

B. 6797

D A M S I N C Y P R U S 1962-1963



DAM CONSTRUCTION 1962-1963

“Lack of sufficient water constitutes the most serious problem of Cyprus” and “the Government is resolved to face every aspect of the water problem with determination and... to invest substantial amounts for the development of water resources in the Island”, the President of the Republic Archbishop Makarios told the House of Representatives in August, 1961, when announcing the Government’s Five-Year Development Programme.

Indeed £10 million was then earmarked for this purpose and the Water Development Department embarked on an unprecedented programme of activity, preparing plans and carrying out projects destined to hold back water from running to the sea and to be used directly for irrigation or replenish underground water resources.

Characteristic of this activity has been the fact that 11 major dams for irrigation and 35 small as well as 7 larger dams for antiflood and recharge purposes have been constructed since Independence, as against 14 in the years 1898 - 1960.

Furthermore six major projects are scheduled for 1964 and more and more works are planned for the future. The Water Development Department has been assisted in its task by a pool of experts from the United Nations, the U.S.A., The Federal Republic of Germany and France.

This booklet gives an account of irrigation and other projects completed in 1962, and of similar works currently under construction.

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MORPHOU DAM

The Morphou Dam is the largest dam built so far in Cyprus both in capacity and volume of materials used.

The capacity of the Dam is about 450 million gallons and was chosen after due consideration to recharge the Morphou aquifers. The maximum height of the dam is 37 feet at its crest 20 feet wide at its base and 180 feet at its maximum width. It is 4,200 feet long.

The body of the dam is formed by about 200,000 cubic yards of gravel and sand obtained from the river bed and about 70,000 cubic yards of clay.

A spillway is provided which is 250 feet long at 7 feet lower than the crest of the dam, through which the overflow of the reservoir will escape and is big enough to cope with the maximum expected flood.

Expenditure on the construction of the dam amounted to £82,000. Some £13,000 was also spent for the acquisition of land and the construction of a new road. An additional sum of £6,000 was spent for the design, supervision and overheads.

The area irrigated from the boreholes situated downstream of the dam structure is about 22,000 donums. This dam was constructed by the Water Development Department.

PRODROMOS RESERVOIR

The Prodromos reservoir, built near the Prodromos - Troodos road at an altitude of about 5,000 ft., is the largest of its kind ever built in Cyprus.

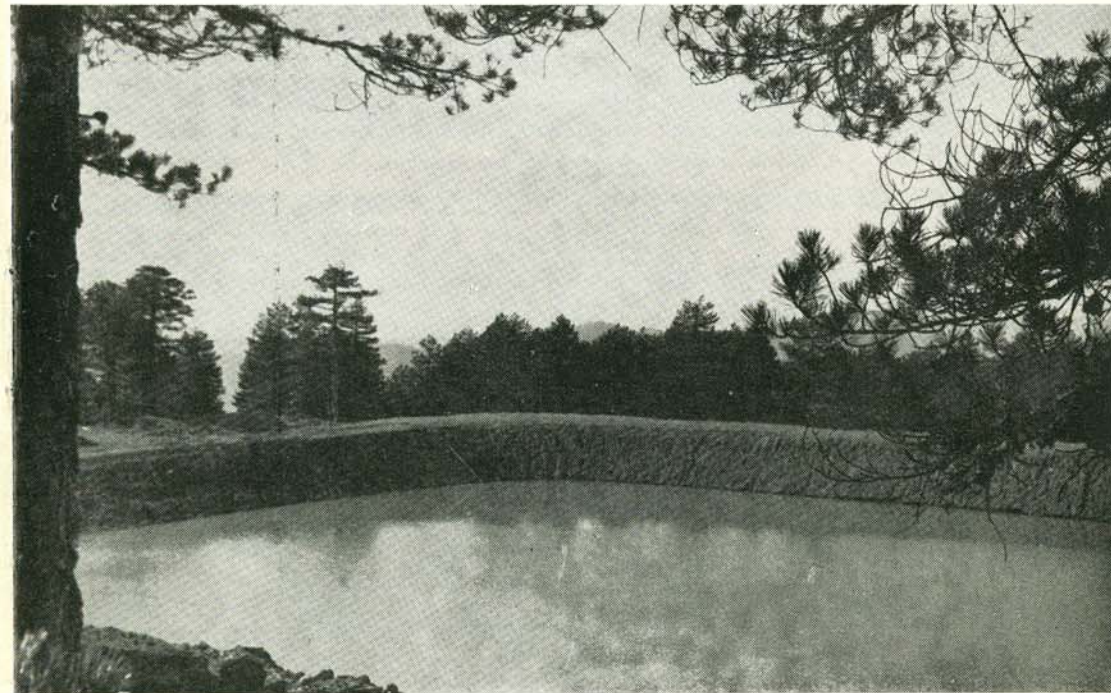
It involved 165,000 cubic yards of excavation into decomposed igneous rock.

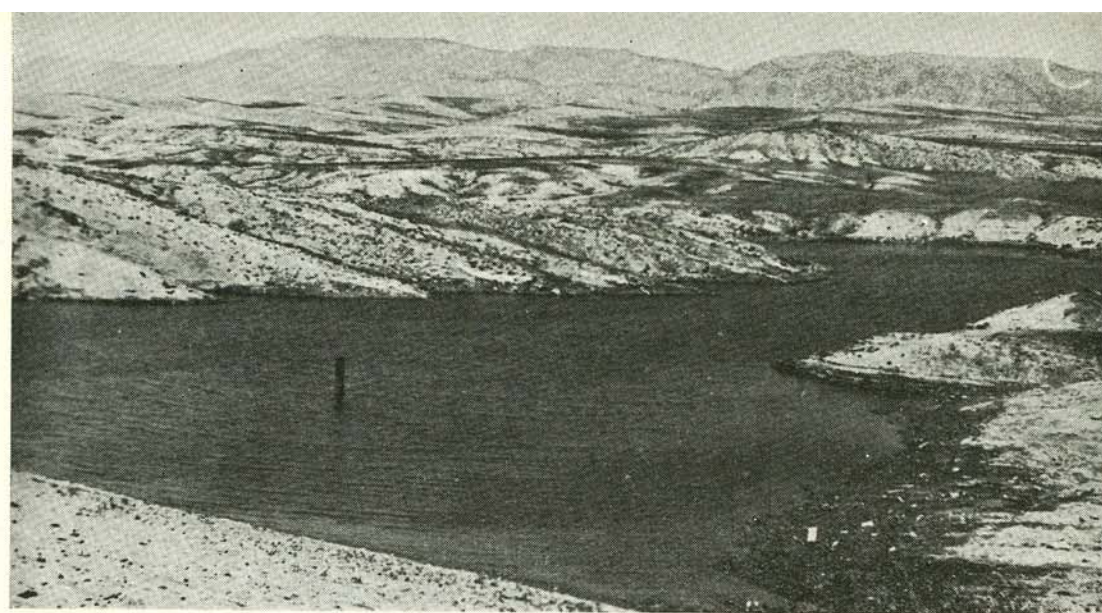
It is a rectangular reservoir of a length of 840 ft. and width 240 ft. The depth of the reservoir is 20 ft. The reservoir was built of 96,000 cubic yards of earth.

A zoned embankment was introduced by using 10 ft. thick clay on the reservoir side and 3 ft. clay on the base and using the other drift materials on the outside face.

The reservoir's holding capacity is about 25 million gallons of water, which will be used to irrigate about 160 donums of deciduous fruit trees belonging to the Prodromos Irrigation Division.

The cost of the reservoir is £72,000. It will be completed in 1963.





GEUNYELI EARTH DAM

This dam was built on the "Almyros" stream which descends from the Kyrenia hills and discharges on the Pedieos river at Orta Keuy. The position of the dam is about two miles upstream of Geunyeli and about one mile east of the main Nicosia-Kyrenia road.

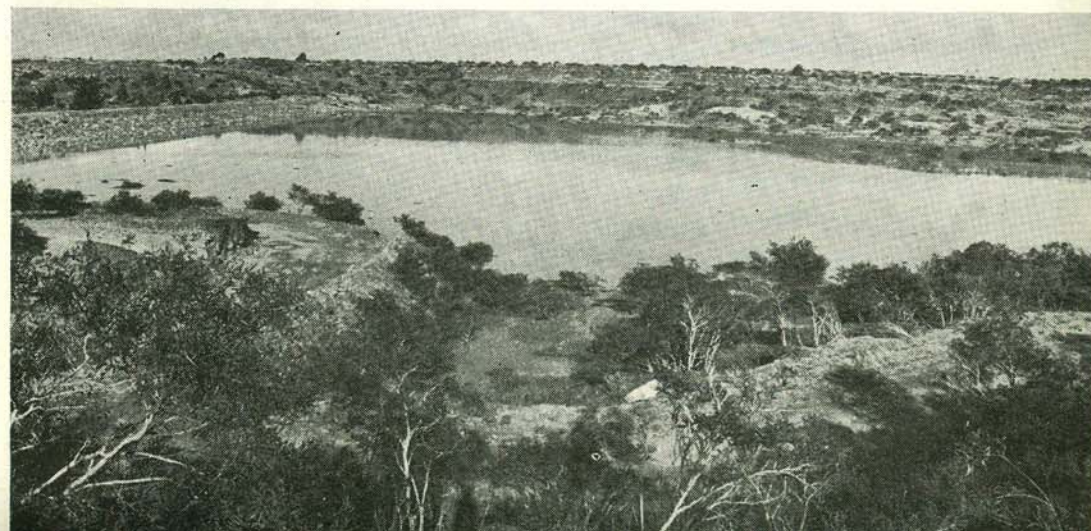
The capacity of the dam is 230 million gallons and the volume of earthfill amounted to 66,000 cubic yards.

The maximum height of the dam is 50 ft. and it has a spillway capable to cater for a flood of 3500 cusecs.

The maximum surface area of the water in the reservoir is 65 acres.

An area of 1,300 donums of spring crops is irrigated from this dam.

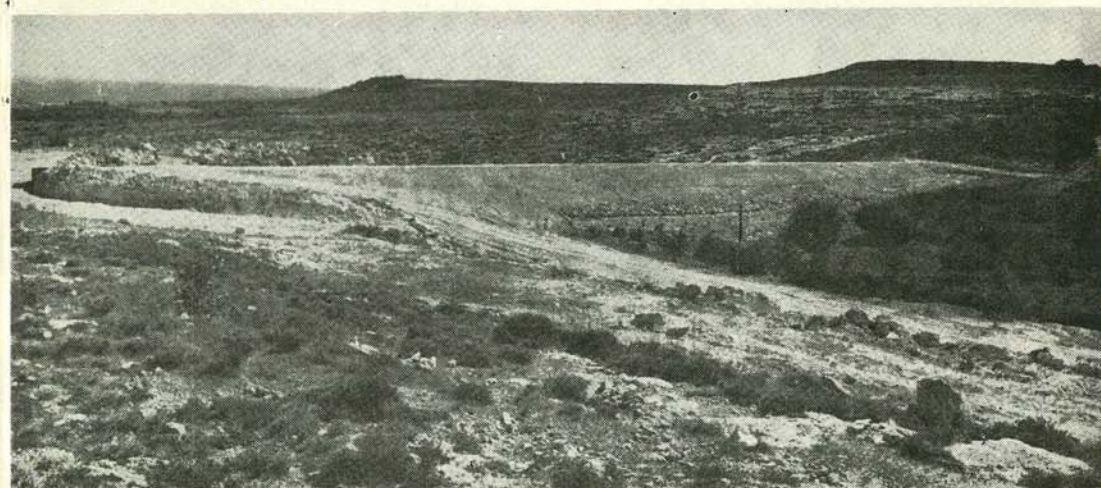
The cost of the dam amounted to £22,000 excluding overhead expenses. It was completed in 1962.



PARALIMNI RECHARGE WORKS

This scheme consists of the construction of a canal, which will take water from the natural Paralimni lake to the Paralimni coastal aquifer for recharging the depleted water resources.

This canal along its route will also supply water to 35 small reservoirs by many small dams in small rivers. The water brought from Paralimni lake and coming from the 35 catchments will be used for local recharge. The average available water for recharge is about 200 million gallons.



PANAYIA DAM

Belonging to the Paralimni recharge works is the pictured Panayia dam on the Panayia stream. It has an embankment 23 ft. high and 300 ft. long. The capacity of the reservoir is 10 million gallons. Purpose of this dam is to recharge.

The scheme was completed in 1962, at a cost of £27,000.

ATHALASSA DAM

The Athalassa dam was built on the "Vathys" stream which is on small tributary of the Pedieos river and has its sources in the area of Xeri village.

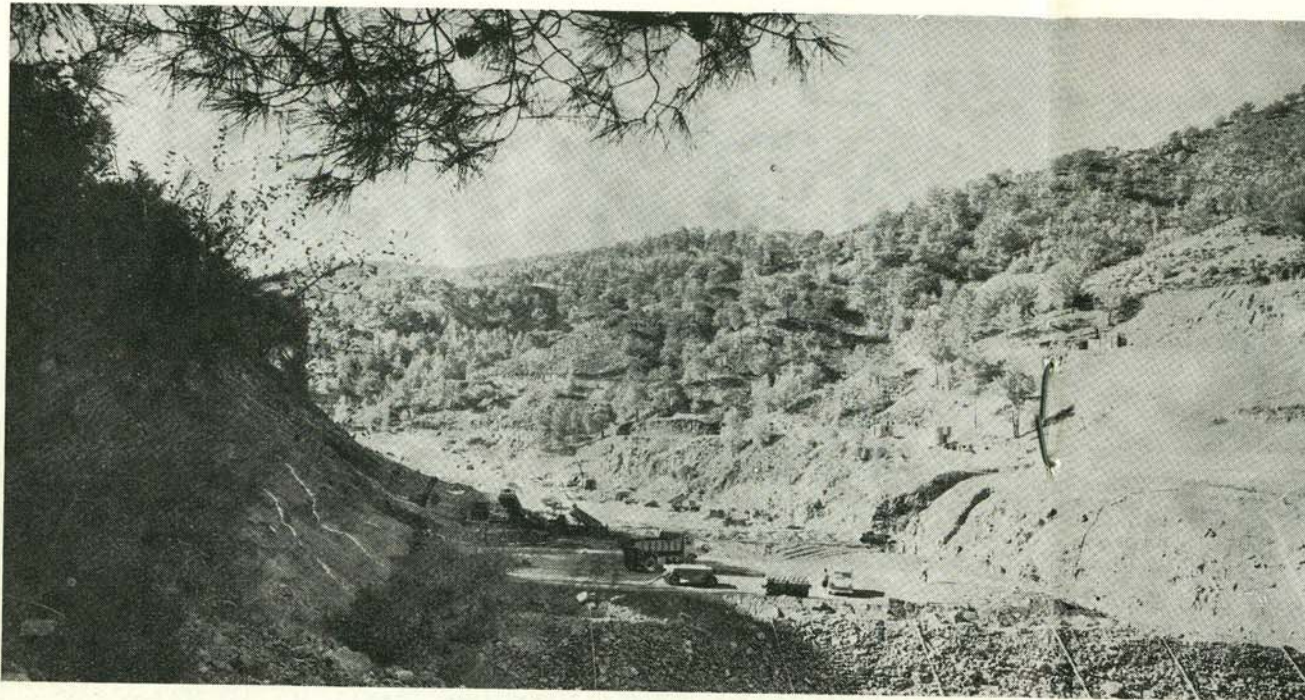
The dam is within the boundaries of the Athalassa Government farm and is about one mile north-east of the main Nicosia-Limassol road.

The volume of earthfill was 135,000 cubic yards and the maximum height was 42 ft. The capacity of the dam is 174 million gallons and the maximum surface area of the water is 56 acres.

The extent of land that can be irrigated, when the dam is full, is 1000 donums of spring crops.

The main purpose for constructing this dam was for flood protection of the Athalassa farm.

Cost of the dam was £22,000; it was built by the Water Development Department at full Government cost and completed in 1962.



POMOS ROCKFILL DAM

This dam is under construction on the Livadhi river (Tylliria) with a height of 110 ft. and a crest length of 450 ft. The capacity of the man-made lake will be 270 million gallons of water and will help irrigate 1500 donums of perennial crops.

The villages to benefit are Pomos and Nea Dhimmata.

AYIA MARINA ROCKFILL DAM

This dam is being constructed on the Xeros river at Chrysokhou. The height of the dam is 100 ft. and the length at crest will measure 400 ft. Capacity of the reservoir is 80 million gallons, enough to irrigate 500 donums of spring crops at Ayia Marina village. The picture shows the desilting and irrigation gallery.

DAM CONSTRUCTION PROGRAMME

1963

The Water Development Department has supervised the planning and started construction in 1963 on seven dams for impounding water for irrigation purposes and two larger dams as well as seven smaller ones near Famagusta for recharge and antiflood purposes.





KITI EARTH DAM

When completed early in 1964 the Kiti dam on the Tremithios river will be one of the biggest, both in volume and capacity, on the island. The dam is of the earthfill type and will involve some 220,000 cubic yards of fill. Height of the dam above river bed is 50 ft. Length of crest of dam some 3,400 ft. Capacity of reservoir which will help irrigate 2,500 donums of early summer and winter crops will be 400 million gallons.

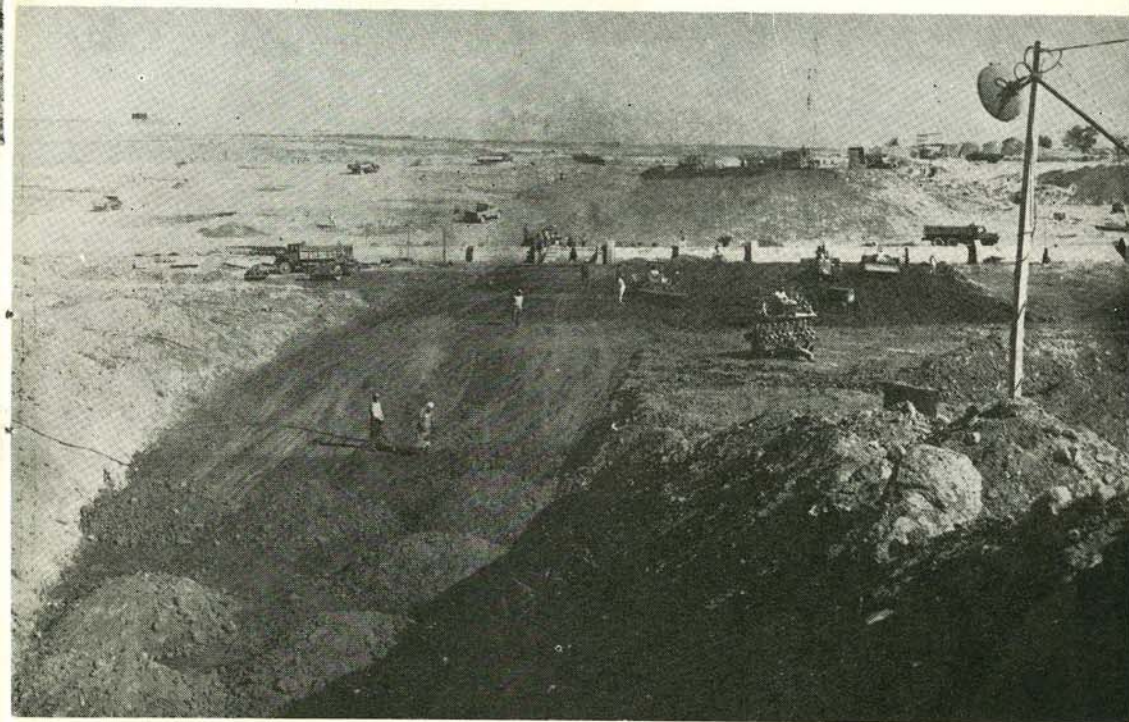
Villages to benefit are Kiti, Sophtadhes and Tersephanou.

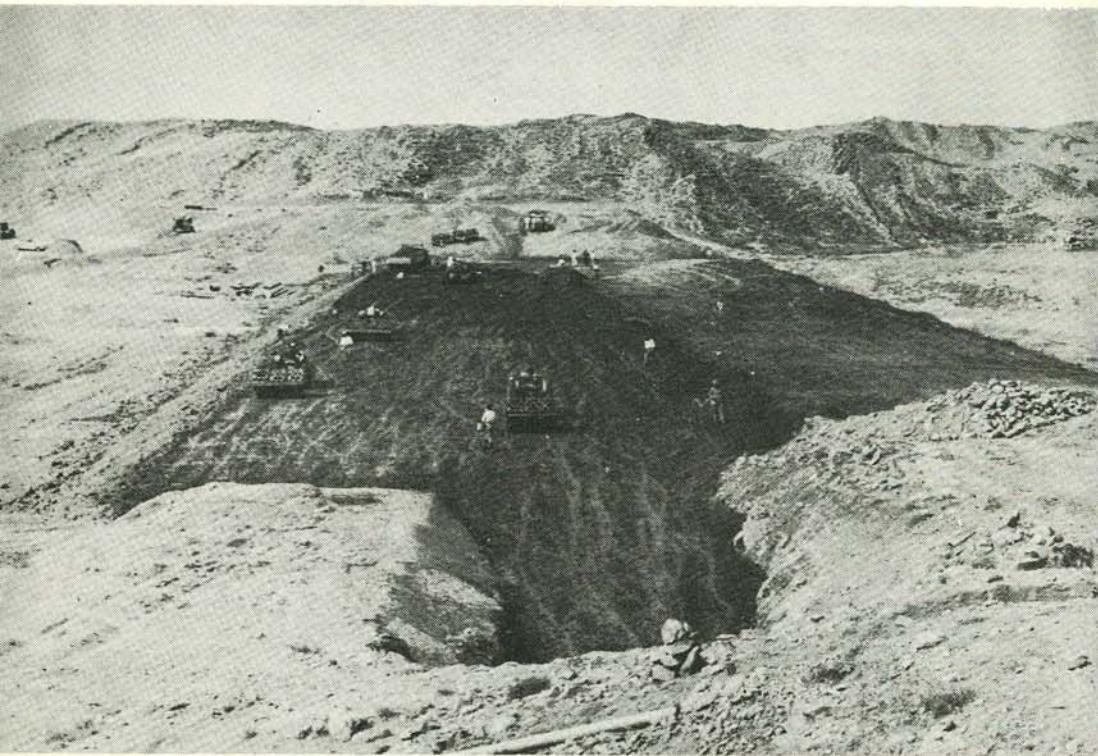
Besides, the reservoir will facilitate the recharge of the surrounding aquifer from where Larnaca and some nearby villages extract their water supply.

The dam is being constructed by the Water Development Department.

ARGAKA - MAGOUNDA ROCKFILL DAM

The Argaka - Magounda dam situated on the Magounda river was started early this summer and will be completed by the end of 1963. When completed this dam will have 100 ft. height, a length at dam crest of 400 ft. and the impounding reservoir will have a capacity of 270 million gallons, which will contribute to irrigating 2,500 donums of summer and winter crops. The dam is being constructed by British contractors under the supervision of the Water Development Department.



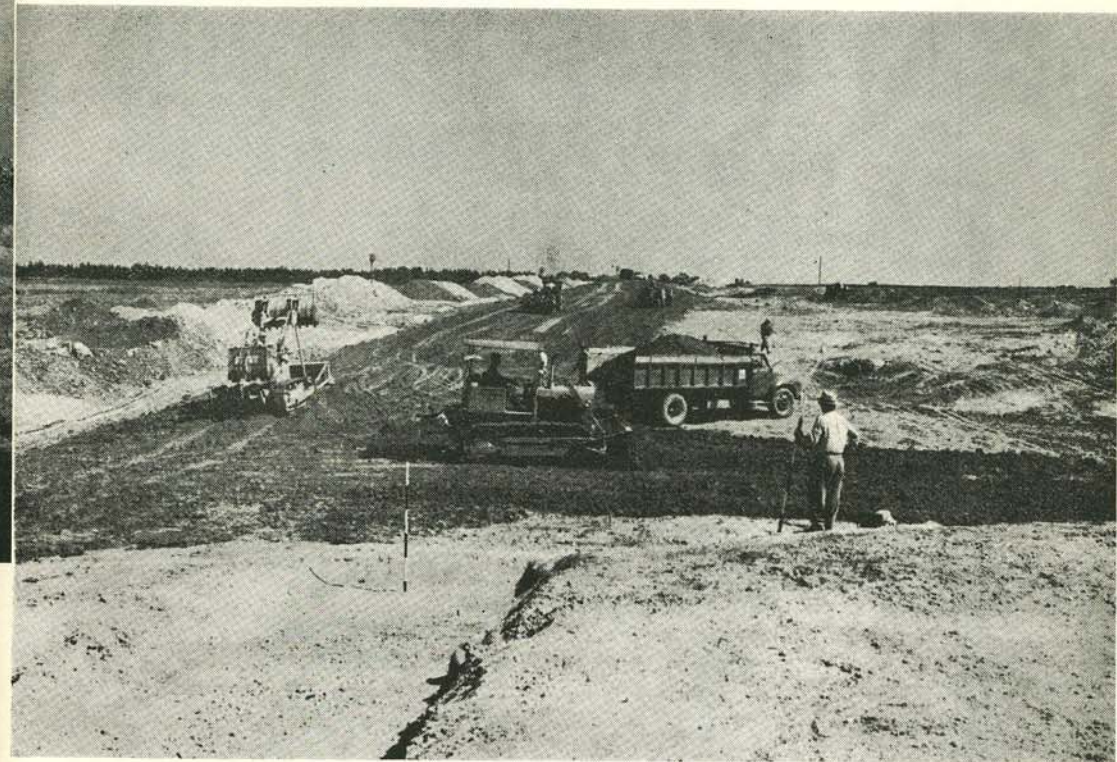


KANLI KEUY EARTHFILL DAM

This dam now under construction, together with the Geunyeli dam completed in 1962, was planned to improve the irrigation of the area situated at the foot of the Kyrenia range, between Kanli Keuy and Geunyeli.

The dam, situated on the "Jinnar Dere", when completed at the end of 1963, will have 50 ft. height and will be 500 ft. long along dam crest. Capacity of the reservoir will amount to 240 million gallons. The area to benefit will amount to 1,000 donums.

This construction is being carried out by the Water Development Department.



FAMAGUSTA RECHARGE AND ANTIFLOOD WORKS EMBANKMENT AT KATO DHERINIA

As a continuation to the 35 small dams together with three bigger dams built in 1962, the construction this year involves two earth dams for recharge or antiflood purposes, one at Kato-Dherinia (antiflood) —shown above— and the other at Ayios Memnon (recharge) as well as seven small dams at Ayia Napa.

The photograph shows an earthfill dam which, when completed at the end of the year, will have a maximum height of 23 ft. and a length at crest of one mile.

The capacity of the reservoir, which is to be subsequently recharged, will be 38 million gallons of water.

DAMS IN CYPRUS SINCE INDEPENDENCE IN 1960

A. Existing Dams

No.	Name	Type of Dam	Height (ft.)	Storage Capacity (million gals)	Year constructed	Irrigable Land perennially
1.	Athalassa	Earth	42	174	1962	1000 donums
2.	Ayios Nicolaos	Earth	10	108	1961	Recharge
3.	Ayios Georghios	Earth	20	25	1961	Recharge
4.	Geunyeli	Earth	50	230	1962	1480 donums
5.	Lefka	Concrete gravity	80	80	1962	450 donums
6.	Morphou	Earth	37	450	1962	Recharge
7.	Paralimni-Panayia Dam	Earth	23	10	1962	Recharge
8.	Paralimni Recharge 35 small dams					
9.	Prodromos	Earth	20	25	1962	160 donums
10.	Sotira	Earth	20	12	1962	Recharge
11.	Aloa	Earth	15	4	1962	Recharge

B. Dams under construction in 1963

12.	Argaka - Magounda	Rockfill	100	400		1500 donums
13.	Ayia Marina	Rockfill	96	70		500 donums
14.	Ayia Napa (7 small dams)	Earth	20	12		Recharge
15.	Famagusta Antiflood Kato Dherinia	Earth	22	38		Antiflood
16.	Famagusta Recharge Ayios Memnon	Earth	16	11		Recharge
17.	Kanli-Keuy	Earth	40	245		1000 donums
18.	Mia Milea	Earth	54	74		600 donums
19.	Ovgos	Earth	46	186		3000 donums
20.	Pomos	Rockfill	108	270		1500 donums
21.	Kiti Dam	Earth	52	400		2500 donums