37.76 | 21.21 | 67.06 | 10.00 | 7.44 |
| | AUG. | 219.00 | 368.00 | 101.37 | 56.81 | 42.32 | 114.47 | 0. | 42.74 | 21.21 | 67.03 | 10.00 | 7.44 |
| | SEP. | 219.00 | 368.00 | 491.38 | 54.98 | 434.02 | 563.02 | 0. | 217.21 | 21.21 | 65.41 | 10.00 | 7.20 |
| | OCT. | 219.00 | 368.00 | 323.01 | 56.81 | 264.09 | 369.59 | 2.30 | 137.13 | 21.21 | 65.91 | 10.00 | 7.44 |
| | NOV. | 219.00 | 368.00 | 70.44 | 54.98 | 13.48 | 79.22 | 32.60 | 17.99 | 21.21 | 67.34 | 10.00 | 7.20 |
| | DEC. | 216.38 | 327.56 | 19.01 | 62.15 | 0. | 65.24 | 63.90 | 0.50 | 21.21 | 66.27 | 10.00 | 7.44 |
| 1975 | JAN. | 213.71 | 280.67 | 10.40 | 49.94 | 0. | 51.74 | 50.40 | 0.50 | 18.65 | 63.63 | 10.00 | 7.05 |
| | FEB. | 211.44 | 248.05 | 4.47 | 34.88 | 0. | 35.81 | 34.60 | 0.50 | 14.42 | 61.11 | 10.00 | 4.70 |
| | MAR. | 208.60 | 211.26 | 3.44 | 37.88 | 0. | 38.74 | 37.40 | 0.50 | 14.14 | 58.60 | 9.75 | 4.88 |
| | APR. | 204.03 | 160.35 | 3.17 | 52.21 | 0. | 53.10 | 51.80 | 0.50 | 20.14 | 54.89 | 8.84 | 6.30 |
| | MAY | 204.95 | 169.81 | 25.81 | 14.75 | 0. | 18.74 | 17.40 | 0.50 | 5.51 | 53.08 | 8.40 | 1.72 |
| | JUN. | 205.18 | 172.16 | 8.26 | 4.67 | 0. | 5.90 | 4.60 | 0.50 | 1.80 | 53.63 | 8.54 | 0.55 |
| | JUL. | 207.26 | 195.27 | 31.28 | 6.82 | 0. | 11.74 | 10.40 | 0.50 | 2.55 | 54.80 | 8.82 | 0.82 |
| | AUG. | 211.03 | 242.45 | 49.66 | 0. | 0. | 7.44 | 0. | 2.78 | 0. | 57.73 | 0. | 0. |
| | SEP. | 219.00 | 368.00 | 573.32 | 54.98 | 390.66 | 531.92 | 0. | 205.22 | 21.21 | 61.53 | 10.00 | 7.20 |
| | OCT. | 219.00 | 368.00 | 526.48 | 56.81 | 467.34 | 603.37 | 2.30 | 224.41 | 21.21 | 65.37 | 10.00 | 7.44 |
| | NOV. | 219.00 | 368.00 | 363.25 | 54.98 | 305.89 | 415.58 | 32.60 | 147.76 | 21.21 | 65.75 | 10.00 | 7.20 |
| | DEC. | 219.00 | 368.00 | 69.51 | 56.81 | 10.29 | 77.70 | 63.90 | 5.15 | 21.21 | 67.40 | 10.00 | 7.44 |
| 1976 | JAN. | 217.59 | 359.55 | 22.34 | 48.18 | 0. | 51.74 | 50.40 | 0.50 | 17.99 | 66.78 | 10.00 | 7.19 |
| | FEB. | 215.87 | 314.35 | 11.17 | 33.83 | 0. | 35.85 | 34.60 | 0.50 | 13.50 | 65.18 | 10.00 | 4.93 |
| | MAR. | 213.62 | 279.25 | 5.22 | 37.56 | 0. | 38.74 | 37.40 | 0.50 | 14.02 | 63.33 | 10.00 | 5.28 |
| | APR. | 209.97 | 228.55 | 3.64 | 52.14 | 0. | 53.10 | 51.80 | 0.50 | 20.11 | 60.37 | 10.00 | 6.93 |
| | | | | | | | | | | | | | 1301.95 |

RESERVOIR OPERATION MOROLICA LOW DAM PLAN

HIGH WATER LEVEL 219.00 LOW WATER LEVEL 204.00

GROSS STORAGE CAPACITY 368.00 MCM

DEAD STORAGE CAPACITY 160.00 MCM

EVAPORATION DATA IN MM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 169.0 | 172.0 | 200.0 | 176.0 | 167.0 | 128.0 | 132.0 | 130.0 | 111.0 | 107.0 | 120.0 | 150.0 |

MAXIMUM DISCHARGE FOR POWER GENERATION 55.78 CMS

POWER INSTALLED CAPACITY 26000. KW

RATED HEAD FOR POWER GENERATION 59.0 M

GUARANTEED MINIMUM DISCHARGE FOR POWER GENERATION 11.62 CMS

SEASONAL MINIMUM STORAGE IN MCM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 244.10 | 227.50 | 201.00 | 160.00 | 160.00 | 160.00 | 160.00 | 205.00 | 280.00 | 295.00 | 280.00 | 264.40 |

MONTHLY IRRIGATION WATER REQUIREMENT

UPSTREAM OF DAMSITE IN MCM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.70 | 2.20 | 3.10 | 3.40 | 1.30 | 0.30 | 1.60 | 1.00 | 1.80 | 2.00 | 1.50 | 2.20 |

DOWNSTREAM OF DAMSITE IN MCM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 50.40 | 34.60 | 37.40 | 51.80 | 17.40 | 4.60 | 10.40 | 0. | 0. | 2.30 | 32.60 | 63.90 |

RESERVOIR OPERATION MOROLICA LOW DAM PLAN

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DIS-CHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 219.00 | 368.00 | | | | | | | | | | |
| 1956 | NOV. | 219.00 | 368.00 | 56.29 | 54.35 | 0. | 60.86 | 32.60 | 10.90 | 20.97 | 67.09 | 26.00 | 8.16 |
| | DEC. | 217.07 | 334.75 | 29.07 | 60.51 | 0. | 65.24 | 63.90 | 0.50 | 22.59 | 66.14 | 26.00 | 8.94 |
| 1957 | JAN. | 216.37 | 322.42 | 40.58 | 49.92 | 0. | 51.74 | 50.40 | 0.50 | 18.64 | 64.83 | 26.00 | 7.21 |
| | FEB. | 215.70 | 311.62 | 26.47 | 34.78 | 0. | 35.81 | 34.60 | 0.50 | 14.38 | 64.08 | 26.00 | 4.96 |
| | MAR. | 214.29 | 289.39 | 18.42 | 37.86 | 0. | 38.74 | 37.40 | 0.50 | 14.14 | 63.10 | 26.00 | 5.30 |
| | APR. | 211.70 | 251.70 | 15.27 | 50.67 | 0. | 53.10 | 51.80 | 0.50 | 19.55 | 61.08 | 26.00 | 6.84 |
| | MAY | 218.40 | 357.30 | 139.07 | 31.13 | 0. | 37.56 | 17.40 | 7.53 | 11.62 | 63.16 | 26.00 | 4.36 |
| | JUN. | 219.00 | 368.00 | 217.93 | 144.58 | 60.36 | 214.81 | 4.60 | 81.10 | 55.78 | 66.32 | 26.00 | 18.72 |
| | JUL. | 219.00 | 368.00 | 41.45 | 39.34 | 0. | 42.29 | 10.40 | 11.91 | 14.69 | 67.11 | 26.00 | 5.91 |
| | AUG. | 219.00 | 368.00 | 58.20 | 56.09 | 0. | 59.39 | 0. | 22.18 | 20.94 | 67.11 | 26.00 | 8.42 |
| | SEP. | 219.00 | 368.00 | 211.42 | 144.58 | 64.83 | 234.19 | 0. | 90.35 | 55.78 | 66.59 | 26.00 | 18.72 |
| | OCT. | 219.00 | 368.00 | 191.20 | 149.40 | 39.89 | 197.49 | 2.30 | 72.88 | 55.78 | 66.77 | 26.00 | 19.34 |
| | NOV. | 219.00 | 368.00 | 36.91 | 35.00 | 0. | 37.39 | 32.60 | 1.65 | 13.50 | 67.09 | 26.00 | 5.25 |
| | DEC. | 216.67 | 326.67 | 24.56 | 65.60 | 0. | 65.24 | 63.90 | 0.50 | 23.75 | 65.92 | 26.00 | 9.36 |
| 1958 | JAN. | 214.35 | 290.33 | 16.16 | 50.10 | 0. | 51.74 | 50.40 | 0.50 | 18.71 | 63.59 | 26.00 | 7.08 |
| | FEB. | 212.39 | 261.35 | 8.24 | 34.95 | 0. | 35.81 | 34.60 | 0.50 | 14.45 | 61.42 | 26.00 | 4.75 |
| | MAR. | 209.89 | 227.46 | 6.27 | 37.71 | 0. | 38.74 | 37.40 | 0.50 | 14.08 | 59.25 | 26.00 | 4.91 |
| | APR. | 205.75 | 178.35 | 5.00 | 52.20 | 0. | 53.10 | 51.80 | 0.50 | 20.14 | 55.91 | 24.01 | 6.41 |
| | MAY | 215.29 | 304.92 | 159.71 | 31.13 | 0. | 41.42 | 17.40 | 8.97 | 11.62 | 58.63 | 25.78 | 4.01 |
| | JUN. | 219.00 | 368.00 | 359.28 | 144.58 | 149.28 | 317.69 | 4.60 | 120.79 | 55.78 | 64.32 | 26.00 | 18.72 |
| | JUL. | 219.00 | 368.00 | 240.00 | 149.40 | 88.16 | 248.07 | 10.40 | 88.73 | 55.78 | 66.48 | 26.00 | 19.34 |
| | AUG. | 219.00 | 368.00 | 119.60 | 117.39 | 0. | 122.89 | 0. | 45.88 | 43.83 | 67.11 | 26.00 | 17.62 |
| | SEP. | 219.00 | 368.00 | 77.62 | 75.79 | 0. | 81.77 | 0. | 31.55 | 29.24 | 67.09 | 26.00 | 11.37 |
| | OCT. | 219.00 | 368.00 | 215.51 | 149.40 | 64.16 | 226.46 | 2.30 | 83.69 | 55.78 | 66.62 | 26.00 | 19.34 |
| | NOV. | 219.00 | 368.00 | 39.84 | 37.93 | 0. | 40.69 | 32.60 | 3.12 | 14.63 | 67.09 | 26.00 | 5.69 |
| | DEC. | 216.33 | 321.78 | 19.53 | 63.47 | 0. | 65.24 | 63.90 | 0.50 | 23.70 | 65.77 | 26.00 | 9.32 |
| 1959 | JAN. | 214.21 | 288.16 | 16.58 | 47.82 | 0. | 51.74 | 50.40 | 0.50 | 17.85 | 63.37 | 26.00 | 6.73 |
| | FEB. | 212.48 | 262.58 | 9.60 | 37.91 | 0. | 35.81 | 34.60 | 0.50 | 13.60 | 61.39 | 26.00 | 4.47 |
| | MAR. | 209.96 | 228.38 | 4.70 | 36.44 | 0. | 38.74 | 37.40 | 0.50 | 13.60 | 59.33 | 26.00 | 4.75 |
| | APR. | 205.69 | 177.67 | 2.07 | 50.86 | 0. | 53.10 | 51.80 | 0.50 | 19.62 | 55.91 | 24.01 | 6.25 |
| | MAY | 206.23 | 183.55 | 38.69 | 31.13 | 0. | 40.93 | 17.40 | 8.79 | 11.62 | 54.07 | 22.83 | 3.70 |
| | JUN. | 209.37 | 220.87 | 68.84 | 30.12 | 0. | 44.16 | 4.60 | 15.27 | 11.62 | 55.89 | 24.00 | 3.70 |
| | JUL. | 208.14 | 205.61 | 17.35 | 31.13 | 0. | 34.38 | 10.40 | 8.95 | 11.62 | 56.86 | 24.63 | 3.89 |
| | AUG. | 208.98 | 215.93 | 42.90 | 31.13 | 0. | 36.82 | 0. | 13.75 | 11.62 | 56.67 | 24.50 | 3.87 |
| | SEP. | 209.59 | 223.60 | 39.06 | 30.12 | 0. | 35.76 | 0. | 13.80 | 11.62 | 57.37 | 24.96 | 3.80 |
| | OCT. | 219.00 | 368.00 | 197.90 | 52.01 | 0. | 92.81 | 2.30 | 33.79 | 19.42 | 62.40 | 26.00 | 7.19 |
| | NOV. | 219.00 | 368.00 | 36.07 | 34.16 | 0. | 40.09 | 32.60 | 2.89 | 13.18 | 67.09 | 26.00 | 5.13 |
| | DEC. | 216.00 | 316.49 | 13.04 | 62.28 | 0. | 65.24 | 63.90 | 0.50 | 23.25 | 65.61 | 26.00 | 9.12 |
| 1960 | JAN. | 213.43 | 276.41 | 11.97 | 49.71 | 0. | 51.74 | 50.40 | 0.50 | 18.56 | 62.82 | 26.00 | 6.93 |
| | FEB. | 211.37 | 244.37 | 4.99 | 34.84 | 0. | 35.85 | 34.60 | 0.50 | 13.91 | 60.37 | 26.00 | 4.64 |
| | MAR. | 208.19 | 206.20 | 2.79 | 38.13 | 0. | 38.74 | 37.40 | 0.50 | 14.23 | 57.78 | 25.23 | 4.84 |
| | APR. | 204.00 | 160.00 | 1.96 | 46.37 | 0. | 47.01 | 45.71* | 0.50 | 17.89 | 54.18 | 22.91 | 5.52 |
| | MAY | 209.34 | 220.41 | 93.78 | 31.13 | 0. | 45.24 | 17.40 | 10.40 | 11.62 | 54.78 | 23.28 | 3.74 |
| | JUN. | 219.00 | 368.00 | 230.72 | 81.29 | 0. | 115.98 | 4.60 | 42.97 | 31.36 | 62.26 | 26.00 | 11.21 |
| | JUL. | 219.00 | 368.00 | 119.51 | 117.26 | 0. | 135.46 | 10.40 | 46.69 | 43.78 | 67.11 | 26.00 | 17.60 |
| | AUG. | 219.00 | 368.00 | 165.50 | 149.40 | 55.15 | 212.69 | 0. | 79.41 | 55.78 | 66.83 | 26.00 | 19.34 |
| | SEP. | 219.00 | 368.00 | 224.41 | 144.58 | 77.80 | 250.27 | 0. | 98.87 | 55.78 | 66.52 | 26.00 | 18.72 |

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DIS-CHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 219.00 | 368.00 | | | | | | | | | | |
| | OCT. | 219.00 | 368.00 | 299.64 | 149.40 | 148.20 | 342.86 | 2.30 | 127.15 | 55.78 | 66.21 | 26.00 | 19.34 |
| | NOV. | 219.00 | 368.00 | 92.13 | 90.33 | 0. | 104.30 | 32.60 | 27.66 | 34.85 | 67.09 | 26.00 | 13.56 |
| | DEC. | 217.26 | 337.35 | 31.90 | 60.23 | 0. | 65.24 | 63.90 | 0.50 | 22.49 | 66.23 | 26.00 | 8.91 |
| 1961 | JAN. | 215.93 | 315.32 | 27.79 | 47.33 | 0. | 51.74 | 50.40 | 0.50 | 17.67 | 64.70 | 26.00 | 6.82 |
| | FEB. | 215.11 | 302.07 | 21.55 | 32.36 | 0. | 35.81 | 34.60 | 0.50 | 13.37 | 63.57 | 26.00 | 4.57 |
| | MAR. | 213.59 | 278.90 | 15.59 | 36.03 | 0. | 38.74 | 37.40 | 0.50 | 13.45 | 62.46 | 26.00 | 4.99 |
| | APR. | 210.62 | 236.97 | 11.39 | 51.09 | 0. | 53.10 | 51.80 | 0.50 | 19.71 | 60.19 | 26.00 | 6.78 |
| | MAY | 208.96 | 215.66 | 11.77 | 31.13 | 0. | 37.96 | 17.40 | 5.81 | 11.62 | 57.89 | 25.30 | 3.96 |
| | JUN. | 216.60 | 326.77 | 142.39 | 30.12 | 0. | 51.53 | 4.60 | 18.11 | 11.62 | 60.87 | 26.00 | 4.05 |
| | JUL. | 219.00 | 368.00 | 150.52 | 106.64 | 0. | 129.42 | 10.40 | 44.44 | 39.81 | 65.91 | 26.00 | 15.69 |
| | AUG. | 219.00 | 368.00 | 77.27 | 75.13 | 0. | 86.86 | 0. | 32.43 | 28.05 | 67.11 | 26.00 | 11.28 |
| | SEP. | 219.00 | 368.00 | 123.09 | 121.70 | 0. | 139.91 | 0. | 53.98 | 46.76 | 67.09 | 26.00 | 18.19 |
| | OCT. | 219.00 | 368.00 | 140.17 | 138.33 | 0. | 159.65 | 2.30 | 58.75 | 51.65 | 67.11 | 26.00 | 19.34 |
| | NOV. | 219.00 | 368.00 | 90.55 | 88.56 | 0. | 102.30 | 32.60 | 26.89 | 34.17 | 67.09 | 26.00 | 13.29 |
| | DEC. | 216.96 | 332.36 | 27.50 | 60.83 | 0. | 65.24 | 63.90 | 0.50 | 22.71 | 66.09 | 26.00 | 8.98 |
| 1962 | JAN. | 215.35 | 305.87 | 23.92 | 47.96 | 0. | 51.74 | 50.40 | 0.50 | 17.90 | 64.26 | 26.00 | 6.86 |
| | FEB. | 214.01 | 285.08 | 14.95 | 33.35 | 0. | 35.81 | 34.60 | 0.50 | 13.79 | 62.72 | 26.00 | 4.64 |
| | MAR. | 211.85 | 253.74 | 8.26 | 37.90 | 0. | 38.74 | 37.40 | 0.50 | 13.81 | 61.03 | 26.00 | 4.99 |
| | APR. | 208.21 | 206.47 | 6.47 | 51.67 | 0. | 53.10 | 51.80 | 0.50 | 19.93 | 58.12 | 25.45 | 6.59 |
| | MAY. | 210.77 | 239.03 | 65.62 | 31.13 | 0. | 41.10 | 17.40 | 8.85 | 11.62 | 57.60 | 25.11 | 3.94 |
| | JUN. | 218.64 | 361.57 | 154.44 | 30.12 | 0. | 53.28 | 4.60 | 18.78 | 11.62 | 62.80 | 26.00 | 4.20 |
| | JUL. | 219.00 | 368.00 | 85.98 | 77.39 | 0. | 90.51 | 10.40 | 29.91 | 28.89 | 66.93 | 26.00 | 11.58 |
| | AUG. | 219.00 | 368.00 | 81.98 | 79.84 | 0. | 92.25 | 0. | 34.44 | 29.81 | 67.11 | 26.00 | 11.98 |
| | SEP. | 219.00 | 368.00 | 135.14 | 133.23 | 0. | 153.79 | 0. | 59.33 | 51.40 | 67.09 | 26.00 | 18.72 |
| | OCT. | 219.00 | 368.00 | 185.12 | 149.40 | 33.82 | 211.30 | 2.30 | 78.03 | 55.78 | 66.82 | 26.00 | 19.34 |
| | NOV. | 218.81 | 364.61 | 28.63 | 30.12 | 0. | 34.59 | 32.60 | 0.77 | 11.62 | 66.99 | 26.00 | 4.51 |
| | DEC. | 216.21 | 319.80 | 19.53 | 62.07 | 0. | 65.24 | 63.90 | 0.50 | 23.17 | 65.62 | 26.00 | 9.09 |
| 1963 | JAN. | 214.05 | 285.69 | 17.21 | 48.95 | 0. | 51.74 | 50.40 | 0.50 | 18.28 | 63.23 | 26.00 | 6.87 |
| | FEB. | 212.20 | 258.73 | 9.50 | 34.21 | 0. | 35.81 | 34.60 | 0.50 | 14.14 | 61.17 | 26.00 | 4.62 |
| | MAR. | 209.82 | 226.55 | 7.53 | 37.27 | 0. | 38.74 | 37.40 | 0.50 | 13.91 | 59.12 | 26.00 | 4.84 |
| | APR. | 205.86 | 179.54 | 6.57 | 51.67 | 0. | 53.10 | 51.80 | 0.50 | 19.93 | 55.93 | 24.02 | 6.35 |
| | MAY | 204.00 | 160.00 | 7.68 | 25.59 | 0. | 26.81 | 17.40 | 3.51 | 9.55* | 53.04 | 22.18 | 2.98 |
| | JUN. | 208.76 | 213.22 | 84.66 | 30.12 | 0. | 42.86 | 4.60 | 14.76 | 11.62 | 54.47 | 23.09 | 3.60 |
| | JUL. | 213.03 | 270.55 | 90.06 | 31.13 | 0. | 44.86 | 10.40 | 12.87 | 11.62 | 59.00 | 26.00 | 4.03 |
| | AUG. | 214.03 | 285.42 | 47.72 | 31.13 | 0. | 38.50 | 0. | 14.38 | 11.62 | 61.63 | 26.00 | 4.24 |
| | SEP. | 219.00 | 368.00 | 115.55 | 31.33 | 0. | 48.89 | 0. | 18.86 | 12.09 | 64.60 | 26.00 | 4.51 |
| | OCT. | 219.00 | 368.00 | 200.21 | 149.40 | 48.89 | 228.58 | 2.30 | 84.48 | 55.78 | 66.71 | 26.00 | 19.34 |
| | NOV. | 219.00 | 368.00 | 150.17 | 144.58 | 3.50 | 171.01 | 32.60 | 53.40 | 55.78 | 67.05 | 26.00 | 18.72 |
| | DEC. | 216.73 | 328.46 | 24.14 | 61.38 | 0. | 65.24 | 63.90 | 0.50 | 22.92 | 65.97 | 26.00 | 9.04 |
| 1964 | JAN. | 214.60 | 294.11 | 17.00 | 48.94 | 0. | 51.74 | 50.40 | 0.50 | 18.27 | 63.77 | 26.00 | 6.94 |
| | FEB. | 212.81 | 267.36 | 9.60 | 34.05 | 0. | 35.85 | 34.60 | 0.50 | 13.59 | 61.77 | 26.00 | 4.66 |
| | MAR. | 210.56 | 236.23 | 8.47 | 37.11 | 0. | 38.74 | 37.40 | 0.50 | 13.85 | 59.79 | 26.00 | 4.88 |
| | APR. | 206.78 | 189.75 | 7.20 | 51.70 | 0. | 53.10 | 51.80 | 0.50 | 19.95 | 56.76 | 24.56 | 6.44 |
| | MAY | 204.49 | 164.95 | 7.99 | 31.13 | 0. | 32.53 | 17.40 | 5.65 | 11.62 | 53.74 | 22.63 | 3.67 |
| | JUN. | 219.00 | 368.00 | 325.43 | 120.61 | 0. | 169.47 | 4.60 | 63.61 | 46.53 | 59.83 | 26.00 | 15.89 |
| | JUL. | 219.00 | 368.00 | 237.90 | 149.40 | 86.07 | 271.37 | 10.40 | 97.44 | 55.78 | 66.50 | 26.00 | 19.34 |
| | AUG. | 219.00 | 368.00 | 71.40 | 69.27 | 0. | 80.07 | 0. | 29.90 | 25.86 | 67.11 | 26.00 | 10.40 |
| | SEP. | 219.00 | 368.00 | 160.08 | 144.58 | 13.55 | 187.46 | 0. | 70.39 | 55.78 | 66.96 | 26.00 | 18.72 |

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DIS-CHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 219.00 | 368.00 | | | | | | | | | | |
| | OCT. | 219.00 | 368.00 | 281.83 | 149.46 | 110.41 | 322.38 | 2.30 | 119.50 | 55.78 | 66.28 | 26.00 | 19.34 |
| | NOV. | 219.00 | 368.00 | 38.56 | 36.67 | 0. | 42.69 | 32.60 | 3.89 | 14.15 | 67.09 | 26.00 | 5.50 |
| | DEC. | 216.74 | 328.56 | 24.25 | 61.39 | 0. | 65.24 | 63.90 | 0.50 | 22.92 | 65.97 | 26.00 | 9.04 |
| 1965 | JAN. | 214.07 | 286.13 | 10.09 | 50.13 | 0. | 51.74 | 50.40 | 0.50 | 18.71 | 63.51 | 26.00 | 7.07 |
| | FEB. | 211.71 | 251.79 | 2.90 | 35.01 | 0. | 35.81 | 34.60 | 0.50 | 14.47 | 60.94 | 26.00 | 4.71 |
| | MAR. | 208.76 | 213.17 | 1.87 | 38.11 | 0. | 38.74 | 37.40 | 0.50 | 14.23 | 58.34 | 25.59 | 4.88 |
| | APR. | 204.00 | 160.04 | 1.29 | 52.61 | 0. | 53.10 | 51.80 | 0.50 | 20.30 | 54.47 | 23.09 | 6.29 |
| | MAY | 208.31 | 207.71 | 80.50 | 31.13 | 0. | 43.33 | 17.40 | 9.68 | 11.62 | 54.26 | 22.96 | 3.71 |
| | JUN. | 215.33 | 305.58 | 129.61 | 30.12 | 0. | 49.51 | 4.60 | 17.33 | 11.62 | 59.91 | 26.00 | 3.97 |
| | JUL. | 216.46 | 323.96 | 51.40 | 31.13 | 0. | 39.12 | 10.40 | 10.72 | 11.62 | 64.00 | 26.00 | 4.43 |
| | AUG. | 217.37 | 339.36 | 48.45 | 31.13 | 0. | 38.47 | 0. | 14.36 | 11.62 | 65.02 | 26.00 | 4.51 |
| | SEP. | 219.00 | 368.00 | 355.70 | 144.58 | 180.36 | 378.65 | 0. | 146.08 | 55.78 | 65.24 | 26.00 | 18.72 |
| | OCT. | 219.00 | 368.00 | 271.25 | 149.40 | 119.84 | 310.19 | 2.30 | 114.95 | 55.78 | 66.33 | 26.00 | 19.34 |
| | NOV. | 219.00 | 368.00 | 90.45 | 88.45 | 0. | 92.90 | 32.60 | 23.27 | 34.12 | 67.09 | 26.00 | 13.27 |
| | DEC. | 217.15 | 335.55 | 33.47 | 63.61 | 0. | 65.24 | 63.90 | 0.50 | 23.75 | 66.18 | 26.00 | 9.40 |
| 1966 | JAN. | 215.33 | 305.55 | 20.98 | 48.52 | 0. | 51.74 | 50.40 | 0.50 | 18.12 | 64.34 | 26.00 | 6.95 |
| | FEB. | 213.74 | 281.08 | 11.70 | 33.81 | 0. | 35.81 | 34.60 | 0.50 | 13.97 | 62.58 | 26.00 | 4.69 |
| | MAR. | 211.63 | 250.76 | 9.20 | 36.94 | 0. | 38.74 | 37.40 | 0.50 | 13.79 | 60.79 | 26.00 | 4.96 |
| | APR. | 208.60 | 211.18 | 13.18 | 50.67 | 0. | 53.10 | 51.80 | 0.50 | 19.55 | 58.20 | 25.50 | 6.48 |
| | MAY | 215.68 | 311.24 | 133.31 | 31.13 | 0. | 92.42 | 17.40 | 28.01 | 11.62 | 60.24 | 26.00 | 4.13 |
| | JUN. | 219.00 | 368.00 | 382.54 | 144.58 | 178.81 | 424.25 | 4.60 | 161.90 | 55.78 | 64.40 | 26.00 | 18.72 |
| | JUL. | 219.00 | 368.00 | 276.98 | 149.40 | 125.09 | 315.31 | 10.40 | 113.84 | 55.78 | 66.31 | 26.00 | 19.34 |
| | AUG. | 219.00 | 368.00 | 123.37 | 121.15 | 0. | 131.09 | 0. | 48.94 | 45.23 | 67.11 | 26.00 | 18.19 |
| | SEP. | 219.00 | 368.00 | 168.15 | 144.58 | 21.61 | 197.75 | 0. | 76.29 | 55.78 | 66.89 | 26.00 | 18.72 |
| | OCT. | 219.00 | 368.00 | 360.53 | 149.40 | 228.99 | 423.06 | 2.30 | 157.09 | 55.78 | 65.91 | 26.00 | 19.34 |
| | NOV. | 219.00 | 368.00 | 62.47 | 60.52 | 0. | 65.85 | 32.60 | 12.83 | 23.35 | 67.09 | 26.00 | 9.08 |
| | DEC. | 217.26 | 337.35 | 32.63 | 60.97 | 0. | 65.24 | 63.90 | 0.50 | 22.76 | 66.23 | 26.00 | 9.02 |
| 1967 | JAN. | 215.43 | 307.24 | 24.34 | 51.97 | 0. | 51.74 | 50.40 | 0.50 | 19.41 | 64.45 | 26.00 | 7.46 |
| | FEB. | 214.19 | 287.95 | 17.04 | 33.95 | 0. | 35.81 | 34.60 | 0.50 | 14.03 | 62.86 | 26.00 | 4.74 |
| | MAR. | 212.42 | 261.77 | 13.39 | 36.93 | 0. | 38.74 | 37.40 | 0.50 | 13.79 | 61.41 | 26.00 | 5.02 |
| | APR. | 210.91 | 240.88 | 31.62 | 50.31 | 0. | 53.10 | 51.80 | 0.50 | 19.41 | 59.75 | 26.00 | 6.62 |
| | MAY | 209.37 | 220.80 | 13.02 | 31.13 | 0. | 32.30 | 17.40 | 5.56 | 11.62 | 58.25 | 25.53 | 3.98 |
| | JUN. | 213.39 | 275.85 | 86.75 | 30.12 | 0. | 53.07 | 4.60 | 18.70 | 11.62 | 59.47 | 26.00 | 3.94 |
| | JUL. | 214.73 | 296.12 | 53.18 | 31.13 | 0. | 36.74 | 10.40 | 9.84 | 11.62 | 62.16 | 26.00 | 4.29 |
| | AUG. | 215.57 | 309.43 | 46.25 | 31.13 | 0. | 33.37 | 0. | 12.46 | 11.62 | 63.25 | 26.00 | 4.37 |
| | SEP. | 219.00 | 368.00 | 147.19 | 86.87 | 0. | 116.87 | 0. | 45.09 | 33.51 | 65.37 | 26.00 | 12.66 |
| | OCT. | 219.00 | 368.00 | 106.12 | 104.32 | 0. | 120.90 | 2.30 | 44.28 | 38.95 | 67.11 | 26.00 | 15.66 |
| | NOV. | 219.00 | 368.00 | 36.91 | 35.00 | 0. | 38.59 | 32.60 | 2.31 | 13.50 | 67.09 | 26.00 | 5.25 |
| | DEC. | 216.36 | 322.38 | 19.74 | 63.08 | 0. | 65.24 | 63.90 | 0.50 | 23.55 | 65.79 | 26.00 | 9.26 |
| 1968 | JAN. | 214.18 | 287.76 | 17.84 | 50.06 | 0. | 51.74 | 50.40 | 0.50 | 18.70 | 63.38 | 26.00 | 7.05 |
| | FEB. | 212.37 | 261.04 | 10.23 | 34.68 | 0. | 35.85 | 34.60 | 0.50 | 13.84 | 61.34 | 26.00 | 4.70 |
| | MAR. | 209.77 | 225.95 | 5.22 | 37.86 | 0. | 38.74 | 37.40 | 0.50 | 14.14 | 59.18 | 26.00 | 4.92 |
| | APR. | 205.59 | 176.55 | 5.00 | 52.50 | 0. | 53.10 | 51.80 | 0.50 | 20.25 | 55.77 | 23.92 | 6.43 |
| | MAY | 213.86 | 282.96 | 159.49 | 31.13 | 0. | 50.24 | 17.40 | 12.26 | 11.62 | 57.83 | 25.26 | 3.95 |
| | JUN. | 219.00 | 368.00 | 543.68 | 144.58 | 311.55 | 533.75 | 4.60 | 204.15 | 55.78 | 63.07 | 26.00 | 18.72 |
| | JUL. | 219.00 | 368.00 | 103.68 | 101.47 | 0. | 106.08 | 10.40 | 35.72 | 37.88 | 67.11 | 26.00 | 15.23 |
| | AUG. | 219.00 | 368.00 | 71.40 | 69.27 | 0. | 71.57 | 0. | 26.72 | 25.86 | 67.11 | 26.00 | 10.40 |
| | SEP. | 219.00 | 368.00 | 317.98 | 144.56 | 173.25 | 461.36 | 0. | 139.41 | 55.78 | 66.09 | 26.00 | 18.72 |

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DIS-CHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 219.00 | 368.00 | | | | | | | | | | |
| | OCT. | 219.00 | 368.00 | 298.07 | 149.40 | 146.63 | 358.66 | 2.30 | 133.05 | 55.78 | 66.21 | 26.00 | 19.34 |
| | NOV. | 219.00 | 368.00 | 113.06 | 111.05 | 0. | 120.77 | 32.60 | 34.02 | 42.84 | 67.09 | 26.00 | 16.66 |
| | DEC. | 217.73 | 345.53 | 42.27 | 62.41 | 0. | 65.24 | 63.90 | 0.50 | 23.30 | 66.47 | 26.00 | 9.27 |
| 1969 | JAN. | 216.85 | 330.45 | 36.18 | 48.71 | 0. | 51.74 | 50.40 | 0.50 | 18.19 | 65.40 | 26.00 | 7.11 |
| | FEB. | 215.41 | 306.85 | 14.00 | 35.11 | 0. | 35.81 | 34.60 | 0.50 | 14.51 | 64.18 | 26.00 | 5.01 |
| | MAR. | 213.48 | 277.17 | 11.19 | 38.13 | 0. | 38.74 | 37.40 | 0.50 | 14.24 | 62.55 | 26.00 | 5.29 |
| | APR. | 210.19 | 231.36 | 8.98 | 52.56 | 0. | 53.10 | 51.80 | 0.50 | 20.29 | 59.92 | 26.00 | 6.94 |
| | MAY | 211.37 | 247.18 | 48.96 | 31.13 | 0. | 42.16 | 17.40 | 9.25 | 11.62 | 58.89 | 25.96 | 4.03 |
| | JUN. | 219.00 | 368.00 | 563.80 | 144.56 | 295.98 | 538.56 | 4.60 | 206.00 | 55.78 | 61.87 | 26.00 | 18.72 |
| | JUL. | 219.00 | 368.00 | 198.72 | 149.40 | 46.95 | 212.13 | 10.40 | 75.32 | 55.78 | 66.73 | 26.00 | 19.34 |
| | AUG. | 219.00 | 368.00 | 456.87 | 149.40 | 304.77 | 556.30 | 0. | 207.70 | 55.78 | 65.69 | 26.00 | 19.34 |
| | SEP. | 219.00 | 368.00 | 516.84 | 144.58 | 369.88 | 651.83 | 0. | 251.48 | 55.78 | 65.48 | 26.00 | 18.72 |
| | OCT. | 219.00 | 368.00 | 760.34 | 149.40 | 608.41 | 897.77 | 2.30 | 334.33 | 55.78 | 65.02 | 26.00 | 19.34 |
| | NOV. | 219.00 | 368.00 | 148.81 | 144.58 | 2.14 | 195.72 | 32.60 | 62.93 | 55.78 | 67.07 | 26.00 | 18.72 |
| | DEC. | 217.94 | 349.12 | 40.70 | 57.24 | 0. | 65.24 | 63.90 | 0.50 | 21.37 | 66.58 | 26.00 | 8.52 |
| 1970 | JAN. | 216.20 | 319.66 | 15.64 | 42.58 | 0. | 51.74 | 50.40 | 0.50 | 15.90 | 65.18 | 26.00 | 6.19 |
| | FEB. | 214.47 | 292.12 | 6.96 | 32.09 | 0. | 35.81 | 34.60 | 0.50 | 13.27 | 63.38 | 26.00 | 4.52 |
| | MAR. | 212.08 | 257.05 | 3.65 | 36.09 | 0. | 38.74 | 37.40 | 0.50 | 13.47 | 61.38 | 26.00 | 4.90 |
| | APR. | 208.38 | 208.56 | 4.16 | 50.56 | 0. | 53.10 | 51.80 | 0.50 | 19.51 | 58.32 | 25.58 | 6.48 |
| | MAY | 208.28 | 207.36 | 31.78 | 31.13 | 0. | 36.35 | 17.40 | 7.07 | 11.62 | 56.44 | 24.35 | 3.86 |
| | JUN. | 208.23 | 206.74 | 30.91 | 30.12 | 0. | 36.01 | 4.60 | 12.12 | 11.62 | 56.34 | 24.29 | 3.73 |
| | JUL. | 215.34 | 305.72 | 131.76 | 31.13 | 0. | 39.66 | 10.40 | 10.92 | 11.62 | 59.89 | 26.00 | 4.11 |
| | AUG. | 219.00 | 368.00 | 211.07 | 146.64 | 0. | 217.18 | 0. | 81.08 | 54.75 | 65.27 | 26.00 | 19.34 |
| | SEP. | 219.00 | 368.00 | 422.44 | 144.58 | 275.59 | 543.23 | 0. | 209.58 | 55.78 | 65.74 | 26.00 | 18.72 |
| | OCT. | 219.00 | 368.00 | 318.08 | 149.40 | 166.62 | 397.23 | 2.30 | 147.45 | 55.78 | 66.13 | 26.00 | 19.34 |
| | NOV. | 219.00 | 368.00 | 103.02 | 101.01 | 0. | 121.29 | 32.60 | 34.21 | 38.97 | 67.09 | 26.00 | 15.16 |
| | DEC. | 217.95 | 349.32 | 41.54 | 57.87 | 0. | 65.24 | 63.90 | 0.50 | 21.61 | 66.58 | 26.00 | 8.61 |
| 1971 | JAN. | 216.62 | 326.64 | 26.54 | 46.68 | 0. | 51.74 | 50.40 | 0.50 | 17.43 | 65.39 | 26.00 | 6.81 |
| | FEB. | 215.47 | 307.85 | 14.95 | 31.25 | 0. | 35.81 | 34.60 | 0.50 | 12.92 | 64.09 | 26.00 | 4.46 |
| | MAR. | 213.70 | 280.55 | 9.41 | 33.95 | 0. | 38.74 | 37.40 | 0.50 | 12.68 | 62.69 | 26.00 | 4.72 |
| | APR. | 210.51 | 235.53 | 6.36 | 49.16 | 0. | 53.10 | 51.80 | 0.50 | 18.97 | 60.19 | 26.00 | 6.52 |
| | MAY | 213.03 | 270.55 | 68.24 | 31.13 | 0. | 41.48 | 17.40 | 8.99 | 11.62 | 59.87 | 26.00 | 4.10 |
| | JUN. | 214.31 | 289.75 | 51.02 | 30.12 | 0. | 37.80 | 4.60 | 12.81 | 11.62 | 61.76 | 26.00 | 4.12 |
| | JUL. | 214.14 | 287.17 | 30.34 | 31.13 | 0. | 35.88 | 10.40 | 9.51 | 11.62 | 62.33 | 26.00 | 4.30 |
| | AUG. | 218.63 | 361.37 | 107.23 | 31.13 | 0. | 47.29 | 0. | 17.66 | 11.62 | 64.49 | 26.00 | 4.47 |
| | SEP. | 219.00 | 368.00 | 307.81 | 144.58 | 154.49 | 345.56 | 0. | 133.32 | 55.78 | 65.97 | 26.00 | 18.72 |
| | OCT. | 219.00 | 368.00 | 341.45 | 149.40 | 189.95 | 390.81 | 2.30 | 145.05 | 55.78 | 66.05 | 26.00 | 19.34 |
| | NOV. | 219.00 | 368.00 | 64.99 | 63.03 | 0. | 72.94 | 32.60 | 15.56 | 24.32 | 67.09 | 26.00 | 9.46 |
| | DEC. | 217.04 | 333.75 | 28.75 | 60.69 | 0. | 65.24 | 63.90 | 0.50 | 22.66 | 66.13 | 26.00 | 8.96 |
| 1972 | JAN. | 215.09 | 301.87 | 19.31 | 48.75 | 0. | 51.74 | 50.40 | 0.50 | 18.20 | 64.18 | 26.00 | 6.96 |
| | FEB. | 213.48 | 277.17 | 11.49 | 33.84 | 0. | 35.85 | 34.60 | 0.50 | 13.51 | 62.35 | 26.00 | 4.68 |
| | MAR. | 211.12 | 243.68 | 6.37 | 37.31 | 0. | 38.74 | 37.40 | 0.50 | 13.93 | 60.40 | 26.00 | 4.97 |
| | APR. | 207.22 | 194.78 | 5.00 | 51.90 | 0. | 53.10 | 51.80 | 0.50 | 20.02 | 57.26 | 24.88 | 6.53 |
| | MAY | 208.43 | 209.12 | 47.29 | 31.13 | 0. | 38.34 | 17.40 | 7.82 | 11.62 | 55.93 | 24.02 | 3.82 |
| | JUN. | 215.46 | 307.72 | 130.34 | 30.12 | 0. | 49.68 | 4.60 | 17.39 | 11.62 | 60.03 | 26.00 | 3.98 |
| | JUL. | 214.68 | 295.45 | 20.70 | 31.13 | 0. | 34.52 | 10.40 | 9.01 | 11.62 | 63.18 | 26.00 | 4.37 |
| | AUG. | 214.27 | 289.10 | 26.56 | 31.13 | 0. | 35.27 | 0. | 13.17 | 11.62 | 62.58 | 26.00 | 4.32 |
| | SEP. | 213.91 | 283.65 | 26.18 | 30.12 | 0. | 34.35 | 0. | 13.25 | 11.62 | 62.18 | 26.00 | 4.15 |

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DIS-CHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 213.91 | 283.65 | | | | | | | | | | |
| | OCT. | 213.73 | 280.93 | 29.84 | 31.13 | 0. | 35.88 | 7.30 | 12.54 | 11.62 | 61.93 | 26.00 | 4.27 |
| | NOV. | 212.57 | 267.59 | 18.36 | 30.12 | 0. | 32.96 | 31.60* | 0.50 | 11.62 | 61.36 | 26.00 | 4.09 |
| | DEC. | 209.16 | 218.20 | 9.47 | 57.04 | 0. | 58.66 | 57.32* | 0.50 | 21.29 | 59.10 | 26.00 | 7.41 |
| 1973 | JAN. | 207.01 | 192.37 | 7.15 | 31.13 | 0. | 32.37 | 31.03* | 0.50 | 11.62 | 56.19 | 24.19 | 3.84 |
| | FEB. | 204.55 | 165.63 | 3.11 | 28.11 | 0. | 26.91 | 27.70* | 0.50 | 11.62 | 53.83 | 22.68 | 3.32 |
| | MAR. | 204.00 | 160.00 | 1.24 | 4.98 | 0. | 5.45 | 4.11* | 0.50 | 1.86* | 52.38 | 21.78 | 0.57 |
| | APR. | 204.00 | 160.00 | 2.07 | 0.42 | 0. | 1.05 | 0. * | 0.40 | 0.16* | 52.09 | 21.59 | 0.05 |
| | MAY | 204.00 | 160.00 | 31.30 | 29.79 | 0. | 34.63 | 17.40 | 6.43 | 11.12* | 52.11 | 21.60 | 3.41 |
| | JUN. | 208.91 | 215.10 | 86.54 | 30.12 | 0. | 43.08 | 4.60 | 14.84 | 11.62 | 54.54 | 23.14 | 3.61 |
| | JUL. | 213.34 | 275.14 | 92.79 | 31.13 | 0. | 45.24 | 10.40 | 13.01 | 11.62 | 59.73 | 26.00 | 4.05 |
| | AUG. | 215.71 | 311.74 | 69.51 | 31.13 | 0. | 41.71 | 0. | 15.57 | 11.62 | 62.63 | 26.00 | 4.32 |
| | SEP. | 219.00 | 368.00 | 231.64 | 144.58 | 28.93 | 208.47 | 0. | 80.43 | 55.78 | 65.19 | 26.00 | 18.72 |
| | OCT. | 219.00 | 368.00 | 575.00 | 149.40 | 421.25 | 656.85 | 2.30 | 244.38 | 55.78 | 65.40 | 26.00 | 19.34 |
| | NOV. | 219.00 | 368.00 | 163.90 | 144.58 | 17.21 | 186.59 | 32.60 | 59.41 | 55.78 | 66.93 | 26.00 | 18.72 |
| | DEC. | 217.30 | 338.04 | 32.52 | 60.16 | 0. | 65.24 | 63.90 | 0.50 | 22.46 | 66.26 | 26.00 | 8.90 |
| 1974 | JAN. | 215.15 | 307.85 | 16.37 | 49.11 | 0. | 51.74 | 50.40 | 0.50 | 18.34 | 64.33 | 26.00 | 7.03 |
| | FEB. | 213.16 | 272.50 | 6.56 | 34.57 | 0. | 35.81 | 34.60 | 0.50 | 14.29 | 62.71 | 26.00 | 4.76 |
| | MAR. | 210.54 | 235.95 | 3.75 | 37.79 | 0. | 38.74 | 37.40 | 0.50 | 14.11 | 59.96 | 26.00 | 4.99 |
| | APR. | 206.31 | 184.50 | 2.80 | 52.30 | 0. | 53.10 | 51.80 | 0.50 | 20.18 | 56.51 | 24.40 | 6.49 |
| | MAY | 219.00 | 368.00 | 230.75 | 45.03 | 0. | 79.79 | 17.40 | 23.29 | 16.81 | 60.76 | 26.00 | 6.04 |
| | JUN. | 219.00 | 368.00 | 198.97 | 144.58 | 52.09 | 226.60 | 4.60 | 85.65 | 55.78 | 66.67 | 26.00 | 18.72 |
| | JUL. | 219.00 | 368.00 | 98.76 | 96.55 | 0. | 111.59 | 10.40 | 37.78 | 36.05 | 67.11 | 26.00 | 14.49 |
| | AUG. | 219.00 | 368.00 | 101.37 | 99.19 | 0. | 114.52 | 0. | 42.76 | 37.03 | 67.11 | 26.00 | 14.89 |
| | SEP. | 219.00 | 368.00 | 491.38 | 144.58 | 344.45 | 563.05 | 0. | 217.23 | 55.76 | 65.55 | 26.00 | 18.72 |
| | OCT. | 219.00 | 368.00 | 323.01 | 149.40 | 171.53 | 369.63 | 2.30 | 137.14 | 55.78 | 66.12 | 26.00 | 19.34 |
| | NOV. | 219.00 | 368.00 | 70.44 | 68.47 | 0. | 79.24 | 32.60 | 17.99 | 26.42 | 67.09 | 26.00 | 10.28 |
| | DEC. | 216.38 | 322.58 | 19.01 | 62.15 | 0. | 65.24 | 63.90 | 0.50 | 23.20 | 65.79 | 26.00 | 9.13 |
| 1975 | JAN. | 213.71 | 280.67 | 10.40 | 49.94 | 0. | 51.74 | 50.40 | 0.50 | 18.65 | 63.15 | 26.00 | 7.00 |
| | FEB. | 211.44 | 248.05 | 4.47 | 34.88 | 0. | 35.81 | 34.60 | 0.50 | 14.42 | 60.62 | 26.00 | 4.67 |
| | MAR. | 208.60 | 211.76 | 3.44 | 37.88 | 0. | 38.74 | 37.40 | 0.50 | 14.14 | 58.13 | 25.45 | 4.84 |
| | APR. | 204.03 | 160.35 | 3.12 | 52.21 | 0. | 53.10 | 51.80 | 0.50 | 20.14 | 54.41 | 23.05 | 6.24 |
| | MAY | 204.00 | 160.00 | 25.81 | 24.59 | 0. | 28.58 | 17.40 | 4.17 | 9.16* | 52.12 | 21.61 | 2.81 |
| | JUN. | 204.00 | 160.00 | 8.26 | 7.07 | 0. | 8.30 | 4.60 | 1.43 | 2.73* | 52.09 | 21.59 | 0.81 |
| | JUL. | 204.00 | 160.00 | 31.28 | 30.05 | 0. | 34.96 | 10.40 | 9.17 | 11.22* | 52.11 | 21.60 | 3.44 |
| | AUG. | 205.56 | 176.78 | 48.66 | 31.13 | 0. | 38.56 | 0. | 14.40 | 11.62 | 52.89 | 22.09 | 3.62 |
| | SEP. | 219.00 | 368.00 | 573.37 | 144.58 | 255.12 | 465.99 | 0. | 179.78 | 55.78 | 59.14 | 26.00 | 18.72 |
| | OCT. | 219.00 | 368.00 | 526.48 | 149.40 | 374.78 | 603.40 | 2.30 | 224.43 | 55.78 | 65.51 | 26.00 | 19.34 |
| | NOV. | 219.00 | 368.00 | 363.28 | 144.58 | 216.32 | 415.62 | 32.60 | 147.77 | 55.78 | 65.93 | 26.00 | 18.72 |
| | DEC. | 219.00 | 368.00 | 69.51 | 67.11 | 0. | 77.70 | 63.90 | 5.15 | 25.05 | 67.11 | 26.00 | 10.07 |
| 1976 | JAN. | 217.39 | 339.55 | 27.34 | 48.18 | 0. | 51.74 | 50.40 | 0.50 | 17.99 | 66.30 | 26.00 | 7.14 |
| | FEB. | 215.87 | 314.36 | 11.17 | 33.93 | 0. | 35.85 | 34.60 | 0.50 | 13.50 | 64.70 | 26.00 | 4.87 |
| | MAR. | 213.62 | 279.25 | 5.22 | 37.56 | 0. | 38.74 | 37.40 | 0.50 | 14.02 | 62.85 | 26.00 | 5.24 |
| | APR. | 209.97 | 228.55 | 3.64 | 52.14 | 0. | 53.10 | 51.80 | 0.50 | 20.11 | 59.88 | 26.00 | 6.88 |
| | | | | | | | | | | | | | 2123.65 |

RESERVOIR OPERATION   MONOLICA LOW DAM PLAN

HIGH WATER LEVEL   225.00   LOW WATER LEVEL   204.00

GROSS STORAGE CAPACITY   472.00 MCM

DEAD STORAGE CAPACITY   160.00 MCM

EVAPORATION DATA IN MM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 169.0 | 172.0 | 200.0 | 176.0 | 167.0 | 128.0 | 132.0 | 130.0 | 111.0 | 107.0 | 120.0 | 150.0 |

MAXIMUM DISCHARGE FOR POWER GENERATION   91.58 CMS

POWER INSTALLED CAPACITY   40000. KW

RATED HEAD FOR POWER GENERATION   61.6 M

GUARANTEED MINIMUM DISCHARGE FOR POWER GENERATION   17.06 CMS

SEASONAL MINIMUM STORAGE IN MCM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 244.10 | 222.50 | 201.00 | 160.00 | 160.00 | 160.00 | 160.00 | 205.00 | 280.00 | 295.00 | 280.00 | 264.40 |

MONTHLY IRRIGATION WATER REQUIREMENT

UPSTREAM OF DAMSITE IN MCM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.70 | 2.20 | 3.10 | 3.40 | 1.30 | 0.30 | 1.60 | 1.00 | 1.80 | 2.00 | 1.50 | 2.20 |

DOWNSTREAM OF DAMSITE IN MCM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 50.40 | 34.60 | 37.40 | 51.80 | 17.40 | 4.60 | 10.40 | 0. | 0. | 2.30 | 32.60 | 63.90 |

RESERVOIR OPERATION MOROLICA LOW DAM PLAN

| YEAR | MONTH | WATER LEVEL | GROSS STORAGE | INFLOW | OUTFLOW | SPILL-OUT | DIS-CHARGE | WATER USED FOR IRRIGATION | RIVER FLOW | OUTFLOW FOR POWER | HEAD FOR POWER | POWER PEAKING CAPACITY | ENERGY OUTPUT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | MCM | MCM | MCM | MCM | MCM | MCM | CMS | CMS | M | MW | GWH |
| | | 225.00 | 472.00 | | | | | | | | | | |
| 1956 | NOV. | 225.00 | 472.00 | 56.29 | 54.00 | 0. | 60.51 | 32.60 | 10.77 | 20.83 | 72.85 | 40.00 | 8.85 |
| | DEC. | 223.31 | 437.78 | 29.07 | 60.51 | 0. | 65.24 | 63.90 | 0.50 | 22.59 | 72.03 | 40.00 | 9.79 |
| 1957 | JAN. | 222.67 | 425.42 | 40.56 | 49.92 | 0. | 51.74 | 50.40 | 0.50 | 18.64 | 70.86 | 40.00 | 7.93 |
| | FEB. | 221.73 | 407.62 | 26.47 | 41.27 | 0. | 42.30 | 34.60 | 3.18 | 17.06 | 70.01 | 40.00 | 6.47 |
| | MAR. | 220.05 | 376.99 | 18.42 | 45.69 | 0. | 46.57 | 37.40 | 3.42 | 17.06 | 68.77 | 40.00 | 7.02 |
| | APR. | 217.82 | 338.81 | 15.27 | 50.67 | 0. | 53.10 | 51.80 | 0.50 | 19.55 | 66.79 | 40.00 | 7.54 |
| | MAY | 222.86 | 429.42 | 139.07 | 45.69 | 0. | 57.12 | 17.40 | 12.96 | 17.06 | 68.22 | 40.00 | 6.96 |
| | JUN. | 225.00 | 472.00 | 217.93 | 172.80 | 0. | 182.66 | 4.60 | 68.70 | 66.67 | 71.79 | 40.00 | 27.86 |
| | JUL. | 224.67 | 465.27 | 41.45 | 45.69 | 0. | 48.64 | 10.40 | 14.28 | 17.06 | 72.71 | 40.00 | 7.47 |
| | AUG. | 225.00 | 472.00 | 58.20 | 49.01 | 0. | 52.31 | 0. | 19.53 | 18.30 | 72.71 | 40.00 | 8.01 |
| | SEP. | 225.00 | 472.00 | 211.42 | 209.09 | 0. | 233.87 | 0. | 90.23 | 80.67 | 72.85 | 40.00 | 28.80 |
| | OCT. | 225.00 | 472.00 | 191.20 | 168.98 | 0. | 197.18 | 2.30 | 72.76 | 70.56 | 72.88 | 40.00 | 29.76 |
| | NOV. | 224.54 | 462.43 | 36.91 | 44.21 | 0. | 46.61 | 32.60 | 5.40 | 17.06 | 72.62 | 40.00 | 7.22 |
| | DEC. | 222.42 | 420.67 | 24.56 | 63.60 | 0. | 65.24 | 63.90 | 0.50 | 23.75 | 71.35 | 40.00 | 10.18 |
| 1958 | JAN. | 220.44 | 383.84 | 16.10 | 50.10 | 0. | 51.74 | 50.40 | 0.50 | 18.71 | 69.31 | 40.00 | 7.77 |
| | FEB. | 218.37 | 348.05 | 5.24 | 41.27 | 0. | 42.13 | 34.60 | 3.11 | 17.06 | 67.21 | 40.00 | 6.18 |
| | MAR. | 215.73 | 305.45 | 6.27 | 45.69 | 0. | 46.72 | 37.40 | 3.48 | 17.06 | 64.93 | 40.00 | 6.58 |
| | APR. | 212.29 | 256.07 | 5.00 | 52.20 | 0. | 53.10 | 51.80 | 0.50 | 20.14 | 61.86 | 40.00 | 7.11 |
| | MAY | 219.52 | 367.68 | 159.71 | 45.69 | 0. | 55.98 | 17.40 | 14.40 | 17.06 | 63.78 | 40.00 | 6.45 |
| | JUN. | 225.00 | 472.00 | 359.26 | 212.23 | 40.16 | 276.21 | 4.60 | 104.79 | 81.88 | 69.84 | 40.00 | 28.80 |
| | JUL. | 225.00 | 472.00 | 240.00 | 219.31 | 17.88 | 247.69 | 10.40 | 88.59 | 81.88 | 72.75 | 40.00 | 29.76 |
| | AUG. | 225.00 | 472.00 | 119.60 | 117.01 | 0. | 122.52 | 0. | 45.74 | 43.69 | 72.88 | 40.00 | 19.17 |
| | SEP. | 225.00 | 472.00 | 77.62 | 75.47 | 0. | 81.45 | 0. | 31.42 | 29.12 | 72.85 | 40.00 | 12.36 |
| | OCT. | 225.00 | 472.00 | 215.51 | 213.26 | 0. | 226.15 | 2.30 | 83.56 | 79.62 | 72.88 | 40.00 | 29.76 |
| | NOV. | 224.68 | 465.36 | 39.84 | 44.21 | 0. | 46.97 | 32.60 | 5.55 | 17.06 | 72.69 | 40.00 | 7.23 |
| | DEC. | 222.32 | 418.70 | 19.53 | 63.47 | 0. | 65.24 | 63.90 | 0.50 | 23.70 | 71.37 | 40.00 | 10.17 |
| 1959 | JAN. | 220.48 | 384.57 | 16.58 | 47.82 | 0. | 51.74 | 50.40 | 0.50 | 17.85 | 69.27 | 40.00 | 7.41 |
| | FEB. | 218.50 | 350.14 | 9.60 | 41.27 | 0. | 44.17 | 34.60 | 3.95 | 17.06 | 67.30 | 40.00 | 6.19 |
| | MAR. | 215.76 | 306.15 | 4.70 | 45.69 | 0. | 47.99 | 37.40 | 3.95 | 17.06 | 65.01 | 40.00 | 6.59 |
| | APR. | 212.21 | 254.98 | 2.07 | 50.86 | 0. | 53.10 | 51.80 | 0.50 | 19.62 | 61.84 | 40.00 | 6.93 |
| | MAY | 211.53 | 245.89 | 38.69 | 45.69 | 0. | 55.49 | 17.40 | 14.22 | 17.06 | 59.74 | 38.16 | 6.01 |
| | JUN. | 213.22 | 268.57 | 68.84 | 44.21 | 0. | 59.28 | 4.60 | 20.71 | 17.06 | 60.23 | 38.63 | 5.86 |
| | JUL. | 210.99 | 238.86 | 17.35 | 45.69 | 0. | 48.94 | 10.40 | 14.39 | 17.06 | 59.98 | 38.39 | 6.03 |
| | AUG. | 210.65 | 234.50 | 42.90 | 45.69 | 0. | 51.39 | 0. | 19.19 | 17.06 | 58.69 | 37.16 | 5.90 |
| | SEP. | 210.13 | 228.03 | 39.06 | 44.21 | 0. | 49.85 | 0. | 19.23 | 17.06 | 58.24 | 36.74 | 5.67 |
| | OCT. | 220.15 | 378.73 | 197.90 | 45.69 | 0. | 86.48 | 2.30 | 31.43 | 17.06 | 63.02 | 40.00 | 6.36 |
| | NOV. | 219.58 | 368.63 | 34.07 | 44.21 | 0. | 50.15 | 32.60 | 6.77 | 17.06 | 67.72 | 40.00 | 6.68 |
| | DEC. | 216.47 | 317.08 | 13.04 | 62.28 | 0. | 65.24 | 63.90 | 0.50 | 23.25 | 65.90 | 40.00 | 9.12 |
| 1960 | JAN. | 213.79 | 276.97 | 11.97 | 49.71 | 0. | 51.74 | 50.40 | 0.50 | 18.56 | 63.00 | 40.00 | 6.92 |
| | FEB. | 210.84 | 237.03 | 4.99 | 42.74 | 0. | 43.75 | 34.60 | 3.65 | 17.06 | 60.15 | 38.55 | 5.66 |
| | MAR. | 207.02 | 191.36 | 2.29 | 45.69 | 0. | 46.30 | 37.40 | 3.32 | 17.06 | 56.81 | 35.38 | 5.71 |
| | APR. | 204.00 | 160.00 | 1.96 | 31.57 | 0. | 32.21 | 30.91* | 0.50 | 12.18* | 53.36 | 32.22 | 3.71 |
| | MAY | 204.30 | 205.89 | 93.26 | 45.69 | 0. | 59.81 | 17.40 | 15.83 | 17.06 | 54.02 | 32.82 | 5.43 |
| | JUN. | 220.81 | 390.61 | 230.72 | 44.21 | 0. | 78.90 | 4.60 | 28.66 | 17.06 | 62.41 | 40.00 | 6.09 |
| | JUL. | 224.52 | 462.08 | 119.51 | 45.69 | 0. | 63.88 | 10.40 | 19.97 | 17.06 | 70.54 | 40.00 | 7.22 |
| | AUG. | 225.00 | 472.00 | 186.86 | 174.29 | 0. | 207.43 | 0. | 75.58 | 65.07 | 72.63 | 40.00 | 28.46 |
| | SEP. | 225.00 | 472.00 | 226.41 | 212.23 | 9.83 | 255.95 | 0. | 98.75 | 81.88 | 72.78 | 40.00 | 28.80 |

| YEAR | MONTH | WATER LEVEL (M) | GROSS STORAGE (MCM) | INFLOW (MCM) | OUTFLOW (MCM) | SPILL-OUT (MCM) | DIS-CHARGE (MCM) | WATER USED FOR IRRIGATION (MCM) | RIVER FLOW (CMS) | OUTFLOW FOR POWER (CMS) | HEAD FOR POWER (M) | POWER PEAKING CAPACITY (MW) | ENERGY OUTPUT (GWH) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 225.00 | 477.00 | | | | | | | | | | |
| | OCT. | 225.00 | 477.00 | 299.44 | 219.31 | 77.98 | 342.55 | 2.30 | 127.03 | 81.86 | 72.40 | 40.00 | 29.76 |
| | NOV. | 225.00 | 477.00 | 97.33 | 59.99 | 0. | 103.95 | 32.60 | 27.53 | 34.72 | 72.85 | 40.00 | 14.74 |
| | DEC. | 223.46 | 440.88 | 31.90 | 60.23 | 0. | 65.24 | 63.90 | 0.50 | 22.49 | 72.11 | 40.00 | 9.76 |
| 1961 | JAN. | 222.30 | 418.33 | 27.79 | 47.33 | 0. | 51.74 | 50.40 | 0.50 | 17.67 | 70.76 | 40.00 | 7.51 |
| | FEB. | 221.09 | 395.64 | 21.55 | 41.27 | 0. | 44.72 | 34.60 | 4.18 | 17.06 | 69.50 | 40.00 | 6.42 |
| | MAR. | 219.21 | 362.76 | 15.59 | 45.69 | 0. | 48.40 | 37.40 | 4.11 | 17.06 | 68.02 | 40.00 | 6.94 |
| | APR. | 216.64 | 319.86 | 11.39 | 51.09 | 0. | 53.10 | 51.80 | 0.50 | 19.71 | 65.78 | 40.00 | 7.47 |
| | MAY | 214.25 | 283.58 | 11.77 | 45.69 | 0. | 47.52 | 17.40 | 11.25 | 17.06 | 63.32 | 40.00 | 6.40 |
| | JUN. | 220.71 | 379.83 | 142.39 | 44.21 | 0. | 65.63 | 4.60 | 23.54 | 17.06 | 65.09 | 40.00 | 6.39 |
| | JUL. | 225.00 | 477.00 | 150.52 | 55.99 | 0. | 78.77 | 10.40 | 25.53 | 20.90 | 70.48 | 40.00 | 8.84 |
| | AUG. | 225.00 | 477.00 | 77.27 | 74.75 | 0. | 86.49 | 0. | 32.29 | 27.91 | 72.88 | 40.00 | 12.25 |
| | SEP. | 225.00 | 477.00 | 123.09 | 120.88 | 0. | 139.59 | 0. | 53.85 | 46.64 | 72.85 | 40.00 | 19.80 |
| | OCT. | 225.00 | 477.00 | 140.17 | 138.02 | 0. | 159.35 | 2.30 | 58.63 | 51.53 | 72.88 | 40.00 | 22.62 |
| | NOV. | 225.00 | 477.00 | 90.55 | 88.21 | 0. | 101.96 | 32.60 | 26.76 | 34.03 | 72.85 | 40.00 | 14.45 |
| | DEC. | 223.21 | 435.89 | 27.50 | 60.83 | 0. | 65.24 | 63.90 | 0.50 | 22.71 | 71.98 | 40.00 | 9.83 |
| 1962 | JAN. | 221.80 | 408.87 | 23.92 | 47.96 | 0. | 51.74 | 50.40 | 0.50 | 17.90 | 70.38 | 40.00 | 7.56 |
| | FEB. | 220.20 | 379.65 | 14.95 | 41.27 | 0. | 43.72 | 34.60 | 3.77 | 17.06 | 68.81 | 40.00 | 6.35 |
| | MAR. | 217.83 | 339.04 | 8.26 | 45.69 | 0. | 47.43 | 37.40 | 3.74 | 17.06 | 66.89 | 40.00 | 6.81 |
| | APR. | 214.77 | 291.28 | 6.47 | 51.67 | 0. | 53.10 | 51.80 | 0.50 | 19.93 | 64.16 | 40.00 | 7.34 |
| | MAY | 215.94 | 308.85 | 65.62 | 45.69 | 0. | 55.67 | 17.40 | 14.29 | 17.06 | 63.23 | 40.00 | 6.39 |
| | JUN. | 222.23 | 417.04 | 154.44 | 44.21 | 0. | 67.38 | 4.60 | 24.22 | 17.06 | 66.94 | 40.00 | 6.59 |
| | JUL. | 224.17 | 454.95 | 85.96 | 45.69 | 0. | 58.81 | 10.40 | 18.07 | 17.06 | 71.08 | 40.00 | 7.28 |
| | AUG. | 225.00 | 477.00 | 81.98 | 67.47 | 0. | 74.89 | 0. | 27.96 | 23.32 | 72.46 | 40.00 | 10.17 |
| | SEP. | 225.00 | 477.00 | 135.14 | 137.91 | 0. | 153.47 | 0. | 59.21 | 51.28 | 72.85 | 40.00 | 21.77 |
| | OCT. | 225.00 | 477.00 | 165.12 | 187.91 | 0. | 210.99 | 2.30 | 77.92 | 68.29 | 72.88 | 40.00 | 29.76 |
| | NOV. | 224.13 | 454.17 | 24.63 | 44.21 | 0. | 48.69 | 32.60 | 6.21 | 17.06 | 72.42 | 40.00 | 7.20 |
| | DEC. | 221.80 | 408.95 | 19.53 | 62.07 | 0. | 65.24 | 63.90 | 0.50 | 23.17 | 70.84 | 40.00 | 9.86 |
| 1963 | JAN. | 219.90 | 374.37 | 17.21 | 48.95 | 0. | 51.74 | 50.40 | 0.50 | 18.28 | 68.73 | 40.00 | 7.52 |
| | FEB. | 217.88 | 339.85 | 9.50 | 41.27 | 0. | 42.87 | 34.60 | 3.42 | 17.06 | 66.70 | 40.00 | 6.13 |
| | MAR. | 215.28 | 298.78 | 7.53 | 45.69 | 0. | 47.16 | 37.40 | 3.65 | 17.06 | 64.45 | 40.00 | 6.53 |
| | APR. | 211.94 | 251.33 | 6.57 | 51.67 | 0. | 53.10 | 51.80 | 0.50 | 19.93 | 61.46 | 39.82 | 6.99 |
| | MAY | 208.76 | 211.33 | 7.68 | 45.69 | 0. | 46.91 | 17.40 | 11.02 | 17.06 | 58.22 | 36.72 | 5.86 |
| | JUN. | 211.86 | 250.25 | 84.66 | 44.21 | 0. | 56.96 | 4.60 | 20.20 | 17.06 | 58.16 | 36.66 | 5.66 |
| | JUL. | 214.88 | 292.88 | 90.06 | 45.69 | 0. | 59.43 | 10.40 | 18.30 | 17.06 | 61.25 | 39.61 | 6.16 |
| | AUG. | 214.90 | 293.11 | 47.72 | 45.69 | 0. | 53.07 | 0. | 19.81 | 17.06 | 62.77 | 40.00 | 6.33 |
| | SEP. | 219.74 | 367.78 | 115.55 | 44.21 | 0. | 61.77 | 0. | 23.85 | 17.06 | 64.92 | 40.00 | 6.37 |
| | OCT. | 225.00 | 477.00 | 200.21 | 89.06 | 0. | 119.35 | 2.30 | 43.70 | 33.25 | 70.00 | 40.00 | 13.96 |
| | NOV. | 225.00 | 477.00 | 150.17 | 147.74 | 0. | 170.67 | 32.60 | 53.27 | 57.00 | 72.85 | 40.00 | 24.20 |
| | DEC. | 223.01 | 432.00 | 24.14 | 61.38 | 0. | 65.24 | 63.90 | 0.50 | 22.92 | 71.88 | 40.00 | 9.91 |
| 1964 | JAN. | 221.17 | 397.11 | 17.00 | 48.94 | 0. | 51.74 | 50.40 | 0.50 | 18.27 | 69.96 | 40.00 | 7.67 |
| | FEB. | 219.14 | 361.15 | 9.60 | 42.74 | 0. | 44.54 | 34.60 | 3.97 | 17.06 | 67.99 | 40.00 | 6.49 |
| | MAR. | 216.70 | 320.86 | 8.47 | 45.69 | 0. | 47.32 | 37.40 | 3.70 | 17.06 | 65.80 | 40.00 | 6.68 |
| | APR. | 213.58 | 273.89 | 7.20 | 51.70 | 0. | 53.10 | 51.80 | 0.50 | 19.95 | 62.99 | 40.00 | 7.19 |
| | MAY | 210.61 | 234.08 | 7.99 | 45.69 | 0. | 47.09 | 17.40 | 11.09 | 17.06 | 59.97 | 38.38 | 6.03 |
| | JUN. | 225.00 | 477.00 | 325.43 | 85.47 | 0. | 134.33 | 4.60 | 50.05 | 32.97 | 65.66 | 40.00 | 12.47 |
| | JUL. | 225.00 | 477.00 | 237.90 | 219.31 | 15.79 | 270.99 | 10.40 | 97.29 | 81.88 | 72.76 | 40.00 | 29.76 |
| | AUG. | 225.00 | 477.00 | 71.40 | 68.90 | 0. | 79.70 | 0. | 29.76 | 25.72 | 72.88 | 40.00 | 11.29 |
| | SEP. | 225.00 | 477.00 | 160.08 | 157.82 | 0. | 182.14 | 0. | 70.27 | 60.89 | 72.85 | 40.00 | 25.85 |

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DIS-CHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 225.00 | 472.00 | | | | | | | | | | |
| | OCT. | 225.00 | 472.00 | 281.83 | 219.31 | 60.19 | 322.07 | 2.30 | 119.39 | 81.88 | 72.49 | 40.00 | 29.76 |
| | NOV. | 224.62 | 444.11 | 38.58 | 44.21 | 0. | 50.23 | 32.60 | 6.80 | 17.06 | 72.66 | 40.00 | 7.22 |
| | DEC. | 222.61 | 424.23 | 24.25 | 61.39 | 0. | 65.24 | 63.90 | 0.50 | 22.92 | 71.49 | 40.00 | 9.85 |
| 1965 | JAN. | 220.29 | 381.30 | 10.09 | 50.13 | 0. | 51.74 | 50.40 | 0.50 | 18.71 | 69.33 | 40.00 | 7.77 |
| | FEB. | 217.90 | 340.20 | 2.90 | 41.27 | 0. | 42.07 | 34.60 | 3.09 | 17.06 | 66.91 | 40.00 | 6.15 |
| | MAR. | 214.92 | 293.45 | 1.87 | 45.69 | 0. | 46.32 | 37.40 | 3.33 | 17.06 | 64.29 | 40.00 | 6.51 |
| | APR. | 211.06 | 239.83 | 1.29 | 52.61 | 0. | 53.10 | 51.80 | 0.50 | 20.30 | 60.85 | 39.22 | 7.05 |
| | MAY | 213.48 | 272.52 | 80.50 | 45.69 | 0. | 57.89 | 17.40 | 15.12 | 17.06 | 60.15 | 38.55 | 6.05 |
| | JUN. | 218.85 | 356.05 | 129.61 | 44.21 | 0. | 63.61 | 4.60 | 27.77 | 17.06 | 64.02 | 40.00 | 6.27 |
| | JUL. | 219.06 | 359.47 | 51.40 | 45.69 | 0. | 53.69 | 10.40 | 16.16 | 17.06 | 66.83 | 40.00 | 6.80 |
| | AUG. | 219.10 | 360.37 | 48.45 | 45.69 | 0. | 53.03 | 0. | 19.80 | 17.06 | 66.95 | 40.00 | 6.82 |
| | SEP. | 225.00 | 472.00 | 355.70 | 212.23 | 29.63 | 295.57 | 0. | 114.03 | 81.88 | 69.70 | 40.00 | 28.80 |
| | OCT. | 225.00 | 472.00 | 271.25 | 219.31 | 49.62 | 309.88 | 2.30 | 114.84 | 81.88 | 72.55 | 40.00 | 29.76 |
| | NOV. | 225.00 | 472.00 | 90.45 | 88.10 | 0. | 92.56 | 32.60 | 23.13 | 33.99 | 72.85 | 40.00 | 14.43 |
| | DEC. | 223.37 | 439.08 | 33.47 | 63.61 | 0. | 65.24 | 63.90 | 0.50 | 23.75 | 72.06 | 40.00 | 10.30 |
| 1966 | JAN. | 221.78 | 408.56 | 20.98 | 48.52 | 0. | 51.74 | 50.40 | 0.50 | 18.12 | 70.45 | 40.00 | 7.66 |
| | FEB. | 220.00 | 376.09 | 11.70 | 41.27 | 0. | 43.27 | 34.60 | 3.58 | 17.06 | 68.70 | 40.00 | 6.34 |
| | MAR. | 217.67 | 336.45 | 9.20 | 45.69 | 0. | 47.49 | 37.40 | 3.77 | 17.06 | 66.71 | 40.00 | 6.79 |
| | APR. | 215.12 | 295.38 | 13.18 | 50.67 | 0. | 53.10 | 51.90 | 0.50 | 19.55 | 64.25 | 40.00 | 7.21 |
| | MAY | 220.30 | 381.45 | 133.31 | 45.69 | 0. | 106.98 | 17.40 | 33.45 | 17.06 | 65.59 | 40.00 | 6.66 |
| | JUN. | 225.00 | 472.00 | 382.54 | 212.23 | 77.11 | 390.20 | 4.60 | 148.77 | 81.88 | 70.03 | 40.00 | 28.80 |
| | JUL. | 225.00 | 472.00 | 276.98 | 219.31 | 54.81 | 314.93 | 10.40 | 113.70 | 81.88 | 72.52 | 40.00 | 29.76 |
| | AUG. | 225.00 | 472.00 | 123.37 | 120.78 | 0. | 130.71 | 0. | 48.80 | 45.09 | 72.88 | 40.00 | 19.79 |
| | SEP. | 225.00 | 472.00 | 169.15 | 165.87 | 0. | 197.45 | 0. | 76.17 | 63.99 | 72.85 | 40.00 | 27.17 |
| | OCT. | 225.00 | 472.00 | 360.53 | 219.31 | 158.77 | 422.75 | 2.30 | 156.98 | 81.88 | 72.07 | 40.00 | 29.76 |
| | NOV. | 225.00 | 472.00 | 62.47 | 60.17 | 0. | 65.50 | 32.60 | 12.69 | 23.21 | 72.85 | 40.00 | 9.86 |
| | DEC. | 223.46 | 440.88 | 32.63 | 60.97 | 0. | 65.24 | 63.90 | 0.50 | 22.76 | 72.11 | 40.00 | 9.88 |
| 1967 | JAN. | 221.87 | 410.24 | 24.34 | 51.97 | 0. | 51.74 | 50.40 | 0.50 | 19.41 | 70.54 | 40.00 | 8.22 |
| | FEB. | 220.40 | 383.11 | 17.04 | 41.27 | 0. | 43.13 | 34.60 | 3.52 | 17.06 | 68.94 | 40.00 | 6.36 |
| | MAR. | 218.35 | 347.60 | 13.39 | 45.69 | 0. | 47.50 | 37.40 | 3.77 | 17.06 | 67.25 | 40.00 | 6.85 |
| | APR. | 217.04 | 326.22 | 31.62 | 50.31 | 0. | 53.10 | 51.80 | 0.50 | 19.41 | 65.55 | 40.00 | 7.33 |
| | MAY | 214.77 | 291.16 | 13.02 | 45.69 | 0. | 46.87 | 17.40 | 11.00 | 17.06 | 63.78 | 40.00 | 6.45 |
| | JUN. | 217.39 | 331.84 | 86.75 | 44.21 | 0. | 67.16 | 4.60 | 24.14 | 17.06 | 63.93 | 40.00 | 6.26 |
| | JUL. | 217.73 | 337.34 | 53.16 | 45.69 | 0. | 51.31 | 10.40 | 15.27 | 17.06 | 65.43 | 40.00 | 6.64 |
| | AUG. | 217.64 | 335.97 | 46.25 | 45.69 | 0. | 47.93 | 0. | 17.90 | 17.06 | 65.56 | 40.00 | 6.66 |
| | SEP. | 223.27 | 437.06 | 147.19 | 44.21 | 0. | 74.22 | 0. | 28.64 | 17.06 | 68.31 | 40.00 | 6.75 |
| | OCT. | 225.00 | 472.00 | 106.12 | 69.17 | 0. | 85.74 | 2.30 | 31.15 | 25.82 | 72.01 | 40.00 | 11.19 |
| | NOV. | 224.54 | 462.43 | 36.91 | 44.21 | 0. | 47.81 | 32.60 | 5.87 | 17.06 | 72.62 | 40.00 | 7.22 |
| | DEC. | 222.20 | 416.38 | 19.74 | 63.08 | 0. | 65.24 | 63.90 | 0.50 | 23.55 | 71.24 | 40.00 | 10.08 |
| 1968 | JAN. | 220.29 | 381.27 | 17.84 | 50.08 | 0. | 51.74 | 50.40 | 0.50 | 18.70 | 69.12 | 40.00 | 7.74 |
| | FEB. | 218.25 | 345.01 | 10.23 | 42.74 | 0. | 43.91 | 34.60 | 3.72 | 17.06 | 67.10 | 40.00 | 6.39 |
| | MAR. | 215.53 | 302.57 | 5.22 | 45.69 | 0. | 46.57 | 37.40 | 3.42 | 17.06 | 64.76 | 40.00 | 6.56 |
| | APR. | 212.04 | 252.71 | 5.00 | 52.59 | 0. | 53.10 | 51.80 | 0.50 | 20.75 | 61.64 | 39.99 | 7.12 |
| | MAY | 218.14 | 344.17 | 139.49 | 45.69 | 0. | 64.80 | 17.40 | 17.70 | 17.06 | 62.97 | 40.00 | 6.35 |
| | JUN. | 225.00 | 472.00 | 543.66 | 212.23 | 200.86 | 490.71 | 4.60 | 187.54 | 81.88 | 68.46 | 40.00 | 28.80 |
| | JUL. | 225.00 | 472.00 | 103.66 | 101.09 | 0. | 105.70 | 10.40 | 35.58 | 37.74 | 72.88 | 40.00 | 16.56 |
| | AUG. | 225.00 | 472.00 | 71.40 | 68.90 | 0. | 71.20 | 0. | 26.58 | 25.72 | 72.88 | 40.00 | 11.29 |
| | SEP. | 225.00 | 472.00 | 317.98 | 212.23 | 103.28 | 361.03 | 0. | 139.29 | 81.88 | 72.26 | 40.00 | 28.80 |

| YEAR | MONTH | WATER LEVEL | GROSS STORAGE | INFLOW | OUTFLOW | SPILL-OUT | DIS-CHARGE | WATER USED FOR IRRIGATION | RIVER FLOW | OUTFLOW FOR POWER | HEAD FOR POWER | POWER PEAKING CAPACITY | ENERGY OUTPUT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | MCM | MCM | MCM | MCM | MCM | MCM | CMS | CMS | M | MW | GWH |
| | | 225.00 | 472.00 | | | | | | | | | | |
| | OCT. | 225.00 | 472.00 | 298.07 | 219.31 | 76.41 | 358.35 | 2.30 | 132.93 | 81.88 | 72.41 | 40.00 | 29.76 |
| | NOV. | 225.00 | 472.00 | 113.08 | 110.70 | 0. | 120.42 | 37.60 | 33.88 | 42.71 | 72.85 | 40.00 | 18.13 |
| | DEC. | 223.87 | 449.06 | 42.27 | 62.41 | 0. | 65.24 | 63.90 | 0.50 | 23.30 | 72.31 | 40.00 | 10.14 |
| 1969 | JAN. | 223.08 | 433.46 | 34.18 | 48.71 | 0. | 51.74 | 50.40 | 0.50 | 18.19 | 71.36 | 40.00 | 7.80 |
| | FEB. | 221.50 | 403.18 | 14.00 | 41.27 | 0. | 41.97 | 34.60 | 3.04 | 17.06 | 70.10 | 40.00 | 6.48 |
| | MAR. | 219.39 | 365.36 | 11.19 | 45.69 | 0. | 46.30 | 37.40 | 3.32 | 17.06 | 68.32 | 40.00 | 6.97 |
| | APR. | 216.59 | 319.06 | 5.98 | 52.56 | 0. | 53.10 | 51.80 | 0.50 | 20.29 | 65.84 | 40.00 | 7.70 |
| | MAY | 216.64 | 319.88 | 48.96 | 45.69 | 0. | 56.73 | 17.40 | 14.68 | 17.06 | 64.49 | 40.00 | 6.53 |
| | JUN. | 225.00 | 472.00 | 563.80 | 212.23 | 196.74 | 506.98 | 4.60 | 193.82 | 81.88 | 67.73 | 40.00 | 28.80 |
| | JUL. | 225.00 | 472.00 | 198.72 | 195.97 | 0. | 211.75 | 10.40 | 75.18 | 73.17 | 72.88 | 40.00 | 29.76 |
| | AUG. | 225.00 | 472.00 | 456.87 | 219.31 | 234.48 | 555.92 | 0. | 207.56 | 81.88 | 71.81 | 40.00 | 29.76 |
| | SEP. | 225.00 | 472.00 | 516.44 | 212.23 | 301.91 | 651.50 | 0. | 251.35 | 81.88 | 71.59 | 40.00 | 28.80 |
| | OCT. | 225.00 | 472.00 | 760.34 | 219.31 | 538.18 | 897.44 | 2.30 | 334.21 | 81.88 | 71.10 | 40.00 | 29.76 |
| | NOV. | 225.00 | 472.00 | 148.81 | 146.38 | 0. | 195.37 | 32.60 | 62.80 | 56.47 | 72.85 | 40.00 | 23.98 |
| | DEC. | 224.05 | 457.46 | 40.70 | 57.24 | 0. | 65.24 | 63.90 | 0.50 | 21.37 | 72.40 | 40.00 | 9.31 |
| 1970 | JAN. | 222.37 | 419.56 | 15.64 | 45.69 | 0. | 54.85 | 50.40 | 1.66 | 17.06 | 71.08 | 40.00 | 7.29 |
| | FEB. | 220.35 | 382.34 | 6.98 | 41.27 | 0. | 44.99 | 34.60 | 4.29 | 17.06 | 69.17 | 40.00 | 6.38 |
| | MAR. | 217.71 | 337.13 | 3.65 | 45.69 | 0. | 48.34 | 37.40 | 4.08 | 17.06 | 66.91 | 40.00 | 6.81 |
| | APR. | 214.56 | 288.18 | 4.16 | 50.56 | 0. | 53.10 | 51.80 | 0.50 | 19.51 | 63.99 | 40.00 | 7.16 |
| | MAY | 213.44 | 272.07 | 31.78 | 45.69 | 0. | 50.91 | 17.40 | 12.51 | 17.06 | 61.88 | 40.00 | 6.23 |
| | JUN. | 217.36 | 257.04 | 30.91 | 44.21 | 0. | 50.11 | 4.60 | 17.56 | 17.06 | 60.76 | 39.14 | 5.91 |
| | JUL. | 217.97 | 341.26 | 131.76 | 45.69 | 0. | 54.22 | 10.40 | 16.36 | 17.06 | 63.04 | 40.00 | 6.36 |
| | AUG. | 225.00 | 472.00 | 211.07 | 78.04 | 0. | 148.58 | 0. | 55.47 | 29.14 | 69.36 | 40.00 | 12.11 |
| | SEP. | 225.00 | 472.00 | 422.44 | 212.23 | 207.61 | 542.91 | 0. | 209.46 | 81.88 | 71.87 | 40.00 | 28.80 |
| | OCT. | 225.00 | 472.00 | 319.08 | 219.31 | 96.40 | 396.92 | 2.30 | 147.34 | 81.88 | 72.32 | 40.00 | 29.76 |
| | NOV. | 225.00 | 472.00 | 103.02 | 100.66 | 0. | 120.94 | 32.60 | 34.08 | 38.83 | 72.85 | 40.00 | 16.49 |
| | DEC. | 224.06 | 452.85 | 41.54 | 57.87 | 0. | 65.24 | 63.90 | 0.50 | 21.61 | 72.41 | 40.00 | 9.42 |
| 1971 | JAN. | 222.29 | 420.45 | 24.54 | 46.66 | 0. | 51.74 | 50.40 | 0.50 | 17.43 | 71.35 | 40.00 | 7.47 |
| | FEB. | 221.54 | 401.53 | 14.95 | 41.27 | 0. | 45.82 | 34.60 | 4.64 | 17.06 | 69.93 | 40.00 | 6.46 |
| | MAR. | 219.12 | 360.76 | 9.41 | 45.69 | 0. | 50.48 | 37.40 | 4.88 | 17.06 | 68.11 | 40.00 | 6.95 |
| | APR. | 216.35 | 315.27 | 4.36 | 49.16 | 0. | 53.10 | 51.80 | 0.50 | 18.97 | 65.59 | 40.00 | 7.17 |
| | MAY | 217.41 | 335.34 | 68.24 | 45.69 | 0. | 56.05 | 17.40 | 14.43 | 17.06 | 64.85 | 40.00 | 6.57 |
| | JUN. | 217.90 | 340.20 | 51.02 | 44.21 | 0. | 51.89 | 4.60 | 18.24 | 17.06 | 65.61 | 40.00 | 6.45 |
| | JUL. | 216.85 | 322.96 | 30.34 | 45.69 | 0. | 50.45 | 10.40 | 14.95 | 17.06 | 65.24 | 40.00 | 6.62 |
| | AUG. | 220.35 | 382.37 | 107.73 | 45.69 | 0. | 61.86 | 0. | 23.09 | 17.06 | 66.47 | 40.00 | 6.76 |
| | SEP. | 225.00 | 472.00 | 307.91 | 212.23 | 3.75 | 262.46 | 0. | 101.26 | 81.88 | 70.50 | 40.00 | 28.80 |
| | OCT. | 225.00 | 472.00 | 341.45 | 219.31 | 119.74 | 390.50 | 2.30 | 144.94 | 81.88 | 72.22 | 40.00 | 29.76 |
| | NOV. | 225.00 | 472.00 | 64.99 | 62.68 | 0. | 77.60 | 32.60 | 15.43 | 24.18 | 72.85 | 40.00 | 10.27 |
| | DEC. | 223.24 | 437.20 | 28.75 | 60.69 | 0. | 65.24 | 63.90 | 0.50 | 22.66 | 72.02 | 40.00 | 9.82 |
| 1972 | JAN. | 221.59 | 404.87 | 19.31 | 48.75 | 0. | 51.74 | 50.40 | 0.50 | 18.20 | 70.31 | 40.00 | 7.68 |
| | FEB. | 219.70 | 370.75 | 11.49 | 42.74 | 0. | 44.75 | 34.60 | 4.05 | 17.06 | 68.47 | 40.00 | 6.54 |
| | MAR. | 217.17 | 328.32 | 6.37 | 45.69 | 0. | 47.12 | 37.40 | 3.63 | 17.06 | 66.31 | 40.00 | 6.74 |
| | APR. | 213.93 | 278.92 | 5.00 | 51.90 | 0. | 53.10 | 51.80 | 0.50 | 20.02 | 63.40 | 40.00 | 7.28 |
| | MAY | 213.88 | 278.27 | 47.29 | 45.69 | 0. | 52.90 | 17.40 | 13.26 | 17.06 | 61.78 | 40.00 | 6.22 |
| | JUN. | 219.22 | 362.51 | 130.34 | 44.21 | 0. | 63.77 | 4.60 | 22.83 | 17.06 | 64.41 | 40.00 | 6.31 |
| | JUL. | 217.41 | 335.46 | 20.70 | 45.69 | 0. | 49.09 | 10.40 | 14.44 | 17.06 | 66.29 | 40.00 | 6.74 |
| | AUG. | 216.29 | 314.40 | 26.56 | 45.69 | 0. | 49.83 | 0. | 18.61 | 17.06 | 64.83 | 40.00 | 6.57 |
| | SEP. | 215.01 | 294.78 | 26.18 | 44.21 | 0. | 48.44 | 0. | 18.69 | 17.06 | 63.51 | 40.00 | 6.21 |

| YEAR | MONTH | WATER LEVEL | GROSS STORAGE | INFLOW | OUTFLOW | SPILL-OUT | DIS-CHARGE | WATER USED FOR IRRIGATION | RIVER FLOW | OUTFLOW FOR POWER | HEAD FOR POWER | POWER PEAKING CAPACITY | ENERGY OUTPUT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | MCM | MCM | MCM | MCM | MCM | MCM | CMS | CMS | M | MW | GWH |
| | | 215.01 | 294.78 | | | | | | | | | | |
| | OCT. | 213.83 | 277.47 | 29.84 | 45.69 | 0. | 50.44 | 2.30 | 17.98 | 17.06 | 62.29 | 40.00 | 6.28 |
| | NOV. | 211.84 | 250.05 | 18.36 | 44.21 | 0. | 47.05 | 32.60 | 5.58 | 17.06 | 60.69 | 39.07 | 5.91 |
| | DEC. | 208.65 | 210.01 | 9.47 | 47.24 | 0. | 49.36 | 48.03* | 0.50 | 17.82 | 58.12 | 36.62 | 6.11 |
| 1973 | JAN. | 204.97 | 169.70 | 7.15 | 45.69 | 0. | 46.94 | 45.60* | 0.50 | 17.06 | 54.69 | 33.42 | 5.50 |
| | FEB. | 204.00 | 160.00 | 3.11 | 11.16 | 0. | 11.96 | 10.75* | 0.50 | 4.61* | 52.30 | 31.25 | 1.28 |
| | MAR. | 203.93 | 159.36 | 1.24 | 0. | 0. | 0.47 | 0. * | 0.18 | 0. * | 51.84 | 0. | 0. |
| | APR. | 203.98 | 159.78 | 2.07 | 0. | 0. | 0.63 | 0. * | 0.24 | 0. * | 51.81 | 0. | 0. |
| | MAY | 204.00 | 160.00 | 31.36 | 29.57 | 0. | 34.41 | 17.40 | 6.35 | 11.04* | 51.86 | 30.87 | 3.38 |
| | JUN. | 207.88 | 201.03 | 86.56 | 44.21 | 0. | 57.17 | 4.60 | 20.28 | 17.06 | 53.79 | 32.61 | 5.24 |
| | JUL. | 211.58 | 246.59 | 92.79 | 45.69 | 0. | 59.80 | 10.40 | 18.44 | 17.06 | 57.60 | 36.13 | 5.79 |
| | AUG. | 213.21 | 269.75 | 69.51 | 45.69 | 0. | 56.27 | 0. | 21.01 | 17.06 | 60.27 | 38.67 | 6.06 |
| | SEP. | 224.14 | 454.42 | 231.64 | 44.21 | 0. | 77.17 | 0. | 30.55 | 17.06 | 66.53 | 40.00 | 6.55 |
| | OCT. | 225.00 | 472.00 | 573.00 | 219.31 | 333.50 | 639.00 | 2.30 | 237.72 | 81.88 | 71.11 | 40.00 | 29.76 |
| | NOV. | 225.00 | 472.00 | 163.90 | 161.44 | 0. | 186.25 | 32.60 | 59.78 | 62.29 | 72.85 | 40.00 | 26.45 |
| | DEC. | 223.50 | 441.56 | 32.52 | 60.16 | 0. | 65.24 | 63.90 | 0.50 | 27.46 | 72.12 | 40.00 | 9.75 |
| 1974 | JAN. | 221.64 | 405.85 | 16.37 | 49.11 | 0. | 51.74 | 50.40 | 0.50 | 18.34 | 70.44 | 40.00 | 7.75 |
| | FEB. | 219.56 | 368.28 | 6.56 | 41.27 | 0. | 42.50 | 34.60 | 3.27 | 17.06 | 68.41 | 40.00 | 6.31 |
| | MAR. | 216.86 | 323.25 | 3.75 | 45.69 | 0. | 46.63 | 37.40 | 3.45 | 17.06 | 66.08 | 40.00 | 6.72 |
| | APR. | 213.39 | 271.29 | 2.80 | 57.30 | 0. | 53.10 | 51.80 | 0.50 | 20.18 | 62.98 | 40.00 | 7.28 |
| | MAY | 224.10 | 453.70 | 250.75 | 45.69 | 0. | 80.44 | 17.40 | 23.54 | 17.06 | 66.62 | 40.00 | 6.78 |
| | JUN. | 225.00 | 472.00 | 198.97 | 176.06 | 0. | 207.99 | 4.60 | 78.47 | 68.69 | 72.41 | 40.00 | 28.80 |
| | JUL. | 225.00 | 472.00 | 98.76 | 96.17 | 0. | 111.21 | 10.40 | 37.64 | 35.91 | 72.88 | 40.00 | 15.76 |
| | AUG. | 225.00 | 472.00 | 101.37 | 98.81 | 0. | 114.15 | 0. | 42.62 | 36.89 | 72.88 | 40.00 | 16.19 |
| | SEP. | 225.00 | 472.00 | 491.36 | 212.23 | 276.48 | 562.73 | 0. | 217.10 | 81.88 | 71.66 | 40.00 | 28.80 |
| | OCT. | 225.00 | 472.00 | 323.21 | 219.31 | 101.32 | 369.32 | 2.30 | 137.03 | 81.88 | 72.30 | 40.00 | 29.76 |
| | NOV. | 225.00 | 472.00 | 70.44 | 68.12 | 0. | 78.89 | 32.60 | 17.86 | 26.28 | 72.85 | 40.00 | 11.16 |
| | DEC. | 222.71 | 426.11 | 19.01 | 62.15 | 0. | 65.24 | 63.90 | 0.50 | 23.20 | 71.73 | 40.00 | 10.01 |
| 1975 | JAN. | 220.43 | 383.67 | 10.40 | 49.94 | 0. | 51.74 | 50.40 | 0.50 | 18.65 | 69.44 | 40.00 | 7.76 |
| | FEB. | 218.14 | 344.12 | 4.47 | 41.27 | 0. | 42.20 | 34.60 | 3.14 | 17.06 | 67.09 | 40.00 | 6.17 |
| | MAR. | 215.29 | 298.92 | 3.44 | 45.69 | 0. | 46.55 | 37.40 | 3.42 | 17.06 | 64.59 | 40.00 | 6.54 |
| | APR. | 211.65 | 247.48 | 3.12 | 57.21 | 0. | 53.10 | 51.80 | 0.50 | 20.14 | 61.32 | 39.68 | 7.05 |
| | MAY | 209.94 | 225.58 | 25.51 | 45.69 | 0. | 49.68 | 17.40 | 12.05 | 17.06 | 58.67 | 37.14 | 5.90 |
| | JUN. | 206.73 | 198.22 | 8.25 | 44.21 | 0. | 45.44 | 4.60 | 15.76 | 17.06 | 56.19 | 34.81 | 5.47 |
| | JUL. | 205.75 | 172.48 | 31.26 | 45.69 | 0. | 50.60 | 10.40 | 15.01 | 17.06 | 53.86 | 32.67 | 5.42 |
| | AUG. | 205.41 | 174.17 | 48.65 | 45.69 | 0. | 53.12 | 0. | 19.83 | 17.06 | 53.20 | 32.07 | 5.35 |
| | SEP. | 225.00 | 472.00 | 573.37 | 212.23 | 61.34 | 359.86 | 0. | 138.83 | 81.88 | 62.67 | 40.00 | 28.80 |
| | OCT. | 225.00 | 472.00 | 526.48 | 219.31 | 304.56 | 603.09 | 2.30 | 224.31 | 81.88 | 71.62 | 40.00 | 29.76 |
| | NOV. | 225.00 | 472.00 | 363.25 | 212.23 | 148.33 | 415.27 | 32.60 | 147.64 | 81.88 | 72.08 | 40.00 | 28.80 |
| | DEC. | 225.00 | 472.00 | 69.51 | 66.64 | 0. | 77.23 | 63.90 | 4.98 | 24.86 | 72.88 | 40.00 | 10.92 |
| 1976 | JAN. | 223.57 | 443.02 | 22.34 | 48.18 | 0. | 51.74 | 50.40 | 0.50 | 17.99 | 72.16 | 40.00 | 7.81 |
| | FEB. | 221.78 | 408.40 | 11.17 | 42.74 | 0. | 44.77 | 34.60 | 4.06 | 17.06 | 70.51 | 40.00 | 6.75 |
| | MAR. | 219.35 | 364.41 | 5.22 | 45.69 | 0. | 46.87 | 37.40 | 3.53 | 17.06 | 68.44 | 40.00 | 6.99 |
| | APR. | 216.23 | 313.42 | 3.64 | 52.14 | 0. | 53.10 | 51.80 | 0.50 | 20.11 | 65.64 | 40.00 | 7.61 |
| | | | | | | | | | | | | | 2714.37 |

RESERVOIR OPERATION MOROLICA HIGH DAM PLAN

HIGH WATER LEVEL 237.00 LOW WATER LEVEL 204.00

GROSS STORAGE CAPACITY 755.00 MCM

DEAD STORAGE CAPACITY 160.00 MCM

EVAPORATION DATA IN MM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 169.0 | 172.0 | 200.0 | 176.0 | 167.0 | 178.0 | 132.0 | 130.0 | 111.0 | 107.0 | 120.0 | 150.0 |

MAXIMUM DISCHARGE FOR POWER GENERATION 111.91 CMS

POWER INSTALLED CAPACITY 60000. KW

RATED HEAD FOR POWER GENERATION 67.4 M

GUARANTEED MINIMUM DISCHARGE FOR POWER GENERATION 23.31 CMS

SEASONAL MINIMUM STORAGE IN MCM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 286.00 | 261.00 | 170.00 | 160.00 | 160.00 | 160.00 | 160.00 | 205.00 | 280.00 | 295.00 | 280.00 | 264.40 |

MONTHLY IRRIGATION WATER REQUIREMENT

UPSTREAM OF DAMSITE IN MCM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.70 | 2.20 | 3.10 | 3.40 | 1.30 | 0.30 | 1.60 | 1.00 | 1.80 | 2.00 | 1.50 | 2.20 |

DOWNSTREAM OF DAMSITE IN MCM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 50.40 | 34.60 | 37.40 | 51.80 | 17.40 | 4.60 | 10.40 | 0. | 0. | 2.30 | 32.60 | 63.90 |

RESERVOIR OPERATION   MOROLICA HIGH DAM PLAN

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DIS-CHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 237.00 | 755.00 | | | | | | | | | | |
| 1956 | NOV. | 236.74 | 747.75 | 56.29 | 60.43 | 0. | 66.94 | 32.60 | 13.25 | 23.31 | 84.52 | 60.00 | 11.56 |
| | DEC. | 235.39 | 710.55 | 29.07 | 62.44 | 0. | 67.18 | 63.90 | 1.22 | 23.31 | 83.73 | 60.00 | 11.83 |
| 1957 | JAN. | 234.42 | 684.51 | 40.58 | 62.44 | 0. | 64.27 | 50.40 | 5.18 | 23.31 | 82.57 | 60.00 | 11.65 |
| | FEB. | 233.10 | 650.44 | 26.47 | 56.40 | 0. | 57.43 | 34.60 | 9.44 | 23.31 | 81.36 | 60.00 | 10.36 |
| | MAR. | 231.14 | 601.82 | 18.42 | 62.44 | 0. | 63.32 | 37.40 | 9.68 | 23.31 | 79.79 | 60.00 | 11.23 |
| | APR. | 229.05 | 552.82 | 15.27 | 60.43 | 0. | 62.86 | 51.80 | 4.27 | 23.31 | 77.74 | 60.00 | 10.57 |
| | MAY | 232.12 | 625.75 | 139.07 | 62.44 | 0. | 68.87 | 17.40 | 19.22 | 23.31 | 78.25 | 60.00 | 11.00 |
| | JUN. | 237.00 | 755.00 | 217.93 | 85.51 | 0. | 95.37 | 4.60 | 35.02 | 32.99 | 82.20 | 60.00 | 15.88 |
| | JUL. | 236.13 | 730.60 | 41.45 | 62.44 | 0. | 65.40 | 10.40 | 20.53 | 23.31 | 84.23 | 60.00 | 11.91 |
| | AUG. | 235.85 | 723.06 | 58.70 | 62.44 | 0. | 65.74 | 0. | 24.55 | 23.31 | 83.66 | 60.00 | 11.82 |
| | SEP. | 237.00 | 755.00 | 211.42 | 176.48 | 0. | 201.26 | 0. | 77.65 | 68.09 | 84.07 | 60.00 | 33.58 |
| | OCT. | 237.00 | 755.00 | 191.20 | 188.76 | 0. | 196.46 | 2.30 | 72.49 | 70.29 | 84.67 | 60.00 | 36.09 |
| | NOV. | 236.05 | 728.39 | 36.91 | 60.43 | 0. | 62.82 | 32.60 | 11.66 | 23.31 | 84.17 | 60.00 | 11.51 |
| | DEC. | 234.46 | 685.61 | 24.56 | 63.60 | 0. | 65.24 | 63.90 | 0.50 | 23.75 | 82.92 | 60.00 | 11.92 |
| 1958 | JAN. | 232.50 | 635.30 | 16.16 | 62.44 | 0. | 64.08 | 50.40 | 5.11 | 23.31 | 81.15 | 60.00 | 11.44 |
| | FEB. | 230.36 | 583.25 | 8.24 | 56.40 | 0. | 57.26 | 34.60 | 9.37 | 23.31 | 79.03 | 60.00 | 10.04 |
| | MAR. | 227.71 | 522.83 | 6.27 | 62.44 | 0. | 63.47 | 37.40 | 9.74 | 23.31 | 76.70 | 60.00 | 10.76 |
| | APR. | 224.91 | 463.94 | 5.00 | 60.43 | 0. | 61.33 | 51.80 | 3.68 | 23.31 | 73.95 | 60.00 | 10.00 |
| | MAY | 229.27 | 557.84 | 159.71 | 62.44 | 0. | 72.73 | 17.40 | 20.66 | 23.31 | 74.76 | 60.00 | 10.46 |
| | JUN. | 237.00 | 755.00 | 359.28 | 158.95 | 0. | 182.77 | 4.60 | 68.74 | 61.32 | 80.78 | 60.00 | 28.97 |
| | JUL. | 237.00 | 755.00 | 240.00 | 236.31 | 0. | 246.81 | 10.40 | 88.27 | 88.23 | 84.67 | 60.00 | 44.64 |
| | AUG. | 237.00 | 755.00 | 119.60 | 116.13 | 0. | 121.64 | 0. | 45.41 | 43.36 | 84.67 | 60.00 | 22.27 |
| | SEP. | 237.00 | 755.00 | 77.62 | 74.71 | 0. | 80.69 | 0. | 31.13 | 28.82 | 84.64 | 60.00 | 14.32 |
| | OCT. | 237.00 | 755.00 | 215.51 | 212.54 | 0. | 225.44 | 2.30 | 83.31 | 79.35 | 84.67 | 60.00 | 40.75 |
| | NOV. | 236.15 | 731.32 | 39.84 | 60.43 | 0. | 63.19 | 32.60 | 11.80 | 23.31 | 84.22 | 60.00 | 11.52 |
| | DEC. | 234.38 | 683.64 | 19.53 | 63.47 | 0. | 65.24 | 63.90 | 0.50 | 23.70 | 82.94 | 60.00 | 11.90 |
| 1959 | JAN. | 232.44 | 633.75 | 16.58 | 62.44 | 0. | 66.36 | 50.40 | 5.96 | 23.31 | 81.08 | 60.00 | 11.43 |
| | FEB. | 230.36 | 583.07 | 9.60 | 56.40 | 0. | 59.30 | 34.60 | 10.21 | 23.31 | 78.99 | 60.00 | 10.03 |
| | MAR. | 227.63 | 521.08 | 4.70 | 62.44 | 0. | 64.75 | 37.40 | 10.21 | 23.31 | 76.66 | 60.00 | 10.75 |
| | APR. | 224.67 | 459.27 | 2.07 | 60.43 | 0. | 62.66 | 51.80 | 4.19 | 23.31 | 73.79 | 60.00 | 9.98 |
| | MAY | 223.30 | 432.45 | 38.69 | 62.44 | 0. | 72.25 | 17.40 | 20.48 | 23.31 | 71.66 | 60.00 | 9.98 |
| | JUN. | 223.62 | 438.53 | 68.84 | 60.43 | 0. | 74.49 | 4.60 | 26.96 | 23.31 | 71.11 | 60.00 | 9.57 |
| | JUL. | 221.08 | 391.12 | 17.35 | 62.44 | 0. | 65.69 | 10.40 | 20.64 | 23.31 | 70.01 | 60.00 | 9.72 |
| | AUG. | 219.84 | 369.42 | 42.90 | 62.44 | 0. | 68.14 | 0. | 25.44 | 23.31 | 68.12 | 60.00 | 9.42 |
| | SEP. | 218.46 | 346.29 | 39.06 | 60.43 | 0. | 66.07 | 0. | 25.49 | 23.31 | 66.80 | 59.24 | 8.92 |
| | OCT. | 225.69 | 479.88 | 197.90 | 62.44 | 0. | 103.24 | 2.30 | 37.69 | 23.31 | 69.74 | 60.00 | 9.68 |
| | NOV. | 224.37 | 453.25 | 36.07 | 60.43 | 0. | 66.36 | 32.60 | 13.02 | 23.31 | 72.67 | 60.00 | 9.81 |
| | DEC. | 221.63 | 401.15 | 13.04 | 62.44 | 0. | 65.41 | 63.90 | 0.56 | 23.31 | 70.67 | 60.00 | 9.82 |
| 1960 | JAN. | 218.56 | 347.91 | 11.97 | 62.44 | 0. | 64.47 | 50.40 | 5.25 | 23.31 | 67.76 | 60.00 | 9.36 |
| | FEB. | 214.96 | 291.94 | 4.99 | 58.41 | 0. | 59.42 | 34.60 | 9.91 | 23.31 | 64.38 | 56.06 | 8.31 |
| | MAR. | 210.31 | 229.20 | 2.29 | 62.44 | 0. | 63.06 | 37.40 | 9.58 | 23.31 | 60.30 | 50.82 | 8.33 |
| | APR. | 204.90 | 168.84 | 1.96 | 60.43 | 0. | 61.06 | 51.80 | 3.57 | 23.31 | 55.25 | 44.56 | 7.38 |
| | MAY | 207.65 | 197.96 | 93.28 | 62.44 | 0. | 76.56 | 17.40 | 22.09 | 23.31 | 53.94 | 42.99 | 7.45 |
| | JUN. | 219.67 | 366.52 | 230.72 | 60.43 | 0. | 95.11 | 4.60 | 34.92 | 23.31 | 61.31 | 52.09 | 8.19 |
| | JUL. | 222.72 | 421.34 | 119.51 | 62.44 | 0. | 80.64 | 10.40 | 26.22 | 23.31 | 68.86 | 60.00 | 9.54 |
| | AUG. | 228.63 | 543.25 | 186.86 | 62.44 | 0. | 90.58 | 0. | 33.82 | 23.31 | 73.34 | 60.00 | 10.24 |
| | SEP. | 235.18 | 704.68 | 224.41 | 60.43 | 0. | 94.32 | 0. | 36.39 | 23.31 | 79.55 | 60.00 | 10.83 |

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DIS-CHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 235.18 | 704.68 | | | | | | | | | | |
| | OCT. | 237.00 | 755.00 | 299.64 | 246.39 | 0. | 291.64 | 2.30 | 108.03 | 91.99 | 83.75 | 60.00 | 44.64 |
| | NOV. | 237.00 | 755.00 | 92.33 | 89.17 | 0. | 103.14 | 37.60 | 27.21 | 34.40 | 84.64 | 60.00 | 17.09 |
| | DEC. | 235.76 | 720.60 | 31.90 | 62.44 | 0. | 67.45 | 63.90 | 1.32 | 23.31 | 84.05 | 60.00 | 11.88 |
| 1961 | JAN. | 234.31 | 681.76 | 27.79 | 62.44 | 0. | 66.85 | 50.40 | 6.14 | 23.31 | 82.71 | 60.00 | 11.67 |
| | FEB. | 232.80 | 642.80 | 21.55 | 56.40 | 0. | 59.85 | 34.60 | 10.44 | 23.31 | 81.15 | 60.00 | 10.33 |
| | MAR. | 230.71 | 591.39 | 15.59 | 62.44 | 0. | 65.15 | 37.40 | 10.36 | 23.31 | 79.42 | 60.00 | 11.18 |
| | APR. | 228.42 | 538.56 | 11.39 | 60.43 | 0. | 62.43 | 51.80 | 4.10 | 23.31 | 77.21 | 60.00 | 10.49 |
| | MAY | 225.91 | 484.52 | 11.77 | 62.44 | 0. | 64.28 | 17.40 | 17.50 | 23.31 | 74.83 | 60.00 | 10.47 |
| | JUN. | 229.53 | 563.86 | 142.39 | 60.43 | 0. | 81.84 | 4.60 | 29.80 | 23.31 | 75.37 | 60.00 | 10.21 |
| | JUL. | 233.05 | 648.96 | 150.52 | 62.44 | 0. | 85.22 | 10.40 | 27.94 | 23.31 | 78.96 | 60.00 | 11.10 |
| | AUG. | 233.50 | 660.70 | 77.27 | 62.44 | 0. | 74.18 | 0. | 27.69 | 23.31 | 80.94 | 60.00 | 11.41 |
| | SEP. | 235.76 | 720.64 | 123.09 | 60.43 | 0. | 79.14 | 0. | 30.53 | 23.31 | 82.28 | 60.00 | 11.24 |
| | OCT. | 237.00 | 755.00 | 140.17 | 103.02 | 0. | 124.35 | 2.30 | 45.57 | 38.46 | 84.05 | 60.00 | 19.60 |
| | NOV. | 237.00 | 755.00 | 90.55 | 87.39 | 0. | 101.14 | 32.60 | 26.44 | 33.72 | 84.64 | 60.00 | 16.75 |
| | DEC. | 235.60 | 716.21 | 27.50 | 62.44 | 0. | 66.85 | 63.90 | 1.10 | 23.31 | 83.97 | 60.00 | 11.87 |
| 1962 | JAN. | 234.00 | 673.52 | 23.92 | 62.44 | 0. | 66.23 | 50.40 | 5.91 | 23.31 | 82.47 | 60.00 | 11.64 |
| | FEB. | 232.21 | 628.00 | 14.95 | 56.40 | 0. | 58.86 | 34.60 | 10.03 | 23.31 | 80.70 | 60.00 | 10.27 |
| | MAR. | 229.77 | 569.34 | 8.26 | 62.44 | 0. | 64.18 | 37.40 | 10.00 | 23.31 | 78.66 | 60.00 | 11.06 |
| | APR. | 227.20 | 511.71 | 6.47 | 60.43 | 0. | 61.86 | 51.80 | 3.88 | 23.31 | 76.13 | 60.00 | 10.33 |
| | MAY | 227.19 | 511.52 | 65.62 | 62.44 | 0. | 72.42 | 17.40 | 20.54 | 23.31 | 74.86 | 60.00 | 10.47 |
| | JUN. | 231.18 | 602.80 | 154.44 | 60.43 | 0. | 83.59 | 4.60 | 30.47 | 23.31 | 76.83 | 60.00 | 10.43 |
| | JUL. | 232.02 | 623.34 | 85.98 | 62.44 | 0. | 75.57 | 10.40 | 24.33 | 23.31 | 79.27 | 60.00 | 11.15 |
| | AUG. | 232.69 | 639.86 | 81.98 | 62.44 | 0. | 74.86 | 0. | 27.95 | 23.31 | 80.02 | 60.00 | 11.27 |
| | SEP. | 235.44 | 711.89 | 135.14 | 60.43 | 0. | 80.99 | 0. | 31.24 | 23.31 | 81.71 | 60.00 | 11.15 |
| | OCT. | 237.00 | 755.00 | 185.12 | 139.19 | 0. | 167.26 | 2.30 | 61.59 | 51.97 | 83.89 | 60.00 | 26.42 |
| | NOV. | 235.74 | 720.12 | 28.63 | 60.43 | 0. | 64.90 | 32.60 | 12.46 | 23.31 | 84.02 | 60.00 | 11.49 |
| | DEC. | 234.00 | 673.51 | 19.53 | 62.44 | 0. | 65.61 | 63.90 | 0.64 | 23.31 | 82.54 | 60.00 | 11.65 |
| 1963 | JAN. | 232.06 | 624.29 | 17.21 | 62.44 | 0. | 65.23 | 50.40 | 5.54 | 23.31 | 80.70 | 60.00 | 11.37 |
| | FEB. | 229.95 | 573.54 | 9.50 | 56.40 | 0. | 58.00 | 34.60 | 9.67 | 23.31 | 78.60 | 60.00 | 9.98 |
| | MAR. | 227.32 | 514.42 | 7.53 | 62.44 | 0. | 63.92 | 37.40 | 9.90 | 23.31 | 76.30 | 60.00 | 10.70 |
| | APR. | 224.57 | 457.14 | 6.57 | 60.43 | 0. | 61.85 | 51.80 | 3.88 | 23.31 | 73.59 | 60.00 | 9.95 |
| | MAY | 221.53 | 399.38 | 7.68 | 62.44 | 0. | 63.66 | 17.40 | 17.27 | 23.31 | 70.72 | 60.00 | 9.83 |
| | JUN. | 222.72 | 421.38 | 84.66 | 60.43 | 0. | 73.17 | 4.60 | 26.45 | 23.31 | 69.77 | 60.00 | 9.37 |
| | JUL. | 224.03 | 446.61 | 90.06 | 62.44 | 0. | 76.18 | 10.40 | 24.56 | 23.31 | 71.05 | 60.00 | 9.88 |
| | AUG. | 223.15 | 429.52 | 47.72 | 62.44 | 0. | 69.82 | 0. | 26.07 | 23.31 | 71.26 | 60.00 | 9.91 |
| | SEP. | 225.82 | 482.57 | 115.55 | 60.43 | 0. | 77.98 | 0. | 30.08 | 23.31 | 72.13 | 60.00 | 9.73 |
| | OCT. | 231.81 | 618.08 | 200.21 | 62.44 | 0. | 92.73 | 2.30 | 33.76 | 23.31 | 76.48 | 60.00 | 10.72 |
| | NOV. | 235.19 | 704.95 | 150.17 | 60.43 | 0. | 83.36 | 32.60 | 19.58 | 23.31 | 81.14 | 60.00 | 11.07 |
| | DEC. | 233.59 | 662.79 | 24.14 | 62.44 | 0. | 66.30 | 63.90 | 0.90 | 23.31 | 82.06 | 60.00 | 11.58 |
| 1964 | JAN. | 231.63 | 613.61 | 17.00 | 62.44 | 0. | 65.24 | 50.40 | 5.54 | 23.31 | 80.28 | 60.00 | 11.31 |
| | FEB. | 229.41 | 561.00 | 9.60 | 58.41 | 0. | 60.21 | 34.60 | 10.22 | 23.31 | 78.14 | 60.00 | 10.27 |
| | MAR. | 226.78 | 502.89 | 8.47 | 62.44 | 0. | 64.07 | 37.40 | 9.96 | 23.31 | 75.76 | 60.00 | 10.61 |
| | APR. | 224.02 | 446.29 | 7.20 | 60.43 | 0. | 61.83 | 51.80 | 3.87 | 23.31 | 73.05 | 60.00 | 9.86 |
| | MAY | 220.95 | 388.89 | 7.99 | 62.44 | 0. | 63.85 | 17.40 | 17.34 | 23.31 | 70.15 | 60.00 | 9.74 |
| | JUN. | 233.14 | 651.31 | 325.43 | 60.43 | 0. | 109.30 | 4.60 | 40.39 | 23.31 | 74.69 | 60.00 | 10.11 |
| | JUL. | 237.00 | 755.00 | 237.90 | 130.83 | 0. | 166.73 | 10.40 | 58.37 | 48.85 | 82.74 | 60.00 | 24.47 |
| | AUG. | 237.00 | 755.00 | 71.40 | 68.01 | 0. | 78.81 | 0. | 29.42 | 25.39 | 84.67 | 60.00 | 13.04 |
| | SEP. | 237.00 | 755.00 | 160.08 | 157.07 | 0. | 181.39 | 0. | 69.98 | 60.60 | 84.64 | 60.00 | 30.10 |

| YEAR | MONTH | WATER LEVEL | GROSS STORAGE | INFLOW | OUTFLOW | SPILL-OUT | DIS-CHARGE | WATER USED FOR IRRIGATION | RIVER FLOW | OUTFLOW FOR POWER | HEAD FOR POWER | POWER PEAKING CAPACITY | ENERGY OUTPUT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | MCM | MCM | MCM | MCM | MCM | MCM | CMS | CMS | M | MW | GWH |
| | | 237.00 | 755.00 | | | | | | | | | | |
| | OCT. | 237.00 | 755.00 | 281.83 | 278.79 | 0. | 321.36 | 2.30 | 119.12 | 104.09 | 84.67 | 60.00 | 44.64 |
| | NOV. | 236.11 | 730.06 | 38.58 | 60.43 | 0. | 66.45 | 32.60 | 13.06 | 23.31 | 84.20 | 60.00 | 11.52 |
| | DEC. | 234.55 | 688.12 | 24.75 | 62.44 | 0. | 66.30 | 63.90 | 0.89 | 23.31 | 83.00 | 60.00 | 11.72 |
| 1965 | JAN. | 232.36 | 631.73 | 10.09 | 62.44 | 0. | 64.06 | 50.40 | 5.10 | 23.31 | 81.13 | 60.00 | 11.43 |
| | FEB. | 229.99 | 574.36 | 2.90 | 56.40 | 0. | 57.20 | 34.60 | 9.34 | 23.31 | 78.77 | 60.00 | 10.00 |
| | MAR. | 227.10 | 509.60 | 1.87 | 62.44 | 0. | 63.07 | 37.40 | 9.59 | 23.31 | 76.21 | 60.00 | 10.68 |
| | APR. | 224.06 | 447.07 | 1.29 | 60.43 | 0. | 60.91 | 51.80 | 3.52 | 23.31 | 73.22 | 60.00 | 9.89 |
| | MAY | 224.81 | 462.02 | 80.50 | 62.44 | 0. | 74.64 | 17.40 | 21.37 | 23.31 | 72.10 | 60.00 | 10.05 |
| | JUN. | 227.97 | 528.67 | 129.61 | 60.43 | 0. | 79.82 | 4.60 | 29.02 | 23.31 | 74.04 | 60.00 | 10.01 |
| | JUL. | 227.34 | 514.93 | 51.40 | 62.44 | 0. | 70.44 | 10.40 | 22.42 | 23.31 | 75.33 | 60.00 | 10.55 |
| | AUG. | 226.57 | 498.34 | 48.45 | 62.44 | 0. | 69.79 | 0. | 26.06 | 23.31 | 74.62 | 60.00 | 10.44 |
| | SEP. | 237.00 | 755.00 | 355.70 | 96.44 | 0. | 150.15 | 0. | 57.93 | 37.21 | 79.43 | 60.00 | 17.26 |
| | OCT. | 237.00 | 755.00 | 271.25 | 268.22 | 0. | 309.17 | 2.30 | 114.57 | 100.14 | 84.67 | 60.00 | 44.64 |
| | NOV. | 237.00 | 755.00 | 90.45 | 87.29 | 0. | 91.74 | 32.60 | 22.82 | 33.67 | 84.64 | 60.00 | 16.73 |
| | DEC. | 235.78 | 721.01 | 33.47 | 63.61 | 0. | 65.24 | 63.90 | 0.50 | 23.75 | 84.06 | 60.00 | 12.10 |
| 1966 | JAN. | 234.07 | 675.37 | 20.98 | 62.44 | 0. | 65.66 | 50.40 | 5.70 | 23.31 | 82.59 | 60.00 | 11.66 |
| | FEB. | 232.16 | 626.60 | 11.70 | 56.40 | 0. | 58.40 | 34.60 | 9.84 | 23.31 | 80.71 | 60.00 | 10.27 |
| | MAR. | 229.75 | 568.90 | 9.20 | 62.44 | 0. | 64.24 | 37.40 | 10.02 | 23.31 | 78.62 | 60.00 | 11.05 |
| | APR. | 227.48 | 517.95 | 13.18 | 60.43 | 0. | 62.85 | 51.80 | 4.26 | 23.31 | 76.26 | 60.00 | 10.35 |
| | MAY | 230.45 | 585.28 | 133.31 | 62.44 | 0. | 123.74 | 17.40 | 39.70 | 23.31 | 76.63 | 60.00 | 10.75 |
| | JUN. | 237.00 | 755.00 | 382.54 | 209.53 | 0. | 310.39 | 4.60 | 117.97 | 80.84 | 81.37 | 60.00 | 38.49 |
| | JUL. | 237.00 | 755.00 | 276.98 | 273.24 | 0. | 314.06 | 10.40 | 113.37 | 102.02 | 84.67 | 60.00 | 44.64 |
| | AUG. | 237.00 | 755.00 | 123.37 | 119.90 | 0. | 129.83 | 0. | 48.47 | 44.77 | 84.67 | 60.00 | 22.99 |
| | SEP. | 237.00 | 755.00 | 168.15 | 165.13 | 0. | 196.68 | 0. | 75.88 | 63.71 | 84.64 | 60.00 | 31.65 |
| | OCT. | 237.00 | 755.00 | 380.53 | 299.73 | 77.66 | 422.05 | 2.30 | 156.72 | 111.91 | 84.27 | 60.00 | 44.64 |
| | NOV. | 236.96 | 753.92 | 62.47 | 60.43 | 0. | 65.76 | 32.60 | 12.79 | 23.31 | 84.63 | 60.00 | 11.58 |
| | DEC. | 235.75 | 720.26 | 37.63 | 62.44 | 0. | 66.71 | 63.90 | 1.05 | 23.31 | 84.02 | 60.00 | 11.87 |
| 1967 | JAN. | 234.17 | 677.97 | 24.34 | 62.44 | 0. | 67.21 | 50.40 | 4.41 | 23.31 | 82.63 | 60.00 | 11.66 |
| | FEB. | 232.47 | 634.52 | 17.04 | 56.40 | 0. | 58.26 | 34.60 | 9.78 | 23.31 | 80.92 | 60.00 | 10.30 |
| | MAR. | 230.27 | 580.96 | 13.39 | 62.44 | 0. | 64.25 | 37.40 | 10.02 | 23.31 | 79.04 | 60.00 | 11.12 |
| | APR. | 228.85 | 548.36 | 31.62 | 60.43 | 0. | 63.21 | 51.80 | 4.40 | 23.31 | 77.21 | 60.00 | 10.49 |
| | MAY | 226.44 | 495.53 | 13.02 | 62.44 | 0. | 63.62 | 17.40 | 17.26 | 23.31 | 75.31 | 60.00 | 10.54 |
| | JUN. | 227.55 | 519.28 | 86.75 | 60.43 | 0. | 83.38 | 4.60 | 30.39 | 23.31 | 74.64 | 60.00 | 10.10 |
| | JUL. | 226.99 | 507.36 | 53.18 | 62.44 | 0. | 68.06 | 10.40 | 21.53 | 23.31 | 74.94 | 60.00 | 10.49 |
| | AUG. | 226.11 | 488.59 | 46.25 | 62.44 | 0. | 64.69 | 0. | 24.15 | 23.31 | 74.22 | 60.00 | 10.38 |
| | SEP. | 229.93 | 573.06 | 147.19 | 60.43 | 0. | 90.44 | 0. | 34.89 | 23.31 | 75.66 | 60.00 | 10.26 |
| | OCT. | 231.66 | 614.36 | 106.12 | 62.44 | 0. | 79.02 | 2.30 | 28.64 | 23.31 | 78.46 | 60.00 | 11.03 |
| | NOV. | 230.57 | 588.15 | 36.91 | 60.43 | 0. | 64.02 | 32.60 | 12.12 | 23.31 | 78.76 | 60.00 | 10.72 |
| | DEC. | 228.55 | 541.58 | 19.74 | 63.08 | 0. | 65.24 | 63.90 | 0.50 | 23.55 | 77.23 | 60.00 | 10.95 |
| 1968 | JAN. | 226.34 | 493.55 | 17.84 | 62.44 | 0. | 64.10 | 50.40 | 5.12 | 23.31 | 75.12 | 60.00 | 10.51 |
| | FEB. | 223.80 | 442.09 | 10.23 | 58.41 | 0. | 59.58 | 34.60 | 9.97 | 23.31 | 72.69 | 60.00 | 9.48 |
| | MAR. | 220.53 | 381.38 | 5.22 | 62.44 | 0. | 63.32 | 37.40 | 9.68 | 23.31 | 69.83 | 60.00 | 9.69 |
| | APR. | 217.03 | 323.18 | 5.00 | 60.43 | 0. | 61.03 | 51.80 | 3.56 | 23.31 | 66.42 | 58.74 | 8.87 |
| | MAY | 221.43 | 397.55 | 139.49 | 62.44 | 0. | 81.55 | 17.40 | 23.95 | 23.31 | 66.90 | 59.37 | 9.24 |
| | JUN. | 237.00 | 755.00 | 543.68 | 183.30 | 0. | 260.92 | 4.60 | 98.89 | 70.72 | 76.86 | 60.00 | 31.65 |
| | JUL. | 237.00 | 755.00 | 103.68 | 100.19 | 0. | 104.81 | 10.40 | 35.25 | 37.41 | 84.67 | 60.00 | 19.21 |
| | AUG. | 237.00 | 755.00 | 71.40 | 68.01 | 0. | 70.31 | 0. | 26.25 | 25.39 | 84.67 | 60.00 | 13.04 |
| | SEP. | 237.00 | 755.00 | 317.98 | 290.06 | 24.72 | 360.30 | 0. | 139.01 | 111.91 | 84.50 | 60.00 | 43.20 |

| YEAR | MONTH | WATER LEVEL | GROSS STORAGE | INFLOW | OUTFLOW | SPILL-OUT | DIS-CHARGE | WATER USED FOR IRRIGATION | RIVER FLOW | OUTFLOW FOR POWER | HEAD FOR POWER | POWER PEAKING CAPACITY | ENERGY OUTPUT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | MCM | MCM | MCM | MCM | MCM | MCM | CMS | CMS | M | MW | GWH |
| | | 237.00 | 755.00 | | | | | | | | | | |
| | OCT. | 237.00 | 755.00 | 298.07 | 295.01 | 0. | 357.64 | 2.30 | 132.67 | 110.15 | 84.67 | 60.00 | 44.64 |
| | NOV. | 237.00 | 755.00 | 113.08 | 109.89 | 0. | 119.61 | 32.60 | 33.57 | 42.39 | 84.64 | 60.00 | 21.06 |
| | DEC. | 236.14 | 730.96 | 42.27 | 62.44 | 0. | 65.27 | 63.90 | 0.51 | 23.31 | 84.24 | 60.00 | 11.91 |
| 1969 | JAN. | 235.02 | 700.44 | 36.18 | 62.44 | 0. | 65.47 | 50.40 | 5.63 | 23.31 | 83.25 | 60.00 | 11.76 |
| | FEB. | 233.24 | 653.87 | 14.00 | 56.40 | 0. | 57.10 | 34.60 | 9.30 | 23.31 | 81.72 | 60.00 | 10.41 |
| | MAR. | 230.98 | 598.02 | 11.19 | 62.44 | 0. | 63.05 | 37.40 | 9.58 | 23.31 | 79.78 | 60.00 | 11.23 |
| | APR. | 228.61 | 547.76 | 8.98 | 60.43 | 0. | 60.94 | 51.80 | 3.53 | 23.31 | 77.44 | 60.00 | 10.52 |
| | MAY. | 227.84 | 525.82 | 48.96 | 62.44 | 0. | 73.48 | 17.40 | 20.94 | 23.31 | 75.89 | 60.00 | 10.63 |
| | JUN. | 237.00 | 755.00 | 563.80 | 290.06 | 41.20 | 429.26 | 4.60 | 163.84 | 111.91 | 79.83 | 60.00 | 43.20 |
| | JUL. | 237.00 | 755.00 | 198.72 | 195.08 | 0. | 210.87 | 10.40 | 74.85 | 72.84 | 84.67 | 60.00 | 37.40 |
| | AUG. | 237.00 | 755.00 | 456.87 | 299.73 | 153.22 | 555.08 | 0. | 207.24 | 111.91 | 83.98 | 60.00 | 44.64 |
| | SEP. | 237.00 | 755.00 | 516.84 | 290.06 | 223.37 | 650.78 | 0. | 251.07 | 111.91 | 83.73 | 60.00 | 43.20 |
| | OCT. | 237.00 | 755.00 | 760.34 | 299.73 | 457.08 | 896.77 | 2.30 | 333.96 | 111.91 | 83.20 | 60.00 | 44.64 |
| | NOV. | 237.00 | 755.00 | 148.81 | 145.57 | 0. | 194.56 | 32.60 | 62.48 | 56.16 | 84.64 | 60.00 | 27.90 |
| | DEC. | 236.08 | 729.39 | 40.70 | 62.44 | 0. | 70.45 | 63.90 | 2.44 | 23.31 | 84.21 | 60.00 | 11.90 |
| 1970 | JAN. | 234.18 | 678.38 | 15.64 | 62.44 | 0. | 71.60 | 50.40 | 7.92 | 23.31 | 82.80 | 60.00 | 11.69 |
| | FEB. | 232.09 | 624.90 | 6.98 | 56.40 | 0. | 60.12 | 34.60 | 10.55 | 23.31 | 80.73 | 60.00 | 10.27 |
| | MAR. | 229.44 | 561.66 | 3.65 | 62.44 | 0. | 65.09 | 37.40 | 10.34 | 23.31 | 78.43 | 60.00 | 11.02 |
| | APR. | 226.73 | 501.76 | 4.16 | 60.43 | 0. | 62.96 | 51.80 | 4.31 | 23.31 | 75.73 | 60.00 | 10.27 |
| | MAY | 225.10 | 467.84 | 31.78 | 62.44 | 0. | 67.66 | 17.40 | 18.77 | 23.31 | 73.58 | 60.00 | 10.28 |
| | JUN. | 223.49 | 435.94 | 30.91 | 60.43 | 0. | 66.32 | 4.60 | 23.81 | 23.31 | 71.94 | 60.00 | 9.70 |
| | JUL. | 226.78 | 502.75 | 131.76 | 62.44 | 0. | 70.98 | 10.40 | 22.62 | 23.31 | 72.80 | 60.00 | 10.15 |
| | AUG. | 233.03 | 648.55 | 211.07 | 62.44 | 0. | 132.98 | 0. | 49.65 | 23.31 | 77.57 | 60.00 | 10.89 |
| | SEP. | 237.00 | 755.00 | 422.44 | 290.06 | 22.87 | 435.99 | 0. | 168.21 | 111.91 | 82.52 | 60.00 | 43.20 |
| | OCT. | 237.00 | 755.00 | 318.08 | 299.73 | 15.28 | 396.22 | 2.30 | 147.07 | 111.91 | 84.58 | 60.00 | 44.64 |
| | NOV. | 237.00 | 755.00 | 103.02 | 99.84 | 0. | 120.12 | 32.60 | 33.77 | 38.52 | 84.64 | 60.00 | 19.14 |
| | DEC. | 236.11 | 730.23 | 41.54 | 62.44 | 0. | 69.81 | 63.90 | 2.21 | 23.31 | 84.22 | 60.00 | 11.90 |
| 1971 | JAN. | 234.63 | 690.09 | 26.54 | 62.44 | 0. | 67.51 | 50.40 | 6.39 | 23.31 | 83.04 | 60.00 | 11.73 |
| | FEB. | 232.87 | 644.51 | 14.95 | 56.40 | 0. | 60.96 | 34.60 | 10.89 | 23.31 | 81.34 | 60.00 | 10.36 |
| | MAR. | 230.52 | 586.92 | 9.41 | 62.44 | 0. | 67.23 | 37.40 | 11.14 | 23.31 | 79.36 | 60.00 | 11.17 |
| | APR. | 227.99 | 529.10 | 6.36 | 60.43 | 0. | 64.36 | 51.80 | 4.85 | 23.31 | 76.90 | 60.00 | 10.44 |
| | MAY | 228.10 | 531.45 | 68.24 | 62.44 | 0. | 72.80 | 17.40 | 20.68 | 23.31 | 75.71 | 60.00 | 10.61 |
| | JUN. | 227.55 | 519.42 | 51.02 | 60.43 | 0. | 68.10 | 4.60 | 24.50 | 23.31 | 75.47 | 60.00 | 10.23 |
| | JUL. | 225.92 | 484.69 | 30.34 | 62.44 | 0. | 67.20 | 10.40 | 21.21 | 23.31 | 74.40 | 60.00 | 10.40 |
| | AUG. | 227.89 | 526.88 | 107.23 | 62.44 | 0. | 78.61 | 0. | 29.35 | 23.31 | 74.57 | 60.00 | 10.43 |
| | SEP. | 237.00 | 755.00 | 307.81 | 77.08 | 0. | 123.57 | 0. | 47.67 | 29.74 | 80.09 | 60.00 | 13.92 |
| | OCT. | 237.00 | 755.00 | 341.45 | 299.73 | 38.62 | 389.80 | 2.30 | 144.67 | 111.91 | 84.45 | 60.00 | 44.64 |
| | NOV. | 237.00 | 755.00 | 64.99 | 61.86 | 0. | 71.77 | 32.60 | 15.11 | 23.87 | 84.64 | 60.00 | 11.86 |
| | DEC. | 235.65 | 717.47 | 28.75 | 62.44 | 0. | 66.99 | 63.90 | 1.15 | 23.31 | 83.99 | 60.00 | 11.87 |
| 1972 | JAN. | 233.87 | 670.17 | 19.31 | 62.44 | 0. | 65.44 | 50.40 | 5.61 | 23.31 | 82.43 | 60.00 | 11.63 |
| | FEB. | 231.86 | 619.20 | 11.49 | 58.41 | 0. | 60.43 | 34.60 | 10.31 | 23.31 | 80.48 | 60.00 | 10.61 |
| | MAR. | 229.31 | 558.71 | 6.37 | 62.44 | 0. | 63.87 | 37.40 | 9.88 | 23.31 | 78.25 | 60.00 | 11.00 |
| | APR. | 226.63 | 499.66 | 5.00 | 60.43 | 0. | 61.63 | 51.80 | 3.79 | 23.31 | 75.62 | 60.00 | 10.25 |
| | MAY | 225.75 | 481.22 | 47.29 | 62.44 | 0. | 69.66 | 17.40 | 19.51 | 23.31 | 73.86 | 60.00 | 10.32 |
| | JUN. | 228.86 | 548.54 | 130.34 | 60.43 | 0. | 79.99 | 4.60 | 29.09 | 23.31 | 74.95 | 60.00 | 10.15 |
| | JUL. | 226.84 | 504.09 | 20.70 | 62.44 | 0. | 65.84 | 10.40 | 20.70 | 23.31 | 75.52 | 60.00 | 10.58 |
| | AUG. | 224.99 | 465.67 | 26.56 | 62.44 | 0. | 66.59 | 0. | 24.86 | 23.31 | 73.58 | 60.00 | 10.28 |
| | SEP. | 223.14 | 429.37 | 26.18 | 60.43 | 0. | 64.65 | 0. | 24.94 | 23.31 | 71.71 | 60.00 | 9.66 |

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DIS-CHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 223.14 | 429.37 | | | | | | | | | | |
| | OCT. | 221.29 | 394.90 | 29.84 | 62.44 | 0. | 67.20 | 2.30 | 24.23 | 23.31 | 69.88 | 60.00 | 9.70 |
| | NOV. | 218.74 | 350.87 | 18.36 | 60.43 | 0. | 63.27 | 32.60 | 11.83 | 23.31 | 67.66 | 60.00 | 9.04 |
| | DEC. | 215.14 | 294.50 | 9.47 | 63.61 | 0. | 65.24 | 63.90 | 0.50 | 23.75 | 64.61 | 56.35 | 9.09 |
| 1973 | JAN. | 210.93 | 237.00 | 7.15 | 62.44 | 0. | 63.69 | 50.40 | 4.96 | 23.31 | 60.70 | 51.32 | 8.38 |
| | FEB. | 206.16 | 181.78 | 3.11 | 56.40 | 0. | 57.19 | 34.60 | 9.34 | 23.31 | 56.14 | 45.65 | 7.00 |
| | MAR. | 204.00 | 160.00 | 1.24 | 21.06 | 0. | 21.53 | 20.19* | 0.50 | 7.86* | 52.75 | 41.57 | 2.46 |
| | APR. | 204.00 | 160.00 | 2.07 | 0.42 | 0. | 1.05 | 0. * | 0.40 | 0.16* | 51.64 | 40.27 | 0.05 |
| | MAY | 204.00 | 160.00 | 31.36 | 29.79 | 0. | 34.63 | 17.40 | 6.43 | 11.12* | 51.67 | 40.30 | 3.40 |
| | JUN. | 206.45 | 184.85 | 86.54 | 60.43 | 0. | 73.38 | 4.60 | 26.54 | 23.31 | 52.87 | 41.72 | 7.06 |
| | JUL. | 209.03 | 213.77 | 92.79 | 62.44 | 0. | 76.56 | 10.40 | 24.70 | 23.31 | 55.41 | 44.76 | 7.65 |
| | AUG. | 209.50 | 219.35 | 69.51 | 62.44 | 0. | 73.03 | 0. | 27.27 | 23.31 | 56.93 | 46.61 | 7.86 |
| | SEP. | 220.96 | 388.99 | 231.64 | 60.43 | 0. | 95.39 | 0. | 36.80 | 23.31 | 62.87 | 54.10 | 8.40 |
| | OCT. | 237.00 | 755.00 | 573.00 | 204.53 | 0. | 290.73 | 2.30 | 107.69 | 76.36 | 76.65 | 60.00 | 35.21 |
| | NOV. | 237.00 | 755.00 | 163.90 | 160.64 | 0. | 185.44 | 32.60 | 58.97 | 61.97 | 84.64 | 60.00 | 30.79 |
| | DEC. | 235.78 | 721.23 | 32.52 | 62.44 | 0. | 67.52 | 63.90 | 1.35 | 23.31 | 84.06 | 60.00 | 11.88 |
| 1974 | JAN. | 233.90 | 670.99 | 16.37 | 62.44 | 0. | 65.07 | 50.40 | 5.48 | 23.31 | 82.51 | 60.00 | 11.65 |
| | FEB. | 231.77 | 617.12 | 6.56 | 56.40 | 0. | 57.64 | 34.60 | 9.52 | 23.31 | 80.43 | 60.00 | 10.23 |
| | MAR. | 229.10 | 554.02 | 3.75 | 62.44 | 0. | 63.39 | 37.40 | 9.70 | 23.31 | 78.10 | 60.00 | 10.97 |
| | APR. | 226.31 | 492.79 | 2.80 | 60.43 | 0. | 61.23 | 51.80 | 3.64 | 23.31 | 75.35 | 60.00 | 10.21 |
| | MAY | 233.38 | 657.47 | 230.75 | 62.44 | 0. | 97.19 | 17.40 | 29.79 | 23.31 | 77.51 | 60.00 | 10.88 |
| | JUN. | 237.00 | 755.00 | 198.97 | 98.20 | 0. | 128.13 | 4.60 | 47.66 | 37.88 | 82.83 | 60.00 | 18.39 |
| | JUL. | 237.00 | 755.00 | 98.76 | 95.27 | 0. | 110.31 | 10.40 | 37.30 | 35.57 | 84.67 | 60.00 | 18.27 |
| | AUG. | 237.00 | 755.00 | 101.37 | 97.93 | 0. | 113.26 | 0. | 42.29 | 36.56 | 84.67 | 60.00 | 18.77 |
| | SEP. | 237.00 | 755.00 | 491.38 | 290.06 | 197.93 | 562.01 | 0. | 216.83 | 111.91 | 83.80 | 60.00 | 43.20 |
| | OCT. | 237.00 | 755.00 | 323.01 | 299.73 | 20.20 | 368.62 | 2.30 | 136.77 | 111.91 | 84.55 | 60.00 | 44.64 |
| | NOV. | 237.00 | 755.00 | 70.44 | 67.30 | 0. | 78.06 | 32.60 | 17.54 | 25.96 | 84.64 | 60.00 | 12.90 |
| | DEC. | 235.29 | 707.74 | 19.01 | 62.44 | 0. | 65.53 | 63.90 | 0.61 | 23.31 | 83.81 | 60.00 | 11.84 |
| 1975 | JAN. | 233.15 | 651.59 | 10.40 | 62.44 | 0. | 64.24 | 50.40 | 5.17 | 23.31 | 81.89 | 60.00 | 11.55 |
| | FEB. | 230.89 | 595.71 | 4.47 | 56.40 | 0. | 57.33 | 34.60 | 9.40 | 23.31 | 79.61 | 60.00 | 10.12 |
| | MAR. | 228.14 | 532.40 | 3.44 | 62.44 | 0. | 63.30 | 37.40 | 9.67 | 23.31 | 77.18 | 60.00 | 10.83 |
| | APR. | 225.28 | 471.59 | 3.12 | 60.43 | 0. | 61.31 | 51.80 | 3.67 | 23.31 | 74.36 | 60.00 | 10.06 |
| | MAY | 223.27 | 431.85 | 25.81 | 62.44 | 0. | 66.44 | 17.40 | 18.31 | 23.31 | 71.94 | 60.00 | 10.02 |
| | JUN. | 220.30 | 377.49 | 8.28 | 60.43 | 0. | 61.65 | 4.60 | 22.01 | 23.31 | 69.43 | 60.00 | 9.32 |
| | JUL. | 218.34 | 344.21 | 31.28 | 62.44 | 0. | 67.36 | 10.40 | 21.27 | 23.31 | 66.99 | 59.50 | 9.25 |
| | AUG. | 217.36 | 328.44 | 48.66 | 62.44 | 0. | 69.88 | 0. | 26.09 | 23.31 | 65.52 | 57.55 | 9.04 |
| | SEP. | 237.00 | 755.00 | 573.32 | 144.37 | 0. | 230.66 | 0. | 88.99 | 55.70 | 74.82 | 60.00 | 24.21 |
| | OCT. | 237.00 | 755.00 | 526.48 | 299.73 | 223.46 | 602.40 | 2.30 | 224.05 | 111.91 | 83.76 | 60.00 | 44.64 |
| | NOV. | 237.00 | 755.00 | 363.28 | 290.06 | 69.77 | 414.49 | 32.60 | 147.33 | 111.91 | 84.28 | 60.00 | 43.20 |
| | DEC. | 237.00 | 755.00 | 69.51 | 65.60 | 0. | 76.19 | 63.90 | 4.59 | 24.49 | 84.67 | 60.00 | 12.58 |
| 1976 | JAN. | 235.39 | 710.59 | 22.34 | 62.44 | 0. | 66.00 | 50.40 | 5.82 | 23.31 | 83.86 | 60.00 | 11.85 |
| | FEB. | 233.44 | 659.14 | 11.17 | 58.41 | 0. | 60.44 | 34.60 | 10.31 | 23.31 | 82.04 | 60.00 | 10.83 |
| | MAR. | 230.95 | 597.31 | 5.22 | 62.44 | 0. | 63.62 | 37.40 | 9.79 | 23.31 | 79.87 | 60.00 | 11.24 |
| | APR. | 228.34 | 536.72 | 3.64 | 60.43 | 0. | 61.39 | 51.80 | 3.70 | 23.31 | 77.29 | 60.00 | 10.50 |
| | | | | | | | | | | | | | 3521.57 |

RESERVOIR OPERATION MOROLICA LOW DAM PLAN

HIGH WATER LEVEL 231.00 LOW WATER LEVEL 204.00

GROSS STORAGE CAPACITY 605.00 MCM

DEAD STORAGE CAPACITY 160.00 MCM

EVAPORATION DATA IN MM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 169.0 | 172.0 | 200.0 | 176.0 | 167.0 | 128.0 | 132.0 | 130.0 | 111.0 | 107.0 | 120.0 | 150.0 |

MAXIMUM DISCHARGE FOR POWER GENERATION 97.61 CMS

POWER INSTALLED CAPACITY 50000. KW

RATED HEAD FOR POWER GENERATION 64.5 M

GUARANTEED MINIMUM DISCHARGE FOR POWER GENERATION 20.34 CMS

SEASONAL MINIMUM STORAGE IN MCM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 286.00 | 261.00 | 170.00 | 160.00 | 160.00 | 160.00 | 160.00 | 205.00 | 280.00 | 295.00 | 280.00 | 264.40 |

MONTHLY IRRIGATION WATER REQUIREMENT

UPSTREAM OF DAMSITE IN MCM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.70 | 2.20 | 3.10 | 3.40 | 1.30 | 0.30 | 1.60 | 1.00 | 1.80 | 2.00 | 1.50 | 2.20 |

DOWNSTREAM OF DAMSITE IN MCM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 50.40 | 34.60 | 37.40 | 51.80 | 17.40 | 4.60 | 10.40 | 0. | 0. | 2.30 | 32.60 | 63.90 |

RESERVOIR OPERATION MOROLICA LOW DAM PLAN

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DIS-CHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 225.00 | 470.02 | | | | | | | | | | |
| 1956 | NOV. | 225.06 | 471.32 | 56.29 | 52.71 | 0. | 59.22 | 32.60 | 10.27 | 20.34 | 72.77 | 50.00 | 8.60 |
| | DEC. | 223.36 | 437.10 | 29.07 | 60.51 | 0. | 65.24 | 63.90 | 0.50 | 22.59 | 71.97 | 50.00 | 9.75 |
| 1957 | JAN. | 222.48 | 420.19 | 40.58 | 54.47 | 0. | 56.29 | 50.40 | 2.20 | 20.34 | 70.68 | 50.00 | 8.60 |
| | FEB. | 221.10 | 394.49 | 26.47 | 49.20 | 0. | 50.23 | 34.60 | 6.46 | 20.34 | 69.48 | 50.00 | 7.62 |
| | MAR. | 218.86 | 355.18 | 18.42 | 54.47 | 0. | 55.35 | 37.40 | 6.70 | 20.34 | 67.74 | 50.00 | 8.70 |
| | APR. | 216.39 | 315.06 | 15.77 | 52.71 | 0. | 55.14 | 51.80 | 1.29 | 20.34 | 65.36 | 50.00 | 7.62 |
| | MAY | 221.24 | 397.03 | 139.07 | 54.47 | 0. | 60.90 | 17.40 | 16.24 | 20.34 | 66.58 | 50.00 | 8.04 |
| | JUN. | 229.11 | 559.80 | 217.93 | 52.71 | 0. | 62.58 | 4.60 | 22.37 | 20.34 | 72.91 | 50.00 | 8.62 |
| | JUL. | 228.42 | 544.00 | 41.45 | 54.47 | 0. | 57.42 | 10.40 | 17.56 | 20.34 | 76.52 | 50.00 | 9.39 |
| | AUG. | 228.46 | 545.02 | 58.20 | 54.47 | 0. | 57.77 | 0. | 21.57 | 20.34 | 76.20 | 50.00 | 9.34 |
| | SEP. | 231.00 | 605.00 | 211.42 | 148.91 | 0. | 173.70 | 0. | 67.01 | 57.45 | 77.47 | 50.00 | 26.01 |
| | OCT. | 231.00 | 605.00 | 191.20 | 188.64 | 0. | 196.84 | 2.30 | 72.63 | 70.43 | 78.76 | 50.00 | 33.54 |
| | NOV. | 230.24 | 586.54 | 36.91 | 52.71 | 0. | 55.10 | 32.60 | 8.68 | 20.34 | 78.36 | 50.00 | 9.32 |
| | DEC. | 228.43 | 544.29 | 24.56 | 63.60 | 0. | 65.24 | 63.90 | 0.50 | 23.75 | 77.10 | 50.00 | 11.05 |
| 1958 | JAN. | 226.55 | 502.55 | 16.16 | 54.47 | 0. | 56.10 | 50.40 | 2.13 | 20.34 | 75.25 | 50.00 | 9.22 |
| | FEB. | 224.42 | 458.29 | 8.24 | 49.20 | 0. | 50.06 | 34.60 | 6.39 | 20.34 | 73.18 | 50.00 | 8.07 |
| | MAR. | 221.75 | 406.50 | 6.27 | 54.47 | 0. | 55.50 | 37.40 | 6.76 | 20.34 | 70.85 | 50.00 | 8.62 |
| | APR. | 218.90 | 355.88 | 5.00 | 52.71 | 0. | 53.61 | 51.80 | 0.70 | 20.34 | 68.07 | 50.00 | 7.98 |
| | MAY | 224.42 | 458.24 | 159.71 | 54.47 | 0. | 64.76 | 17.40 | 17.68 | 20.34 | 69.42 | 50.00 | 8.43 |
| | JUN. | 231.00 | 605.00 | 359.28 | 209.66 | 0. | 233.49 | 4.60 | 88.31 | 80.89 | 75.45 | 50.00 | 35.58 |
| | JUL. | 231.00 | 605.00 | 240.00 | 236.77 | 0. | 247.27 | 10.40 | 88.44 | 88.40 | 78.76 | 50.00 | 37.20 |
| | AUG. | 231.00 | 605.00 | 119.60 | 116.60 | 0. | 122.10 | 0. | 45.59 | 43.53 | 78.76 | 50.00 | 20.73 |
| | SEP. | 231.00 | 605.00 | 77.62 | 75.11 | 0. | 81.09 | 0. | 31.28 | 28.98 | 78.74 | 50.00 | 13.35 |
| | OCT. | 231.00 | 605.00 | 215.51 | 212.92 | 0. | 225.81 | 2.30 | 83.45 | 79.49 | 78.76 | 50.00 | 37.20 |
| | NOV. | 230.36 | 589.47 | 39.84 | 52.71 | 0. | 55.47 | 32.60 | 8.82 | 20.34 | 78.42 | 50.00 | 9.33 |
| | DEC. | 228.34 | 542.32 | 19.53 | 63.47 | 0. | 65.24 | 63.90 | 0.50 | 23.70 | 77.11 | 50.00 | 11.03 |
| 1959 | JAN. | 226.47 | 501.01 | 16.58 | 54.47 | 0. | 58.39 | 50.40 | 2.98 | 20.34 | 75.17 | 50.00 | 9.21 |
| | FEB. | 224.42 | 458.11 | 9.60 | 49.20 | 0. | 52.10 | 34.60 | 7.23 | 20.34 | 73.14 | 50.00 | 8.07 |
| | MAR. | 221.66 | 404.75 | 4.70 | 54.47 | 0. | 56.77 | 37.40 | 7.23 | 20.34 | 70.80 | 50.00 | 8.62 |
| | APR. | 218.63 | 351.22 | 2.07 | 52.71 | 0. | 54.94 | 51.80 | 1.21 | 20.34 | 67.88 | 50.00 | 7.95 |
| | MAY | 217.51 | 332.87 | 38.69 | 54.47 | 0. | 64.27 | 17.40 | 17.50 | 20.34 | 65.83 | 50.00 | 7.94 |
| | JUN. | 218.38 | 347.03 | 68.84 | 52.71 | 0. | 66.77 | 4.60 | 23.99 | 20.34 | 65.68 | 50.00 | 7.66 |
| | JUL. | 215.93 | 307.94 | 17.35 | 54.47 | 0. | 57.72 | 10.40 | 17.67 | 20.34 | 64.91 | 50.00 | 7.81 |
| | AUG. | 215.04 | 294.53 | 42.90 | 54.47 | 0. | 60.17 | 0. | 22.46 | 20.34 | 63.25 | 48.56 | 7.60 |
| | SEP. | 214.00 | 279.35 | 39.06 | 52.71 | 0. | 58.35 | 0. | 22.51 | 20.34 | 62.26 | 47.43 | 7.24 |
| | OCT. | 222.53 | 421.12 | 197.90 | 54.47 | 0. | 95.26 | 2.30 | 34.71 | 20.34 | 66.03 | 50.00 | 7.96 |
| | NOV. | 221.53 | 402.39 | 36.07 | 52.71 | 0. | 58.64 | 32.60 | 10.05 | 20.34 | 69.77 | 50.00 | 8.20 |
| | DEC. | 218.59 | 350.69 | 13.04 | 62.28 | 0. | 65.24 | 63.90 | 0.50 | 23.25 | 67.82 | 50.00 | 9.39 |
| 1960 | JAN. | 215.78 | 305.66 | 11.97 | 54.47 | 0. | 56.50 | 50.40 | 2.28 | 20.34 | 64.95 | 50.00 | 7.81 |
| | FEB. | 212.42 | 257.37 | 4.99 | 50.95 | 0. | 51.96 | 34.60 | 6.93 | 20.34 | 61.82 | 46.92 | 6.95 |
| | MAR. | 208.05 | 202.81 | 2.29 | 54.47 | 0. | 55.08 | 37.40 | 6.60 | 20.34 | 57.99 | 42.64 | 6.97 |
| | APR. | 204.00 | 160.00 | 1.96 | 42.99 | 0. | 43.62 | 42.33* | 0.50 | 16.58* | 53.76 | 38.06 | 5.10 |
| | MAY | 207.55 | 197.13 | 93.28 | 54.47 | 0. | 68.59 | 17.40 | 19.11 | 20.34 | 53.53 | 37.81 | 6.43 |
| | JUN. | 219.92 | 373.40 | 230.72 | 52.71 | 0. | 87.40 | 4.60 | 31.94 | 20.34 | 61.47 | 46.53 | 7.15 |
| | JUL. | 223.31 | 436.17 | 119.51 | 54.47 | 0. | 72.66 | 10.40 | 23.25 | 20.34 | 69.38 | 50.00 | 8.42 |
| | AUG. | 229.37 | 566.00 | 186.86 | 54.47 | 0. | 82.60 | 0. | 30.84 | 20.34 | 74.10 | 50.00 | 9.06 |
| | SEP. | 231.00 | 605.00 | 224.41 | 182.82 | 0. | 216.71 | 0. | 83.61 | 70.53 | 77.92 | 50.00 | 32.13 |

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DIS-CHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 231.00 | 605.00 | | | | | | | | | | |
| | OCT. | 231.00 | 605.00 | 299.64 | 261.45 | 35.51 | 342.21 | 2.30 | 126.91 | 97.61 | 78.54 | 50.00 | 37.20 |
| | NOV. | 231.00 | 605.00 | 92.33 | 89.60 | 0. | 103.56 | 32.60 | 27.38 | 34.57 | 78.74 | 50.00 | 15.93 |
| | DEC. | 229.68 | 573.37 | 31.90 | 60.23 | 0. | 65.24 | 63.90 | 0.50 | 22.49 | 78.10 | 50.00 | 10.61 |
| 1961 | JAN. | 228.38 | 543.11 | 27.79 | 54.47 | 0. | 58.87 | 50.40 | 3.16 | 20.34 | 76.79 | 50.00 | 9.42 |
| | FEB. | 226.98 | 511.94 | 21.55 | 49.20 | 0. | 52.65 | 34.60 | 7.46 | 20.34 | 75.37 | 50.00 | 8.34 |
| | MAR. | 224.96 | 469.17 | 15.59 | 54.47 | 0. | 57.17 | 37.40 | 7.38 | 20.34 | 73.73 | 50.00 | 9.01 |
| | APR. | 222.71 | 424.62 | 11.39 | 52.71 | 0. | 54.72 | 51.80 | 1.13 | 20.34 | 71.57 | 50.00 | 8.44 |
| | MAY | 220.24 | 379.06 | 11.77 | 54.47 | 0. | 56.30 | 17.40 | 14.52 | 20.34 | 69.24 | 50.00 | 8.40 |
| | JUN. | 224.83 | 466.48 | 142.39 | 52.71 | 0. | 74.12 | 4.60 | 26.82 | 20.34 | 70.27 | 50.00 | 8.27 |
| | JUL. | 229.11 | 559.88 | 150.52 | 54.47 | 0. | 77.25 | 10.40 | 24.96 | 20.34 | 74.73 | 50.00 | 9.15 |
| | AUG. | 229.96 | 579.89 | 77.27 | 54.47 | 0. | 66.20 | 0. | 24.72 | 20.34 | 77.30 | 50.00 | 9.49 |
| | SEP. | 231.00 | 605.00 | 123.09 | 95.48 | 0. | 114.18 | 0. | 44.05 | 36.83 | 78.22 | 50.00 | 16.85 |
| | OCT. | 231.00 | 605.00 | 140.17 | 137.68 | 0. | 159.00 | 2.30 | 58.51 | 51.40 | 78.76 | 50.00 | 24.48 |
| | NOV. | 231.00 | 605.00 | 90.35 | 87.82 | 0. | 101.57 | 32.60 | 26.61 | 33.88 | 78.74 | 50.00 | 15.61 |
| | DEC. | 229.47 | 568.37 | 27.50 | 60.83 | 0. | 65.24 | 63.90 | 0.50 | 22.71 | 78.00 | 50.00 | 10.70 |
| 1962 | JAN. | 227.99 | 534.27 | 23.92 | 54.47 | 0. | 58.25 | 50.40 | 2.93 | 20.34 | 76.49 | 50.00 | 9.38 |
| | FEB. | 226.27 | 496.55 | 14.95 | 49.20 | 0. | 51.65 | 34.60 | 7.05 | 20.34 | 74.82 | 50.00 | 8.27 |
| | MAR. | 223.84 | 446.55 | 8.26 | 54.47 | 0. | 56.21 | 37.40 | 7.02 | 20.34 | 72.81 | 50.00 | 8.89 |
| | APR. | 221.25 | 397.20 | 6.47 | 52.71 | 0. | 54.14 | 51.80 | 0.90 | 20.34 | 70.28 | 50.00 | 8.27 |
| | MAY | 221.70 | 405.49 | 65.62 | 54.47 | 0. | 64.45 | 17.40 | 17.57 | 20.34 | 69.23 | 50.00 | 8.40 |
| | JUN. | 226.65 | 504.85 | 154.44 | 52.71 | 0. | 75.87 | 4.60 | 27.50 | 20.34 | 71.91 | 50.00 | 8.49 |
| | JUL. | 227.96 | 533.69 | 85.98 | 54.47 | 0. | 67.59 | 10.40 | 21.35 | 20.34 | 75.07 | 50.00 | 9.19 |
| | AUG. | 229.05 | 558.48 | 81.98 | 54.47 | 0. | 66.89 | 0. | 24.97 | 20.34 | 76.27 | 50.00 | 9.35 |
| | SEP. | 231.00 | 605.00 | 135.14 | 86.16 | 0. | 106.72 | 0. | 41.17 | 33.24 | 77.76 | 50.00 | 15.11 |
| | OCT. | 231.00 | 605.00 | 185.12 | 182.57 | 0. | 210.65 | 2.30 | 77.79 | 68.16 | 78.76 | 50.00 | 32.46 |
| | NOV. | 229.89 | 578.27 | 28.63 | 52.71 | 0. | 57.18 | 32.60 | 9.48 | 20.34 | 78.18 | 50.00 | 9.30 |
| | DEC. | 227.91 | 532.56 | 19.53 | 62.07 | 0. | 65.24 | 63.90 | 0.50 | 23.17 | 76.66 | 50.00 | 10.72 |
| 1963 | JAN. | 226.05 | 491.92 | 17.21 | 54.47 | 0. | 57.26 | 50.40 | 2.56 | 20.34 | 74.74 | 50.00 | 9.15 |
| | FEB. | 223.96 | 448.96 | 9.50 | 49.20 | 0. | 50.80 | 34.60 | 6.70 | 20.34 | 72.70 | 50.00 | 8.01 |
| | MAR. | 221.32 | 398.47 | 7.53 | 54.47 | 0. | 55.94 | 37.40 | 6.92 | 20.34 | 70.40 | 50.00 | 8.56 |
| | APR. | 218.52 | 349.46 | 6.57 | 52.71 | 0. | 54.14 | 51.80 | 0.90 | 20.34 | 67.66 | 50.00 | 7.92 |
| | MAY | 215.42 | 300.19 | 7.68 | 54.47 | 0. | 55.69 | 17.40 | 14.30 | 20.34 | 64.73 | 50.00 | 7.78 |
| | JUN. | 217.35 | 330.27 | 84.66 | 52.71 | 0. | 65.45 | 4.60 | 23.48 | 20.34 | 64.12 | 49.57 | 7.46 |
| | JUL. | 219.37 | 363.81 | 90.06 | 54.47 | 0. | 68.20 | 10.40 | 21.58 | 20.34 | 66.12 | 50.00 | 7.98 |
| | AUG. | 218.85 | 354.99 | 47.72 | 54.47 | 0. | 61.85 | 0. | 23.09 | 20.34 | 66.87 | 50.00 | 8.08 |
| | SEP. | 222.26 | 415.98 | 115.55 | 52.71 | 0. | 70.26 | 0. | 27.11 | 20.34 | 68.29 | 50.00 | 8.01 |
| | OCT. | 229.10 | 559.65 | 200.21 | 54.47 | 0. | 84.76 | 2.30 | 30.79 | 20.34 | 73.44 | 50.00 | 8.97 |
| | NOV. | 231.00 | 605.00 | 150.17 | 107.13 | 0. | 125.06 | 32.60 | 35.67 | 39.40 | 77.79 | 50.00 | 17.92 |
| | DEC. | 229.31 | 564.48 | 24.14 | 61.38 | 0. | 65.24 | 63.90 | 0.50 | 22.92 | 77.91 | 50.00 | 10.79 |
| 1964 | JAN. | 227.50 | 523.49 | 17.00 | 54.47 | 0. | 57.27 | 50.40 | 2.56 | 20.34 | 76.17 | 50.00 | 9.34 |
| | FEB. | 225.42 | 478.74 | 9.60 | 50.95 | 0. | 52.75 | 34.60 | 7.24 | 20.34 | 74.18 | 50.00 | 8.49 |
| | MAR. | 222.94 | 429.03 | 8.47 | 54.47 | 0. | 56.10 | 37.40 | 6.98 | 20.34 | 71.94 | 50.00 | 8.77 |
| | APR. | 220.32 | 380.50 | 7.20 | 52.71 | 0. | 54.11 | 51.80 | 0.89 | 20.34 | 69.37 | 50.00 | 8.15 |
| | MAY | 217.42 | 331.39 | 7.99 | 54.47 | 0. | 55.87 | 17.40 | 14.36 | 20.34 | 66.63 | 50.00 | 8.05 |
| | JUN. | 230.87 | 601.72 | 325.43 | 52.71 | 0. | 101.58 | 4.60 | 37.41 | 20.34 | 71.88 | 50.00 | 8.48 |
| | JUL. | 231.00 | 605.00 | 237.90 | 231.41 | 0. | 267.30 | 10.40 | 95.92 | 86.40 | 78.69 | 50.00 | 37.20 |
| | AUG. | 231.00 | 605.00 | 71.40 | 68.47 | 0. | 79.27 | 0. | 29.60 | 25.56 | 78.76 | 50.00 | 12.17 |
| | SEP. | 231.00 | 605.00 | 160.08 | 157.46 | 0. | 181.78 | 0. | 70.13 | 60.75 | 78.74 | 50.00 | 27.99 |

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DIS-CHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 231.00 | 605.00 | | | | | | | | | | |
| | OCT. | 231.00 | 605.00 | 281.83 | 261.45 | 17.72 | 321.73 | 2.30 | 119.26 | 97.61 | 78.65 | 50.00 | 37.20 |
| | NOV. | 230.31 | 588.21 | 38.58 | 52.71 | 0. | 58.73 | 32.60 | 10.08 | 20.34 | 78.39 | 50.00 | 9.32 |
| | DEC. | 228.59 | 547.86 | 24.25 | 61.39 | 0. | 65.24 | 63.90 | 0.50 | 22.92 | 77.21 | 50.00 | 10.68 |
| 1965 | JAN. | 226.43 | 500.04 | 10.09 | 54.47 | 0. | 56.08 | 50.40 | 2.12 | 20.34 | 75.27 | 50.00 | 9.22 |
| | FEB. | 224.03 | 450.45 | 2.90 | 49.20 | 0. | 50.00 | 34.60 | 6.37 | 20.34 | 72.92 | 50.00 | 8.04 |
| | MAR. | 221.09 | 394.32 | 1.87 | 54.47 | 0. | 55.10 | 37.40 | 6.61 | 20.34 | 70.32 | 50.00 | 8.55 |
| | APR. | 217.95 | 340.06 | 1.29 | 52.71 | 0. | 53.19 | 51.80 | 0.54 | 20.34 | 67.26 | 50.00 | 7.87 |
| | MAY | 219.35 | 363.47 | 80.50 | 54.47 | 0. | 66.67 | 17.40 | 18.39 | 20.34 | 66.41 | 50.00 | 8.02 |
| | JUN. | 223.41 | 438.18 | 129.61 | 52.71 | 0. | 72.10 | 4.60 | 26.04 | 20.34 | 69.12 | 50.00 | 8.12 |
| | JUL. | 223.13 | 432.74 | 51.40 | 54.47 | 0. | 62.47 | 10.40 | 19.44 | 20.34 | 71.03 | 50.00 | 8.65 |
| | AUG. | 222.70 | 424.40 | 48.45 | 54.47 | 0. | 61.81 | 0. | 23.08 | 20.34 | 70.68 | 50.00 | 8.60 |
| | SEP. | 231.00 | 605.00 | 355.70 | 172.72 | 0. | 226.42 | 0. | 87.35 | 66.63 | 74.59 | 50.00 | 28.95 |
| | OCT. | 231.00 | 605.00 | 271.25 | 261.45 | 7.15 | 309.55 | 2.30 | 114.71 | 97.61 | 78.71 | 50.00 | 37.20 |
| | NOV. | 231.00 | 605.00 | 90.45 | 87.71 | 0. | 92.17 | 32.60 | 22.98 | 33.84 | 78.74 | 50.00 | 15.59 |
| | DEC. | 229.61 | 571.57 | 33.47 | 63.61 | 0. | 65.24 | 63.90 | 0.50 | 23.75 | 78.07 | 50.00 | 11.20 |
| 1966 | JAN. | 228.00 | 534.52 | 20.98 | 54.47 | 0. | 57.69 | 50.40 | 2.72 | 20.34 | 76.56 | 50.00 | 9.39 |
| | FEB. | 226.13 | 493.56 | 11.70 | 49.20 | 0. | 51.20 | 34.60 | 6.86 | 20.34 | 74.75 | 50.00 | 8.26 |
| | MAR. | 223.74 | 444.51 | 9.20 | 54.47 | 0. | 56.27 | 37.40 | 7.04 | 20.34 | 72.69 | 50.00 | 8.87 |
| | APR. | 221.50 | 401.86 | 13.18 | 52.71 | 0. | 55.14 | 51.80 | 1.29 | 20.34 | 70.36 | 50.00 | 8.28 |
| | MAY | 225.37 | 477.67 | 133.31 | 54.47 | 0. | 115.76 | 17.40 | 36.72 | 20.34 | 71.20 | 50.00 | 8.67 |
| | JUN. | 231.00 | 605.00 | 382.54 | 252.26 | 0. | 353.12 | 4.60 | 134.46 | 97.32 | 75.92 | 50.00 | 36.00 |
| | JUL. | 231.00 | 605.00 | 276.98 | 261.45 | 12.26 | 314.52 | 10.40 | 113.55 | 97.61 | 78.68 | 50.00 | 37.20 |
| | AUG. | 231.00 | 605.00 | 123.37 | 120.36 | 0. | 130.29 | 0. | 48.65 | 44.94 | 78.76 | 50.00 | 21.40 |
| | SEP. | 231.00 | 605.00 | 168.15 | 165.52 | 0. | 197.07 | 0. | 76.03 | 63.86 | 78.74 | 50.00 | 29.42 |
| | OCT. | 231.00 | 605.00 | 380.53 | 261.45 | 116.31 | 422.42 | 2.30 | 156.86 | 97.61 | 78.17 | 50.00 | 37.20 |
| | NOV. | 231.00 | 605.00 | 62.47 | 59.78 | 0. | 65.11 | 32.60 | 12.54 | 23.06 | 78.74 | 50.00 | 10.63 |
| | DEC. | 229.68 | 573.37 | 32.63 | 60.97 | 0. | 65.24 | 63.90 | 0.50 | 22.76 | 78.10 | 50.00 | 10.74 |
| 1967 | JAN. | 228.23 | 539.66 | 24.34 | 54.47 | 0. | 54.23 | 50.40 | 1.43 | 20.34 | 76.72 | 50.00 | 9.41 |
| | FEB. | 226.61 | 504.01 | 17.04 | 49.20 | 0. | 51.06 | 34.60 | 6.80 | 20.34 | 75.11 | 50.00 | 8.31 |
| | MAR. | 224.46 | 459.08 | 13.39 | 54.47 | 0. | 56.27 | 37.40 | 7.05 | 20.34 | 73.30 | 50.00 | 8.95 |
| | APR. | 223.24 | 434.76 | 31.62 | 52.71 | 0. | 55.50 | 51.80 | 1.43 | 20.34 | 71.59 | 50.00 | 8.44 |
| | MAY | 220.87 | 390.41 | 13.02 | 54.47 | 0. | 55.64 | 17.40 | 14.28 | 20.34 | 69.82 | 50.00 | 8.48 |
| | JUN. | 222.59 | 422.24 | 86.75 | 52.71 | 0. | 75.66 | 4.60 | 27.41 | 20.34 | 69.47 | 50.00 | 8.16 |
| | JUL. | 222.40 | 418.63 | 53.18 | 54.47 | 0. | 60.09 | 10.40 | 18.55 | 20.34 | 70.25 | 50.00 | 8.54 |
| | AUG. | 221.84 | 408.15 | 46.25 | 54.47 | 0. | 56.71 | 0. | 21.17 | 20.34 | 69.88 | 50.00 | 8.49 |
| | SEP. | 226.45 | 500.57 | 147.19 | 52.71 | 0. | 82.72 | 0. | 31.91 | 20.34 | 71.89 | 50.00 | 8.48 |
| | OCT. | 228.68 | 550.05 | 106.12 | 54.47 | 0. | 71.05 | 2.30 | 25.67 | 20.34 | 75.33 | 50.00 | 9.23 |
| | NOV. | 227.88 | 531.75 | 36.91 | 52.71 | 0. | 56.30 | 32.60 | 9.15 | 20.34 | 76.02 | 50.00 | 9.02 |
| | DEC. | 225.74 | 485.42 | 19.74 | 63.08 | 0. | 65.24 | 63.90 | 0.50 | 23.55 | 74.57 | 50.00 | 10.57 |
| 1968 | JAN. | 223.79 | 445.60 | 17.84 | 54.47 | 0. | 56.13 | 50.40 | 2.14 | 20.34 | 72.53 | 50.00 | 8.85 |
| | FEB. | 221.50 | 401.83 | 10.23 | 50.95 | 0. | 52.12 | 34.60 | 6.99 | 20.34 | 70.36 | 50.00 | 8.01 |
| | MAR. | 218.51 | 349.31 | 5.22 | 54.47 | 0. | 55.35 | 37.40 | 6.70 | 20.34 | 67.77 | 50.00 | 8.20 |
| | APR. | 215.34 | 298.99 | 5.00 | 52.71 | 0. | 53.31 | 51.80 | 0.58 | 20.34 | 64.66 | 50.00 | 7.52 |
| | MAY | 220.37 | 381.45 | 139.49 | 54.47 | 0. | 73.58 | 17.40 | 20.98 | 20.34 | 65.62 | 50.00 | 7.91 |
| | JUN. | 231.00 | 605.00 | 543.68 | 253.01 | 64.24 | 394.88 | 4.60 | 150.57 | 97.61 | 73.06 | 50.00 | 36.00 |
| | JUL. | 231.00 | 605.00 | 103.68 | 100.66 | 0. | 105.28 | 10.40 | 35.42 | 37.58 | 78.76 | 50.00 | 17.90 |
| | AUG. | 231.00 | 605.00 | 71.40 | 68.47 | 0. | 70.77 | 0. | 26.42 | 25.56 | 78.76 | 50.00 | 12.17 |
| | SEP. | 231.00 | 605.00 | 117.98 | 253.01 | 62.15 | 360.69 | 0. | 139.15 | 97.61 | 78.38 | 50.00 | 36.00 |

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DIS-CHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 231.00 | 605.00 | | | | | | | | | | |
| | OCT. | 231.00 | 605.00 | 298.07 | 261.45 | 33.94 | 358.02 | 2.30 | 132.81 | 97.61 | 78.55 | 50.00 | 37.20 |
| | NOV. | 231.00 | 605.00 | 113.08 | 110.31 | 0. | 120.04 | 32.60 | 33.73 | 42.56 | 78.74 | 50.00 | 19.61 |
| | DEC. | 230.03 | 581.55 | 42.27 | 62.41 | 0. | 65.24 | 63.90 | 0.50 | 23.30 | 78.28 | 50.00 | 11.02 |
| 1969 | JAN. | 229.10 | 559.62 | 36.18 | 54.47 | 0. | 57.49 | 50.40 | 2.65 | 20.34 | 77.32 | 50.00 | 9.49 |
| | FEB. | 227.39 | 520.86 | 14.00 | 49.20 | 0. | 49.89 | 34.60 | 6.32 | 20.34 | 75.93 | 50.00 | 8.41 |
| | MAR. | 225.18 | 473.65 | 11.19 | 54.47 | 0. | 55.07 | 37.40 | 6.60 | 20.34 | 74.04 | 50.00 | 9.05 |
| | APR. | 222.82 | 426.68 | 8.98 | 52.71 | 0. | 53.23 | 51.80 | 0.55 | 20.34 | 71.74 | 50.00 | 8.46 |
| | MAY | 222.38 | 418.22 | 48.96 | 54.47 | 0. | 65.51 | 17.40 | 17.96 | 20.34 | 70.36 | 50.00 | 8.56 |
| | JUN. | 231.00 | 605.00 | 563.80 | 253.01 | 120.99 | 472.00 | 4.60 | 180.33 | 97.61 | 73.81 | 50.00 | 36.00 |
| | JUL. | 231.00 | 605.00 | 198.72 | 195.55 | 0. | 211.33 | 10.40 | 75.02 | 73.01 | 78.76 | 50.00 | 34.77 |
| | AUG. | 231.00 | 605.00 | 456.87 | 261.45 | 191.95 | 555.52 | 0. | 207.41 | 97.61 | 77.90 | 50.00 | 37.20 |
| | SEP. | 231.00 | 605.00 | 516.84 | 253.01 | 260.79 | 651.16 | 0. | 251.22 | 97.61 | 77.66 | 50.00 | 36.00 |
| | OCT. | 231.00 | 605.00 | 760.34 | 261.45 | 495.72 | 897.13 | 2.30 | 334.09 | 97.61 | 77.15 | 50.00 | 37.20 |
| | NOV. | 231.00 | 605.00 | 148.81 | 145.99 | 0. | 194.99 | 32.60 | 62.65 | 56.32 | 78.74 | 50.00 | 25.95 |
| | DEC. | 230.18 | 585.14 | 40.70 | 57.24 | 0. | 65.24 | 63.90 | 0.50 | 21.37 | 78.35 | 50.00 | 10.12 |
| 1970 | JAN. | 228.36 | 542.71 | 15.64 | 54.47 | 0. | 63.63 | 50.40 | 4.94 | 20.34 | 77.03 | 50.00 | 9.45 |
| | FEB. | 226.29 | 497.01 | 6.98 | 49.20 | 0. | 52.91 | 34.60 | 7.57 | 20.34 | 75.02 | 50.00 | 8.30 |
| | MAR. | 223.63 | 442.40 | 3.65 | 54.47 | 0. | 57.12 | 37.40 | 7.36 | 20.34 | 72.72 | 50.00 | 8.88 |
| | APR. | 220.89 | 390.77 | 4.16 | 52.71 | 0. | 55.25 | 51.80 | 1.33 | 20.34 | 70.00 | 50.00 | 8.23 |
| | MAY | 219.46 | 365.34 | 31.78 | 54.47 | 0. | 59.69 | 17.40 | 15.79 | 20.34 | 67.94 | 50.00 | 8.23 |
| | JUN. | 218.04 | 341.52 | 30.91 | 52.71 | 0. | 58.60 | 4.60 | 20.83 | 20.34 | 66.49 | 50.00 | 7.77 |
| | JUL. | 227.29 | 416.64 | 131.76 | 54.47 | 0. | 63.00 | 10.40 | 19.64 | 20.34 | 67.93 | 50.00 | 8.23 |
| | AUG. | 229.57 | 570.70 | 211.07 | 54.47 | 0. | 125.00 | 0. | 46.67 | 20.34 | 73.69 | 50.00 | 9.01 |
| | SEP. | 231.00 | 605.00 | 422.44 | 253.01 | 132.78 | 508.36 | 0. | 196.13 | 97.61 | 77.36 | 50.00 | 36.00 |
| | OCT. | 231.00 | 605.00 | 318.08 | 261.45 | 53.93 | 396.59 | 2.30 | 147.21 | 97.61 | 78.45 | 50.00 | 37.20 |
| | NOV. | 231.00 | 605.00 | 103.02 | 100.27 | 0. | 120.55 | 32.60 | 33.93 | 38.68 | 78.74 | 50.00 | 17.82 |
| | DEC. | 230.19 | 585.34 | 41.54 | 57.87 | 0. | 65.24 | 63.90 | 0.50 | 21.61 | 78.36 | 50.00 | 10.23 |
| 1971 | JAN. | 228.84 | 553.78 | 26.54 | 54.47 | 0. | 59.53 | 50.40 | 3.41 | 20.34 | 77.28 | 50.00 | 9.49 |
| | FEB. | 227.16 | 515.98 | 14.95 | 49.20 | 0. | 53.75 | 34.60 | 7.92 | 20.34 | 75.70 | 50.00 | 8.38 |
| | MAR. | 224.85 | 467.02 | 9.41 | 54.47 | 0. | 59.26 | 37.40 | 8.16 | 20.34 | 73.77 | 50.00 | 9.02 |
| | APR. | 222.34 | 417.47 | 6.36 | 52.71 | 0. | 56.65 | 51.80 | 1.87 | 20.34 | 71.33 | 50.00 | 8.41 |
| | MAY | 222.90 | 428.29 | 68.24 | 54.47 | 0. | 64.83 | 17.40 | 17.71 | 20.34 | 70.38 | 50.00 | 8.56 |
| | JUN. | 222.70 | 424.32 | 51.02 | 52.71 | 0. | 60.39 | 4.60 | 21.52 | 20.34 | 70.54 | 50.00 | 8.31 |
| | JUL. | 221.29 | 397.90 | 30.34 | 54.47 | 0. | 59.23 | 10.40 | 18.23 | 20.34 | 69.75 | 50.00 | 8.48 |
| | AUG. | 223.93 | 448.37 | 107.23 | 54.47 | 0. | 70.63 | 0. | 26.37 | 20.34 | 70.37 | 50.00 | 8.56 |
| | SEP. | 231.00 | 605.00 | 307.81 | 148.79 | 0. | 195.28 | 0. | 75.34 | 57.41 | 75.20 | 50.00 | 25.16 |
| | OCT. | 231.00 | 605.00 | 341.45 | 261.45 | 77.27 | 390.17 | 2.30 | 144.81 | 97.61 | 78.33 | 50.00 | 37.20 |
| | NOV. | 231.00 | 605.00 | 64.99 | 62.29 | 0. | 72.20 | 32.60 | 15.28 | 24.03 | 78.74 | 50.00 | 11.07 |
| | DEC. | 229.53 | 569.77 | 28.75 | 60.69 | 0. | 65.24 | 63.90 | 0.50 | 22.66 | 78.03 | 50.00 | 10.68 |
| 1972 | JAN. | 227.84 | 531.06 | 19.31 | 54.47 | 0. | 57.46 | 50.40 | 2.64 | 20.34 | 76.45 | 50.00 | 9.38 |
| | FEB. | 225.87 | 488.16 | 11.49 | 50.95 | 0. | 52.97 | 34.60 | 7.33 | 20.34 | 74.57 | 50.00 | 8.54 |
| | MAR. | 223.32 | 436.31 | 6.37 | 54.47 | 0. | 55.89 | 37.40 | 6.91 | 20.34 | 72.36 | 50.00 | 8.83 |
| | APR. | 220.60 | 385.55 | 5.00 | 52.71 | 0. | 53.91 | 51.80 | 0.81 | 20.34 | 69.70 | 50.00 | 8.19 |
| | MAY | 220.04 | 375.61 | 47.29 | 54.47 | 0. | 61.68 | 17.40 | 16.53 | 20.34 | 68.09 | 50.00 | 8.25 |
| | JUN. | 224.06 | 451.01 | 130.34 | 52.71 | 0. | 72.27 | 4.60 | 26.11 | 20.34 | 69.79 | 50.00 | 8.21 |
| | JUL. | 222.20 | 414.87 | 20.70 | 54.47 | 0. | 57.87 | 10.40 | 17.72 | 20.34 | 70.89 | 50.00 | 8.63 |
| | AUG. | 220.56 | 384.74 | 26.56 | 54.47 | 0. | 58.61 | 0. | 21.88 | 20.34 | 69.14 | 50.00 | 8.39 |
| | SEP. | 218.93 | 356.40 | 26.18 | 52.71 | 0. | 56.94 | 0. | 21.97 | 20.34 | 67.48 | 50.00 | 7.90 |

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DIS-CHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 218.93 | 356.40 | | | | | | | | | | |
| | OCT. | 217.34 | 330.12 | 29.84 | 54.47 | 0. | 59.22 | 2.30 | 21.75 | 20.34 | 65.90 | 50.00 | 7.95 |
| | NOV. | 215.01 | 294.03 | 18.36 | 52.71 | 0. | 55.55 | 32.60 | 8.85 | 20.34 | 63.91 | 49.33 | 7.43 |
| | DEC. | 210.94 | 237.94 | 9.47 | 63.61 | 0. | 65.24 | 63.90 | 0.50 | 23.75 | 60.74 | 45.70 | 8.52 |
| 1973 | JAN. | 206.79 | 188.71 | 7.15 | 54.47 | 0. | 55.72 | 50.40 | 1.98 | 20.34 | 56.63 | 41.14 | 6.80 |
| | FEB. | 204.00 | 160.00 | 3.11 | 30.11 | 0. | 30.90 | 29.69* | 0.50 | 12.45* | 53.08 | 37.34 | 3.53 |
| | MAR. | 203.93 | 159.36 | 1.24 | 0. | 0. | 0.47 | 0. * | 0.18 | 0. * | 51.73 | 0. | 0. |
| | APR. | 203.98 | 159.78 | 2.07 | 0. | 0. | 0.63 | 0. * | 0.24 | 0. * | 51.69 | 0. | 0. |
| | MAY | 204.00 | 160.00 | 31.36 | 29.57 | 0. | 34.41 | 17.40 | 6.35 | 11.04* | 51.75 | 35.94 | 3.38 |
| | JUN. | 207.14 | 192.55 | 86.54 | 52.71 | 0. | 65.67 | 4.60 | 23.56 | 20.34 | 53.31 | 37.57 | 6.20 |
| | JUL. | 210.27 | 229.39 | 92.79 | 54.47 | 0. | 68.58 | 10.40 | 21.72 | 20.34 | 56.46 | 40.96 | 6.79 |
| | AUG. | 211.33 | 242.87 | 69.51 | 54.47 | 0. | 65.05 | 0. | 24.29 | 20.34 | 58.56 | 43.26 | 7.04 |
| | SEP. | 222.48 | 420.13 | 231.64 | 52.71 | 0. | 87.67 | 0. | 33.82 | 20.34 | 64.64 | 50.00 | 7.52 |
| | OCT. | 231.00 | 605.00 | 573.00 | 261.45 | 124.16 | 471.80 | 2.30 | 175.29 | 97.61 | 73.88 | 50.00 | 37.20 |
| | NOV. | 231.00 | 605.00 | 163.90 | 161.06 | 0. | 185.87 | 32.60 | 59.13 | 62.14 | 78.74 | 50.00 | 28.63 |
| | DEC. | 229.71 | 574.06 | 32.52 | 60.16 | 0. | 65.24 | 63.90 | 0.50 | 22.46 | 78.12 | 50.00 | 10.60 |
| 1974 | JAN. | 227.90 | 532.41 | 16.37 | 54.47 | 0. | 57.10 | 50.40 | 2.50 | 20.34 | 76.57 | 50.00 | 9.39 |
| | FEB. | 225.78 | 486.34 | 6.56 | 49.20 | 0. | 50.43 | 34.60 | 6.55 | 20.34 | 74.54 | 50.00 | 8.24 |
| | MAR. | 223.09 | 431.89 | 3.75 | 54.47 | 0. | 55.41 | 37.40 | 6.73 | 20.34 | 72.20 | 50.00 | 8.81 |
| | APR. | 220.23 | 378.95 | 2.80 | 52.71 | 0. | 53.51 | 51.80 | 0.66 | 20.34 | 69.40 | 50.00 | 8.16 |
| | MAY | 228.77 | 552.10 | 230.75 | 54.47 | 0. | 89.22 | 17.40 | 26.81 | 20.34 | 72.26 | 50.00 | 8.82 |
| | JUN. | 231.00 | 605.00 | 198.97 | 143.15 | 0. | 173.08 | 4.60 | 65.00 | 55.23 | 77.62 | 50.00 | 25.06 |
| | JUL. | 231.00 | 605.00 | 98.76 | 95.74 | 0. | 110.78 | 10.40 | 37.48 | 35.75 | 78.76 | 50.00 | 17.02 |
| | AUG. | 231.00 | 605.00 | 101.37 | 98.39 | 0. | 113.73 | 0. | 42.46 | 36.74 | 78.76 | 50.00 | 17.49 |
| | SEP. | 231.00 | 605.00 | 491.38 | 253.01 | 235.36 | 562.39 | 0. | 216.97 | 97.61 | 77.73 | 50.00 | 36.00 |
| | OCT. | 231.00 | 605.00 | 323.01 | 261.45 | 58.85 | 368.99 | 2.30 | 136.91 | 97.61 | 78.42 | 50.00 | 37.20 |
| | NOV. | 231.00 | 605.00 | 70.44 | 67.73 | 0. | 78.50 | 32.60 | 17.71 | 26.13 | 78.74 | 50.00 | 12.04 |
| | DEC. | 229.05 | 558.59 | 19.01 | 67.15 | 0. | 65.24 | 63.90 | 0.50 | 23.20 | 77.79 | 50.00 | 10.90 |
| 1975 | JAN. | 226.94 | 511.04 | 10.40 | 54.47 | 0. | 56.27 | 50.40 | 2.19 | 20.34 | 75.76 | 50.00 | 9.28 |
| | FEB. | 224.66 | 462.97 | 4.47 | 49.20 | 0. | 50.13 | 34.60 | 6.42 | 20.34 | 73.49 | 50.00 | 8.11 |
| | MAR. | 221.85 | 408.34 | 3.44 | 54.47 | 0. | 55.33 | 37.40 | 6.69 | 20.34 | 71.01 | 50.00 | 8.65 |
| | APR. | 218.90 | 355.83 | 3.12 | 52.71 | 0. | 53.59 | 51.80 | 0.69 | 20.34 | 68.11 | 50.00 | 7.98 |
| | MAY | 217.00 | 324.61 | 25.81 | 54.47 | 0. | 58.46 | 17.40 | 15.33 | 20.34 | 65.71 | 50.00 | 7.92 |
| | JUN. | 213.93 | 278.36 | 8.28 | 52.71 | 0. | 53.93 | 4.60 | 19.03 | 20.34 | 63.20 | 48.51 | 7.35 |
| | JUL. | 212.13 | 253.45 | 31.28 | 54.47 | 0. | 59.38 | 10.40 | 18.29 | 20.34 | 60.79 | 45.76 | 7.31 |
| | AUG. | 211.57 | 246.01 | 48.66 | 54.47 | 0. | 61.90 | 0. | 23.11 | 20.34 | 59.61 | 44.43 | 7.16 |
| | SEP. | 231.00 | 605.00 | 573.32 | 212.19 | 0. | 298.48 | 0. | 115.15 | 81.86 | 69.02 | 50.00 | 32.63 |
| | OCT. | 231.00 | 605.00 | 526.48 | 261.45 | 262.10 | 602.76 | 2.30 | 224.19 | 97.61 | 77.69 | 50.00 | 37.20 |
| | NOV. | 231.00 | 605.00 | 363.28 | 253.01 | 107.18 | 414.90 | 32.60 | 147.49 | 97.61 | 78.18 | 50.00 | 36.00 |
| | DEC. | 231.00 | 605.00 | 69.51 | 66.14 | 0. | 76.73 | 63.90 | 4.79 | 24.69 | 78.76 | 50.00 | 11.76 |
| 1976 | JAN. | 229.51 | 569.17 | 22.34 | 54.47 | 0. | 58.02 | 50.40 | 2.85 | 20.34 | 78.01 | 50.00 | 9.59 |
| | FEB. | 227.61 | 525.79 | 11.17 | 50.95 | 0. | 52.98 | 34.60 | 7.34 | 20.34 | 76.27 | 50.00 | 8.75 |
| | MAR. | 225.13 | 472.60 | 5.22 | 54.47 | 0. | 55.65 | 37.40 | 6.81 | 20.34 | 74.13 | 50.00 | 9.07 |
| | APR. | 222.49 | 420.30 | 3.64 | 52.71 | 0. | 53.67 | 51.80 | 0.72 | 20.34 | 71.54 | 50.00 | 8.44 |
| | | | | | | | | | | | | | 3116.97 |

RESERVOIR OPERATION MOROLICA HIGH DAM PLAN

HIGH WATER LEVEL 243.00 LOW WATER LEVEL 207.50

GROSS STORAGE CAPACITY 925.00 MCM

DEAD STORAGE CAPACITY 195.00 MCM

EVAPORATION DATA IN MM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 149.0 | 172.0 | 200.0 | 176.0 | 167.0 | [illegible] | 132.0 | 130.0 | 111.0 | 107.0 | 120.0 | 150.0 |

MAXIMUM DISCHARGE FOR POWER GENERATION 171.72 CMS

POWER INSTALLED CAPACITY 70000. KW

RATED HEAD FOR POWER GENERATION 72.0 M

GUARANTEED MINIMUM DISCHARGE FOR POWER GENERATION 25.36 CMS

SEASONAL MINIMUM STORAGE IN MCM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 255.00 | 255.00 | 450.00 | 430.00 | 0. | 0. | 0. | 0. | 370.00 | 310.00 | 250.00 | 195.00 |

MONTHLY IRRIGATION WATER REQUIREMENT

UPSTREAM OF DAMSITE IN MCM

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.70 | 2.20 | 3.10 | 3.40 | 1.30 | 0.30 | 1.60 | 1.00 | 1.80 | 2.00 | 1.50 | 2.20 |

DOWNSTREAM OF DAMSITE IN CMS

| JAN. | FEB. | MAR. | APR. | MAY | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 50.40 | 34.40 | 37.40 | 51.80 | 17.40 | 4.60 | 10.40 | 0. | 0. | 2.30 | 32.60 | 63.90 |

RESERVOIR OPERATION [illegible]OKOLICA HIGH DAM PLAN

| YEAR | MONTH | WATER LEVEL | GROSS STORAGE | INFLOW | OUTFLOW | SPILL-OUT | DIS-CHARGE | WATER USED FOR IRRIGATION | RIVER FLOW | OUTFLOW FOR POWER | HEAD FOR POWER | POWER PEAKING CAPACITY | ENERGY OUTPUT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | MCM | MCM | MCM | MCM | MCM | MCM | CMS | CMS | M | MW | GWH |
| | | 243.00 | 925.00 | | | | | | | | | | |
| 1956 | NOV. | 242.59 | 911.97 | 54.29 | 65.73 | 0. | 72.24 | 52.60 | 15.29 | 25.36 | 90.38 | 70.00 | 13.47 |
| | DEC. | 241.21 | 868.72 | 29.07 | 67.92 | 0. | 72.66 | 63.90 | 5.27 | 25.36 | 89.51 | 70.00 | 13.78 |
| 1957 | JAN. | 240.16 | 836.56 | 40.58 | 67.92 | 0. | 69.75 | 50.40 | 7.22 | 25.36 | 88.29 | 70.00 | 13.58 |
| | FEB. | 238.62 | 796.93 | 26.47 | 61.35 | 0. | 62.38 | 34.60 | 11.48 | 25.36 | 87.02 | 70.00 | 12.07 |
| | MAR. | 236.88 | 742.11 | 14.42 | 67.92 | 0. | 68.80 | 37.40 | 11.72 | 25.36 | 85.46 | 70.00 | 13.11 |
| | APR. | 234.84 | 687.19 | 15.27 | 65.73 | 0. | 68.16 | 51.80 | 6.31 | 25.36 | 83.45 | 70.00 | 12.36 |
| | MAY | 237.31 | 754.08 | 139.07 | 67.92 | 0. | 74.35 | 17.40 | 21.26 | 25.36 | 83.59 | 70.00 | 12.81 |
| | JUN. | 242.50 | 902.71 | 217.93 | 65.73 | 0. | 75.60 | 4.60 | 27.39 | 25.36 | 87.39 | 70.00 | 12.99 |
| | JUL. | 241.53 | 872.39 | 41.45 | 67.92 | 0. | 70.87 | 10.40 | 22.58 | 25.36 | 89.43 | 70.00 | 13.76 |
| | AUG. | 240.90 | 858.91 | 58.20 | 67.92 | 0. | 71.22 | 0. | 26.59 | 25.36 | 88.72 | 70.00 | 13.65 |
| | SEP. | 243.00 | 925.00 | 211.42 | 141.99 | 0. | 166.77 | 0. | 64.34 | 54.78 | 89.53 | 70.00 | 28.80 |
| | OCT. | 243.00 | 925.00 | 191.20 | 187.85 | 0. | 196.05 | 2.30 | 72.34 | 70.13 | 90.61 | 70.00 | 38.60 |
| | NOV. | 241.98 | 892.61 | 36.91 | 65.73 | 0. | 68.12 | 32.60 | 13.71 | 25.36 | 90.08 | 70.00 | 13.42 |
| | DEC. | 240.44 | 844.93 | 24.56 | 67.92 | 0. | 69.56 | 63.90 | 2.11 | 25.36 | 88.82 | 70.00 | 13.66 |
| 1958 | JAN. | 238.53 | 798.49 | 16.16 | 67.92 | 0. | 69.56 | 50.40 | 7.15 | 25.36 | 87.09 | 70.00 | 13.38 |
| | FEB. | 236.47 | 730.85 | 9.24 | 61.35 | 0. | 62.71 | 34.60 | 11.41 | 25.36 | 85.03 | 70.00 | 11.78 |
| | MAR. | 233.96 | 664.21 | 6.27 | 67.92 | 0. | 68.95 | 37.40 | 11.78 | 25.36 | 82.82 | 70.00 | 12.67 |
| | APR. | 231.34 | 599.37 | 5.00 | 65.73 | 0. | 66.63 | 51.80 | 5.72 | 25.36 | 80.23 | 70.00 | 11.84 |
| | MAY | 234.84 | 687.21 | 159.71 | 67.92 | 0. | 78.21 | 17.40 | 22.70 | 25.36 | 80.70 | 70.00 | 12.32 |
| | JUN. | 243.00 | 925.00 | 359.28 | 117.92 | 0. | 141.74 | 4.60 | 52.91 | 45.49 | 86.51 | 70.00 | 23.06 |
| | JUL. | 243.00 | 925.00 | 240.00 | 235.80 | 0. | 246.30 | 10.40 | 88.08 | 88.04 | 90.61 | 70.00 | 48.45 |
| | AUG. | 243.00 | 925.00 | 119.60 | 115.63 | 0. | 121.13 | 0. | 45.22 | 43.17 | 90.61 | 70.00 | 23.76 |
| | SEP. | 243.00 | 925.00 | 77.62 | 74.27 | 0. | 80.25 | 0. | 30.96 | 28.66 | 90.58 | 70.00 | 15.26 |
| | OCT. | 243.00 | 925.00 | 215.51 | 212.13 | 0. | 225.02 | 2.30 | 83.16 | 79.20 | 90.61 | 70.00 | 43.58 |
| | NOV. | 242.08 | 895.56 | 19.84 | 65.73 | 0. | 68.49 | 32.60 | 13.85 | 25.36 | 90.12 | 70.00 | 13.43 |
| | DEC. | 240.37 | 842.83 | 19.53 | 67.92 | 0. | 69.69 | 63.90 | 2.16 | 25.36 | 88.83 | 70.00 | 13.66 |
| 1959 | JAN. | 238.47 | 786.92 | 16.56 | 67.92 | 0. | 71.84 | 50.40 | 8.00 | 25.36 | 87.02 | 70.00 | 13.37 |
| | FEB. | 236.46 | 730.54 | 9.60 | 61.35 | 0. | 54.25 | 34.60 | 12.26 | 25.36 | 85.00 | 70.00 | 11.77 |
| | MAR. | 233.98 | 662.33 | 4.70 | 67.92 | 0. | 70.23 | 37.40 | 12.26 | 25.36 | 82.78 | 70.00 | 12.66 |
| | APR. | 231.13 | 594.58 | 2.07 | 65.73 | 0. | 67.96 | 51.80 | 6.24 | 25.36 | 80.09 | 70.00 | 11.82 |
| | MAY | 229.72 | 561.47 | 39.69 | 67.92 | 0. | 77.73 | 17.40 | 22.52 | 25.36 | 78.03 | 70.00 | 11.87 |
| | JUN. | 229.73 | 562.01 | 58.84 | 65.73 | 0. | 79.79 | 4.60 | 29.01 | 25.36 | 77.31 | 70.00 | 11.37 |
| | JUL. | 227.32 | 509.68 | 17.35 | 67.92 | 0. | 71.17 | 10.40 | 22.69 | 25.36 | 76.13 | 70.00 | 11.55 |
| | AUG. | 226.00 | 481.07 | 42.90 | 67.92 | 0. | 73.62 | 0. | 27.49 | 25.36 | 74.26 | 70.00 | 11.23 |
| | SEP. | 224.56 | 457.26 | 39.06 | 65.73 | 0. | 71.37 | 0. | 27.53 | 25.36 | 72.86 | 70.00 | 10.64 |
| | OCT. | 230.52 | 540.08 | 147.90 | 67.92 | 0. | 108.72 | 2.30 | 39.73 | 25.36 | 75.15 | 70.00 | 11.38 |
| | NOV. | 229.11 | 547.82 | 36.07 | 65.73 | 0. | 71.66 | 32.60 | 15.07 | 25.36 | 77.40 | 70.00 | 11.38 |
| | DEC. | 226.47 | 489.86 | 13.04 | 67.92 | 0. | 70.89 | 63.90 | 2.61 | 25.36 | 75.37 | 70.00 | 11.42 |
| 1960 | JAN. | 223.44 | 450.71 | 11.97 | 67.92 | 0. | 69.95 | 50.40 | 7.30 | 25.36 | 72.54 | 70.00 | 10.94 |
| | FEB. | 220.03 | 369.19 | 4.99 | 63.54 | 0. | 64.55 | 34.60 | 11.95 | 25.36 | 69.30 | 66.05 | 9.76 |
| | MAR. | 215.72 | 300.49 | 2.29 | 67.92 | 0. | 68.53 | 37.40 | 11.62 | 25.36 | 65.48 | 60.67 | 9.86 |
| | APR. | 210.86 | 234.40 | 1.96 | 65.73 | 0. | 66.37 | 51.80 | 5.62 | 25.36 | 60.87 | 54.38 | 8.87 |
| | MAY | 212.67 | 257.47 | 93.28 | 67.92 | 0. | 82.04 | 17.40 | 24.13 | 25.36 | 59.37 | 52.38 | 8.94 |
| | JUN. | 222.91 | 420.69 | 250.72 | 65.73 | 0. | 100.42 | 4.60 | 36.97 | 25.36 | 65.37 | 60.52 | 9.53 |
| | JUL. | 225.44 | 469.83 | 119.51 | 67.92 | 0. | 86.12 | 10.40 | 28.27 | 25.36 | 71.79 | 69.63 | 10.81 |
| | AUG. | 230.77 | 556.06 | 144.84 | 67.92 | 0. | 96.06 | 0. | 35.86 | 25.36 | 75.72 | 70.00 | 11.48 |
| | SEP. | 234.88 | 742.06 | 224.41 | 65.73 | 0. | 99.62 | 0. | 38.43 | 25.36 | 81.41 | 70.00 | 12.04 |

| YEAR | MONTH | WATER LEVEL | GROSS STORAGE | INFLOW | OUTFLOW | SPILL-OUT | DIS-CHARGE | WATER USED FOR IRRIGATION | RIVER FLOW | OUTFLOW FOR POWER | HEAD FOR POWER | POWER PEAKING CAPACITY | ENERGY OUTPUT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | MCM | MCM | MCM | MCM | MCM | MCM | CMS | CMS | M | MW | GWH |
| | | 236.88 | 742.08 | | | | | | | | | | |
| | OCT. | 243.00 | 925.00 | 299.64 | 113.67 | 0. | 158.93 | 2.30 | 58.48 | 42.44 | 87.55 | 70.00 | 22.51 |
| | NOV. | 243.00 | 925.00 | 97.33 | 88.70 | 0. | 102.66 | 32.60 | 27.03 | 34.22 | 90.58 | 70.00 | 18.22 |
| | DEC. | 241.77 | 884.53 | 31.90 | 67.92 | 0. | 72.93 | 63.90 | 3.37 | 25.36 | 89.97 | 70.00 | 13.85 |
| 1961 | JAN. | 240.76 | 839.56 | 27.79 | 67.92 | 0. | 72.33 | 50.40 | 8.19 | 25.36 | 88.60 | 70.00 | 13.63 |
| | FEB. | 238.75 | 794.99 | 21.55 | 61.35 | 0. | 64.80 | 34.60 | 17.48 | 25.36 | 87.04 | 70.00 | 12.07 |
| | MAR. | 236.71 | 737.16 | 15.59 | 67.92 | 0. | 70.63 | 37.40 | 12.41 | 25.36 | 85.34 | 70.00 | 13.09 |
| | APR. | 234.51 | 678.59 | 11.39 | 65.73 | 0. | 67.74 | 51.80 | 6.15 | 25.36 | 83.20 | 70.00 | 12.32 |
| | MAY | 232.13 | 619.47 | 11.77 | 67.92 | 0. | 69.76 | 17.40 | 19.55 | 25.36 | 80.93 | 70.00 | 12.36 |
| | JUN. | 235.05 | 692.07 | 142.39 | 65.73 | 0. | 67.14 | 4.60 | 31.84 | 25.36 | 81.16 | 70.00 | 11.99 |
| | JUL. | 237.92 | 771.27 | 150.52 | 67.92 | 0. | 90.70 | 10.40 | 29.98 | 25.36 | 84.08 | 70.00 | 12.88 |
| | AUG. | 238.13 | 777.14 | 77.27 | 67.92 | 0. | 79.65 | 0. | 29.74 | 25.36 | 85.63 | 70.00 | 13.14 |
| | SEP. | 239.99 | 831.45 | 123.09 | 65.73 | 0. | 84.44 | 0. | 32.58 | 25.36 | 86.64 | 70.00 | 12.87 |
| | OCT. | 242.24 | 900.44 | 140.17 | 67.92 | 0. | 89.25 | 2.30 | 32.46 | 25.36 | 88.72 | 70.00 | 13.65 |
| | NOV. | 242.90 | 921.89 | 90.55 | 65.73 | 0. | 79.48 | 32.60 | 18.09 | 25.36 | 90.15 | 70.00 | 13.43 |
| | DEC. | 241.48 | 877.04 | 27.50 | 67.92 | 0. | 77.33 | 63.90 | 3.15 | 25.36 | 89.80 | 70.00 | 13.82 |
| 1962 | JAN. | 239.88 | 828.22 | 23.92 | 67.92 | 0. | 71.71 | 50.40 | 7.95 | 25.36 | 88.29 | 70.00 | 13.57 |
| | FEB. | 238.13 | 777.11 | 14.95 | 61.35 | 0. | 63.80 | 34.60 | 12.07 | 25.36 | 86.54 | 70.00 | 12.00 |
| | MAR. | 235.79 | 712.24 | 8.26 | 67.92 | 0. | 69.66 | 37.40 | 12.05 | 25.36 | 84.57 | 70.00 | 12.96 |
| | APR. | 233.35 | 648.67 | 4.47 | 65.73 | 0. | 67.16 | 51.80 | 5.93 | 25.36 | 82.15 | 70.00 | 12.15 |
| | MAY | 233.10 | 642.41 | 65.62 | 67.92 | 0. | 77.90 | 17.40 | 22.59 | 25.36 | 80.83 | 70.00 | 12.34 |
| | JUN. | 236.37 | 727.96 | 154.44 | 65.73 | 0. | 88.89 | 4.60 | 32.52 | 25.36 | 82.32 | 70.00 | 12.18 |
| | JUL. | 236.90 | 742.41 | 55.98 | 67.92 | 0. | 81.04 | 10.40 | 26.38 | 25.36 | 84.24 | 70.00 | 12.91 |
| | AUG. | 237.28 | 753.26 | 81.96 | 67.92 | 0. | 80.34 | 0. | 30.00 | 25.36 | 84.70 | 70.00 | 12.98 |
| | SEP. | 239.59 | 819.69 | 135.14 | 65.73 | 0. | 86.29 | 0. | 33.29 | 25.36 | 86.02 | 70.00 | 12.78 |
| | OCT. | 243.00 | 925.00 | 155.12 | 76.71 | 0. | 104.79 | 2.30 | 38.27 | 28.64 | 88.90 | 70.00 | 15.45 |
| | NOV. | 241.72 | 884.35 | 28.63 | 65.73 | 0. | 70.20 | 32.60 | 14.51 | 25.36 | 89.94 | 70.00 | 13.40 |
| | DEC. | 239.99 | 831.47 | 10.53 | 67.92 | 0. | 71.09 | 63.90 | 2.66 | 25.36 | 88.46 | 70.00 | 13.60 |
| 1963 | JAN. | 238.10 | 776.33 | 17.21 | 67.92 | 0. | 70.71 | 50.40 | 7.56 | 25.36 | 86.66 | 70.00 | 13.31 |
| | FEB. | 236.07 | 719.99 | 9.50 | 61.35 | 0. | 62.95 | 34.60 | 11.72 | 25.36 | 84.62 | 70.00 | 11.71 |
| | MAR. | 233.58 | 654.65 | 7.53 | 67.92 | 0. | 69.40 | 37.40 | 11.95 | 25.36 | 82.44 | 70.00 | 12.61 |
| | APR. | 231.00 | 591.42 | 6.57 | 65.73 | 0. | 67.16 | 51.80 | 5.92 | 25.36 | 79.88 | 70.00 | 11.79 |
| | MAY | 228.19 | 527.58 | 7.68 | 67.92 | 0. | 69.14 | 17.40 | 19.32 | 25.36 | 77.20 | 70.00 | 11.73 |
| | JUN. | 228.93 | 543.83 | 84.66 | 65.73 | 0. | 78.47 | 4.60 | 28.50 | 25.36 | 76.15 | 70.00 | 11.18 |
| | JUL. | 229.79 | 563.15 | 90.06 | 67.92 | 0. | 81.66 | 10.40 | 26.60 | 25.36 | 76.96 | 70.00 | 11.69 |
| | AUG. | 228.74 | 540.17 | 47.72 | 67.92 | 0. | 75.30 | 0. | 28.11 | 25.36 | 76.88 | 70.00 | 11.68 |
| | SEP. | 230.84 | 587.59 | 115.55 | 65.73 | 0. | 83.28 | 0. | 32.13 | 25.36 | 77.39 | 70.00 | 11.38 |
| | OCT. | 235.98 | 717.37 | 200.21 | 67.92 | 0. | 98.21 | 2.30 | 35.81 | 25.36 | 81.01 | 70.00 | 12.37 |
| | NOV. | 238.87 | 798.40 | 150.17 | 65.73 | 0. | 88.66 | 32.60 | 21.63 | 25.36 | 85.01 | 70.00 | 12.61 |
| | DEC. | 237.20 | 750.82 | 24.14 | 67.92 | 0. | 71.78 | 63.90 | 2.94 | 25.36 | 85.64 | 70.00 | 13.14 |
| 1964 | JAN. | 235.16 | 695.52 | 17.00 | 67.92 | 0. | 70.72 | 50.40 | 7.59 | 25.36 | 83.79 | 70.00 | 12.83 |
| | FEB. | 232.90 | 637.48 | 9.60 | 63.54 | 0. | 65.34 | 34.60 | 12.27 | 25.36 | 81.59 | 70.00 | 11.66 |
| | MAR. | 230.23 | 573.49 | 8.47 | 67.92 | 0. | 69.55 | 37.40 | 12.00 | 25.36 | 79.17 | 70.00 | 12.06 |
| | APR. | 227.44 | 511.25 | 7.20 | 65.73 | 0. | 67.13 | 51.80 | 5.91 | 25.36 | 76.42 | 70.00 | 11.22 |
| | MAY | 224.35 | 448.07 | 7.99 | 67.92 | 0. | 69.33 | 17.40 | 19.39 | 25.36 | 73.50 | 70.00 | 11.10 |
| | JUN. | 233.52 | 704.07 | 325.45 | 65.73 | 0. | 114.60 | 4.60 | 42.44 | 25.36 | 77.52 | 70.00 | 11.40 |
| | JUL. | 241.30 | 871.30 | 237.90 | 67.92 | 0. | 103.82 | 10.40 | 34.88 | 25.36 | 86.02 | 70.00 | 13.20 |
| | AUG. | 241.29 | 871.11 | 71.40 | 67.92 | 0. | 78.72 | 0. | 29.39 | 25.36 | 88.90 | 70.00 | 13.68 |
| | SEP. | 243.00 | 925.00 | 160.05 | 102.88 | 0. | 127.20 | 0. | 49.07 | 39.69 | 89.73 | 70.00 | 20.92 |

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DIS-CHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 243.00 | 925.00 | | | | | | | | | | |
| | OCT. | 243.00 | 925.00 | 281.83 | 278.38 | 0. | 320.95 | 2.30 | 118.97 | 103.94 | 90.61 | 70.00 | 52.08 |
| | NOV. | 242.04 | 894.29 | 38.58 | 65.73 | 0. | 71.75 | 32.60 | 15.10 | 25.36 | 90.10 | 70.00 | 13.42 |
| | DEC. | 240.48 | 846.28 | 24.25 | 67.92 | 0. | 71.78 | 63.90 | 2.94 | 25.36 | 88.87 | 70.00 | 13.67 |
| 1965 | JAN. | 238.36 | 783.78 | 10.09 | 67.92 | 0. | 69.54 | 50.40 | 7.14 | 25.36 | 87.03 | 70.00 | 13.37 |
| | FEB. | 236.11 | 720.82 | 2.90 | 61.35 | 0. | 62.15 | 34.60 | 11.39 | 25.36 | 84.77 | 70.00 | 11.74 |
| | MAR. | 233.39 | 649.84 | 1.87 | 67.92 | 0. | 68.55 | 37.40 | 11.63 | 25.36 | 82.36 | 70.00 | 12.59 |
| | APR. | 230.57 | 581.36 | 1.29 | 65.73 | 0. | 66.21 | 51.80 | 5.56 | 25.36 | 79.57 | 70.00 | 11.74 |
| | MAY | 230.95 | 590.23 | 80.50 | 67.92 | 0. | 80.12 | 17.40 | 23.42 | 25.36 | 78.37 | 70.00 | 11.93 |
| | JUN. | 233.44 | 651.15 | 129.61 | 65.73 | 0. | 85.12 | 4.60 | 31.07 | 25.36 | 79.78 | 70.00 | 11.77 |
| | JUL. | 232.66 | 631.52 | 51.40 | 67.92 | 0. | 75.92 | 10.40 | 24.46 | 25.36 | 80.66 | 70.00 | 12.31 |
| | AUG. | 231.74 | 609.05 | 44.45 | 67.92 | 0. | 75.27 | 0. | 28.10 | 25.36 | 79.81 | 70.00 | 12.17 |
| | SEP. | 242.09 | 896.12 | 355.70 | 65.73 | 0. | 119.44 | 0. | 46.08 | 25.36 | 84.50 | 70.00 | 12.53 |
| | OCT. | 243.00 | 925.00 | 271.75 | 238.99 | 0. | 279.94 | 2.30 | 103.66 | 89.23 | 90.15 | 70.00 | 48.84 |
| | NOV. | 243.00 | 925.00 | 90.45 | 86.81 | 0. | 91.27 | 32.60 | 22.63 | 33.49 | 90.58 | 70.00 | 17.83 |
| | DEC. | 241.77 | 886.10 | 33.47 | 67.92 | 0. | 69.55 | 63.90 | 2.11 | 25.36 | 89.99 | 70.00 | 13.85 |
| 1966 | JAN. | 240.08 | 834.32 | 20.98 | 67.92 | 0. | 71.14 | 50.40 | 7.74 | 25.36 | 88.54 | 70.00 | 13.62 |
| | FEB. | 238.23 | 779.95 | 11.70 | 61.35 | 0. | 63.35 | 34.60 | 11.88 | 25.36 | 86.69 | 70.00 | 12.02 |
| | MAR. | 235.93 | 716.01 | 9.20 | 67.92 | 0. | 69.72 | 37.40 | 12.07 | 25.36 | 84.69 | 70.00 | 12.98 |
| | APR. | 233.76 | 659.11 | 13.18 | 65.73 | 0. | 68.16 | 51.80 | 6.31 | 25.36 | 82.43 | 70.00 | 12.20 |
| | MAY | 236.09 | 720.36 | 133.31 | 67.92 | 0. | 129.22 | 17.40 | 41.75 | 25.36 | 82.53 | 70.00 | 12.62 |
| | JUN. | 243.00 | 925.00 | 382.54 | 174.20 | 0. | 275.06 | 4.60 | 104.34 | 67.21 | 87.13 | 70.00 | 34.32 |
| | JUL. | 243.00 | 925.00 | 276.98 | 272.74 | 0. | 313.55 | 10.40 | 113.18 | 101.83 | 90.61 | 70.00 | 52.08 |
| | AUG. | 243.00 | 925.00 | 123.37 | 119.39 | 0. | 129.32 | 0. | 48.28 | 44.58 | 90.61 | 70.00 | 24.53 |
| | SEP. | 243.00 | 925.00 | 168.15 | 164.70 | 0. | 196.25 | 0. | 75.71 | 63.54 | 90.58 | 70.00 | 33.83 |
| | OCT. | 243.00 | 925.00 | 380.53 | 326.03 | 50.95 | 421.65 | 2.30 | 156.57 | 121.72 | 90.34 | 70.00 | 52.08 |
| | NOV. | 242.79 | 918.14 | 62.47 | 65.73 | 0. | 71.06 | 32.60 | 14.84 | 25.36 | 90.48 | 70.00 | 13.48 |
| | DEC. | 241.53 | 878.43 | 32.63 | 67.92 | 0. | 72.19 | 63.90 | 3.10 | 25.36 | 89.77 | 70.00 | 13.82 |
| 1967 | JAN. | 239.94 | 830.03 | 24.34 | 67.92 | 0. | 67.69 | 50.40 | 6.45 | 25.36 | 88.34 | 70.00 | 13.58 |
| | FEB. | 238.26 | 781.00 | 17.04 | 61.35 | 0. | 63.21 | 34.60 | 11.83 | 25.36 | 86.64 | 70.00 | 12.02 |
| | MAR. | 236.12 | 721.24 | 13.39 | 67.92 | 0. | 69.73 | 37.40 | 12.07 | 25.36 | 84.80 | 70.00 | 13.00 |
| | APR. | 234.67 | 682.72 | 31.62 | 65.73 | 0. | 68.52 | 51.80 | 6.45 | 25.36 | 82.98 | 70.00 | 12.29 |
| | MAY | 232.35 | 623.83 | 13.02 | 67.92 | 0. | 69.10 | 17.40 | 19.30 | 25.36 | 81.12 | 70.00 | 12.39 |
| | JUN. | 233.07 | 641.86 | 86.75 | 65.73 | 0. | 88.68 | 4.60 | 32.44 | 25.36 | 80.29 | 70.00 | 11.85 |
| | JUL. | 232.36 | 624.04 | 53.16 | 67.92 | 0. | 73.54 | 10.40 | 23.57 | 25.36 | 80.32 | 70.00 | 12.25 |
| | AUG. | 231.34 | 599.40 | 46.25 | 67.92 | 0. | 70.17 | 0. | 26.20 | 25.36 | 79.45 | 70.00 | 12.11 |
| | SEP. | 234.50 | 678.25 | 147.19 | 65.73 | 0. | 95.74 | 0. | 36.94 | 25.36 | 80.50 | 70.00 | 11.89 |
| | OCT. | 235.84 | 713.78 | 106.12 | 67.92 | 0. | 84.50 | 2.30 | 30.69 | 25.36 | 82.78 | 70.00 | 12.66 |
| | NOV. | 234.64 | 681.97 | 36.91 | 65.73 | 0. | 69.32 | 32.60 | 14.17 | 25.36 | 82.83 | 70.00 | 12.26 |
| | DEC. | 232.61 | 630.19 | 19.74 | 67.92 | 0. | 70.08 | 63.90 | 2.31 | 25.36 | 81.23 | 70.00 | 12.41 |
| 1968 | JAN. | 230.36 | 576.28 | 17.84 | 67.92 | 0. | 69.58 | 50.40 | 7.16 | 25.36 | 79.09 | 70.00 | 12.05 |
| | FEB. | 227.81 | 519.32 | 10.23 | 63.54 | 0. | 64.71 | 34.60 | 12.02 | 25.36 | 76.64 | 70.00 | 10.88 |
| | MAR. | 224.58 | 452.69 | 5.22 | 67.92 | 0. | 68.80 | 37.40 | 11.72 | 25.36 | 73.81 | 70.00 | 11.15 |
| | APR. | 221.16 | 388.83 | 5.00 | 65.73 | 0. | 66.33 | 51.80 | 5.61 | 25.36 | 70.46 | 67.71 | 10.27 |
| | MAY | 224.82 | 457.40 | 139.49 | 67.92 | 0. | 87.03 | 17.40 | 26.00 | 25.36 | 70.60 | 67.91 | 10.63 |
| | JUN. | 243.00 | 925.00 | 543.68 | 72.94 | 0. | 150.56 | 4.60 | 56.31 | 28.14 | 81.49 | 70.00 | 13.37 |
| | JUL. | 243.00 | 925.00 | 103.68 | 99.67 | 0. | 104.29 | 10.40 | 35.05 | 37.21 | 90.61 | 70.00 | 20.48 |
| | AUG. | 242.99 | 924.57 | 71.40 | 67.92 | 0. | 70.22 | 0. | 26.22 | 25.36 | 90.60 | 70.00 | 13.95 |
| | SEP. | 243.00 | 925.00 | 317.98 | 313.93 | 0. | 359.45 | 0. | 138.68 | 121.12 | 90.58 | 70.00 | 50.40 |

| YEAR | MONTH | WATER LEVEL | GROSS STORAGE | INFLOW | OUTFLOW | SPILL-OUT | DIS-CHARGE | WATER USED FOR IRRIGATION | RIVER FLOW | OUTFLOW FOR POWER | HEAD FOR POWER | POWER PEAKING CAPACITY | ENERGY OUTPUT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | MCM | MCM | MCM | MCM | MCM | MCM | CMS | CMS | M | MW | GWH |
| | | 243.00 | 925.00 | | | | | | | | | | |
| | OCT. | 243.00 | 925.00 | 298.07 | 294.61 | 0. | 357.23 | 2.30 | 132.52 | 109.99 | 90.61 | 70.00 | 52.08 |
| | NOV. | 243.00 | 925.00 | 113.06 | 109.42 | 0. | 119.14 | 32.60 | 33.39 | 42.21 | 90.58 | 70.00 | 22.47 |
| | DEC. | 242.05 | 894.89 | 47.27 | 67.92 | 0. | 70.75 | 63.90 | 2.56 | 25.36 | 90.13 | 70.00 | 13.88 |
| 1969 | JAN. | 240.87 | 858.24 | 36.16 | 67.92 | 0. | 70.95 | 50.40 | 7.67 | 25.36 | 89.07 | 70.00 | 13.70 |
| | FEB. | 239.13 | 804.08 | 14.00 | 61.35 | 0. | 67.05 | 34.60 | 11.35 | 25.36 | 87.54 | 70.00 | 12.15 |
| | MAR. | 236.95 | 744.00 | 11.19 | 67.92 | 0. | 68.53 | 37.40 | 11.62 | 25.36 | 85.65 | 70.00 | 13.14 |
| | APR. | 234.55 | 682.80 | 8.96 | 65.73 | 0. | 66.25 | 51.80 | 5.57 | 25.36 | 83.40 | 70.00 | 12.35 |
| | MAY | 233.78 | 659.78 | 48.96 | 67.92 | 0. | 78.96 | 17.40 | 22.98 | 25.36 | 81.84 | 70.00 | 12.51 |
| | JUN. | 243.00 | 925.00 | 563.80 | 294.82 | 0. | 392.82 | 4.60 | 149.78 | 113.74 | 85.98 | 70.00 | 50.40 |
| | JUL. | 243.00 | 925.00 | 198.72 | 194.57 | 0. | 210.36 | 10.40 | 74.66 | 77.65 | 90.61 | 70.00 | 39.98 |
| | AUG. | 243.00 | 925.00 | 457.87 | 326.03 | 126.43 | 554.59 | 0. | 207.06 | 121.72 | 90.04 | 70.00 | 52.08 |
| | SEP. | 243.00 | 925.00 | 516.84 | 315.51 | 197.50 | 650.37 | 0. | 250.91 | 121.72 | 89.77 | 70.00 | 50.40 |
| | OCT. | 243.00 | 925.00 | 760.34 | 326.03 | 430.39 | 896.37 | 2.30 | 333.81 | 121.72 | 89.24 | 70.00 | 52.08 |
| | NOV. | 243.00 | 925.00 | 148.81 | 145.10 | 0. | 194.09 | 32.60 | 62.30 | 55.98 | 90.58 | 70.00 | 29.80 |
| | DEC. | 242.00 | 893.32 | 40.70 | 67.92 | 0. | 75.93 | 63.90 | 4.49 | 25.36 | 90.11 | 70.00 | 13.87 |
| 1970 | JAN. | 240.15 | 836.18 | 15.64 | 67.92 | 0. | 77.08 | 50.40 | 9.96 | 25.36 | 88.68 | 70.00 | 13.64 |
| | FEB. | 238.13 | 777.09 | 6.96 | 61.35 | 0. | 65.07 | 34.60 | 12.59 | 25.36 | 86.67 | 70.00 | 12.02 |
| | MAR. | 235.62 | 707.63 | 3.65 | 67.92 | 0. | 70.57 | 37.40 | 12.39 | 25.36 | 84.48 | 70.00 | 12.95 |
| | APR. | 233.07 | 641.77 | 4.16 | 65.73 | 0. | 68.27 | 51.80 | 6.35 | 25.36 | 81.93 | 70.00 | 12.12 |
| | MAY | 231.44 | 601.77 | 31.75 | 67.92 | 0. | 73.14 | 17.40 | 20.81 | 25.36 | 79.86 | 70.00 | 12.18 |
| | JUN. | 229.83 | 564.11 | 30.91 | 65.73 | 0. | 71.62 | 4.60 | 25.86 | 25.36 | 78.22 | 70.00 | 11.52 |
| | JUL. | 232.39 | 624.99 | 131.76 | 67.92 | 0. | 76.46 | 10.40 | 24.66 | 25.36 | 78.72 | 70.00 | 11.99 |
| | AUG. | 237.70 | 764.91 | 211.07 | 67.92 | 0. | 138.46 | 0. | 51.69 | 25.36 | 82.65 | 70.00 | 12.64 |
| | SEP. | 243.00 | 925.00 | 427.44 | 256.98 | 0. | 382.04 | 0. | 147.39 | 99.92 | 87.93 | 70.00 | 50.40 |
| | OCT. | 243.00 | 925.00 | 318.06 | 314.60 | 0. | 395.81 | 2.30 | 146.92 | 117.46 | 90.61 | 70.00 | 52.08 |
| | NOV. | 243.00 | 925.00 | 103.02 | 99.37 | 0. | 119.65 | 32.60 | 33.58 | 38.34 | 90.58 | 70.00 | 20.41 |
| | DEC. | 242.01 | 894.16 | 41.54 | 67.92 | 0. | 75.29 | 63.90 | 4.25 | 25.36 | 90.12 | 70.00 | 13.88 |
| 1971 | JAN. | 240.53 | 847.89 | 26.54 | 67.92 | 0. | 72.99 | 50.40 | 8.43 | 25.36 | 88.89 | 70.00 | 13.67 |
| | FEB. | 238.81 | 795.71 | 14.95 | 61.35 | 0. | 65.90 | 34.60 | 12.94 | 25.36 | 87.20 | 70.00 | 12.10 |
| | MAR. | 236.55 | 732.90 | 9.41 | 67.92 | 0. | 72.71 | 37.40 | 13.18 | 25.36 | 85.29 | 70.00 | 13.08 |
| | APR. | 234.15 | 669.13 | 6.36 | 65.73 | 0. | 69.67 | 51.80 | 6.89 | 25.36 | 82.93 | 70.00 | 12.28 |
| | MAY | 234.00 | 665.40 | 68.24 | 67.92 | 0. | 78.28 | 17.40 | 27.73 | 25.36 | 81.68 | 70.00 | 12.48 |
| | JUN. | 233.30 | 647.63 | 51.07 | 65.73 | 0. | 73.41 | 4.60 | 26.55 | 25.36 | 81.24 | 70.00 | 12.01 |
| | JUL. | 231.65 | 606.98 | 30.34 | 67.92 | 0. | 72.68 | 10.40 | 23.25 | 25.36 | 80.09 | 70.00 | 12.21 |
| | AUG. | 233.13 | 643.28 | 107.25 | 67.92 | 0. | 84.09 | 0. | 31.40 | 25.36 | 80.00 | 70.00 | 12.20 |
| | SEP. | 241.66 | 882.43 | 307.41 | 65.73 | 0. | 112.27 | 0. | 43.29 | 25.36 | 84.98 | 70.00 | 12.61 |
| | OCT. | 243.00 | 925.00 | 341.45 | 295.47 | 0. | 346.92 | 2.30 | 128.67 | 110.31 | 89.94 | 70.00 | 52.08 |
| | NOV. | 242.86 | 920.66 | 64.99 | 65.73 | 0. | 75.64 | 32.60 | 16.61 | 25.36 | 90.52 | 70.00 | 13.49 |
| | DEC. | 241.46 | 877.06 | 28.75 | 67.92 | 0. | 72.47 | 63.90 | 3.20 | 25.36 | 89.78 | 70.00 | 13.82 |
| 1972 | JAN. | 239.73 | 823.65 | 19.31 | 67.92 | 0. | 70.92 | 50.40 | 7.66 | 25.36 | 88.21 | 70.00 | 13.56 |
| | FEB. | 237.77 | 766.97 | 11.49 | 61.54 | 0. | 65.55 | 34.60 | 12.35 | 25.36 | 86.31 | 70.00 | 12.39 |
| | MAR. | 235.34 | 700.21 | 6.37 | 67.92 | 0. | 69.35 | 37.40 | 11.93 | 25.36 | 84.16 | 70.00 | 12.89 |
| | APR. | 232.81 | 635.22 | 5.00 | 65.73 | 0. | 66.93 | 51.80 | 5.84 | 25.36 | 81.66 | 70.00 | 12.07 |
| | MAY | 231.81 | 610.72 | 47.29 | 67.92 | 0. | 75.14 | 17.40 | 21.56 | 25.36 | 79.92 | 70.00 | 12.19 |
| | JUN. | 234.27 | 672.31 | 150.34 | 65.73 | 0. | 85.29 | 4.60 | 31.13 | 25.36 | 80.62 | 70.00 | 11.91 |
| | JUL. | 232.27 | 621.96 | 20.70 | 67.92 | 0. | 71.32 | 10.40 | 22.74 | 25.36 | 80.88 | 70.00 | 12.35 |
| | AUG. | 230.41 | 577.66 | 26.50 | 67.92 | 0. | 72.07 | 0. | 26.91 | 25.36 | 78.95 | 70.00 | 12.02 |
| | SEP. | 228.56 | 535.72 | 26.18 | 65.73 | 0. | 69.96 | 0. | 26.99 | 25.36 | 77.07 | 70.00 | 11.33 |

| YEAR | MONTH | WATER LEVEL M | GROSS STORAGE MCM | INFLOW MCM | OUTFLOW MCM | SPILL-OUT MCM | DIS-CHARGE MCM | WATER USED FOR IRRIGATION MCM | RIVER FLOW CMS | OUTFLOW FOR POWER CMS | HEAD FOR POWER M | POWER PEAKING CAPACITY MW | ENERGY OUTPUT GWH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 228.56 | 535.72 | | | | | | | | | | |
| | OCT. | 226.69 | 495.46 | 29.84 | 67.92 | 0. | 72.68 | 2.30 | 26.28 | 25.36 | 75.24 | 70.00 | 11.40 |
| | NOV. | 224.23 | 445.79 | 18.36 | 65.73 | 0. | 68.57 | 32.60 | 13.88 | 25.36 | 73.04 | 70.00 | 10.67 |
| | DEC. | 220.93 | 384.69 | 9.47 | 67.92 | 0. | 69.55 | 63.90 | 2.11 | 25.36 | 70.18 | 67.32 | 10.57 |
| 1973 | JAN. | 217.08 | 321.23 | 7.15 | 67.92 | 0. | 69.17 | 50.40 | 7.01 | 25.36 | 66.61 | 62.25 | 10.03 |
| | FEB. | 212.89 | 260.59 | 3.11 | 61.35 | 0. | 62.14 | 34.60 | 11.39 | 25.36 | 62.52 | 56.60 | 8.51 |
| | MAR. | 207.50 | 195.00 | 1.24 | 64.45 | 0. | 64.92 | 37.40 | 10.28 | 24.06* | 57.80 | 50.31 | 8.26 |
| | APR. | 207.50 | 195.00 | 2.07 | 0.16 | 0. | 0.81 | 0. * | 0.31 | 0.07* | 55.08 | 46.81 | 0.02 |
| | MAY | 207.50 | 195.00 | 31.36 | 29.57 | 0. | 34.41 | 17.40 | 6.35 | 11.04* | 55.11 | 46.84 | 3.61 |
| | JUN. | 209.21 | 214.39 | 66.54 | 65.73 | 0. | 78.69 | 4.60 | 28.56 | 25.36 | 55.94 | 47.90 | 8.15 |
| | JUL. | 211.13 | 237.70 | 92.79 | 67.92 | 0. | 82.03 | 10.40 | 26.75 | 25.36 | 57.78 | 50.28 | 8.70 |
| | AUG. | 211.13 | 237.70 | 69.51 | 67.92 | 0. | 79.51 | 0. | 29.31 | 25.36 | 58.73 | 51.54 | 8.85 |
| | SEP. | 221.89 | 401.97 | 231.64 | 65.73 | 0. | 100.69 | 0. | 38.85 | 25.36 | 64.09 | 58.75 | 9.34 |
| | OCT. | 242.36 | 904.54 | 573.00 | 67.92 | 0. | 154.12 | 2.30 | 56.68 | 25.36 | 79.73 | 70.00 | 12.16 |
| | NOV. | 243.00 | 925.00 | 163.90 | 139.76 | 0. | 164.57 | 32.60 | 50.91 | 53.92 | 90.26 | 70.00 | 28.60 |
| | DEC. | 241.74 | 885.16 | 32.52 | 67.92 | 0. | 73.00 | 63.90 | 3.40 | 25.36 | 89.98 | 70.00 | 13.85 |
| 1974 | JAN. | 239.90 | 828.78 | 16.37 | 67.92 | 0. | 70.55 | 50.40 | 7.52 | 25.36 | 88.43 | 70.00 | 13.60 |
| | FEB. | 237.85 | 769.31 | 6.56 | 61.35 | 0. | 62.59 | 34.60 | 11.57 | 25.36 | 86.41 | 70.00 | 11.98 |
| | MAR. | 235.33 | 699.98 | 3.75 | 67.92 | 0. | 68.87 | 37.40 | 11.75 | 25.36 | 84.70 | 70.00 | 12.90 |
| | APR. | 232.71 | 632.79 | 2.80 | 65.73 | 0. | 66.53 | 51.80 | 5.68 | 25.36 | 81.60 | 70.00 | 12.07 |
| | MAY | 238.63 | 791.41 | 230.75 | 67.92 | 0. | 102.67 | 17.40 | 31.84 | 25.36 | 83.28 | 70.00 | 12.75 |
| | JUN. | 242.88 | 920.99 | 198.97 | 65.73 | 0. | 95.66 | 4.60 | 35.13 | 25.36 | 88.33 | 70.00 | 13.14 |
| | JUL. | 243.00 | 925.00 | 98.76 | 90.76 | 0. | 105.80 | 10.40 | 35.62 | 33.89 | 90.55 | 70.00 | 18.63 |
| | AUG. | 243.00 | 925.00 | 101.37 | 97.42 | 0. | 112.75 | 0. | 42.10 | 36.37 | 90.61 | 70.00 | 20.02 |
| | SEP. | 243.00 | 925.00 | 491.38 | 315.51 | 172.07 | 561.59 | 0. | 216.66 | 121.72 | 89.85 | 70.00 | 50.40 |
| | OCT. | 243.00 | 925.00 | 323.01 | 319.52 | 0. | 368.21 | 2.30 | 136.61 | 119.29 | 90.61 | 70.00 | 52.08 |
| | NOV. | 243.00 | 925.00 | 70.44 | 66.83 | 0. | 77.59 | 32.60 | 17.36 | 25.78 | 90.58 | 70.00 | 13.73 |
| | DEC. | 241.31 | 871.67 | 19.01 | 67.92 | 0. | 71.01 | 63.90 | 2.66 | 25.36 | 89.76 | 70.00 | 13.82 |
| 1975 | JAN. | 239.24 | 809.38 | 10.40 | 67.92 | 0. | 69.72 | 50.40 | 7.21 | 25.36 | 87.88 | 70.00 | 13.51 |
| | FEB. | 237.09 | 747.89 | 4.47 | 61.35 | 0. | 62.28 | 34.60 | 11.44 | 25.36 | 85.70 | 70.00 | 11.88 |
| | MAR. | 234.51 | 678.35 | 3.44 | 67.92 | 0. | 68.78 | 37.40 | 11.72 | 25.36 | 83.41 | 70.00 | 12.77 |
| | APR. | 231.84 | 611.57 | 3.12 | 65.73 | 0. | 66.61 | 51.80 | 5.72 | 25.36 | 80.76 | 70.00 | 11.93 |
| | MAY | 229.90 | 565.73 | 25.91 | 67.92 | 0. | 71.92 | 17.40 | 20.35 | 25.36 | 78.48 | 70.00 | 11.94 |
| | JUN. | 227.17 | 505.59 | 8.26 | 65.73 | 0. | 66.95 | 4.60 | 24.06 | 25.36 | 76.12 | 70.00 | 11.17 |
| | JUL. | 225.27 | 466.37 | 31.24 | 67.92 | 0. | 72.84 | 10.40 | 23.31 | 25.36 | 73.83 | 70.00 | 11.16 |
| | AUG. | 224.17 | 444.66 | 48.66 | 67.92 | 0. | 75.36 | 0. | 28.14 | 25.36 | 72.33 | 70.00 | 10.90 |
| | SEP. | 243.00 | 925.00 | 573.32 | 90.25 | 0. | 176.54 | 0. | 68.11 | 34.82 | 81.17 | 70.00 | 16.47 |
| | OCT. | 243.00 | 925.00 | 526.46 | 326.03 | 196.75 | 602.00 | 2.30 | 223.90 | 121.72 | 89.81 | 70.00 | 52.08 |
| | NOV. | 243.00 | 925.00 | 363.26 | 315.51 | 43.81 | 414.03 | 32.60 | 147.16 | 121.72 | 90.35 | 70.00 | 50.40 |
| | DEC. | 242.91 | 922.09 | 69.51 | 67.92 | 0. | 78.51 | 63.90 | 5.46 | 25.36 | 90.56 | 70.00 | 13.95 |
| 1976 | JAN. | 241.31 | 871.53 | 22.34 | 67.92 | 0. | 71.46 | 50.40 | 7.87 | 25.36 | 89.72 | 70.00 | 13.81 |
| | FEB. | 239.41 | 814.31 | 11.17 | 63.54 | 0. | 65.57 | 34.60 | 12.36 | 25.36 | 87.92 | 70.00 | 12.64 |
| | MAR. | 237.03 | 746.24 | 5.22 | 67.92 | 0. | 69.10 | 37.40 | 11.84 | 25.36 | 85.83 | 70.00 | 13.17 |
| | APR. | 234.56 | 679.70 | 3.64 | 65.73 | 0. | 66.69 | 51.80 | 5.74 | 25.36 | 83.38 | 70.00 | 12.35 |
| | | | | | | | | | | | | | 3848.13 |