KAYRAKTEPE DAM AND HEPP, ENVIRONMENTALLY ACCEPTABLE ALTERNATIVE SOLUTION

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ABSTRACT

KAYRAKTEPE DAM AND HEPP, ENVIRONMENTALLY ACCEPTABLE ALTERNATIVE SOLUTION

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In this study, alternative solution of Kayraktepe Dam is investigated. Kayraktepe Dam was planned more than 30 years ago, but due to various reasons the construction could not be realized. In this study, an alternative feasible formulation was developed. Former Kayraktepe Dam was planned for multiple objectives: flood control, energy generation and water supply for irrigation. The newly developed formulation was designed to meet these objects as well.

Keywords: Kayraktepe, dam, flood, hydropower, HEPP

ÖZ

KAYRAKTEPE BARAJI VE HES İÇİN ÇEVRESEL AÇIDAN KABUL EDİLEBİLİR ALTERNATİF ÇÖZÜM

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Tez Yöneticisi: Yard. Doç. Dr. Şahnaz Tiğrek

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Bu çalışmada, Kayraktepe Barajı için alternatif çözüm arandı. 30 yılı aşkın süredir gündemde olan baraj çeşitli nedenlerden dolayı yapılamamıştır. Bu sebeple Kayraktepe Barajı'nı yapılabilir kılabilmek için yeni bir formülasyon geliştirilmiştir. Kayraktepe Barajı taşkın, enerji ve sulama amaçlı bir projedir. Yeni formülasyon da, bu ihtiyaçları karşılayacak şekilde tasarlanmıştır.

Anahtar Kelimeler: Kayraktepe, baraj, taşkın, hidroelektrik, HES

To My Wife and My Parents

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CHAPTER I

INTRODUCTION

Kayraktepe Dam and Hydroelectric Power Plant (HEPP) project area is located on Göksu River Basin, 15 km north of Silifke District of İçel Province. Kayraktepe Dam and HEPP Project have more than 30 years of history. However, up till now the project has not been started. The project formulation was changed a few times but none of them was found to be feasible. Kayraktepe Dam project has three functions: energy production, flood control and flow regulation for downstream irrigation project. However it has been receiving severe critics due to environmental consideration. Both the upstream and downstream of the dam are expected to be adversely affected by the dam. At the upstream there are valuable fertile lands and at the downstream there is Göksu Delta Plain. The Göksu Delta Plain is one of the Turkish wetlands which are protected by Ramsar Convention (Efe and Greenwood, 2007). Thus the construction of the dam on the river will prevent transportation of nutrient enriched sediment to the delta.

Therefore, in this study, alternative solutions of Kayraktepe Dam and HEPP Project were investigated. In order to make the project feasible, the project was divided into smaller projects. In the former formulation, the project consists of just one large dam. But in the newly developed formulation, the project consists of one medium dam and five run-of-river type hydropower stations. With this change, the project was found to be feasible. The most important advantages of this new formulation are given below.

- A very large area containing numerous villages and valuable agricultural areas that were originally marked for expropriation and flooding will be preserved. A dramatic reduction in expropriation area by %83.5 (down to

%16.5 of original) has been attained, where originally 5000 ha area has been reduced to approximately 820 ha.

- The citizens living in the region will not be affected owing to significantly reduced expropriation.

- The Wild Life Protection Area to be flooded as per original formulation will be retained.

- Göksu River Delta to be deprived of natural sediment inflow under the original formulation will now be completely preserved.

- Overall, an entirely renewable and environmentally compliant hydroelectric development yielding flood control and energy production will be realized through this formulation, with the replacement of a large dam by smaller units.

The Chronology of Göksu Basin and Kayraktepe Dam

In this part, the main milestones of the development of the Göksu Basin and Kayraktepe Dam and HEPP Projects were listed in respect of international and national legislation. While reading the list, each bullet shape has a meaning:

- Important national legislations related to water resources projects

- Inauguration dates of administrations related to water resources projects

- Major components of Göksu River Basin

- Important international developments conceptual in water resources project

- Critical stages of the Kayraktepe Dam and HEPP projects and debates on it

  - **1936**: General Directorate of Electrical Power Resources Survey and Development Administration (EİE) was founded to investigate issues on how rivers in the country could be utilized for energy production.

  - **1953**: Initial investigation in the basin started; Stream Gauging Stations were installed.

  - **1954**: State Hydraulic Works (DSİ) was established.

  - **1954**: The basin scale studies for 26 different basins have been started.

  - **1971**: Ramsar Convention or the convention of wetlands was accepted. It is an intergovernmental treaty in order to maintain the ecological character of their Wetlands of International Importance and to plan for the "wise use", or sustainable use, of all of the wetlands in their territories. (Ramsar, İran, 1971).

  - **1977**: The Kayraktepe Dam and HEPP project was identified by EİE.

  - **1977**: The contract awarded to the consortium of EPDC, Su-İş, Su-Yapı and TMB.

  - **1979**: Construction of Gezende Dam on the Ermenek Creek was started.

  - **1982**: The feasibility report of Kayraktepe Dam and HEPP project released by the Consortium.

  - **1984**: ACT No: 3096 released: Local and foreign private companies allowed to generate, transmit distribute and trade electricity by using Built-Operate-Transfer model.

- **1986**: The construction of Kayraktepe Dam was awarded by DSİ to EPDC under finance from the World Bank. Small preliminary works done.

- **1990**: Construction of Gezende Dam was completed.

- **1994**: Turkey ratified Ramsar Convention. The Göksu Delta was recognized as Ramsar site.

- **1997**: Kayraktepe Dam and HEPP Project was revised.

- **1999**: Act No: 4446 released: Legal foundation of "Privatization in the ConstİTUtion was defined.

- **2000**: The World Commission on Dams published an infamous report as "Dams and Development". It is the biggest victory of environmentalist nongovernmental organizations against large dams. In the report, five core values were identified and 26 guidelines were listed for the construction of large dams. Turkey and some other developing economies put strong critics to the report by claiming that they had the right to development. However, from that time onwards, the construction of large dams became difficult due to action taken from international credit agencies (WCD, 2000).

- **2001**: Act No: 4628 released: Aims to form a stable, transparent and competitive electricity market to generate sufficient, sustainable and cheaper electricity.

- **2002**: Construction of Ermenek Dam was started.

- **2003**: Regulation for increasing involvement of private sector in the electricity market was established.

- **2004**: Six on-going HEPP developments were transferred to private sector.

- **2005**: Act No: 5346 released: Aims to increase electricity generation from renewable sources.

- **2006**: The construction of Blue Tunnel was started (water transmission from the Göksu River to Konya Plain).

- **2008**: Kayraktepe Dam and HEPP was awarded to a private company. The company, namely BM holding decided to revise the project in order to eliminate environmental effects.

- **2009**: Construction of Ermenek Dam was completed.

- **2010**: Negotiations with DSİ for the new formulation of Kayraktepe Dam and HEPP project has not been settled yet.

It is very clear from the chronology that the project has been changed several times. Therefore in order to eliminate possible misunderstanding, the original formulation, the revised project and newly developed project are named as Kayraktepe-1982, Kayraktepe-1997 and Kayraktepe 2010, respectively.

Impacts of Kayraktepe Dam:

- **Environmental**: Kayraktepe Dam will have negative effects on both upstream and downstream. There are several endemic species in the lake area. At the downstream the Göksu Delta which is an important wetland is located. The dam will cut sediment transportation to the downstream that will cause loss of fertility and coastal erosion.

- **Social**: Over the years the area is heavily populated. At the upstream there are important agricultural activities whereas at the downstream both agricultural and tourism are important elements for people.

CHAPTER II

DAM DEBATES

Dams are very important structures to supply water and prevent flood from the beginning of the civilization. In the past century, they were built for power generation. In the 20^{th} century dams especially the large ones were densely constructed on various world river systems.

Some environmental damages were caused because of dams. Therefore in the last decade dams receive heavy criticisms from the environmentalists. Dam opponents claim that dams are restricting free flow of fish and thus some species become extinct. Dams prevent sediment transport thus the fertility of the downstream plains is decreasing. The erosion problems on coast lines and draining of wetlands are also the subjects under discussion. The affected population and resettlement issues have been the reasons for critics, too.

The World Commission on Dams published a report in 2000 (WCD 2000). The report heavily criticized environmental and social impacts of large dams and brought new legally non-binding regulations. It is claimed that over the last forty years $1.30x10^6$ hectares of wetlands have been destroyed (The Minister of Environmental and Forestry year-2007).

Especially in 1920s and 1930s wetlands were considered as main culprit for malaria. After 1950 World Health Organization (WHO) changed its policy about malaria instead of fighting mosquitoes, WHO developed strategies to combat with malaria plasmodium. Nevertheless, it becomes an important political debate in Turkey to give land to the farmers who does not have lands. In 1950, a law was decreed about land usage of drained lands. Several wetlands and lakes were drained. However, those lands were not suitable for agriculture. In order to obtain arable land several

lakes (Amik in Hatay, Kestel in Burdur, Gavur in Kahramanmaraş, Sugla and Samsam in Konya), were also dried along with the swamp areas (Turkiye'nin Sulak Alanları, www.wwf.org.tr). There are several other lakes (Akşehir and Beyşehir in Konya, Eber in Afyon) and wetlands (Hotamis and Esmekaya in Konya) that have been drained as a result of decrease of water supply in their feeding rivers due to diverting water to irrigation areas (Akşehir, Beyşehir in Konya).

The effects of dam opposition have been seen in Turkey, too. The construction a few dams has been stopped by court decision due to environmental issues, the cultural heritage and resettlement (e.g. Yusufeli on the Çoruh River and Ilısu Dam on the Tigris River (Yalçın, 2010)). It is expected that in the future more projects will be dropped because of environmental opposition. Turkey also responds to the changing conditions by applying new measures. In 1982 Undersecretary for Environment was established. After that in 1983 Environmental Law was declared. Environmental Impact Assessment (EIA) was issued in 1993. In 1994, Turkey ratified the Ramsar Convention. Impacts of irrigation and drainage practice on wetlands have been examined in the scope of EIA. In Turkey, EIA is required for storage facilities having reservoir areas of more than 15 km^2 and reservoir volumes of more than 100 x $10^6 m^3$ as well as power plants having installed capacities of more than 25 MW For power plants with smaller capacities, a preliminary EIA is necessary.

The resettlement law was also changed after monitoring the conditions of resettled people for over the years. In Turkey, involuntary resettlement is regulated by the Expropriation Law and the Resettlement Law. The expropriation law states that expropriation payments are made in cash and in advance. From the experience obtained in Turkish projects, it has been found that around 25% of the affected families choose government-assisted resettlement. The remaining 75% of affected families prefer self-resettlement rather than government resettlement, because they receive sufficient expropriation compensation to afford their own resettlement cost. However it has been observed that the families who assumed urban setting could not maintain their living standards since the family members were unskilled workers in

the cities. Although, new resettlement practice targets to make resettled people as productive as before (Altınbilek et al. 1999; Yasinok 1990; Akyürek 2006), there are still difficulties in application.

Since Anatolia had been a home to many civilizations over the 6000 years, it has quite a lot archeological sites where dams are located (Küçükdoğan 2007).

CHAPTER III

KAYRAKTEPE DAM (KAYRAKTEPE – 1982 and 1997)

The Kayraktepe Dam Project was identified during the reconnaissance study on Göksu River Basin undertaken by General Directorate of Electrical Power Resources Survey and Development Administration (EİE). It was planned to produce energy, control flood and maintain the required water to the downstream irrigation projects.

Göksu River is an important river system discharging to the Mediterranean Sea. It has a length of 260 km and a drainage basin of about 10000 km^2. There are two tributaries of the river, namely Ermenek Creek and Gökçay Creek. It discharges into the sea near Silifke where Göksu Delta Plain developed due to the sediment carried by the river. A plan view of Kayraktepe Dam Project is given in Figure III-1.

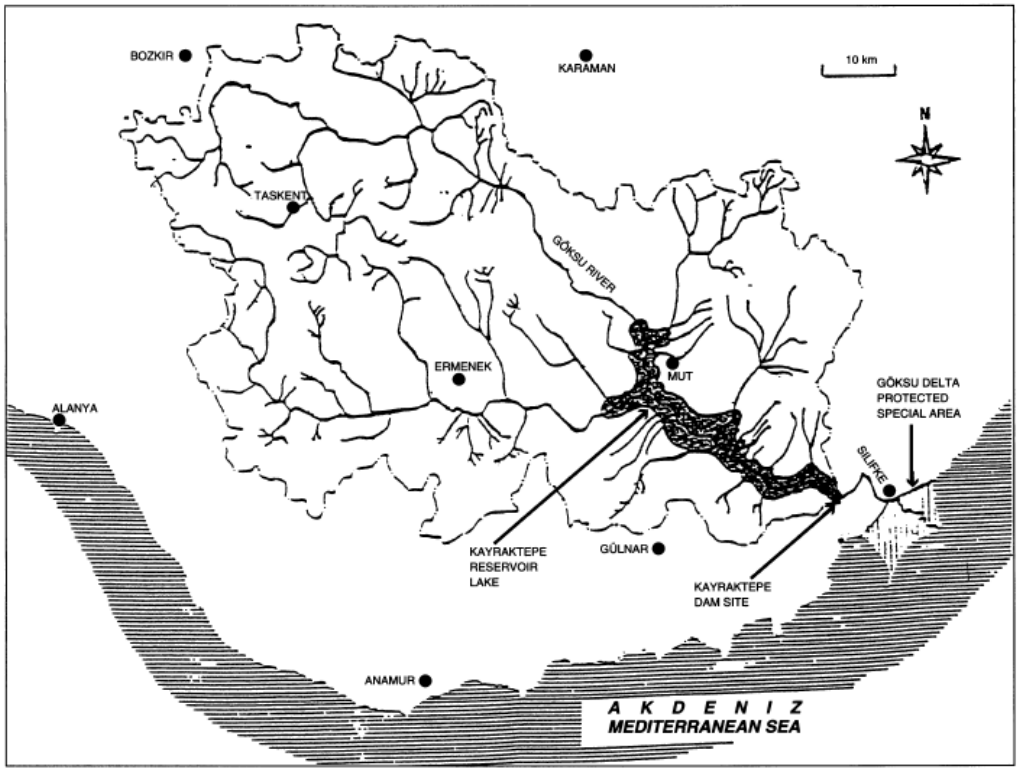

Figure III-1: Kayraktepe Dam and HEPP Project

History of the Project:

In November 1977, as a result of international competitive bidding, a consortium of EPDC, Su-İş, Su-Yapı and TMB was awarded contract for the engineering services for the project. In March 1980, the first phase of the engineering service was commenced. The service included the feasibility study for the purpose of selecting the optimum dam site and formulating an optimum development scheme of the optimum scale. The feasibility study report was prepared in March 1982. Successively the second phase of the service which covered detailed design of the project on the selected development scheme was carried out, and the design report and the loan application report were prepared in January 1983.

In August 1986, construction supervision was awarded by DSİ to EPDC with a financial support of the World Bank. The project is in the investment program since 1986. However, various circumstances affected the implementation and the commencement of the construction has been postponed, exception of preliminary works such as camp facilities and access roads.

Between 1996 and 1997, while the construction has been pending, there has been remarkable development of social infrastructures and private properties in the project area. Particularly, agricultural development including wide area irrigation system in the upstream and downstream of Kayraktepe Dam should be noted. Therefore, additional cost for land acquisition and relocation of road will inevitably affect the economics of the project. Under such circumstances, it became necessary for DSİ to review the development scheme of the project, confirming if the smaller scale scheme of the project is still feasible. Thus, in October 1997, "Göksu – Kayraktepe Dam and Hydroelectric Power Plant Revised Feasibility Study Final Report" was published.

III.1. Description of the Project Area

III.1.1. Geographical Features

Kayraktepe Dam and HEPP project is located 80 km west of Mersin Province and extended between (33°15'E - 34°15'E) longitude and (36°15'N-37°00'N) latitude within the Eastern Mediterranean region. The project area is surrounded by the Silifke Plain and Mediterranean Sea from south, Gezende and Aladağ projects from north and the drainage basins of Sipahili Stream and Lamas Stream from west and east respectively.

Middle Taurus Mountains take place within the project area and extend from east to west in parallel to the Mediterranean Sea. Those mountains divide the Anatolian

plateau from the coastal region, and usually do not permit any passage except the Valley of Göksu River.

The project area is generally comprised of hills and rugged mountains. There are two plains being considered worth mentioning. One is Mut plain on the north, and second is Silifke plain on the south.

The major river, in the project area, is Göksu River and its tributaries. The main tributary of Göksu River rises near Hadim, and after flowing toward south, it joins with Ermenek Stream. Following this, Göksu River flows toward the southeast and takes Hocasait Stream from south and Kurtsuyu from north and passes through Silifke plain and finally feeding into the Mediterranean Sea.

III.1.2. Natural Conditions

In the reservoir and the dam site area, schist, conglomerate and limestone Paleozoic age, limestone of Mesozoic age, and conglomerate, limestone, marl, sandstone and alluvium of Cenozoic age are present. Outcrops of schist, conglomerate and limestone are seen on southeast of reservoir area which are the stratigraphically use rocks. Schist is mainly sound, hard and dense. But interlocation of different layers, weakness due to different hardness. Conglomerate is well cemented and includes different size and kind gravel. Limestone is hard, dense, brittle and medium bedded includes many white calcite veins and also heavily jointed and fractured. Some layers of limestone are dolomites or dolomite and their typical characteristic is cavity like due to hot water.

Turkey is situated on the Alpine – Himalayan Earthquake Belt, and influenced the Alpine structure of Mediterranean Europe, a fair amount of earthquake activity is observed, it is interesting to note that the most of the project area is sİTUated within the earthquake free or less important zone.

The climate of the project area shows typical Mediterranean characteristics which has a dry and hot summer, and a mild and rainy winter. Annual average temperature at Silifke and Mut are (19°C) and (17.2°C) respectively. Annual average precipitation at dam site is around 600 mm and most of the snowfall occurs from November to March.

III.1.3. Social Conditions

The population of project area is 163988 (based on the towns of Silifke and Mut, 1990). It is observed that in rural area, the population tend to increase very slowly or even to decrease in some years. But on the other hand, in the urban centers, the population is increasing at about 5% a year. This shows that there is a strong tendency of immigration from rural area to urban centers.

There is at least a primary school at every village in the project area, in Silifke and Mut there are also high schools. General level of cultural condition does not differ so much from the rest of the country. It is obvious that cultural condition will improve in parallel with the economic development.

III.2. Project Formulation

III.2.1. Kayraktepe – 1982

The first feasibility report was published in 1982. In this report, four dam sites were examined. Among four dam sites, the optimum site was selected. In the final design for the Kayraktepe Project-1982 , it was determined that the rockfill dam with vertical clay core was optimal, and that the alluvial deposit was to be excavated down to the sound rock foundation so as to ensure dam safety and satisfactory foundation treatment. According to this report, Kayraktepe Dam main characteristics are given in Table III-1.

Table III-1 Kayraktepe – 1982 Project Characteristics

	Kayraktepe 1982
River Name	Göksu River
Drainage Area (km^2)	10 069
Flood Water Level (m)	158.00
High Water Level (m)	157.00
Low Water Level (m)	127.50
Gross Storage Capacity (10^6 m^3)	4 800.00
Flood Storage Capacity (10^6 m^3)	160.00
Active Storage Capacity (10^6 m^3)	2 800.00
Reservoir Area (km^2)	133.00
Type	Rockfill Dam with Center Core
Elevation of Dam Crest (m)	161.00
Height of Dam (m)	196.00
Installed Capacity (MW)	206.00

III.2.2. Kayraktepe – 1997

In 1997, the feasibility report was revised. Basic idea and typical section of the dam are same as the final design report in 1983 except dam height.

In this revised feasibility, it is concluded that the dam lowered 35.50 meters is economically superior to the original. Therefore it is indispensable to revise a comparative study on the dam type again, considering the several effects caused by lowering dam height. In order to confirm the geological conditions at the dam site, several investigations have been carried out for the original project so far. Those results are also highly useful for this comparative study. According to this report, Kayraktepe Dam main characteristics are given in Table III-2. The comparison of these two reports is given in Table III-3. All values were taken from the feasibility reports published in 1982 and 1997 respectively.

Table III-2 Kayraktepe – 1997 Project Characteristics

	Kayraktepe 1997
River Name	Göksu River
Drainage Area (km^2)	10 069
Flood Water Level (m)	122.50
High Water Level (m)	120.00
Low Water Level (m)	110.00
Gross Storage Capacity (10^6 m^3)	1 726.90
Flood Storage Capacity (10^6 m^3)	160.00
Active Storage Capacity (10^6 m^3)	524.80
Reservoir Area (km^2)	65.25
Type	Rockfill Dam with Center Core
Elevation of Dam Crest (m)	125.50
Height of Dam (m)	160.00
Installed Capacity (MW)	149.00

Table III-3 Comparison of Kayraktepe 1982 and 1997 Alternatives

	Kayraktepe 1982	**Kayraktepe 1997**
River Name	Göksu River	Göksu River
Drainage Area (km^2)	10 069	10 069
Reservoir		
Flood Water Level (m)	158.00	122.50
High Water Level (m)	157.00	120.00
Low Water Level (m)	127.50	110.00
Available Drawdown Depth (m)	29.50	10.00
Gross Storage Capacity (10^6 m^3)	4 800.00	1 726.90
Flood Storage Capacity (10^6 m^3)	160.00	160.00
Active Storage Capacity (10^6 m^3)	2 800.00	524.80
Reservoir Area (km^2)	133.00	65.25
Dam		
Type	Rockfill Dam with Center Core	Rockfill Dam with Center Core
Elevation of Dam Crest (m)	161.00	125.50
Height of Dam (m)	196.00	160.00
Length of Dam Crest (m)	580.00	460.00
Volume of Dam (10^3 m^3)	17 000	7 747
Spillway		
Design Flood (m^3/s)	9 875	9 875
Type	Gated Chute	Gated Chute
Overflow Crest Elevation (m)	143.00	107.50
Width of Overflow Crest	97.80 m (including 5 piers width 3.00 m)	97.80 m (including 5 piers width 3.00 m)
Energy Dissipating System	Flip Bucket	Flip Bucket
Type of Gate	Tainter Gate	Tainter Gate
Number of Gate	6.00	6.00
Size of Gate (Width x Height)	13.80 m x 15.00 m	13.80 m x 15.00 m
Power Intake		
Type	Inclined	Inclined
Number	2.00	2.00
Inlet Elevation (m)	105.00	87.50
Type of Gate	Caterpillar Gate	Caterpillar Gate
Number of Gate	2.00	2.00

Table III-3 Project Characteristics (Continued)

	Kayraktepe 1982	Kayraktepe 1997
Headrace Tunnel		
Type	Circular Pressure	Circular Pressure
Number	2.00	2.00
Discharge Capacity (m^3/s)	198.00	195.00
Inner Diameter (m)	8.40	8.00
Length (Tunnel 1 / Tunnel 2)	170.80	213.46 m / 254.47 m
Penstock		
Type	Steel Embedded	Steel Embedded
Number	2.00	2.00
Inner Diameter (Tunnel 1 / Tunnel 2)	7.20 m ~ 5.20 m	6.80 m ~ 5.20 m
Length (Tunnel 1 / Tunnel 2)	315.20 m / 283.80 m	172.85 m / 166.69 m
Powerhouse		
Type	Semi-Underground	Semi-Underground
Turbine		
Type	Vertical Shaft, Francis Turbine	Vertical Shaft, Francis Turbine
Number	2.00	2.00
Max Discharge (m^3/s)	198.00	195.00
Installed Capacity (MW)	206.00	149.00

III.2.3. Geological Features

The dam site is characterized geologically by the following features.

- Thick alluvium in the riverbed.
- High permeability of conglomerate, especially of the right abutment.
- Major fault and sheared zone at the bedrock.

Optimal dam type should be selected considering consistency with adequate measures against the above-mentioned geological features.

CHAPTER IV

ALTERNATIVE SOLUTION

The first feasibility report of Kayraktepe Dam was published in 1982. In that report, the project was composed of just one dam with a height of 196 m. In 1986, the construction of Kayraktepe Dam was awarded by DSİ to EPDC under the finance from World Bank. But some years later, World Bank cancelled the loan due to the low rantability, environmental and social problems.

In 1997, the feasibility report was revised. In this revised feasibility study, it is concluded that the dam lowered 35.50 meters is economically superior to the original. Kayraktepe – 1997 alternative has also significant social and environmental problems. Therefore, the dam could not be constructed also according to this alternative.

In order to make the project feasible, the project was disintegrated into smaller projects. In this newly developed formulation, the project consists of one medium dam and five run-of-river type hydropower stations. The plan view is given in Figure IV-1.

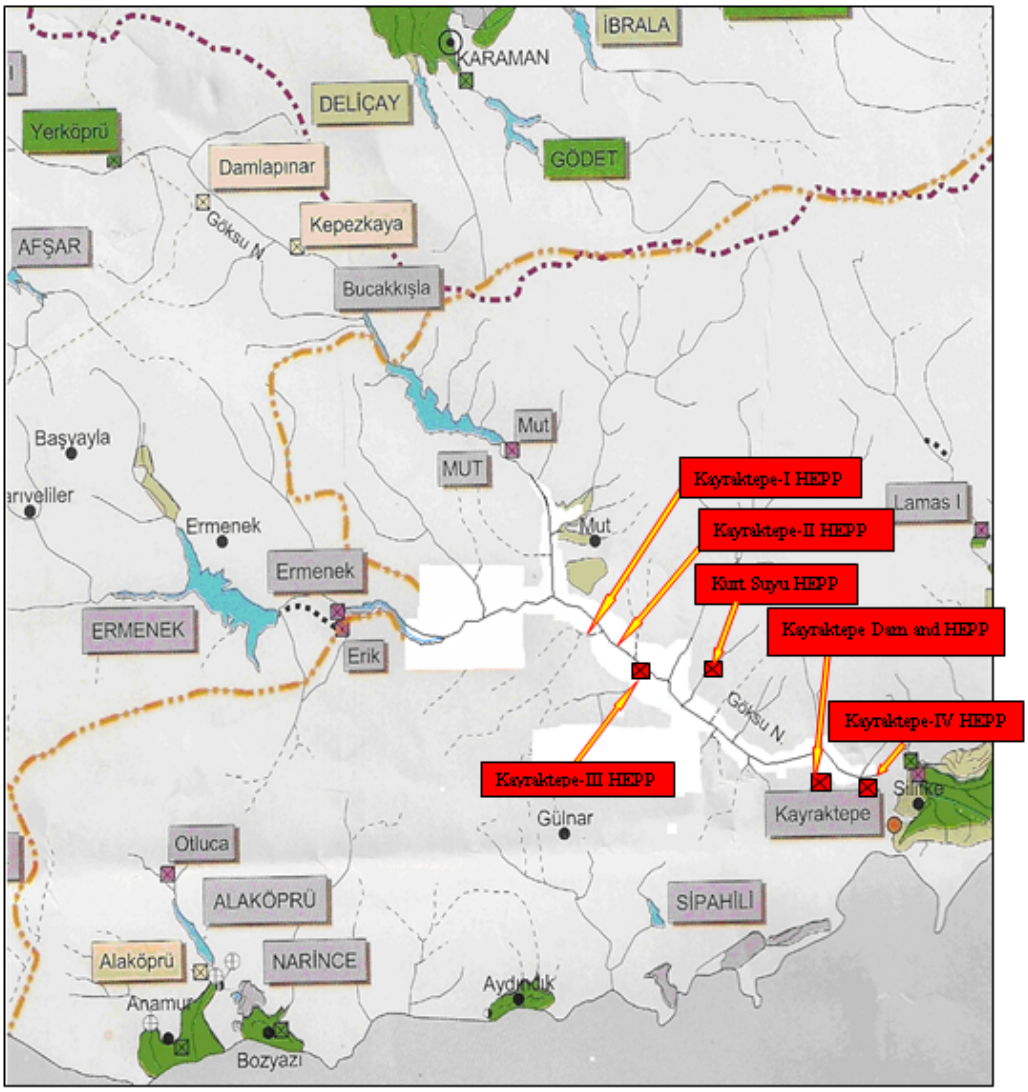

Figure IV-1: Kayraktepe Alternative Formulation

IV.1. Project Characteristics

IV.1.1. Kayraktepe I Diversion Weir and HEPP

Kayraktepe I Diversion Weir is planned to be located both on Göksu River and Ermenek Creek. The thalweg elevation at the weir location is 117.00 m. The characteristics of Kayraktepe I Diversion Weir are given below:

- Two uncontrolled spillways, one of them is planned on Göksu River, and the other one is planned on Ermenek Creek.
- The space between these spillways is planned to be filled with RCC body.
- At the right bank of Ermenek Creek, 234 m length RCC body is planned.
- The operating level of Kayraktepe I Diversion Weir is 120.00 m.
- The tailwater elevation of Kayraktepe I HEPP is 110.00 m.
- Design discharge is 227.00 m^3/s.
- Installed power is 20.53 MW.
- Annual average energy production will be 58.80 GWh.

IV.1.2. Kayraktepe II Diversion Weir and HEPP

Kayraktepe II Diversion Weir is planned to locate on Göksu River. The thalweg elevation at the weir location is 106.00 m. The characteristics of Kayraktepe II Diversion Weir are given below:

- Left bank of the weir is planned as RCC body.

- Left bank of the weir is planned as an uncontrolled spillway.

- The middle part is composed of sluiceway, water intake structure and power plant.

- The operating level of Kayraktepe II Diversion Weir is 110.00 m.

- The tailwater elevation of Kayraktepe I HEPP is 104.00 m.

- Design discharge is 232.00 m^3/s.

- Installed power is 12.53 MW.

- Annual average energy production will be 39.37 GWh.

IV.1.3. Kayraktepe III Diversion Weir and HEPP

Kayraktepe III Diversion Weir is planned to locate on Göksu River. The thalweg elevation at the weir location is 95.50 m. The characteristics of Kayraktepe III Diversion Weir are given below:

- Left bank of the weir is planned as RCC body.

- Right bank of the weir is planned as sluiceway and water intake structure.

- The middle part is planned as an uncontrolled spillway.

- The conveyance line is composed of canal and tunnel. The length of the conveyance canal is 5925.00 m and the length of the conveyance tunnel 513.95 m.

- At the end of the conveyance line a head pond is planned.

- The water is conveyed from the head pond to the power plant by means of penstocks.

- The operating level of Kayraktepe III Diversion Weir is 104.00 m.
- The tailwater elevation of Kayraktepe I HEPP is 85.00 m.

- Design discharge is 237.00 m^3/s.

- Installed power is 36.53 MW.

- Annual average energy production will be 114.40 GWh.

IV.1.4. Kurtsuyu Diversion Weir and HEPP

Kurtsuyu Diversion Weir is planned to locate on Kurtsuyu Creek. The thalweg elevation at the weir location is 115.00 m. The characteristics of Kurtsuyu Diversion Weir are given below:

- Left bank of the weir is planned as RCC body.

- Right bank of the weir is planned as sluiceway and water intake structure.

- The middle part is planned as uncontrolled spillway.

- The conveyance line is composed of a canal. The length of the conveyance canal is 2 285.00 m.

- At the end of the conveyance line a head pond is planned.

- The water is conveyed from the head pond to the power plant by means of penstocks.

- The operating level of Kurtsuyu Diversion Weir is 120.00 m.

- The tailwater elevation of Kurtsuyu HEPP is 85.00 m.
- Design discharge is 8.00 m^3/s.

- Installed power is 2.48 MW.

- Annual average energy production will be 9.68 GWh.

IV.1.5. Kayraktepe Dam and HEPP

Kayraktepe Dam is planned to locate on Göksu River. The thalweg elevation at the dam location is 41.50 m. The characteristics of Kayraktepe Dam are given below:

- Kayraktepe Dam is composed of controlled spillway, bottom outlet and power plant.

- The power plant is planned as combined with the dam body.

- The operating level of Kayraktepe Dam is 85.00 m.

- The flood level of Kayraktepe Dam is 93.00 m.

- The crest elevation of the dam body is 94.50 m.

- The tailwater elevation of Kayraktepe Dam is 37.00 m.

- Design discharge is 369.22 m^3/s.

- Installed power is 152.13 MW.

- Annual average energy production will be 308.58 GWh.

IV.1.6. Kayraktepe V Diversion Weir and HEPP

Kayraktepe IV Diversion Weir is planned to locate on Göksu River. The thalweg elevation at the weir location is 27.00 m. The characteristics of Kayraktepe IV Diversion Weir are given below:

- Left bank of the weir is planned as RCC body.

- Right bank of the weir is planned as uncontrolled spillway.

- The middle part is composed of sluiceway, water intake structure and power plant.

- The operating level of Kayraktepe IV Diversion Weir is 37.00 m.

- The tailwater elevation of Kayraktepe I HEPP is 28.30 m.

- Design discharge is 369.30 m3/s.

- Installed power is 29.35 MW.

- Annual average energy production will be 57.40 GWh.

Kayraktepe Power system total installed capacity and annual energy generation is given below.

- Installed power is 253.55 MW.
- Annual average energy production will be 588.23 GWh.

Kayraktepe – 2010 formulation characteristics are given in Table IV – 1. Also, a schematic vertical profile of Kayraktepe – 2010 formulation is given in Figure IV – 2. Finally, a plan view of Kayraktepe – 1997 and Kayraktepe – 2010 alternatives were prepared by using a 1/25000 scaled topographic map. This map is given in Figure IV – 3.

Table IV-1 Kayraktepe – 2010 Formulation Characteristics Table

	Kayraktepe I	Kayraktepe II	Kayraktepe III	Kurtsuyu	Kayraktepe Dam	Kayraktepe IV
Thalweg Elevation (m)	117.00	106.00	95.50	115.00	41.50	27.00
Operating Elevation (m)	120.00	110.00	104.00	120.00	85.00	37.00
Flood Level (m)	-	-	-	-	93.00	-
Dam Crest Elevation (m)	-	-	-	-	94.50	-
Tailwater Elevation (m)	110.00	104.00	85.00	85.00	37.00	28.30
Design Discharge (m^3/s)	227.00	232.00	237.00	8.00	369.22	369.30
Installed Power (MW)	20.53	12.53	36.53	2.48	152.13	29.35
Energy Production (GWh)	58.80	39.37	114.40	9.68	308.58	57.40
Length of Canal (m)	-	-	5 925.00	2 285.00	-	-
Length of Tunnel (m)	-	-	513.95	-	-	-

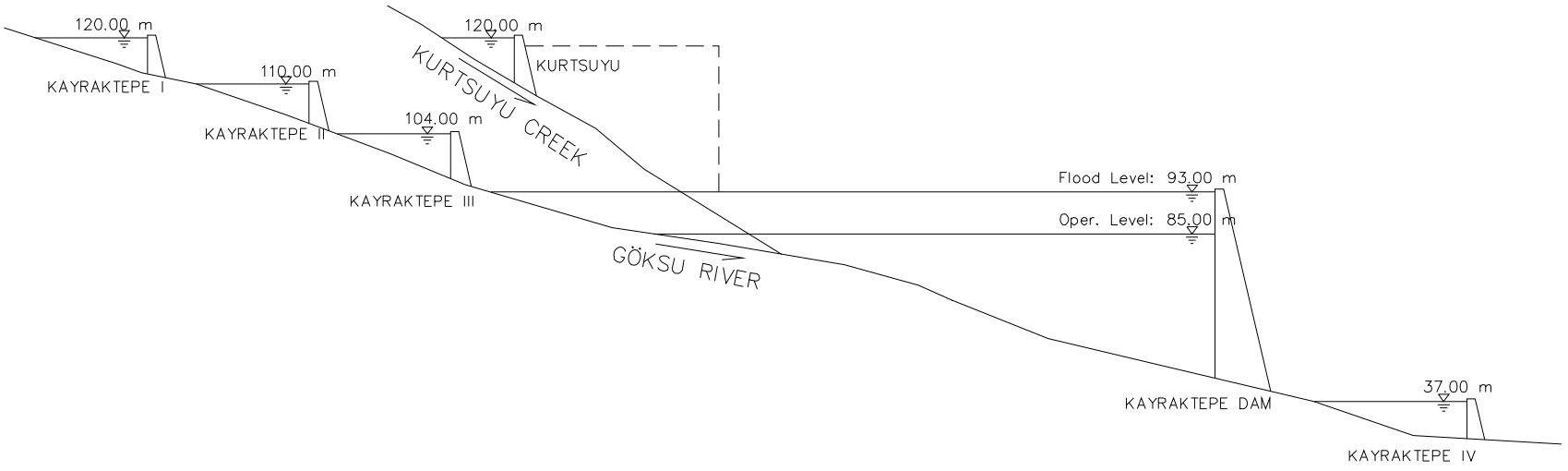

Figure IV-2: Kayraktepe – 2010 Formulation Schematic Profile View

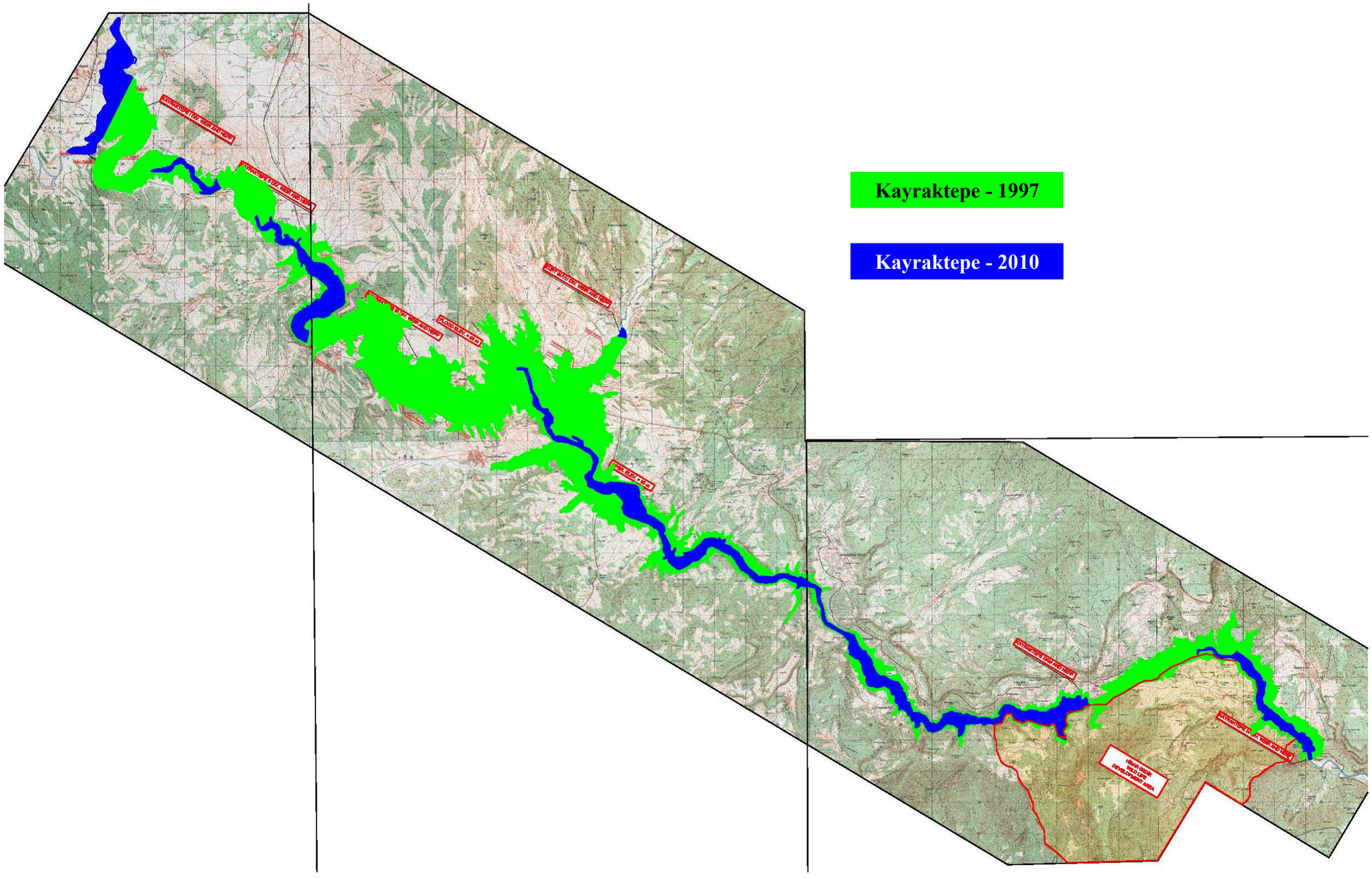

Figure IV-3: Kayraktepe 1997 and Kayraktepe 2010 Reservoir Areas

CHAPTER V

SEDIMENT

In the past accumulated sediment in the reservoir lakes behind the dam were only considered while calculating economic life of the reservoir. This approach is called as design life approach. In this approach cost-benefit calculation is carried out over a certain time period, which is called the economic life of the dam. This time period is taken as approximately 50 years in Turkey. This duration is economically feasible operation and maintenance of the project. In this approach environmental and social issues are only included at the initial stage of the project and any change over the operation and maintenance period is not included (Palmieri et al., 2003, Çetinkaya 2005, Aras 2009,). In present World Bank is promoting life cycle management approach. In this approach sedimentation, decommissioning of the dam, different reservoir sedimentation management alternatives, social and environmental safeguards, economical optimizations for all of the management techniques can be included in pre-feasibility level. Moreover, intergenerational equity is considered in the approach. Thus it is necessary to design a dam with an appropriate sediment management guide. RESCON was studied for Turkey Dams and it is found that it can be used (Tiğrek and Aras, 2011). The management of sedimentation in a reservoir is a very important issue in order to develop sustainable water structures.

Examined 69 rivers out of 169 of the Mediterranean drainage basin and concluded that construction of hundreds of dams around the Mediterranean Sea, especially over the last 50 years, has led to a dramatic reduction in the sediment supply to approximately 50% of the potential (natural) sediment supply. Such a reduction is considered to be the primary factor responsible for the loss of coastal (mainly deltaic) land, with annual rates of erosion ranging from tens to hundreds of meters.

There are a number of studies examining damming factor of coastal erosion on the Black Sea and the Mediterranean Sea (Çetin et al. 1999, Kökpınar et al., 2000, Güler et al., 2002, Fakıoğlu 2005; Yılmaz, 2005, Işık et al., 2006, Göbelez et al. 2008, and among others Fakıoğlu (2005)), studied on Seyhan Dam which is located in Seyhan Basin, nearby Mediterranean Sea. In this study, the author has evaluated the sediment yield by comparing the hydrographical maps produced in different periods and considered causes of sedimentation and countermeasures accordingly. It is found out that the active volume of the reservoir was 1238 hm^3 in 1966 and has decreased to 831 hm^3 until 2005. Also, the accumulated sediment volume is 407 hm^3 in 2005. In 1999, Çetin et al. examined the Seyhan, Ceyhan and Göksu located in the northeastern Mediterranean where the most active shoreline changes have been occurring (Çetin et al. 1999). Çetin et al. (1999) indicated that the construction of the dams had an irreversible effect on the erosion of the deltas on the Mediterranean cost lines by inspecting the Ceyhan and Seyhan Rivers. On the mouth of the Seyhan due to construction of the Seyhan Dam on the river in 1954 greatly reduced sedimentation in the delta and erosion started at a rate of 24696 m^2/yr. As a result, from 1954 to 1995, an area of about 1012536 m^2 has been lost due to coastal erosion, and the delta became retro gradational. On the mouth of the Ceyhan River to the northeast, an area of 835779 m^2 was eroded by the sea due to no sediment influx on the abandoned Ceyhan River channel in Yumurtalık Bay between 1948 and 1995. The total amount of progradation, from 1956 to 1995, on the mouth of the Göksu River is 398 445 m^2. However, there is erosion on the southwest at a rate of 4548 m^2/yr from 1951 to 1995. The reason of the erosion is not due to damming but changing of the flow pattern of the Göksu River. The total amount of retrogression here is about 200125 m^2.

V.1. Estimation Sedimentation Load in Kayraktepe-2010

To calculate the expected sediment amount at the Kayraktepe Dam axis, firstly the sediment gauging stations near the project area were investigated (Figure V-1).

The nearest sediment gauging station is EİE 1714 Göksu River – Karahacılı station. The characteristics of this station are given below. The sediment rating curve of this station is given in Figure V-2.

Basin and Region No – Name:	17 – East Mediterranean Basin, 06 – Adana Region
Station No – Name:	1714 – Göksu River - Karahacılı
Elevation and Location:	24 m, (33° 48' 55" E – 36° 24' 11" N) 15th km of Silifke- Mut Highway
Gross and Net Drainage Area:	10 065.2 km^2, 6 906.7 km^2
Observation Period:	21.12.1965 – 06.09.1999, 34 years, 370 observations
Average Flow and Obs. Period:	117.00 m^3/s (01.06.1961 – 30.09.1996, 36 years)
Average Sediment Distribution:	**Sand**: % 53.3, **Clay+Silt**: % 46.7
Ave. Sed. Amount and Yield:	**Amount**: 1 699 854 Ton/year **Yield**: 246 Ton/year/km^2

Average Sediment Distribution: **Sand**: % 53.3, **Clay+Silt**: % 46.7

Explanations: Gezende Dam 1993, 3158.5 km^2, Total Decreased Area: 3158.5 km^2

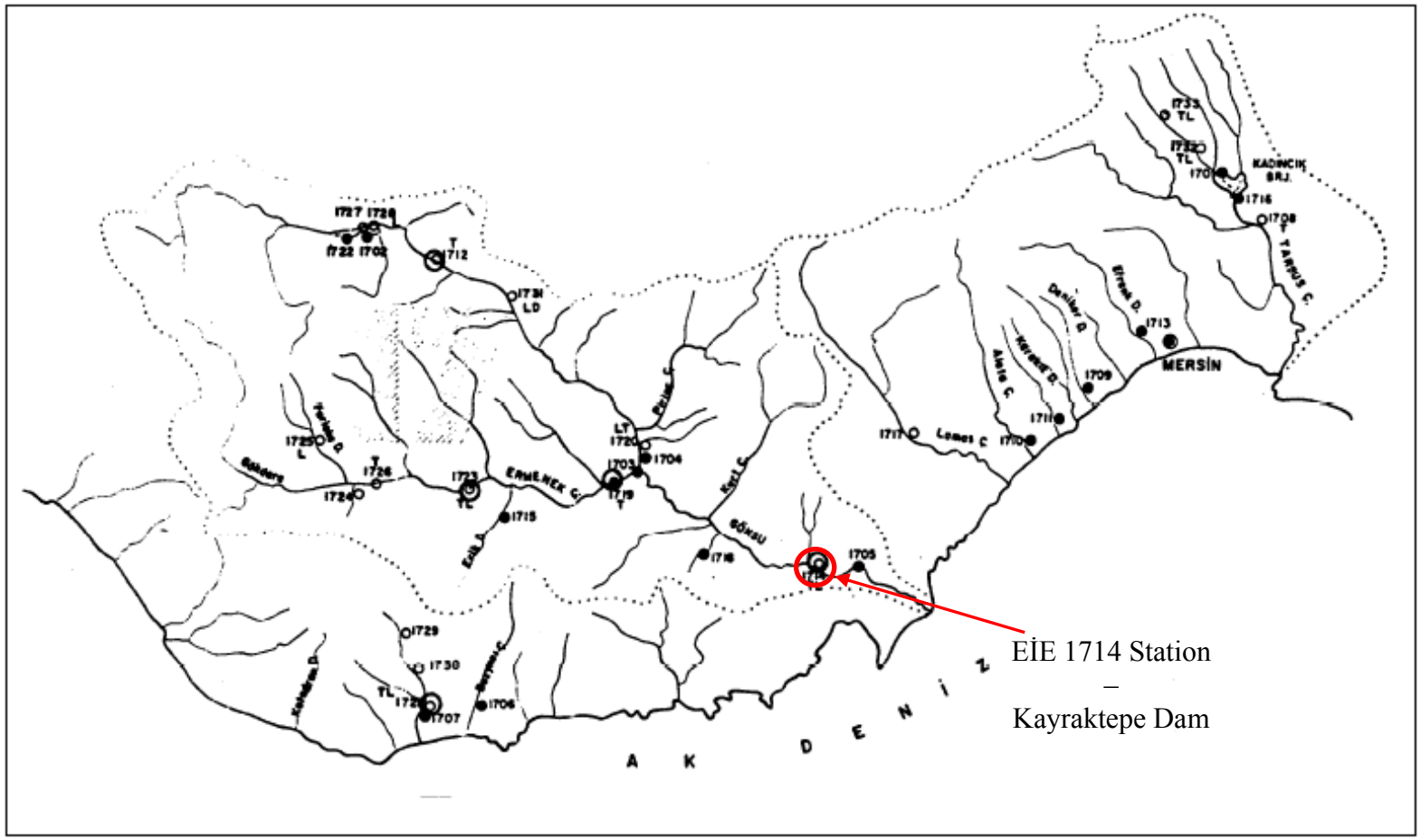

Figure V-1: Sediment Gauging Stations (Türkiye Akarsularında Süspanse Sediment Gözlemleri ve Sediment Taşınım Miktarları, EİE)

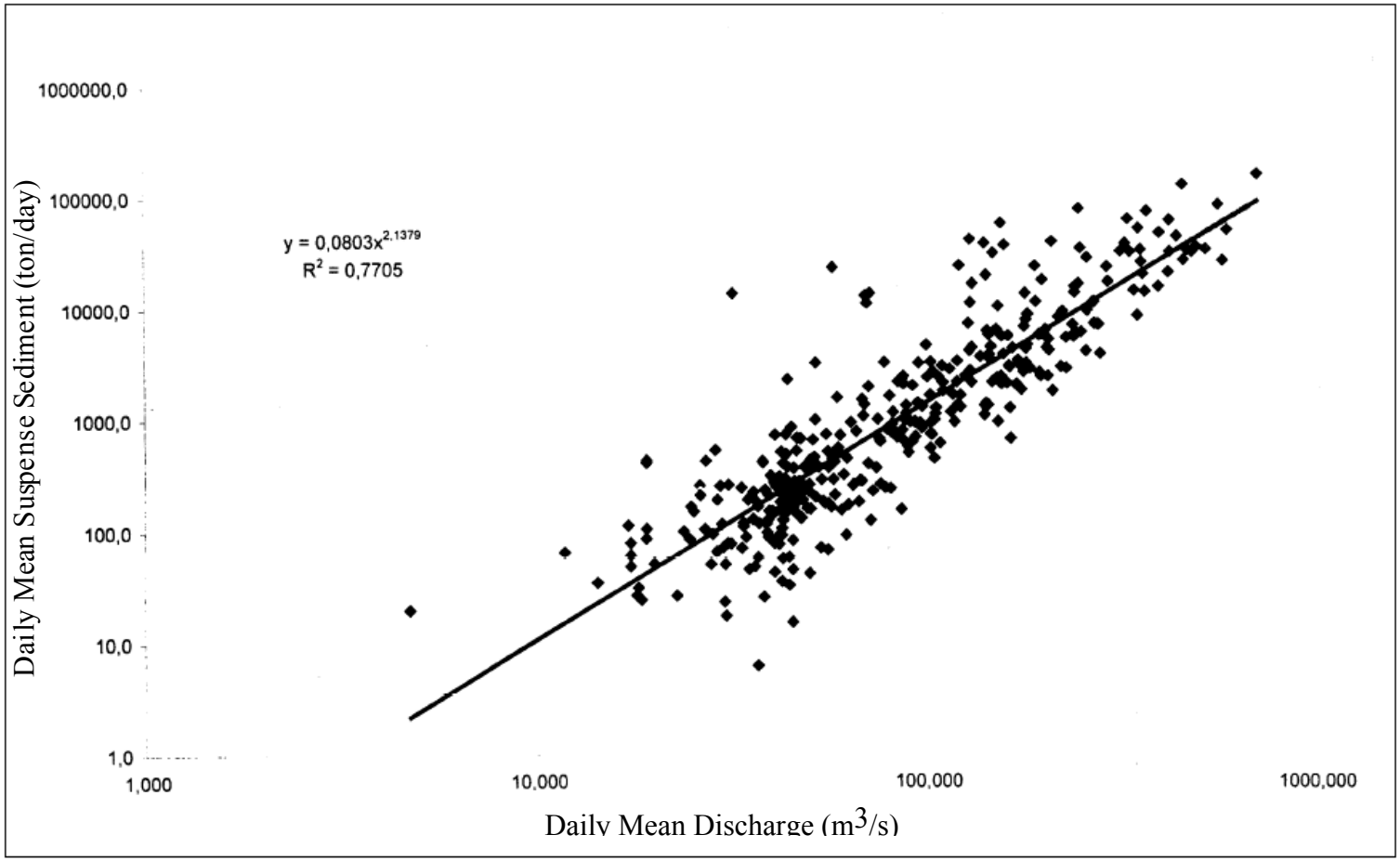

Figure V-2: Sediment Rating Curve (Türkiye Akarsularında Süspanse Sediment Gözlemleri ve Sediment Taşınım Miktarları, EİE)

Y = Daily Average Suspended Sediment Amount (ton/day)

X = Daily Average Discharge (m^3/s)

$Y = 0.0803 \times X^{2.1379}$

$R^2 = 0.7705$

By using the data of this station, the sediment amount at Kayraktepe Dam axis was calculated. The results are given in Table VI-1.

Table V-1 Kayraktepe Dam Sediment Calculations

EİE 1714 Karahacılı Station Sediment Measurement Information		
Gross Drainage Area =	10 065.20	km^2
Yield =	246.00	Ton/yıl/km^2

Gezende Dam Drainage Area =	3 158.50	km^2
Mut Dam Drainage Area =	3 384.00	km^2
Station Net Drainage Area =	3 522.70	km^2
Kayraktepe Dam Drainage Area =	9 840.00	km^2
Kayraktepe Dam Net Drainage Area =	3 297.50	km^2

Kayraktepe Dam Axis Suspended Sediment Amount=	811 185	ton/yıl
Kayraktepe Dam Axis Total Sediment Amount=	973 422	ton/yıl
Kayraktepe Dam Axis Total Sediment Amount=	1 134 036	m^3/yıl

The annual sediment amount at Kayraktepe Dam axis is about 1.13×10^6 m^3. Kayraktepe Dam volume – area curve is given in Figure V-35. Kayraktepe Dam minimum water elevation is 75.00 m. The volume under this elevation is called the dead volume. The dead volume of Kayraktepe Dam is 49.71×10^6 m^3. This volume will be filled up in about 44 years (49.71 / 1.13). Sediments are mostly transported in floods. During the flood periods, by means of the bottom outlets, the transported sediments can be transferred to downstream before subsiding and solidifying.

Therefore, by flushing the reservoir during the flood periods, the dead volume will be adequate for more than 50 years (the economic life of the dam).

V.2. Evacuation of Sediments from Reservoir by Flushing

Flushing is a sediment removal technique that deposited sediment is scoured from reservoir by increasing flow velocity and then transported through low level outlets (Aras 2009). Basson and Rooseboom (1997) has prepared a diagram, by inspecting 177 dam cases. This diagram enables to make a preliminary judgment about whether flushing is an effective technique or not. In the diagram, Kw and Kt which are the ratios of storage (Co) to mean annual river runoff (MAR) and storage to mean annual sediment yield (MSY) respectively, should be calculated.

$K_w = C_0 / MAR$
$K_t = C_0 / MSY$

The right upper part of the diagram, where Kw is greater than 0.2, is denser than other parts. More than often the reservoirs have been designed for 50 or more year's sediment accumulation and these reservoirs have not enough water for flushing operation or reservoir drawdown. If Kw value is between 0.03-0.2, seasonal flushing is suggested. If Kw is smaller than 0.03, sediment sluicing and flushing should be carried out during floods and through large bottom outlets, preferably with free conditions especially in semi-arid regions (Basson, 2004). If Kt, between $30<Kt<100$ excess water is available and flushing is efficient.

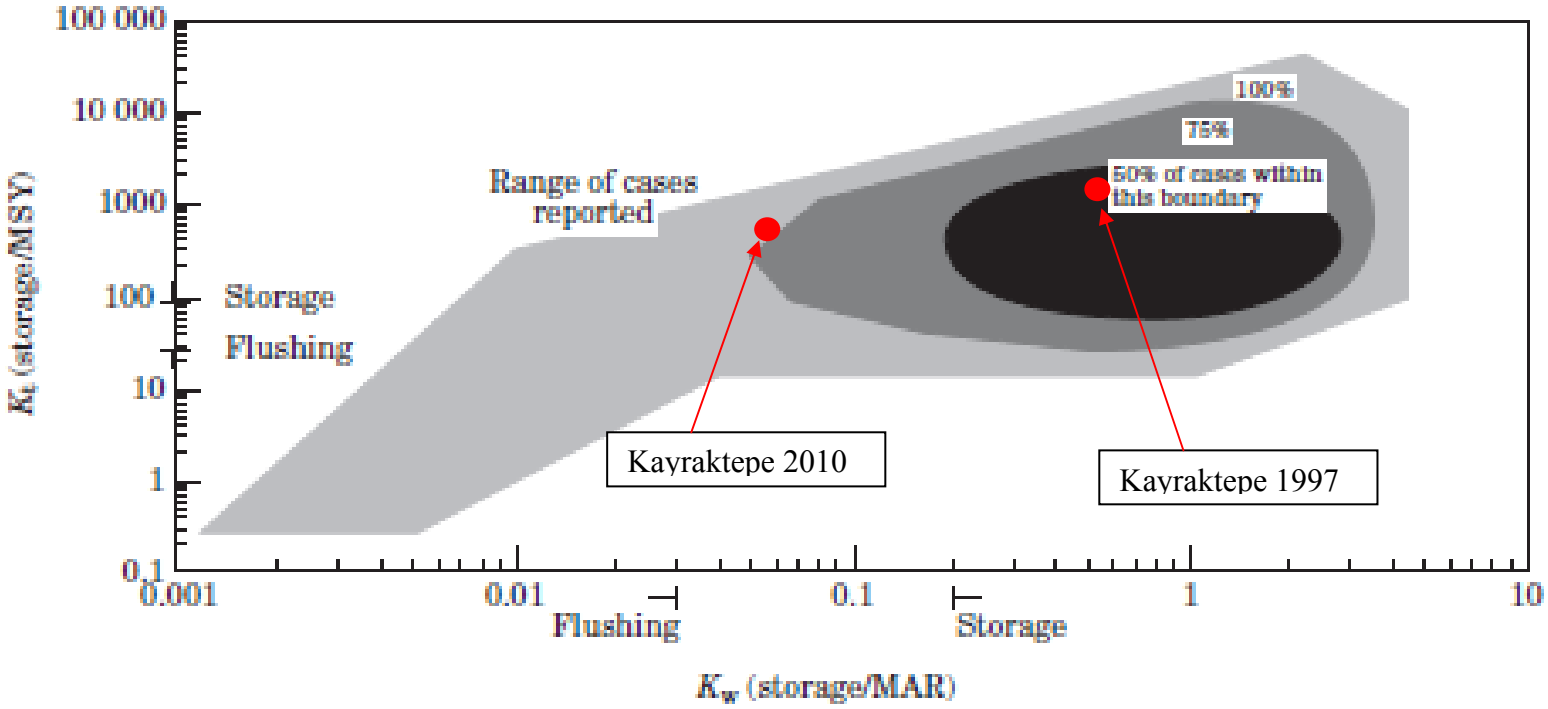

Figure VI-3: Basson's diagram on reservoir operation modes. Modified from Basson and Rooseboom (1997)

Kayraktepe-2010 formulation

C_o = 174.50 Mm^3

MAR = 3010.55 Mm^3

MSY = 1.13 Mm^3

K_w = 174.50 / 3010.55 = 0.058

K_t = 174.50 / 1.13 = 154.42

Kayraktepe-1997 formulation

C_o = 1 726.90 Mm^3

MAR = 3010.55 Mm^3

MSY = 1.13 Mm^3

K_w = 1 726.90 / 3010.55 = 0.573

K_t = 1 726.90 / 1.13 = 1 528

V.3. Discussion of the Results

The details and the results of the sediment calculations are given above. According to these calculations, the annual sediment amount at Kayraktepe Dam axis is about 1.13 x 10^6 m^3.

The dead volume of Kayraktepe Dam Project is planned as 49.71 x 10^6 m^3. This volume is sufficient to store the sediment load approximately 44 years.

Sediments are mostly transported in floods. During the flood periods, by means of the bottom outlets, the transported sediments can be transferred to downstream before subsiding and solidifying. Therefore, by flushing the reservoir during the flood periods, the dead volume will be adequate for more than 50 years (the economic life of the dam).

The suitability of flushing was examined by using Basson's Diagram. According to this study:

- Kayraktepe – 1997 alternative is not suitable for flushing.

- Kayraktepe – 2010 alternative is suitable for flushing.

The newly developed formulation (Kayraktepe – 2010) is suitable for flushing, thus sediment supply of Göksu Delta will continue.

CHAPTER VI

CONCLUSIONS AND THE FURTHER RECOMMENDATIONS

Kayraktepe Dam and HEPP Project have more than 30 years of history. However, up till now the project has not been started. The project formulation was changed a few times but none of them was found to be feasible. Kayraktepe Dam project has three functions: energy production, flood control and flow regulation for downstream irrigation project. However it has been receiving severe critics due to environmental consideration. Both the upstream and downstream of the dam are expected to be adversely affected by the dam. At the upstream there are valuable fertile lands and at the downstream there is Göksu Delta Plain. The Göksu Delta Plain is one of the Turkish wetlands which are protected by Ramsar Convention (Efe and Greenwood, 2007). Thus the construction of the dam on the river will prevent transportation of nutrient enriched sediment to the delta.

In this study, alternative solution of Kayraktepe Dam was investigated. In order to make the project feasible, the project was divided into smaller projects. In the former formulations, namely Kayraktepe-1982 and 1997, the project consists of one big dam. But in the newly developed formulation, the project consists of one dam and five run-of-river type hydropower stations.

As mentioned above, Kayraktepe Dam has 3 functions. In this thesis, the flood control function of the dam is analized. To do this, firstly the flood hydrographs of Kayraktepe Dam were found by daily average and annual peak flow records of stream gauging stations (SGS). Then, the outflow hydrographs of Kayraktepe Dam were found by inflow hydrographs and flood routing studies.

The results of these studies show that, a smaller dam (like the dam in the newly developed formulation) is also enough to limit the outflow peak. By using this newly

developed formulation, the outflow peak discharge could be decreased to 1200 m^3/s for a 500 return period flood. This discharge can flow inside Silifke District harmlessly. 1200 m^3/s discharge is also denoted as harmless by DSİ Adana Region and by the results of HEC-RAS calculations.

The newly developed formulation was analized whether the dam is adequate for flushing or not. According to this analyse, it was determined that the new dam is adequate for flushing. Thus, the sediment supply of Göksu Delta will also continue. It means Göksu Delta will be preserved against erosion. But, Kayraktepe 1997 formulation was analized also and found out that Kayraktepe 1997 formulation is not adequate for flushing. Therefore, erosion of Göksu Delta will continue.

Kayraktepe 2010 formulation has a lot of advantages. The advantages and disadvantages of Kayraktepe 2010 formulation is given below briefly.

- Social and environmental impacts were reduced.
    - Expropriation area is decreased from 5000 ha to 820 ha.
    - No settlement is required.
    - Wild life protection area is recovered.

- The flood control task has been overcomed.

- The energy production reduces about 10%.

- Göksu River Delta to be deprived of natural sediment inflow under the original formulation will now be completely preserved.

Finally, Kayraktepe Dam has a long history. Over the years, the need of Kayraktepe Dam also grows. But, by looking the history of the project, it is came out that Kayraktepe Dam cannot be constructed according to these formulations because they are both unfeasible.

There is a great risk of flooding in Silifke District. Kayraktepe Dam should be constructed to prevent the flood damage in Silifke District. The newly formulation is feasible both environmentally and socially. By constructing the project according to Kayraktepe 2010 formulation, Silifke District will be prevented from flood, energy production will be realized and Göksu Delta will be saved.

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APPENDIX A

FLOOD CALCULATIONS

In this chapter, the flood hydrographs of 50, 100, 500, 1000 and 10000 years return period for Kayraktepe Dam were calculated. To do this, firstly the flood hydrograph of Mut Dam, Ermenek Dam and the sub – basin between these dams and Kayraktepe Dam were calculated. The flood routing studies were carried out for the reservoirs. After this studies, the inflow hydrographs (100, 500, 1000, 10000 years return period) of Kayraktepe Dam were calculated.

A.1. Flood Hydrograph Calculation

Kayraktepe Dam and HEPP Project is planned on Göksu River. At the upstream of the project area, Ermenek Creek joins Göksu River and there are lots of project (planning, constructing or operating stage) on these rivers. The schematic profile view of these projects is shown in Figure A-4. The projects within the boundaries of Kayraktepe Dam drainage basin that have flood routing capacity are given below:

- Ermenek Dam (in construction, on Ermenek Creek)
- Gezende Dam (in operation, on Gökçay Creek)
- Balkusan Dam (planning, Balkusan Creek)
- Mut Dam (planning, Göksu River)

Balkusan Dam has a small reservoir capacity, and the project is owned by a private company. Thus, the time of finishing construction works and starting operation is not

clear. Therefore, in this study, the effect of Balkusan Dam was not taken into consideration.

Mut Dam is also owned by a private company. The construction and operation starting time of Mut Dam is unknown. Consequently, the studies were prepared for both the case Mut Dam is in operation or not.

In this study first Mut and Ermenek Dam Flood Hydrographs were calculated, then the sub – basins up to Kayraktepe Dam were calculated. In Figure A-8, the schematic view of sub – basins used in the calculations are shown. The calculation steps are given below.

- Firstly, the inflow hydrograph of Ermenek Dam was calculated.

- Then, Ermenek Dam outflow hydrograph was calculated by using flood routing studies according to the volume – area curve of Ermenek Dam Reservoir.

- The inflow hydrograph of Gezende Dam was calculated by adding the hydrograph of the area in between Gezende and Ermenek Dams and Ermenek Dam outflow hydrograph.

- Gezende Dam outflow hydrograph was calculated by using flood routing studies according to the volume – area curve of Gezende Dam Reservoir.

- The hydrographs of the area in between Gezende Dam and the joint of Ermenek Creek and Gökçay Creek were calculated.

- This hydrograph was added to Gezende Dam outflow hydrograph and the total hydrograph of Ermenek Creek was calculated.

- The total hydrograph of Gökçay Creek (upstream part of the joint of Ermenek Creek and Gökçay Creek) was calculated according to two cases.

  - Mut Dam is in operation:

    - Flood routing studies was performed by using Mut Dam volume – area curve and Mut Dam inflow hydrograph. After all, the outflow hydrograph of Mut Dam was calculated.

    - The hydrograph for the area in between Mut Dam and the joint of Ermenek Creek and Gökçay Creek was calculated.

    - This hydrograph was added to Mut Dam outflow hydrograph and the total hydrograph of Gökçay Creek (upstream part of the joint of Ermenek Creek and Gökçay Creek) was calculated.

  - Mut Dam is not in operation:

    - The flood hydrograph of the stream gauging station (very near to the joint of Ermenek Creek and Gökçay Creek) was calculated.

    - The flood hydrograph of the stream gauging station (SGS) was transferred to the joint by using the $2/3^{rd}$ power of the area ratio. This ratio is the default ratio of Turkey used by DSİ.

- By the summation of the total hydrographs of Ermenek Creek and Gökçay Creek, the total hydrograph of the joint was calculated.

- This hydrograph was transferred to Kayraktepe Dam by using the $2/3^{rd}$ power of the area ratio. By doing this, the 100, 500, 1000 and 10000 years return period inflow hydrographs of Kayraktepe Dam was founded.

A.1.1. EİE's Approximate Method for Hydrograph Generation

In 1982 and in 1997 two feasibility reports of Kayraktepe Dam were published. In these reports, the flood calculations were made by using an approximate method, which is proposed by the officials of the General Directorate of Electrical Power Resources Survey and Development Administration. This is an approximate method developed specifically for long duration flood events. Contrary to the commonly used flood frequency analysis dealing with annual peak discharges, this method has some assumptions and limitations. However, to make a proper comparison with the aforementioned reports, the same method was used in this study.

The hydrographs mentioned above was calculated by using this method. The calculation procedure is given below:

In this method, observed values of stream gauging stations (SGS) are used. The stream gauging stations at the project area are given in Table A-2. The annual instantaneous peak discharges of these stations are given in Table A-3.

The hydrographs are generated by using annual peak discharges and also daily average flow data. The hydrograph durations were 25 days in Kayraktepe – 1982 and Kayraktepe – 1997 reports. Therefore, in this thesis the flood hydrographs were generated also for 25 – day periods. By doing these, the flood hydrographs cover the same duration and thus they are suitable for comparison.

To calculate the peak value of the hydrograph, the annual peak discharges were used. The peak discharges corresponds to different return periods (100 years, 500 years, 1000 years and 10000 years) were calculated by using these annual peak discharges and Simirnov – Kolmogorov Test.

To calculate the peak value for one day flow (column that corresponds to one day), the maximum average daily discharges were used. The peak discharges corresponds

to different return periods (100 years, 500 years, 1000 years and 10000 years) were calculated by using these annual maximum average daily discharges and Simirnov – Kolmogorov Test.

To calculate three day flow peak of the hydrograph, the maximum average daily discharges corresponds to three days are used. The chief point in this method is using the daily data in sequential order. To do this, the yearly data was analyzed and the 3 – day average flow for all of the year are calculated separately. Then these values are compared and the maximum value is chosen. The peak discharges corresponds to different return periods (100 years, 500 years, 1000 years and 10000 years) were calculated by using these three day maximum average discharges and Simirnov – Kolmogorov Test.

The calculation procedure for 3 day flood hydrograph is given below:

- Firstly, annual daily average flows were listed.

- Then, three-day average discharges were calculated from the arithmetic averageof those flows. This, procedure is repeated for all years.

$$\sum_{i=1}^{3} \frac{Q_i}{3} = Q_{ave\text{-}1}$$

$$\sum_{i=2}^{4} \frac{Q_i}{3} = Q_{ave\text{-}2}$$

.

.

.

$$\sum_{i=363}^{365} \frac{Q_i}{3} = Q_{ave\text{-}363}$$

Where,

Q = Discharge (m^3/s)
i = Number of the day (1 to 365 (or 366))
Q_{ave} = Three day average discharge (m^3/s)

- After finding the average values, the peak values for all of the studied years were determined. These peak values were used in the frequency analysis studies.

- Finally, the peak discharges corresponds to different return periods (100 years, 500 years, 1000 years and 10000 years) were calculated by using these three day maximum average discharges and Simirnov – Kolmogorov Test.

This method is repeated for 5 days, 7 days, …, 23 days and 25 days maximum discharges. The calculated values were aligned symmetrically at the left and right of the peak value. Finally, the 25 day flood hydrographs for different return periods were obtained. The area below this hydrograph gives the flood volume.

Hydrograph calculation procedure is explained schematically in Figure A-1 and A-2. Firstly, the peak discharges for different return periods and for different time intervals were calculated. Then, the calculated values are plotted on the graph.

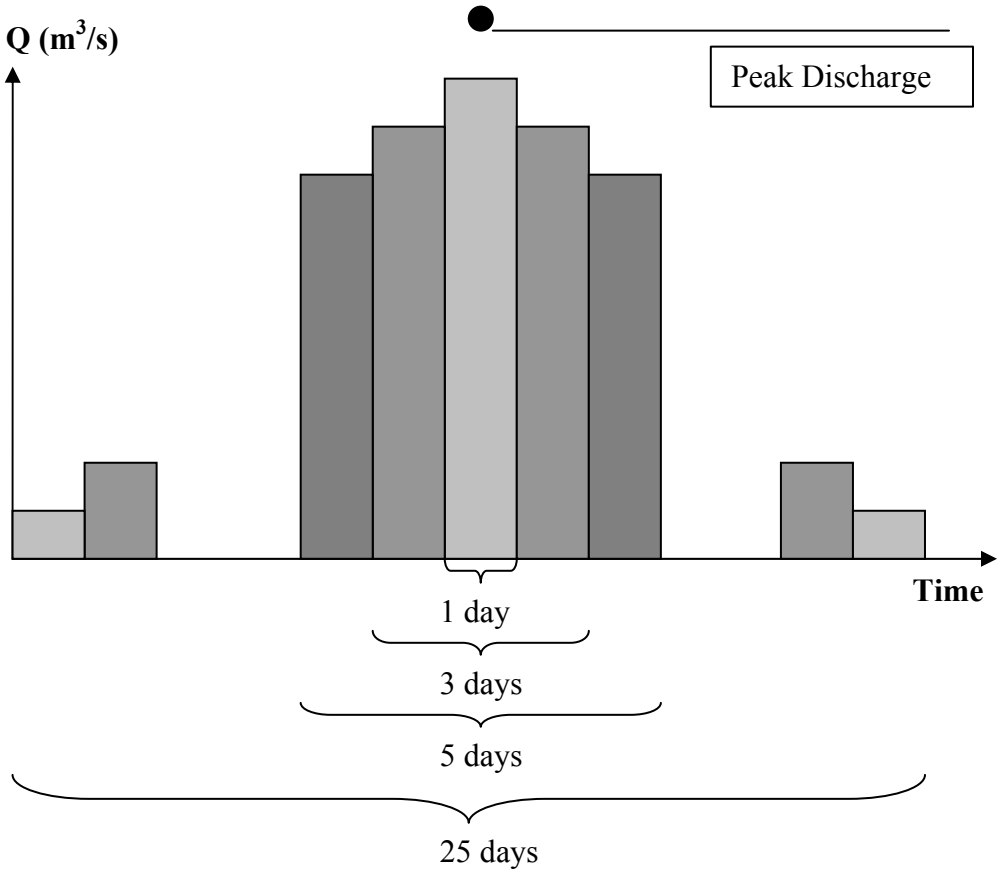


Figure A-1: EİE's Approximate Method Calculation Step 1

After these columns and the peak value were plotted, the hydrograph can be drawn. In Figure A-2, the plotted hydrograph can be seen.

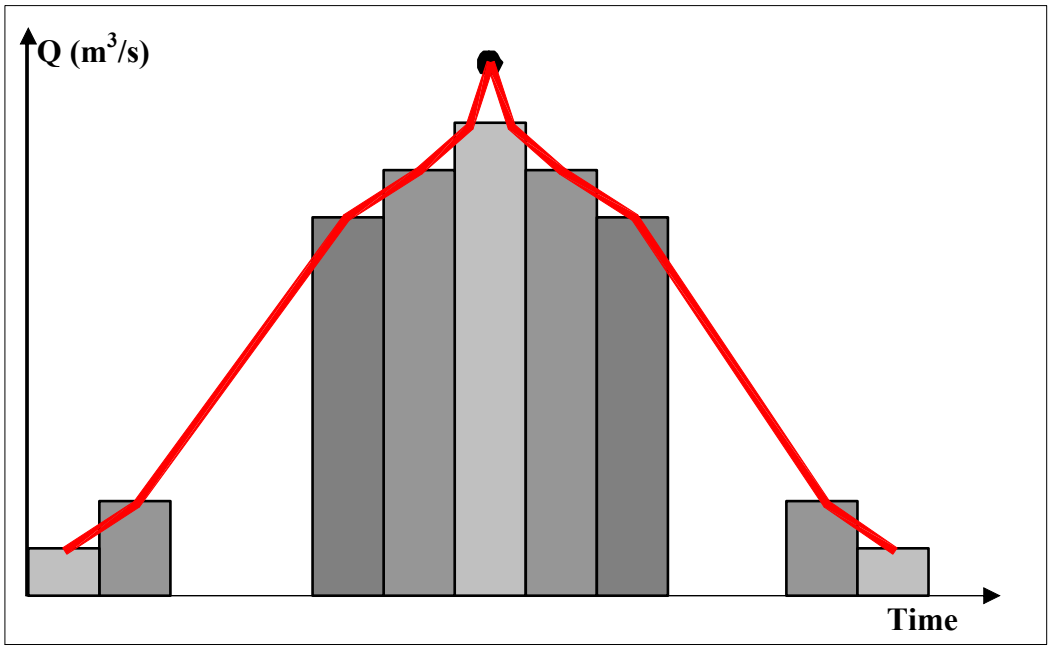


Figure A-2: EİE's Approximate Method Calculation Step 2

The limitations of the approximate method used for flood hydrograph generation can be summarized as:

- This method is specifically developed for obtaining the flood hydrograph. In common practice, the peak discharge corresponding to a desired return period is found and the shape of the hydrograph is obtained by using the generated design hyetograph and unit hydrographs. Some approximations are also availablein the literature for hydrograph shape generation (Yanmaz, 2006).

- With the application of this method, it may be possible to collect sequential data for daily discharges. therefore, daily events would be dependant. However, in the approximate method requirement of independent events for a statistical analysis is ignored.

- Frequency analyses are applied to the generated flows corresponding to 1, 3, 5, …, 25 days. The results of the goodness are tested using Kolmogorov – Simirnov test. However, it may be possible to obtain different probability density functions (PDF) for these days. In fact, a flood event has a unique characteri which should only be specified using a particular PDF. This aspect is also ignored.

A.1.2. Calculating the Inflow Flood Hydrograph of Ermenek Dam

The drainage area of Ermenek Dam is 2304 km^2. DSİ 17-14 SGS is located on the Görmel Bridge just at the upstream of the dam axis. The drainage area of this SGS is 2156 km^2. To calculate the flood hydrographs of Ermenek Dam DSİ 17-14 SGS data were used because of the SGS is very near to the dam axis and has a long period of observed data. The schematic plan view of stream gauging stations and facilities at the upstream of Kayraktepe Dam is given in Figure A – 3.

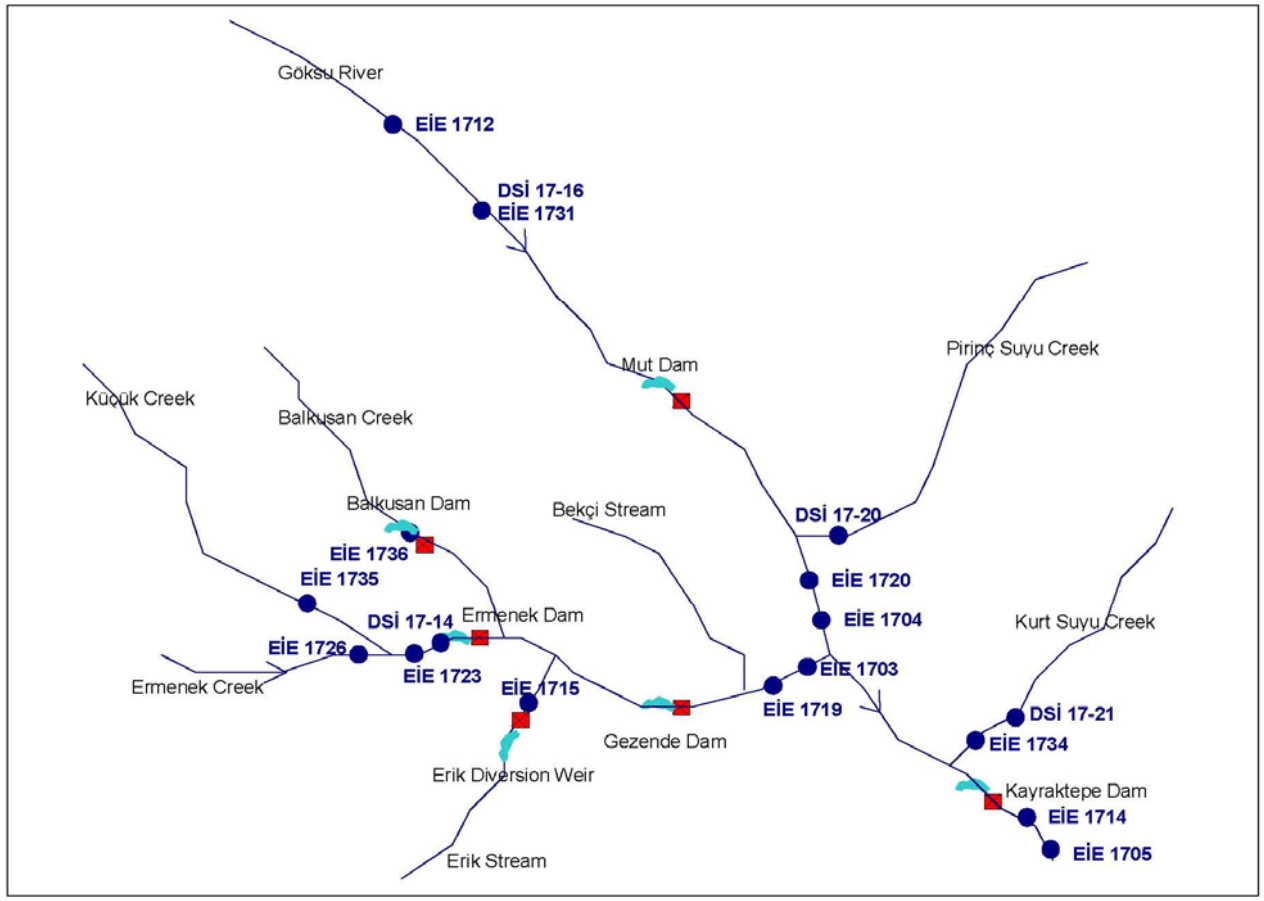


Figure A-3: Schematic Plan View of Stream Gauging Stations and Facilities at the Upstream of Kayraktepe Dam

A.1.2.1. Ermenek Dam Inflow Hydrograph Calculation by Using Point Flood Frequency Analysis (PFFA)

EİE 1726, 1723, 1719 and DSİ 17-14 SGS are located on Ermenek River, EİE 1735 is located on Küçük Su, and EİE 1736 SGS is located on Balkusan Creek. Küçük Su and Balkusan Creek are branches of Ermenek Creek. To calculate Ermenek Dam inflow hydrographs, the most suitable SGS is DSİ 17 – 14 SGS, which is located just at the upstream of the dam axis. DSİ 17 – 14 SGS has 38 years of observed daily average discharge value between 1965 – 2007.

To find Ermenek Dam inflow flood hydrograph firstly the flood hydrographs of DSİ 17 – 14 SGS were found. DSİ 17 – 14 SGS flood hydrographs were calculated by using EİE's approximate method. The calculation details of EİE's approximate method are given in section A.1.1. Calculated peak discharges of DSİ 17-14 SGS are given in Table A-4.

The drainage areas of DSİ 17-14 SGS and Ermenek Dam are 2156 km^2 and 2304 km^2 respectively. The calculated values were transferred to the Ermenek Dam axis by using 2/3rd power of area ratio ($[2304/2156]^{2/3}$ = 1.04526). Calculated peak discharges of Ermenek Dam are given in Table A-5. Finally, the 25 day flood hydrographs for different return periods (Figure A-5) were obtained for Ermenek Dam. The area below this hydrograph gives the flood volume.

Ermenek Dam inflow flood hydrograph characteristics are given below.

	Peak Discharge (m^3/s)	**Flood Volume (hm^3)**
100 year return period	2 353.36	966.38
500 year return period	2 981.32	1 072.80
1000 year return period	3 258.75	1 171.86
10000 year return period	4 164.15	1 377.33

A.1.3. Calculating the Inflow Flood Hydrograph of Mut Dam

Drainage area of Mut Dam is 3384 km^2. Mut Dam flood discharges were found by using regional flood frequency analysis. In the flood analysis the SGS, which are located upstream of the Ermenek Creek – Gökçay Creek joint, are used.

A.1.3.1. Calculation of Mut Dam Inflow Hydrograph by Using Regional Flood Frequency Analysis (RFFA)

EİE 1712, 1720, 1714 and DSİ 17-16 SGS are located on Göksu River, DSİ 17-20 is located on Pirinç Suyu, EİE 1734 and DSİ 17-21 SGS are located on Kurt Suyu. Pirinç Suyu and Kurt Suyu are branches of Göksu River. Among these stations DSİ 17-20 SGS has 3 years (1970 – 1972), DSİ 17-21 SGS has 3 years (1970 – 1972) and EİE 1734 SGS has 1 year (1998) of observation data. Therefore, these stations were not used in the frequency analysis. To find Mut Dam inflow flood hydrographs EİE 1712, DSİ 17-16 and EİE 1720 SGS were used. All of these stations are on Gökçay Creek. At the downstream part of Göksu River the flow characteristics are changed. As a result of this, the SGS, which are located at the downstream of the Ermenek Creek joint, were not used in the frequency analysis. The peak discharges and the Q_x/Q_2 ratios of these stations are given in Table A-6 an A-7 respectively.

By using EİE's approximate method, the peak values of these SGS were calculated. In the regional flood frequency analysis, 2 year return period peak values are needed. Therefore, besides the 100 year, 500 year, 1000 year and 10000 year return period peak values; 2 year return period peak values should be calculated.

Then, peak discharges of 2 year return period vs. drainage area graph was plotted on a log – log paper. This graph is called flood envelope and given in Figure A-6. This flood envelope was plotted for the annual peak, 1 day peak, 3 day peak, …, 25 day peak flows individually.

The 2 year return period peak discharge corresponding Mut Dam Drainage area (3384 km^2) was calculated by using this graph. By multiplying these average ratios with Mut Dam 2 year return period peak discharge, Q_{100}, Q_{500}, Q_{1000} and Q_{10000} values for Mut Dam were obtained. This procedure was repeated for annual peak, 1 day peak, 3 day peak, …, 25 day peak flows. Calculated peak discharges of Mut Dam are given in Table A-8. Finally, by using these values the inflow flood hydrographs of Mut Dam was plotted and given in Figure A-7.

Mut Dam inflow flood hydrograph characteristics are given below.

	Peak Discharge (m^3/s)	**Flood Volume (hm^3)**
100 year return period	688.49	624.95
500 year return period	862.12	717.15
1000 year return period	928.82	785.20
10000 year return period	1 169.16	945.44

A.1.4. Sub – Basin Flood Hydrograph Calculations

After the flood routing studies the calculated outflow hydrographs were summed with the sub – basin hydrographs to calculate Kayraktepe Dam inflow flood hydrograph. The internal area flood hydrographs are given below.

- For Ermenek Creek:
    - Between Ermenek Dam Axis and Gezende Dam Axis.
    - Between Gezende Dam Axis and the Ermenek Creek – Göksu River Joint.

- For Gökçay Creek:

    - Between Mut Dam Axis and the Ermenek Creek – Gökçay Creek Joint.

These hydrographs were calculated separately and added to dam outflow hydrographs.

Firstly, the flood hydrographs for Ermenek Creek internal areas were calculated by using EİE 1723 and EİE 1719 SGS.

A.1.4.1. Ermenek Creek Sub – Basin Flood Hydrographs Calculation

EİE 1723 SGS (very close to Ermenek Dam) and EİE 1919 SGS (very near to Ermenek Creek – Göksu River Joint) are located on Ermenek Creek.

To find the natural flow on Ermenek Creek sub – basin EİE 1723 SGS daily flows were subtracted from EİE 1719 SGS daily flows. But after 1991, because of the effect of Gezende Dam, negative values were calculated. Therefore, for these two SGS, 1985 – 1991 period of was used.

After obtaining the sub - basin flow values, the flood hydrographs were calculated by using EİE's approximate method. Calculated peak discharges of Ermenek Creek Sub – Basin are given in Table A-9. Finally, by using these values Ermenek Creek Sub – Basin flood hydrographs was plotted and given in Figure A-9. Sub – basin flood hydrograph characteristics are given below.

	Peak Discharge (m^3/s)	Flood Volume (hm^3)
100 year return period	877.68	316.12
500 year return period	1 108.22	392.15
1000 year return period	1 236.43	428.47
10000 year return period	1 595.19	540.81

After calculating Ermenek Creek Sub – Basin flood hydrographs, Gökçay Creek Sub – Basin flood hydrographs were calculated by using Regional Flood Frequency Analysis (RFFA).

A.1.4.2. Gökçay Creek Sub – Basin Flood Hydrograph Calculation by Using Regional Flood Frequency Analysis (RFFA)

EİE 1712, 1720, 1714 and DSİ 17-16 SGS are located on Göksu River, DSİ 17-20 is located on Pirinç Suyu, EİE 1734 and DSİ 17-21 SGS are located on Kurt Suyu. Pirinç Suyu and Kurt Suyu are branches of Göksu River. Among these stations DSİ 17-20 SGS has 3 years (1970 – 1972), DSİ 17-21 SGS has 3 years (1970 – 1972) and EİE 1734 SGS has 1 year (1998) of observation data. Therefore, these stations were not used in the frequency analysis. To find Mut Dam inflow flood hydrographs EİE 1712, DSİ 17-16 and EİE 1720 SGS were used. All of these stations are on Gökçay Creek. At the downstream part of Göksu River the flow characteristics are changed. As a result of this, the SGS, which are located at the downstream of the Ermenek Creek joint, were not used in the frequency analysis. The peak discharges and the Q_x/Q_2 ratios of these stations are given in Table A-10 an A-11 respectively.

By using EİE's approximate method, the peak values of these SGS were calculated. In the regional flood frequency analysis, 2 year return period peak values are needed. Therefore, besides the 100 year, 500 year, 1000 year and 10000 year return period peak values; 2 year return period peak values should be calculated.

Then, peak discharges of 2 year return period vs. drainage area graph was plotted on a log – log paper. This graph is called flood envelope and given in Figure A-10. This flood envelope was plotted for the annual peak, 1 day peak, 3 day peak, …, 25 day peak flows individually.

The 2 year return period peak discharge corresponding Gökçay Creek Sub – Basin area (1039.18 km^2) was calculated by using this graph. By multiplying these average ratios with Mut Dam 2 year return period peak discharge, Q_{100}, Q_{500}, Q_{1000} and Q_{10000} values for Gökçay Creek Sub – Basin were obtained. This procedure was repeated for annual peak, 1 day peak, 3 day peak, …, 25 day peak flows. Calculated peak discharges of Ermenek Creek Sub – Basin are given in Table A-12. Finally, by using these values the inflow flood hydrographs of Gökçay Creek Sub – Basin was plotted and given in Figure A-11.

Göksu River Sub – Basin flood hydrograph characteristics are given below.

	Peak Discharge (m^3/s)	**Flood Volume (hm^3)**
100 year return period	298.84	296.55
500 year return period	374.20	340.03
1000 year return period	403.16	372.36
10000 year return period	507.47	448.16

A.1.5. Kayraktepe Dam Inflow Flood Calculation In Case Of Mut Dam in Operation

The calculation procedure of the flood hydrographs of these basins is given below.

- Firstly, Ermenek Dam flood routing studies were done by using Ermenek Dam inflow flood hydrograph and Ermenek Dam Volume – Area Curve

(Figure A-13). In this study Ermenek Dam was operated between 694.00 m (normal operating level) and 699.05 m (maximum flood elevation). Flood routing studies are given in Table A-13 to A-16 and Figure A-14 to A-17.

According to Ermenek Dam flood routing studies the outflow peak discharges are given below:

	Peak Discharge (m^3/s)
100 year return period	311.46
500 year return period	369.92
1000 year return period	426.65
10000 year return period	565.00

- Ermenek Creek Sub – Basin hydrograph was transferred to Ermenek Dam – Gezende Dam Sub – Basin by using $2/3^{rd}$ power of area ratio $([854/1483]^{2/3})$.

- Ermenek Dam – Gezende Dam Sub – Basin hydrographs (Figure A-18) were added to Ermenek Dam outflow hydrographs to find Gezende Dam inflow hydrographs.

- Gezende Dam flood routing studies were done by using Gezende Dam inflow flood hydrographs (Figure A-19) and Gezende Dam Volume – Area Curve (Figure A-20). In this study Gezende Dam was operated between 320.00 m (spillway crest elevation) and 333.00 m (maximum flood elevation). Flood routing studies are given in Table A-17 to A-20 and Figure A-21 to A-24. According to Gezende Dam flood routing studies the outflow peak discharged are given below:

	Peak Discharge (m^3/s)
100 year return period	411.84
500 year return period	516.67
1000 year return period	605.00
10000 year return period	824.00

- Ermenek Creek Sub – Basin hydrograph was transferred to Gezende Dam – Ermenek Creek – Gökçay Creek Joint Sub – Basin by using 2/3rd power of area ratio ($[538/1483]^{2/3}$). These hydrographs are given in Figure A-25.

- Gezende Dam – Ermenek Creek – Gökçay Creek Joint Sub – Basin hydrographs were added to Gezende Dam outflow hydrographs to find Ermenek Creek – Gökçay Creek Joint hydrographs (Figure A-26).

- Mut Dam flood routing studies were done by using Mut Dam inflow flood hydrographs and Mut Dam Volume – Area Curve (Figure A-27). In this study Mut Dam was operated between 305.00 m (normal operation elevation) and 307.50 m (maximum flood elevation). Flood routing studies are given in Table A-21 to A-24 and Figure A-28 to A-31. According to Mut Dam flood routing studies the outflow peak discharges are given below:

	Peak Discharge (m^3/s)
100 year return period	232.17
500 year return period	282.51
1000 year return period	318.00
10000 year return period	412.94

- Mut Dam – Ermenek Creek – Göksu River Joint Sub – Basin hydrographs (Figure A-32) were added to Mut Dam outflow hydrographs to find Ermenek Creek – Gökçay Creek Joint hydrographs (Figure A-33).

- The calculated hydrograph at the joint point was transferred to Kayraktepe Dam axis by multiplying with $2/3^{rd}$ power of area ratio. Finally, Kayraktepe Dam inflow flood hydrographs were obtained (Figure A-34).

- Kayraktepe Dam 100 year return period flood peak value is calculated as 1584.60 m^3/s and the volume of the flood is calculated as 2079.24 hm^3. Kayraktepe Dam flood routing studies were done by using the volume – area curve (Figure A-35) and the 100 year return period inflow flood hydrograph. According to this Kayraktepe Dam flood routing studies, in case of Mut Dam is in operation, the needed volume to limit the outflow discharge at 1200 m^3/s is 14.46 hm^3. Flood routing studies are given in Table A-25, Figure A-36 and A-37.

- Kayraktepe Dam 500 year return period flood peak value is calculated as 1981.30 m^3/s and the volume of the flood is calculated as 2505.94 hm^3. Kayraktepe Dam flood routing studies were done by using the volume – area curve and the 500 year return period inflow flood hydrograph. According to Kayraktepe Dam flood routing studies, in case of Mut Dam is in operation, the needed volume to limit the outflow discharge at 1200 m^3/s is 75.57 hm^3. Flood routing studies are given in Table A-26, Figure A-38 and A-39.

- Kayraktepe Dam 1000 year return period flood peak value is calculated as 2389.62 m^3/s and the volume of the flood is calculated as 2951.88 hm^3. Kayraktepe Dam flood routing studies were done by using the volume – area curve and the 1000 year return period inflow flood hydrograph. According to Kayraktepe Dam flood routing studies, in case of Mut Dam is in operation, the outflow hydrograph peak discharge (for 1000 year return period flood) is

1490 m^3/s. Flood routing studies are given in Table A-27, Figure A-40 and A-41.

- Kayraktepe Dam 10000 year return period flood peak value is calculated as 2915.14 m^3/s and the volume of the flood is calculated as 3537.77 hm^3. Kayraktepe Dam flood routing studies were done by using the volume – area curve and the 10000 year return period inflow flood hydrograph. According to Kayraktepe Dam flood routing studies, in case of Mut Dam is in operation, the outflow hydrograph peak discharge (for 10000 year return period flood) is 1800 m^3/s. Flood routing studies are given in Table A-28, Figure A-42 and A-43.

A.1.6. Kayraktepe Dam Inflow Flood Calculation in Case Mut Dam Is not in Operation

In this case the total flood hydrograph of Ermenek Creek is the same with the case Mut Dam is in operation. But the hydrograph of Göksu River is different with the case Mut Dam is in operation.

EİE 1720 SGS is located just at the upstream of Ermenek Creek – Gökçay Creek Joint on Gökçay Creek. The total flood hydrograph (upstream part of the joint) of Göksu River was calculated by using the flood hydrograph of EİE 1720 SGS. The calculation procedure is given below.

EİE 1720 SGS has 32 years of daily average discharge values between 1966 – 2007.

To find Ermenek Dam inflow flood hydrograph firstly the flood hydrographs of EİE 1720 SGS were found. EİE 1720 SGS flood hydrographs were calculated by using EİE's approximate method. The calculation details of EİE's approximate method are given in section A.1.1. Calculated peak discharges of EİE 1720 SGS are given in Table A-29.

The drainage areas of EİE 1720 SGS is 2156 km^2 and 4304 km^2 and the total drainage area of (upstream part of the joint) of Göksu River is 4382 km^2. The calculated values were transferred to the Joint by using 2/3rd power of area ratio ($[4382/4304]^{2/3}$ = 1.012046). Calculated peak discharges of Gökçay Creek at the Joint are given in Table A-30. Finally, the 25 day flood hydrographs for different return periods were obtained for the Joint (Figure A-44). The area below this hydrograph gives the flood volume. Hydrograph characteristics are given below.

	Peak Discharge (m^3/s)	Flood Volume (hm^3)
100 year return period	788.16	701.95
500 year return period	992.20	804.19
1000 year return period	1 065.14	881.66
10000 year return period	1 342.12	1 061.38

The total hydrograph of the joint (Figure A-45) was calculated by summing the hydrographs of Gökçay Creek and Ermenek Creek at the joint.

The total hydrograph of the joint was transferred to Kayraktepe Dam by using 2/3rd power of area ratio. Kayraktepe Dam inflow flood hydrographs are given in Figure A-46.

Kayraktepe Dam 100 year return period flood (in case of Mut Dam is not in operation) peak value is calculated as 1877.90 m^3/s and the volume of the flood is calculated as 1972.30 hm^3. Kayraktepe Dam flood routing studies were done by using the volume – area curve and the 100 year return period inflow flood hydrograph. According to Kayraktepe Dam flood routing studies, in case of Mut Dam is in operation, the needed volume to limit the outflow discharge at 1200 m^3/s is 29.00 hm^3. Flood routing studies are given in Table A-31, Figure A-47 and A-48.

Kayraktepe Dam 500 year return period flood in case of Mut Dam is not in operation) peak value is calculated as 2363.95 m^3/s and the volume of the flood is calculated as 2351.42 hm^3. Kayraktepe Dam flood routing studies were done by using the volume – area curve and the 100 year return period inflow flood hydrograph. According to Kayraktepe Dam flood routing studies, in case of Mut Dam is in operation, the needed volume to limit the outflow discharge at 1200 m^3/s is 104.73 hm^3. Flood routing studies are given in Table A-32, Figure A-49 and A-50.

Kayraktepe Dam 1000 year return period flood in case of Mut Dam is not in operation) peak value is calculated as 2781.96 m^3/s and the volume of the flood is calculated as 2766.32 hm^3. According to Kayraktepe Dam flood routing studies, in case of Mut Dam is not in operation, the outflow hydrograph peak discharge (for 1000 year return period flood) is 1550.00 m^3/s. Flood routing studies are given in Table A-33, Figure A-51 and A-52.

Kayraktepe Dam 10000 year return period flood in case of Mut Dam is not in operation) peak value is calculated as 3396.12 m^3/s and the volume of the flood is calculated as 3262.40 hm^3. Kayraktepe Dam flood routing studies were done by using the volume – area curve and the 10000 year return period inflow flood hydrograph. According to Kayraktepe Dam flood routing studies, in case of Mut Dam is not in operation, the outflow hydrograph peak discharge (for 10000 year return period flood) is 1890.00 m^3/s. Flood routing studies are given in Table A-34, Figure A-53 and A-54.

A.2. Discussion of the Results

The first feasibility report of Kayraktepe Dam and HEPP Project was published in 1982. This report was prepared by EPDC, Suiş, TMB and Su-Yapı. In 1997, the revised feasibility report of Kayraktepe Dam and HEPP Project was published. The revised report was prepared by EPDC and Suiş.

Kayraktepe Dam project has three functions: energy production, flood control and flow regulation for downstream irrigation project. In both of these reports published in 1982 and 1997, flood calculations were made by using "EİE's Approximate Method". This method is widely used in the reports prepared by EİE (e.g. Mut Dam Feasibility Report, EİE, 1995). The calculated flood hydrographs of Kayraktepe Dam in these reports are given in Figure A-55 and Figure A-56 respectively. In this thesis, to make a comparison, the same method was chosen for flood calculations.

In this thesis, the hydrology of the whole basin was revised. Firstly, the flow data were revised. In Kayraktepe 1997 report, flow data till 1989 were used. However in the thesis, flow data till 2007 were used. Then, the characteristics of the projects within the basin updated. In Kayraktepe 1997 report, Ermenek Dam characteristics were taken from the feasibility report (1990). In this report, Ermenek Dam flood storage was given as 160.68 hm^3. But actually, Ermenek Dam constructed with a flood storage of 298.85 hm^3. The differences are listed below briefly.

Table A-1 Comparison Table of the Studies Related to the Flood Calculations

Kayraktepe 1997 Report	**Thesis**
Flow data (SGS) till 1989 were used	Hydrology of the basin was revised. Flow data (SGS) till 2007 were used
Ermenek Dam information was taken from the feasibility report (1990). In this report, Ermenek Dam flood storage was given as 160.68 hm^3.	Ermenek Dam information was revised (according to the real state). Ermenek Dam flood storage is 298.85 hm^3.
The permissible outflow peak discharge of the dam was given 800 m^3/s. In that report, a 160 hm^3 storage was found to be adequate.	The permissible outflow peak discharge of the dam is accepted as 1200 m^3/s. This value was taken from DSI - Adana Region. This value is also confirmed by calculating the water surface profile (HEC-RAS) in Silifke District.
But, according to the revised hydrology, this storage is adequate to decrease the peak outflow just to 1110 m^3/s (Q_{500}, In case Mut Dam is in operation).	

Table A-2 Stream Gauging Stations at the Project Area

SGS #	River	SGS Name	Drainage Area	Elevation	Available Observation Period	Number of Available Years
EİE 1712	Göksu River	Bucakkışla	2689.2	397	1962-2007	46
DSİ 17-16 EİE 1731	Göksu River	Kravga Köp.	2994.0	233	1966-1967,1969-1971, 1974-1984,1986-1992, 1994-2005	34
EİE 1704	Göksu River	Selamlı	4368.0	125	1946-1965	20
EİE 1720	Göksu River	Hamam	4304.0	127	1966-2007	42
EİE 1705	Göksu River	Ekşiler	10095.2	17	1953-1960	8
EİE 1714	Göksu River	Karahacılı	10065.2	24	1961-2007	47
EİE 1703	Ermenek Creek	Evren	3642.0	126	1946-1956,1962-1965	15
EİE 1719	Ermenek Creek	Kırkkavak	3631.0	130	1966-2007	42
EİE 1726	Ermenek Creek	Yeşilköy	1418.4	662	1994-2007	14
EİE 1723	Ermenek Creek	Çavuşköy	2148.0	515	1985-2004	20
DSİ 17-14	Göksu River	Görmel Köp.	2156.0	509	1966-1968, 1973-1981, 1983-1985, 1987-1994, 1997-2001, 2003-2007	32
EİE 1735	Küçük Su	Narlıca	377.6	616	1998-2006	9
EİE 1736	Balkusan Creek	Tekegeçidi	203.5	1452	2000-2006	7
EİE 1715	Erik Stream	Ilısu	241.6	850	1966,1970-1971	3
DSİ 17-20	Pirinç Suyu	Yapıntı	514.9	152	1970-1972	3
EİE 1734	Kurtsuyu	Karayolu Köp.	765.8	82	1998	1
DSİ 17-21	Kurtsuyu	Karayolu Köp.	641.8	88	1970-1972	3

Table A-3 Annual Instantaneous Peak Discharges of the Stream Gauging Stations at the Project Area

SGS #	EİE 1712		DSİ 17-16		EİE 1731		EİE 1704		EİE 1720		EİE 1705		EİE 1714		EİE 1703		EİE 1719		EİE 1726		EİE 1723		DSİ 17-14		EİE 1735		EİE 1736		EİE 1715		DSİ 17-20		EİE 1734		DSİ 17-21	
Area	2689.20	km^2	2994.00	km^2	2994.00	km^2	4368.00	km^2	4304.00	km^2	10095.20	km^2	10065.20	km^2	3642.00	km^2	3631.00	km^2	1418.40	km^2	2148.00	km^2	2156.00	km^2	377.60	km^2	203.50	km^2	241.60	km^2	514.90	km^2	765.80	km^2	641.80	km^2
Year	Date	Max. (m^3/s)	Date	Max. (m^3/s)	Date	Max. (m^3/s)	Date	Max. (m^3/s)	Date	Max. (m^3/s)	Date	Max. (m^3/s)	Date	Max. (m^3/s)	Date	Max. (m^3/s)	Date	Max. (m^3/s)	Date	Max. (m^3/s)	Date	Max. (m^3/s)	Date	Max. (m^3/s)	Date	Max. (m^3/s)	Date	Max. (m^3/s)	Date	Max. (m^3/s)	Date	Max. (m^3/s)	Date	Max. (m^3/s)	Date	Max. (m^3/s)
2007	24-03	233.00			24-03	300.00			24-03	334.00			05-11	677.00			04-11	683.00	04-11	604.00			05-11	1112.00												
2006	16-04	106.00			16-04	113.00			17-04	124.00			18-04	359.00			17-04	255.00	16-04	195.00			17-04	197.00	30-03	14.80	23-03	4.60								
2005	30-01	136.00			31-01	185.00			31-01	194.00			04-03	415.00			03-03	316.00	21-11	402.00			21-11	241.00	02-03	23.90	02-03	8.22								
2004	05-03	514.00			05-03	534.00			06-03	698.00			06-03	1996.00			05-03	2464.00	05-03	772.00	05-03	1651.00	05-03	1562.00	05-03	144.00	05-03	44.10								
2003	06-04	261.00	05-04	453.00	05-04	276.00			05-04	335.00			07-04	590.00			20-04	323.00	05-04	322.00	06-04	449.00	05-04	565.00	05-04	45.00	05-04	18.10								
2002	28-12	310.00	28-12	591.00	28-12	339.00			29-12	489.00			25-11	1333.00			25-11	1776.00	25-11	845.00	25-11	1798.00	25-11	1748.00	06-04	33.30	28-12	17.40								
2001	02-03	55.20	30-12	74.20	30-12	82.10			30-12	95.50			03-03	177.00			10-01	122.00	24-02	215.00	25-02	237.00	25-02	256.00	07-03	8.25	08-03	3.78								
2000	07-04	233.00	07-04	382.00	07-04	253.00			07-04	279.00			07-04	680.00			14-04	540.00	20-04	338.00	06-04	438.00	06-04	530.00	13-04	45.40	06-04	16.40								
1999	10-12	224.00	10-12	325.00	10-12	234.00			11-12	264.00			10-12	1245.00			10-12	1104.00	10-12	650.00	10-12	1125.00	10-12	1265.00	10-12	21.00										
1998	16-12	246.00	17-12	284.00	16-12	269.00			16-12	288.00			17-12	650.00			19-11	490.00	15-12	565.00	15-12	790.00	15-12	983.00	16-12	29.90							18-11	16.30		
1997	03-12	145.00	04-12	435.00	04-12	252.00			04-12	285.00			29-12	290.00			29-12	193.00	24-04	285.00	24-04	329.00	24-04	364.00												
1996	17-04	221.00	18-04	357.00	18-04	228.00			18-04	264.00			21-11	954.00			20-11	854.00	19-11	994.00	19-11	1775.00														
1995	21-11	170.00	21-11	250.00	21-11	200.00			21-11	220.00			20-11	871.00			20-11	536.00	19-11	561.00	19-11	706.00														
1994	31-03	126.00	31-03	160.00	31-03	113.00			01-04	123.00			01-04	336.00			27-02	175.00	17-11	273.00	17-11	314.00	03-01	197.00												
1993	19-04	250.00			19-04	224.00			20-04	274.00			20-04	820.00			19-04	594.00			19-04	555.00	19-04	741.00												
1992	13-04	238.00	29-03	326.00					13-04	240.00			14-04	673.00			20-04	432.00			20-04	399.00	20-04	477.00												
1991	14-12	122.00	14-12	132.00					14-12	123.00			17-12	468.00			16-12	670.00			16-12	498.00	16-12	600.00												
1990	11-12	229.00	11-12	284.00					11-12	369.00			30-11	1189.00			11-12	1352.00			29-11	1486.00	29-11	1491.00												
1989	28-02	137.00	17-11	214.00					17-11	198.00			17-11	838.00			16-11	685.00			16-11	530.00	16-11	642.00												
1988	11-04	158.00	11-04	240.00					11-04	249.00			12-04	594.00			10-04	362.00			10-04	318.00	29-03	480.00												
1987	12-04	162.00	13-04	250.00					12-04	283.00			10-01	748.00			04-01	455.00			13-04	291.00	09-01	590.00												
1986	09-11	420.00	09-11	440.00					09-11	545.00			10-11	1111.00			08-11	880.00			08-11	640.00	09-11	900.00												
1985	01-04	133.00							02-04	162.00			01-04	432.00			01-04	279.00			13-04	199.00	01-04	280.00												
1984	01-12	232.00	02-12	220.00					01-12	271.00			01-12	1157.00			01-12	1025.00					30-11	1240.00												
1983	28-03	192.00	02-04	185.00					29-03	307.00			03-04	541.00			02-04	247.00					27-12	410.00												
1982	28-12	334.00	27-12	310.00					27-12	678.00			18-12	1310.00			18-12	1069.00					16-11	1600.00												
1981	18-03	207.00	18-03	230.00					18-03	323.00			18-03	681.00			06-12	424.00					06-01	630.00												
1980	28-03	394.00	28-03	360.00					28-03	675.00			28-03	1321.00			28-03	894.00					14-12	1200.00												
1979	06-06	231.00	04-01	190.00					15-01	326.00			04-01	1248.00			03-01	1060.00					03-01	880.00												
1978	20-01	275.00	21-01	390.00					21-01	304.00			21-01	941.00			20-01	777.00					20-01	1000.00												
1977	03-12	227.00	23-04	230.00					23-04	257.00			04-12	933.00			04-12	810.00					03-12	820.00												
1976	12-04	261.00	12-04	240.00					14-04	281.00			12-04	933.00			12-04	834.00					12-04	880.00												
1975	24-03	218.00	31-01	230.00					31-01	513.00			31-01	1025.00			20-12	822.00					20-12	560.00												
1974	15-03	291.00	15-03	270.00					16-03	251.00			15-03	901.00			15-03	792.00					15-03	870.00												
1973	14-03	132.00							15-03	109.00			24-10	418.00			24-10	182.00					26-02	160.00												
1972	11-12	500.00							12-12	569.00			13-12	938.00			12-12	672.00					10-04	240.00					12-01	44.00			30-07	78.00		
1971	10-01	201.00	10-01	130.00					10-01	433.00			01-01	694.00			10-01	436.00											27-10	19.50	10-01	55.00			11-01	29.00		
1970	21-12	171.00	19-01	195.00					21-12	297.00			18-12	969.00			21-12	553.00											22-12	20.30	29-11	17.50			29-11	31.00		
1969	29-12	292.00	27-12	490.00					26-12	441.00			22-01	1230.00			28-12	874.00																		
1968	13-03	428.00							13-03	470.00			13-03	1223.00			13-03	784.00					13-03	680.00												
1967	16-04	241.00	16-04	290.00					16-04	278.00			16-04	615.00			10-12	442.00					12-01	540.00												
1966	25-01	222.00	25-01	280.00					25-01	264.00			25-01	960.00			26-12	700.00					25-01	730.00					29-01	10.80						
1965	06-03	176.00	12-04	200.00			08-01	241.00					12-04	670.00	12-04	449.00							21-01	480.00												
1964	10-03	94.40					10-03	139.00					26-03	225.00	02-03	225.00							21-03	9.00												
1963	19-12	243.00					19-12	450.00					19-12	1550.00	18-12	960.00							23-04	32.00												
1962	17-03	128.00					17-12	247.00					17-12	553.00	17-12	378.00							17-03	32.00												
1961							29-12	437.00					29-12	1047.00									14-04	37.00												
1960							23-03	113.00			18-04	338.00																								
1959							28-01	349.00			29-01	1230.00																								
1958							10-01	267.00			10-01	1679.00																								
1957							03-03	141.00			03-03	410.00																								
1956							28-11	215.00			18-12	1108.00			27-11	383.00																				
1955							25-12	146.00			26-12	1024.00			09-12	348.00																				
1954							01-04	197.00			02-04	830.00			02-04	397.00																				
1953							18-02	252.00			10-02	1496.00			09-02	447.00																				
1952							01-04	182.00							03-04	383.00																				
1951							21-01	81.50							21-01	296.00																				
1950							05-04	142.00							05-01	322.00																				
1949							24-03	189.00							03-05	327.00																				
1948							11-04	215.00							27-11	354.00																				
1947							15-02	141.00							28-12	296.00																				
1946							14-12	268.00							21-04	268.00																				

Table A-4 DSİ 17-14 SGS 1, 3, 5,….23, 25 Day Maximum Average Discharges for Different Return Periods

	Peak	1 Day	3 Day	5 Day	7 Day	9 Day	11 Day	13 Day	15 Day	17 Day	19 Day	21 Day	23 Day	25 Day
Q_2	675.06	517.29	340.63	273.70	239.02	217.42	204.39	198.66	191.54	184.67	177.61	171.02	165.83	161.63
Q_5	1097.10	740.75	458.87	358.60	307.46	282.75	264.27	255.65	245.61	236.31	227.17	218.40	211.16	206.35
Q_{10}	1376.52	857.57	520.69	402.99	342.89	318.00	296.06	285.17	273.35	262.68	252.49	242.55	234.03	228.96
Q_{25}	1729.57	982.23	586.65	450.35	380.42	356.36	330.29	316.47	302.60	290.39	279.12	267.90	257.87	252.56
Q_{50}	1991.49	1062.60	629.18	480.89	404.52	381.53	352.58	336.58	321.26	308.01	296.07	284.01	272.93	267.49
Q_{100}	2251.47	1134.98	667.48	508.38	426.05	404.52	372.78	354.54	337.85	323.64	311.10	298.28	286.22	280.68
Q_{500}	2852.24	1280.64	744.56	563.73	465.49	447.06	409.98	387.48	368.16	352.15	338.54	324.29	310.33	304.62
Q_{1000}	3117.66	1409.61	812.80	612.73	508.38	490.18	448.73	423.22	401.70	383.99	369.12	353.45	337.90	331.88
Q_{10000}	3983.86	1684.25	958.13	717.07	590.71	575.83	524.68	491.90	465.54	444.34	427.15	408.62	389.57	383.09

Table A-5 1, 3, 5,….23, 25 Day Maximum Average Discharges for Different Return Periods For Ermenek Dam

Drainage Area= 2304 km^2

	Peak	1 Day	3 Day	5 Day	7 Day	9 Day	11 Day	13 Day	15 Day	17 Day	19 Day	21 Day	23 Day	25 Day
Q_2	705.61	540.70	356.04	286.09	249.84	227.26	213.64	207.65	200.20	193.03	185.65	178.75	173.33	168.94
Q_5	1146.75	774.27	479.64	374.83	321.38	295.55	276.23	267.22	256.72	247.01	237.45	228.29	220.71	215.68
Q_{10}	1438.82	896.38	544.25	421.22	358.40	332.39	309.46	298.08	285.72	274.57	263.92	253.53	244.62	239.32
Q_{25}	1807.85	1026.68	613.20	470.73	397.64	372.49	345.24	330.79	316.29	303.53	291.75	280.02	269.54	263.99
Q_{50}	2081.61	1110.69	657.65	502.65	422.83	398.79	368.54	351.81	335.80	321.95	309.46	296.86	285.28	279.59
Q_{100}	2353.36	1186.34	697.69	531.39	445.33	422.83	389.65	370.59	353.14	338.29	325.18	311.78	299.18	293.38
Q_{500}	2981.32	1338.60	778.25	589.24	486.56	467.29	428.54	405.01	384.82	368.09	353.86	338.97	324.37	318.41
Q_{1000}	3258.75	1473.41	849.59	640.46	531.39	512.36	469.04	442.37	419.87	401.37	385.83	369.45	353.19	346.90
Q_{10000}	4164.15	1760.47	1001.49	749.52	617.44	601.89	548.43	514.16	486.61	464.45	446.48	427.12	407.20	400.43

Table A-6 Peak Discharges of the SGS Located On Göksu River With Different Return Periods

SGS	Area (km^2)	2	5	10	25	50	100	500	1000	10000
EİE 1720	4304.00	290.09	423.67	516.45	637.96	731.07	826.50	1057.95	1133.44	1440.38
DSİ 17-16	2994.00	263.68	363.12	429.26	513.16	575.75	638.64	786.77	845.92	1053.21
EİE 1712	2689.20	213.07	311.24	376.23	458.35	519.28	579.75	719.49	781.23	982.71
Mut Dam	3384.00	258.44	370.29	445.73	542.43	615.16	688.49	862.12	928.82	1169.16

Table A-7 Q_x/Q_2 Ratios of the SGS Located on Göksu River

SGS	Area (km^2)	Q_2/Q_2	Q_5/Q_2	Q_{10}/Q_2	Q_{25}/Q_2	Q_{50}/Q_2	Q_{100}/Q_2	Q_{500}/Q_2	Q_{1000}/Q_2	Q_{10000}/Q_2
EİE 1720	4304.00	1.00	1.46	1.78	2.20	2.52	2.85	3.65	3.91	4.97
DSİ 17-16	2994.00	1.00	1.38	1.63	1.95	2.18	2.42	2.98	3.21	3.99
EİE 1712	2689.20	1.00	1.46	1.77	2.15	2.44	2.72	3.38	3.67	4.61
Average		1.00	1.43	1.72	2.10	2.38	2.66	3.34	3.59	4.52

Table A-8 1, 3, 5,….23, 25 Day Maximum Average Discharges for Different Return Periods of Mut Dam

	Peak	1 Day	3 Day	5 Day	7 Day	9 Day	11 Day	13 Day	15 Day	17 Day	19 Day	21 Day	23 Day	25 Day
Q_2	258.44	211.44	179.28	161.18	150.05	140.61	134.46	130.37	127.13	124.27	121.67	119.52	117.30	115.60
Q_5	370.29	297.03	243.67	217.67	202.43	187.99	182.49	174.41	169.77	165.00	161.80	157.51	153.22	150.62
Q_{10}	445.73	351.60	282.05	251.59	233.88	216.27	211.49	199.68	194.10	187.96	184.47	178.58	172.90	169.70
Q_{25}	542.43	418.77	326.72	291.38	270.78	249.52	245.58	228.15	221.34	213.53	209.68	201.77	194.46	190.49
Q_{50}	615.16	467.60	357.64	319.13	296.54	272.82	269.43	247.32	239.55	230.61	226.43	217.07	208.65	204.12
Q_{100}	688.49	515.58	386.94	345.62	321.13	295.17	292.12	265.05	256.23	246.29	241.71	231.03	221.56	216.49
Q_{500}	862.12	624.95	449.60	402.93	374.26	342.76	339.28	298.48	287.87	275.68	270.58	257.02	245.71	239.51
Q_{1000}	928.82	677.91	490.78	438.70	407.51	373.27	371.95	329.77	317.74	304.03	298.38	282.95	269.74	262.82
Q_{10000}	1169.16	840.25	594.62	531.78	493.89	451.37	451.78	394.49	379.25	361.78	355.05	334.87	317.91	309.14

Table A-9 1, 3, 5,….23, 25 Day Maximum Average Discharges for Different Return Periods For Ermenek Creek Sub – Basin

	Peak	1 Day	3 Day	5 Day	7 Day	9 Day	11 Day	13 Day	15 Day	17 Day	19 Day	21 Day	23 Day	25 Day
Q_2	242.16	151.00	82.13	61.49	51.95	46.24	42.79	41.64	40.40	38.54	36.78	35.39	34.43	33.28
Q_5	402.88	222.88	130.61	93.09	76.43	68.16	62.08	61.28	60.09	57.27	54.18	51.78	50.39	48.54
Q_{10}	515.30	267.59	162.70	114.01	92.63	82.67	74.85	74.28	73.13	69.68	65.70	62.63	60.95	58.64
Q_{25}	660.41	320.89	203.26	140.44	113.10	101.01	90.98	90.71	89.60	85.35	80.25	76.34	74.31	71.41
Q_{50}	769.39	358.57	233.34	160.05	128.29	114.61	102.95	102.90	101.83	96.97	91.05	86.51	84.21	80.88
Q_{100}	877.68	394.61	263.21	179.51	143.36	128.12	114.83	115.00	113.96	108.51	101.77	96.61	94.04	90.28
Q_{500}	1108.22	464.36	332.22	224.49	178.20	159.32	142.29	142.96	141.99	135.18	126.53	119.93	116.76	112.00
Q_{1000}	1236.43	520.36	362.71	244.36	193.59	173.11	154.42	155.31	154.37	146.96	137.47	130.24	126.80	121.60
Q_{10000}	1595.19	646.11	462.21	309.21	243.81	218.10	194.01	195.61	194.79	185.40	173.18	163.88	159.55	152.92

Table A-10 Peak Discharges of the SGS Located On Göksu River With Different Return Periods

SGS	AREA (km^2)	2	5	10	25	50	100	500	1000	10000
EİE 1720	4304.00	290.09	423.67	516.45	637.96	731.07	826.50	1057.95	1133.44	1440.38
DSİ 17-16	2994.00	263.68	363.12	429.26	513.16	575.75	638.64	786.77	845.92	1053.21
EİE 1712	2689.20	213.07	311.24	376.23	458.35	519.28	579.75	719.49	781.23	982.71
Göksu River Sub-Basin	998.00	112.18	160.73	193.47	235.44	267.01	298.84	374.20	403.16	507.47

Table A-11 Q_x/Q_2 Ratios of the SGS Located on Göksu River

SGS	AREA (km^2)	Q_2/Q_2	Q_5/Q_2	Q_{10}/Q_2	Q_{25}/Q_2	Q_{50}/Q_2	Q_{100}/Q_2	Q_{500}/Q_2	Q_{1000}/Q_2	Q_{10000}/Q_2
EİE 1720	4304.00	1.00	1.46	1.78	2.20	2.52	2.85	3.65	3.91	4.97
DSİ 17-16	2994.00	1.00	1.38	1.63	1.95	2.18	2.42	2.98	3.21	3.99
EİE 1712	2689.20	1.00	1.46	1.77	2.15	2.44	2.72	3.38	3.67	4.61
Average		1.00	1.43	1.72	2.10	2.38	2.66	3.34	3.59	4.52

Table A-12 1, 3, 5,….23, 25 Day Maximum Average Discharges for Different Return Periods For Göksu Creek Sub – Basin

	Pik	1 Gün	3 Gün	5 Gün	7 Gün	9 Gün	11 Gün	13 Gün	15 Gün	17 Gün	19 Gün	21 Gün	23 Gün	25 Gün
Q_2	112.18	94.59	82.21	75.10	70.67	66.88	64.38	62.72	61.39	60.21	59.14	58.25	57.33	56.62
Q_5	160.73	132.88	111.74	101.43	95.35	89.41	87.38	83.90	81.98	79.95	78.64	76.77	74.89	73.78
Q_{10}	193.47	157.29	129.34	117.23	110.16	102.86	101.26	96.05	93.73	91.07	89.66	87.04	84.50	83.12
Q_{25}	235.44	187.33	149.82	135.77	127.53	118.68	117.59	109.75	106.88	103.46	101.92	98.34	95.04	93.31
Q_{50}	267.01	209.18	164.00	148.70	139.67	129.76	129.01	118.97	115.67	111.74	110.06	105.80	101.98	99.98
Q_{100}	298.84	230.64	177.44	161.04	151.25	140.39	139.88	127.50	123.73	119.33	117.49	112.60	108.29	106.04
Q_{500}	374.20	279.57	206.17	187.75	176.27	163.02	162.46	143.58	139.01	133.58	131.52	125.27	120.09	117.32
Q_{1000}	403.16	303.26	225.06	204.42	191.94	177.53	178.10	158.64	153.43	147.31	145.03	137.90	131.83	128.73
Q_{10000}	507.47	375.88	272.67	247.79	232.62	214.68	216.32	189.77	183.13	175.29	172.58	163.21	155.38	151.42

Table A-13 Ermenek Dam Flood Routing Table (Q_{100})

Time	Ermenek Dam Inflow Discharges	Ermenek Dam Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
0	293.38	293.38				4582.58	694.00
4	293.38	293.38	4.22	4.22	0.00	4582.58	694.00
8	293.38	293.38	4.22	4.22	0.00	4582.58	694.00
12	293.38	293.38	4.22	4.22	0.00	4582.58	694.00
16	294.35	294.35	4.23	4.23	0.00	4582.58	694.00
20	295.31	295.31	4.25	4.25	0.00	4582.58	694.00
24	296.28	296.28	4.26	4.26	0.00	4582.58	694.00
28	297.25	297.25	4.27	4.27	0.00	4582.58	694.00
32	298.21	298.21	4.29	4.29	0.00	4582.58	694.00
36	299.18	299.18	4.30	4.30	0.00	4582.58	694.00
40	301.28	301.28	4.32	4.32	0.00	4582.58	694.00
44	303.38	303.38	4.35	4.35	0.00	4582.58	694.00
48	305.48	305.48	4.38	4.38	0.00	4582.58	694.00
52	307.58	307.58	4.41	4.41	0.00	4582.58	694.00
56	309.68	309.68	4.44	4.44	0.00	4582.58	694.00
60	311.78	311.46	4.47	4.47	0.00	4582.58	694.00
64	314.01	311.46	4.51	4.49	0.02	4582.60	694.00
68	316.25	311.46	4.54	4.49	0.05	4582.66	694.00
72	318.48	311.46	4.57	4.49	0.08	4582.74	694.00
76	320.71	311.46	4.60	4.49	0.12	4582.86	694.00
80	322.95	311.46	4.63	4.49	0.15	4583.01	694.01
84	325.18	311.46	4.67	4.49	0.18	4583.19	694.01
88	327.36	311.46	4.70	4.49	0.21	4583.40	694.01
92	329.55	311.46	4.73	4.49	0.24	4583.65	694.02
96	331.73	311.46	4.76	4.49	0.28	4583.92	694.02
100	333.92	311.46	4.79	4.49	0.31	4584.23	694.03
104	336.10	311.46	4.82	4.49	0.34	4584.57	694.03
108	338.29	311.46	4.86	4.49	0.37	4584.94	694.04
112	340.76	311.46	4.89	4.49	0.40	4585.34	694.05
116	343.24	311.46	4.92	4.49	0.44	4585.78	694.05
120	345.71	311.46	4.96	4.49	0.48	4586.26	694.06
124	348.19	311.46	5.00	4.49	0.51	4586.77	694.07
128	350.66	311.46	5.03	4.49	0.55	4587.32	694.08
132	353.14	311.46	5.07	4.49	0.58	4587.90	694.09
136	356.04	311.46	5.11	4.49	0.62	4588.52	694.10
140	358.95	311.46	5.15	4.49	0.66	4589.18	694.11

Table A-13 Ermenek Dam Flood Routing Table (Q_{100}) (Continued)

Time	Ermenek Dam Inflow Discharges	Ermenek Dam Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
144	361.86	311.46	5.19	4.49	0.70	4589.89	694.12
148	364.77	311.46	5.23	4.49	0.75	4590.63	694.14
152	367.68	311.46	5.27	4.49	0.79	4591.42	694.15
156	370.59	311.46	5.32	4.49	0.83	4592.25	694.16
160	373.76	311.46	5.36	4.49	0.87	4593.13	694.18
164	376.94	311.46	5.41	4.49	0.92	4594.05	694.19
168	380.12	311.46	5.45	4.49	0.97	4595.01	694.21
172	383.30	311.46	5.50	4.49	1.01	4596.03	694.23
176	386.47	311.46	5.54	4.49	1.06	4597.08	694.25
180	389.65	311.46	5.59	4.49	1.10	4598.19	694.26
184	395.18	311.46	5.65	4.49	1.17	4599.35	694.28
188	400.71	311.46	5.73	4.49	1.25	4600.60	694.30
192	406.24	311.46	5.81	4.49	1.32	4601.92	694.33
196	411.77	311.46	5.89	4.49	1.40	4603.33	694.35
200	417.30	311.46	5.97	4.49	1.48	4604.81	694.38
204	422.83	311.46	6.05	4.49	1.56	4606.37	694.40
208	426.58	311.46	6.12	4.49	1.63	4608.00	694.43
212	430.33	311.46	6.17	4.49	1.68	4609.69	694.46
216	434.08	311.46	6.22	4.49	1.74	4611.43	694.49
220	437.83	311.46	6.28	4.49	1.79	4613.22	694.52
224	441.58	311.46	6.33	4.49	1.85	4615.07	694.55
228	445.33	311.46	6.39	4.49	1.90	4616.97	694.58
232	459.67	311.46	6.52	4.49	2.03	4619.00	694.62
236	474.02	311.46	6.72	4.49	2.24	4621.24	694.65
240	488.36	311.46	6.93	4.49	2.44	4623.68	694.69
244	502.70	311.46	7.14	4.49	2.65	4626.33	694.74
248	517.05	311.46	7.34	4.49	2.86	4629.19	694.79
252	531.39	311.46	7.55	4.49	3.06	4632.25	694.84
256	559.11	311.46	7.85	4.49	3.37	4635.62	694.90
260	586.82	311.46	8.25	4.49	3.77	4639.38	694.96
264	614.54	311.46	8.65	4.49	4.16	4643.55	695.03
268	642.26	311.46	9.05	4.49	4.56	4648.11	695.11
272	669.97	311.46	9.45	4.49	4.96	4653.08	695.19
276	697.69	311.46	9.85	4.49	5.36	4658.44	695.28
280	806.28	311.46	10.83	4.49	6.34	4664.78	695.39
284	914.87	311.46	12.39	4.49	7.91	4672.69	695.52

Table A-13 Ermenek Dam Flood Routing Table (Q_{100}) (Continued)

Time	Ermenek Dam Inflow Discharges	Ermenek Dam Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
288	1023.46	311.46	13.96	4.49	9.47	4682.16	695.68
292	1132.05	311.46	15.52	4.49	11.03	4693.19	695.87
296	1575.35	311.46	19.49	4.49	15.01	4708.20	696.12
300	2353.36	311.46	28.29	4.49	23.80	4732.00	696.52
304	1575.35	311.46	28.29	4.49	23.80	4755.81	696.93
308	1132.05	311.46	19.49	4.49	15.01	4770.81	697.18
312	1023.46	311.46	15.52	4.49	11.03	4781.85	697.37
316	914.87	311.46	13.96	4.49	9.47	4791.32	697.53
320	806.28	311.46	12.39	4.49	7.91	4799.23	697.66
324	697.69	311.46	10.83	4.49	6.34	4805.57	697.77
328	669.97	311.46	9.85	4.49	5.36	4810.93	697.86
332	642.26	311.46	9.45	4.49	4.96	4815.89	697.94
336	614.54	311.46	9.05	4.49	4.56	4820.46	698.02
340	586.82	311.46	8.65	4.49	4.16	4824.62	698.09
344	559.11	311.46	8.25	4.49	3.77	4828.39	698.15
348	531.39	311.46	7.85	4.49	3.37	4831.76	698.21
352	517.05	311.46	7.55	4.49	3.06	4834.82	698.26
356	502.70	311.46	7.34	4.49	2.86	4837.68	698.31
360	488.36	311.46	7.14	4.49	2.65	4840.33	698.36
364	474.02	311.46	6.93	4.49	2.44	4842.77	698.40
368	459.67	311.46	6.72	4.49	2.24	4845.01	698.43
372	445.33	311.46	6.52	4.49	2.03	4847.04	698.47
376	441.58	311.46	6.39	4.49	1.90	4848.94	698.50
380	437.83	311.46	6.33	4.49	1.85	4850.79	698.53
384	434.08	311.46	6.28	4.49	1.79	4852.58	698.56
388	430.33	311.46	6.22	4.49	1.74	4854.32	698.59
392	426.58	311.46	6.17	4.49	1.68	4856.00	698.62
396	422.83	311.46	6.12	4.49	1.63	4857.63	698.65
400	417.30	311.46	6.05	4.49	1.56	4859.20	698.67
404	411.77	311.46	5.97	4.49	1.48	4860.68	698.70
408	406.24	311.46	5.89	4.49	1.40	4862.09	698.72
412	400.71	311.46	5.81	4.49	1.32	4863.41	698.75
416	395.18	311.46	5.73	4.49	1.25	4864.66	698.77
420	389.65	311.46	5.65	4.49	1.17	4865.82	698.79
424	386.47	311.46	5.59	4.49	1.10	4866.92	698.80
428	383.30	311.46	5.54	4.49	1.06	4867.98	698.82

Table A-13 Ermenek Dam Flood Routing Table (Q_{100}) (Continued)

Time	Ermenek Dam Inflow Discharges	Ermenek Dam Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
432	380.12	311.46	5.50	4.49	1.01	4868.99	698.84
436	376.94	311.46	5.45	4.49	0.97	4869.96	698.86
440	373.76	311.46	5.41	4.49	0.92	4870.88	698.87
444	370.59	311.46	5.36	4.49	0.87	4871.75	698.89
448	367.68	311.46	5.32	4.49	0.83	4872.58	698.90
452	364.77	311.46	5.27	4.49	0.79	4873.37	698.91
456	361.86	311.46	5.23	4.49	0.75	4874.12	698.93
460	358.95	311.46	5.19	4.49	0.70	4874.82	698.94
464	356.04	311.46	5.15	4.49	0.66	4875.49	698.95
468	353.14	311.46	5.11	4.49	0.62	4876.11	698.96
472	350.66	311.46	5.07	4.49	0.58	4876.69	698.97
476	348.19	311.46	5.03	4.49	0.55	4877.24	698.98
480	345.71	311.46	5.00	4.49	0.51	4877.75	698.99
484	343.24	311.46	4.96	4.49	0.48	4878.22	699.00
488	340.76	311.46	4.92	4.49	0.44	4878.66	699.00
492	338.29	311.46	4.89	4.49	0.40	4879.07	699.01
496	336.10	311.46	4.86	4.49	0.37	4879.44	699.02
500	333.92	311.46	4.82	4.49	0.34	4879.78	699.02
504	331.73	311.46	4.79	4.49	0.31	4880.08	699.03
508	329.55	311.46	4.76	4.49	0.28	4880.36	699.03
512	327.36	311.46	4.73	4.49	0.24	4880.61	699.04
516	325.18	311.46	4.70	4.49	0.21	4880.82	699.04
520	322.95	311.46	4.67	4.49	0.18	4881.00	699.04
524	320.71	311.46	4.63	4.49	0.15	4881.15	699.05
528	318.48	311.46	4.60	4.49	0.12	4881.27	699.05
532	316.25	311.46	4.57	4.49	0.08	4881.35	699.05
536	314.01	311.46	4.54	4.49	0.05	4881.40	699.05
540	311.78	311.46	4.51	4.49	0.02	4881.43	**699.05**
544	309.68	311.46	4.47	4.49	-0.01	4881.41	699.05
548	307.58	311.46	4.44	4.49	-0.04	4881.37	699.05
552	305.48	311.46	4.41	4.49	-0.07	4881.30	699.05
556	303.38	311.46	4.38	4.49	-0.10	4881.20	699.05
560	301.28	311.46	4.35	4.49	-0.13	4881.07	699.04
564	299.18	311.46	4.32	4.49	-0.16	4880.91	699.04
568	298.21	311.46	4.30	4.49	-0.18	4880.72	699.04
572	297.25	311.46	4.29	4.49	-0.20	4880.53	699.03

Table A-13 Ermenek Dam Flood Routing Table (Q_{100}) (Continued)

Time	Ermenek Dam Inflow Discharges	Ermenek Dam Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
576	296.28	311.46	4.27	4.49	-0.21	4880.31	699.03
580	295.31	311.46	4.26	4.49	-0.23	4880.09	699.03
584	294.35	311.46	4.25	4.49	-0.24	4879.85	699.02
588	293.38	311.46	4.23	4.49	-0.25	4879.60	699.02
592	293.38	311.46	4.22	4.49	-0.26	4879.34	699.01
596	293.38	311.46	4.22	4.49	-0.26	4879.08	699.01
600	293.38	311.46	4.22	4.49	-0.26	4878.82	699.01

Table A-14 Ermenek Dam Flood Routing Table (Q_{500})

Time	Ermenek Dam Inflow Discharges	Ermenek Dam Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
0	318.41	318.41				4582.58	694.00
4	318.41	318.41	4.59	4.59	0.00	4582.58	694.00
8	318.41	318.41	4.59	4.59	0.00	4582.58	694.00
12	318.41	318.41	4.59	4.59	0.00	4582.58	694.00
16	319.40	319.40	4.59	4.59	0.00	4582.58	694.00
20	320.40	320.40	4.61	4.61	0.00	4582.58	694.00
24	321.39	321.39	4.62	4.62	0.00	4582.58	694.00
28	322.38	322.38	4.64	4.64	0.00	4582.58	694.00
32	323.38	323.38	4.65	4.65	0.00	4582.58	694.00
36	324.37	324.37	4.66	4.66	0.00	4582.58	694.00
40	326.81	326.81	4.69	4.69	0.00	4582.58	694.00
44	329.24	329.24	4.72	4.72	0.00	4582.58	694.00
48	331.67	331.67	4.76	4.76	0.00	4582.58	694.00
52	334.10	334.10	4.79	4.79	0.00	4582.58	694.00
56	336.54	336.54	4.83	4.83	0.00	4582.58	694.00
60	338.97	338.97	4.86	4.86	0.00	4582.58	694.00
64	341.45	341.45	4.90	4.90	0.00	4582.58	694.00
68	343.93	343.93	4.93	4.93	0.00	4582.58	694.00
72	346.41	346.41	4.97	4.97	0.00	4582.58	694.00
76	348.89	348.89	5.01	5.01	0.00	4582.58	694.00
80	351.37	351.37	5.04	5.04	0.00	4582.58	694.00
84	353.86	353.86	5.08	5.08	0.00	4582.58	694.00
88	356.23	356.23	5.11	5.11	0.00	4582.58	694.00
92	358.60	358.60	5.15	5.15	0.00	4582.58	694.00
96	360.97	360.97	5.18	5.18	0.00	4582.58	694.00
100	363.34	363.34	5.22	5.22	0.00	4582.58	694.00
104	365.71	365.71	5.25	5.25	0.00	4582.58	694.00
108	368.09	368.09	5.28	5.28	0.00	4582.58	694.00
112	370.88	369.92	5.32	5.31	0.01	4582.59	694.00
116	373.67	369.92	5.36	5.33	0.03	4582.62	694.00
120	376.45	369.92	5.40	5.33	0.07	4582.69	694.00
124	379.24	369.92	5.44	5.33	0.11	4582.81	694.00
128	382.03	369.92	5.48	5.33	0.15	4582.96	694.01
132	384.82	369.92	5.52	5.33	0.19	4583.16	694.01
136	388.19	369.92	5.57	5.33	0.24	4583.40	694.01
140	391.55	369.92	5.61	5.33	0.29	4583.68	694.02

Table A-14 Ermenek Dam Flood Routing Table (Q_{500}) (Continued)

Time	Ermenek Dam Inflow Discharges	Ermenek Dam Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
144	394.92	369.92	5.66	5.33	0.34	4584.02	694.02
148	398.28	369.92	5.71	5.33	0.38	4584.40	694.03
152	401.65	369.92	5.76	5.33	0.43	4584.84	694.04
156	405.01	369.92	5.81	5.33	0.48	4585.32	694.05
160	408.93	369.92	5.86	5.33	0.53	4585.85	694.06
164	412.85	369.92	5.92	5.33	0.59	4586.44	694.07
168	416.77	369.92	5.97	5.33	0.65	4587.09	694.08
172	420.69	369.92	6.03	5.33	0.70	4587.79	694.09
176	424.62	369.92	6.09	5.33	0.76	4588.55	694.10
180	428.54	369.92	6.14	5.33	0.82	4589.37	694.11
184	435.00	369.92	6.22	5.33	0.89	4590.26	694.13
188	441.46	369.92	6.31	5.33	0.98	4591.24	694.15
192	447.92	369.92	6.40	5.33	1.08	4592.32	694.16
196	454.38	369.92	6.50	5.33	1.17	4593.49	694.18
200	460.83	369.92	6.59	5.33	1.26	4594.75	694.21
204	467.29	369.92	6.68	5.33	1.36	4596.10	694.23
208	470.51	369.92	6.75	5.33	1.43	4597.53	694.25
212	473.72	369.92	6.80	5.33	1.47	4599.00	694.28
216	476.93	369.92	6.84	5.33	1.52	4600.52	694.30
220	480.14	369.92	6.89	5.33	1.56	4602.08	694.33
224	483.35	369.92	6.94	5.33	1.61	4603.69	694.36
228	486.56	369.92	6.98	5.33	1.66	4605.35	694.38
232	503.67	369.92	7.13	5.33	1.80	4607.15	694.42
236	520.79	369.92	7.38	5.33	2.05	4609.20	694.45
240	537.90	369.92	7.62	5.33	2.30	4611.50	694.49
244	555.01	369.92	7.87	5.33	2.54	4614.04	694.53
248	572.13	369.92	8.12	5.33	2.79	4616.83	694.58
252	589.24	369.92	8.36	5.33	3.03	4619.86	694.63
256	620.74	369.92	8.71	5.33	3.38	4623.25	694.69
260	652.24	369.92	9.17	5.33	3.84	4627.09	694.75
264	683.74	369.92	9.62	5.33	4.29	4631.38	694.82
268	715.25	369.92	10.07	5.33	4.75	4636.12	694.90
272	746.75	369.92	10.53	5.33	5.20	4641.32	694.99
276	778.25	369.92	10.98	5.33	5.65	4646.98	695.09
280	902.77	369.92	12.10	5.33	6.78	4653.75	695.20
284	1027.29	369.92	13.90	5.33	8.57	4662.32	695.35

Table A-14 Ermenek Dam Flood Routing Table (Q_{500}) (Continued)

Time	Ermenek Dam Inflow Discharges	Ermenek Dam Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
288	1151.81	369.92	15.69	5.33	10.36	4672.69	695.52
292	1276.34	369.92	17.48	5.33	12.16	4684.84	695.73
296	1886.17	369.92	22.77	5.33	17.44	4702.28	696.02
300	2981.32	369.92	35.05	5.33	29.72	4732.00	696.53
304	1886.17	369.92	35.05	5.33	29.72	4761.72	697.03
308	1276.34	369.92	22.77	5.33	17.44	4779.17	697.32
312	1151.81	369.92	17.48	5.33	12.16	4791.32	697.53
316	1027.29	369.92	15.69	5.33	10.36	4801.68	697.70
320	902.77	369.92	13.90	5.33	8.57	4810.25	697.85
324	778.25	369.92	12.10	5.33	6.78	4817.03	697.96
328	746.75	369.92	10.98	5.33	5.65	4822.68	698.06
332	715.25	369.92	10.53	5.33	5.20	4827.88	698.15
336	683.74	369.92	10.07	5.33	4.75	4832.63	698.23
340	652.24	369.92	9.62	5.33	4.29	4836.92	698.30
344	620.74	369.92	9.17	5.33	3.84	4840.76	698.36
348	589.24	369.92	8.71	5.33	3.38	4844.15	698.42
352	572.13	369.92	8.36	5.33	3.03	4847.18	698.47
356	555.01	369.92	8.12	5.33	2.79	4849.97	698.52
360	537.90	369.92	7.87	5.33	2.54	4852.51	698.56
364	520.79	369.92	7.62	5.33	2.30	4854.81	698.60
368	503.67	369.92	7.38	5.33	2.05	4856.86	698.63
372	486.56	369.92	7.13	5.33	1.80	4858.66	698.67
376	483.35	369.92	6.98	5.33	1.66	4860.32	698.69
380	480.14	369.92	6.94	5.33	1.61	4861.93	698.72
384	476.93	369.92	6.89	5.33	1.56	4863.49	698.75
388	473.72	369.92	6.84	5.33	1.52	4865.01	698.77
392	470.51	369.92	6.80	5.33	1.47	4866.48	698.80
396	467.29	369.92	6.75	5.33	1.43	4867.90	698.82
400	460.83	369.92	6.68	5.33	1.36	4869.26	698.84
404	454.38	369.92	6.59	5.33	1.26	4870.52	698.87
408	447.92	369.92	6.50	5.33	1.17	4871.69	698.89
412	441.46	369.92	6.40	5.33	1.08	4872.77	698.90
416	435.00	369.92	6.31	5.33	0.98	4873.75	698.92
420	428.54	369.92	6.22	5.33	0.89	4874.64	698.94
424	424.62	369.92	6.14	5.33	0.82	4875.46	698.95
428	420.69	369.92	6.09	5.33	0.76	4876.22	698.96

Table A-14 Ermenek Dam Flood Routing Table (Q_{500}) (Continued)

Time	Ermenek Dam Inflow Discharges	Ermenek Dam Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
432	416.77	369.92	6.03	5.33	0.70	4876.92	698.97
436	412.85	369.92	5.97	5.33	0.65	4877.57	698.98
440	408.93	369.92	5.92	5.33	0.59	4878.16	698.99
444	405.01	369.92	5.86	5.33	0.53	4878.69	699.00
448	401.65	369.92	5.81	5.33	0.48	4879.17	699.01
452	398.28	369.92	5.76	5.33	0.43	4879.60	699.02
456	394.92	369.92	5.71	5.33	0.38	4879.99	699.03
460	391.55	369.92	5.66	5.33	0.34	4880.32	699.03
464	388.19	369.92	5.61	5.33	0.29	4880.61	699.04
468	384.82	369.92	5.57	5.33	0.24	4880.85	699.04
472	382.03	369.92	5.52	5.33	0.19	4881.04	699.04
476	379.24	369.92	5.48	5.33	0.15	4881.20	699.05
480	376.45	369.92	5.44	5.33	0.11	4881.31	699.05
484	373.67	369.92	5.40	5.33	0.07	4881.39	699.05
488	370.88	369.92	5.36	5.33	0.03	4881.42	**699.05**
492	368.09	369.92	5.32	5.33	-0.01	4881.41	699.05
496	365.71	369.92	5.28	5.33	-0.04	4881.37	699.05
500	363.34	369.92	5.25	5.33	-0.08	4881.29	699.05
504	360.97	369.92	5.22	5.33	-0.11	4881.18	699.05
508	358.60	369.92	5.18	5.33	-0.15	4881.04	699.04
512	356.23	369.92	5.15	5.33	-0.18	4880.86	699.04
516	353.86	369.92	5.11	5.33	-0.21	4880.64	699.04
520	351.37	369.92	5.08	5.33	-0.25	4880.39	699.03
524	348.89	369.92	5.04	5.33	-0.28	4880.11	699.03
528	346.41	369.92	5.01	5.33	-0.32	4879.79	699.02
532	343.93	369.92	4.97	5.33	-0.36	4879.43	699.02
536	341.45	369.92	4.93	5.33	-0.39	4879.04	699.01
540	338.97	369.92	4.90	5.33	-0.43	4878.61	699.00
544	336.54	369.92	4.86	5.33	-0.46	4878.15	698.99
548	334.10	369.92	4.83	5.33	-0.50	4877.65	698.99
552	331.67	369.92	4.79	5.33	-0.53	4877.12	698.98
556	329.24	369.92	4.76	5.33	-0.57	4876.55	698.97
560	326.81	369.92	4.72	5.33	-0.60	4875.94	698.96
564	324.37	369.92	4.69	5.33	-0.64	4875.31	698.95
568	323.38	369.92	4.66	5.33	-0.66	4874.64	698.94
572	322.38	369.92	4.65	5.33	-0.68	4873.97	698.92

Table A-14 Ermenek Dam Flood Routing Table (Q_{500}) (Continued)

Time	Ermenek Dam Inflow Discharges	Ermenek Dam Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
576	321.39	369.92	4.64	5.33	-0.69	4873.27	698.91
580	320.40	369.92	4.62	5.33	-0.71	4872.57	698.90
584	319.40	369.92	4.61	5.33	-0.72	4871.85	698.89
588	318.41	369.92	4.59	5.33	-0.73	4871.11	698.88
592	318.41	369.92	4.59	5.33	-0.74	4870.37	698.86
596	318.41	369.92	4.59	5.33	-0.74	4869.63	698.85
600	318.41	369.92	4.59	5.33	-0.74	4868.89	698.84

Table A-15 Ermenek Dam Flood Routing Table (Q_{1000})

Time	Ermenek Dam Inflow Discharges	Ermenek Dam Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
0	346.90	346.90				4582.58	694.00
4	346.90	346.90	5.00	5.00	0.00	4582.58	694.00
8	346.90	346.90	5.00	5.00	0.00	4582.58	694.00
12	346.90	346.90	5.00	5.00	0.00	4582.58	694.00
16	347.95	347.95	5.00	5.00	0.00	4582.58	694.00
20	349.00	349.00	5.02	5.02	0.00	4582.58	694.00
24	350.05	350.05	5.03	5.03	0.00	4582.58	694.00
28	351.09	351.09	5.05	5.05	0.00	4582.58	694.00
32	352.14	352.14	5.06	5.06	0.00	4582.58	694.00
36	353.19	353.19	5.08	5.08	0.00	4582.58	694.00
40	355.90	355.90	5.11	5.11	0.00	4582.58	694.00
44	358.61	358.61	5.14	5.14	0.00	4582.58	694.00
48	361.32	361.32	5.18	5.18	0.00	4582.58	694.00
52	364.03	364.03	5.22	5.22	0.00	4582.58	694.00
56	366.74	366.74	5.26	5.26	0.00	4582.58	694.00
60	369.45	369.45	5.30	5.30	0.00	4582.58	694.00
64	372.18	372.18	5.34	5.34	0.00	4582.58	694.00
68	374.91	374.91	5.38	5.38	0.00	4582.58	694.00
72	377.64	377.64	5.42	5.42	0.00	4582.58	694.00
76	380.37	380.37	5.46	5.46	0.00	4582.58	694.00
80	383.10	383.10	5.50	5.50	0.00	4582.58	694.00
84	385.83	385.83	5.54	5.54	0.00	4582.58	694.00
88	388.42	388.42	5.57	5.57	0.00	4582.58	694.00
92	391.01	391.01	5.61	5.61	0.00	4582.58	694.00
96	393.60	393.60	5.65	5.65	0.00	4582.58	694.00
100	396.19	396.19	5.69	5.69	0.00	4582.58	694.00
104	398.78	398.78	5.72	5.72	0.00	4582.58	694.00
108	401.37	401.37	5.76	5.76	0.00	4582.58	694.00
112	404.45	404.45	5.80	5.80	0.00	4582.58	694.00
116	407.54	407.54	5.85	5.85	0.00	4582.58	694.00
120	410.62	410.62	5.89	5.89	0.00	4582.58	694.00
124	413.71	413.71	5.94	5.94	0.00	4582.58	694.00
128	416.79	416.79	5.98	5.98	0.00	4582.58	694.00
132	419.87	419.87	6.02	6.02	0.00	4582.58	694.00
136	423.62	423.62	6.07	6.07	0.00	4582.58	694.00
140	427.37	426.65	6.13	6.12	0.01	4582.59	694.00

Table A-15 Ermenek Dam Flood Routing Table (Q_{1000}) (Continued)

Time	Ermenek Dam Inflow Discharges	Ermenek Dam Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
144	431.12	426.65	6.18	6.14	0.04	4582.62	694.00
148	434.87	426.65	6.24	6.14	0.09	4582.71	694.00
152	438.62	426.65	6.29	6.14	0.15	4582.86	694.00
156	442.37	426.65	6.34	6.14	0.20	4583.06	694.01
160	446.82	426.65	6.40	6.14	0.26	4583.32	694.01
164	451.26	426.65	6.47	6.14	0.32	4583.64	694.02
168	455.71	426.65	6.53	6.14	0.39	4584.03	694.02
172	460.15	426.65	6.59	6.14	0.45	4584.48	694.03
176	464.60	426.65	6.66	6.14	0.51	4584.99	694.04
180	469.04	426.65	6.72	6.14	0.58	4585.57	694.05
184	476.26	426.65	6.81	6.14	0.66	4586.23	694.06
188	483.48	426.65	6.91	6.14	0.77	4587.00	694.07
192	490.70	426.65	7.01	6.14	0.87	4587.87	694.09
196	497.92	426.65	7.12	6.14	0.97	4588.84	694.11
200	505.14	426.65	7.22	6.14	1.08	4589.92	694.12
204	512.36	426.65	7.33	6.14	1.18	4591.10	694.14
208	515.53	426.65	7.40	6.14	1.26	4592.36	694.17
212	518.70	426.65	7.45	6.14	1.30	4593.66	694.19
216	521.87	426.65	7.49	6.14	1.35	4595.01	694.21
220	525.04	426.65	7.54	6.14	1.39	4596.41	694.23
224	528.21	426.65	7.58	6.14	1.44	4597.85	694.26
228	531.39	426.65	7.63	6.14	1.49	4599.33	694.28
232	549.56	426.65	7.78	6.14	1.64	4600.97	694.31
236	567.74	426.65	8.04	6.14	1.90	4602.87	694.34
240	585.92	426.65	8.31	6.14	2.16	4605.03	694.38
244	604.10	426.65	8.57	6.14	2.42	4607.46	694.42
248	622.28	426.65	8.83	6.14	2.69	4610.15	694.47
252	640.46	426.65	9.09	6.14	2.95	4613.09	694.52
256	675.31	426.65	9.47	6.14	3.33	4616.42	694.57
260	710.17	426.65	9.98	6.14	3.83	4620.26	694.64
264	745.02	426.65	10.48	6.14	4.33	4624.59	694.71
268	779.88	426.65	10.98	6.14	4.84	4629.42	694.79
272	814.73	426.65	11.48	6.14	5.34	4634.76	694.88
276	849.59	426.65	11.98	6.14	5.84	4640.60	694.98
280	988.21	426.65	13.23	6.14	7.09	4647.69	695.10
284	1126.84	426.65	15.23	6.14	9.08	4656.77	695.25

Table A-15 Ermenek Dam Flood Routing Table (Q_{1000}) (Continued)

Time	Ermenek Dam Inflow Discharges	Ermenek Dam Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
288	1265.47	426.65	17.22	6.14	11.08	4667.86	695.44
292	1404.09	426.65	19.22	6.14	13.08	4680.93	695.66
296	2068.52	426.65	25.00	6.14	18.86	4699.79	695.98
300	3258.75	426.65	38.36	6.14	32.21	4732.00	696.53
304	2068.52	426.65	38.36	6.14	32.21	4764.22	697.07
308	1404.09	426.65	25.00	6.14	18.86	4783.08	697.39
312	1265.47	426.65	19.22	6.14	13.08	4796.15	697.61
316	1126.84	426.65	17.22	6.14	11.08	4807.23	697.80
320	988.21	426.65	15.23	6.14	9.08	4816.32	697.95
324	849.59	426.65	13.23	6.14	7.09	4823.41	698.07
328	814.73	426.65	11.98	6.14	5.84	4829.25	698.17
332	779.88	426.65	11.48	6.14	5.34	4834.58	698.26
336	745.02	426.65	10.98	6.14	4.84	4839.42	698.34
340	710.17	426.65	10.48	6.14	4.33	4843.75	698.41
344	675.31	426.65	9.98	6.14	3.83	4847.59	698.48
348	640.46	426.65	9.47	6.14	3.33	4850.92	698.53
352	622.28	426.65	9.09	6.14	2.95	4853.86	698.58
356	604.10	426.65	8.83	6.14	2.69	4856.55	698.63
360	585.92	426.65	8.57	6.14	2.42	4858.97	698.67
364	567.74	426.65	8.31	6.14	2.16	4861.14	698.71
368	549.56	426.65	8.04	6.14	1.90	4863.04	698.74
372	531.39	426.65	7.78	6.14	1.64	4864.68	698.77
376	528.21	426.65	7.63	6.14	1.49	4866.16	698.79
380	525.04	426.65	7.58	6.14	1.44	4867.60	698.82
384	521.87	426.65	7.54	6.14	1.39	4869.00	698.84
388	518.70	426.65	7.49	6.14	1.35	4870.34	698.86
392	515.53	426.65	7.45	6.14	1.30	4871.65	698.88
396	512.36	426.65	7.40	6.14	1.26	4872.90	698.91
400	505.14	426.65	7.33	6.14	1.18	4874.09	698.93
404	497.92	426.65	7.22	6.14	1.08	4875.16	698.94
408	490.70	426.65	7.12	6.14	0.97	4876.14	698.96
412	483.48	426.65	7.01	6.14	0.87	4877.01	698.98
416	476.26	426.65	6.91	6.14	0.77	4877.78	698.99
420	469.04	426.65	6.81	6.14	0.66	4878.44	699.00
424	464.60	426.65	6.72	6.14	0.58	4879.02	699.01
428	460.15	426.65	6.66	6.14	0.51	4879.53	699.02

Table A-15 Ermenek Dam Flood Routing Table (Q_{1000}) (Continued)

Time	Ermenek Dam Inflow Discharges	Ermenek Dam Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
432	455.71	426.65	6.59	6.14	0.45	4879.98	699.03
436	451.26	426.65	6.53	6.14	0.39	4880.37	699.03
440	446.82	426.65	6.47	6.14	0.32	4880.69	699.04
444	442.37	426.65	6.40	6.14	0.26	4880.95	699.04
448	438.62	426.65	6.34	6.14	0.20	4881.15	699.05
452	434.87	426.65	6.29	6.14	0.15	4881.29	699.05
456	431.12	426.65	6.24	6.14	0.09	4881.39	699.05
460	427.37	426.65	6.18	6.14	0.04	4881.42	**699.05**
464	423.62	426.65	6.13	6.14	-0.02	4881.41	699.05
468	419.87	426.65	6.07	6.14	-0.07	4881.34	699.05
472	416.79	426.65	6.02	6.14	-0.12	4881.22	699.05
476	413.71	426.65	5.98	6.14	-0.16	4881.05	699.04
480	410.62	426.65	5.94	6.14	-0.21	4880.84	699.04
484	407.54	426.65	5.89	6.14	-0.25	4880.59	699.04
488	404.45	426.65	5.85	6.14	-0.30	4880.29	699.03
492	401.37	426.65	5.80	6.14	-0.34	4879.95	699.03
496	398.78	426.65	5.76	6.14	-0.38	4879.57	699.02
500	396.19	426.65	5.72	6.14	-0.42	4879.15	699.01
504	393.60	426.65	5.69	6.14	-0.46	4878.69	699.00
508	391.01	426.65	5.65	6.14	-0.49	4878.20	699.00
512	388.42	426.65	5.61	6.14	-0.53	4877.67	698.99
516	385.83	426.65	5.57	6.14	-0.57	4877.10	698.98
520	383.10	426.65	5.54	6.14	-0.61	4876.49	698.97
524	380.37	426.65	5.50	6.14	-0.65	4875.84	698.96
528	377.64	426.65	5.46	6.14	-0.69	4875.16	698.94
532	374.91	426.65	5.42	6.14	-0.73	4874.43	698.93
536	372.18	426.65	5.38	6.14	-0.76	4873.67	698.92
540	369.45	426.65	5.34	6.14	-0.80	4872.86	698.91
544	366.74	426.65	5.30	6.14	-0.84	4872.02	698.89
548	364.03	426.65	5.26	6.14	-0.88	4871.14	698.88
552	361.32	426.65	5.22	6.14	-0.92	4870.22	698.86
556	358.61	426.65	5.18	6.14	-0.96	4869.26	698.84
560	355.90	426.65	5.14	6.14	-1.00	4868.26	698.83
564	353.19	426.65	5.11	6.14	-1.04	4867.22	698.81
568	352.14	426.65	5.08	6.14	-1.07	4866.15	698.79
572	351.09	426.65	5.06	6.14	-1.08	4865.07	698.77

Table A-15 Ermenek Dam Flood Routing Table (Q_{1000}) (Continued)

Time	Ermenek Dam Inflow Discharges	Ermenek Dam Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
576	350.05	426.65	5.05	6.14	-1.10	4863.98	698.76
580	349.00	426.65	5.03	6.14	-1.11	4862.87	698.74
584	347.95	426.65	5.02	6.14	-1.13	4861.74	698.72
588	346.90	426.65	5.00	6.14	-1.14	4860.60	698.70
592	346.90	426.65	5.00	6.14	-1.15	4859.45	698.68
596	346.90	426.65	5.00	6.14	-1.15	4858.30	698.66
600	346.90	426.65	5.00	6.14	-1.15	4857.16	698.64

Table A-16 Ermenek Dam Flood Routing Table (Q_{10000})

Time	Ermenek Dam Inflow Discharges	Ermenek Dam Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
0	400.43	400.43				4582.58	694.00
4	400.43	400.43	5.77	5.77	0.00	4582.58	694.00
8	400.43	400.43	5.77	5.77	0.00	4582.58	694.00
12	400.43	400.43	5.77	5.77	0.00	4582.58	694.00
16	401.55	401.55	5.77	5.77	0.00	4582.58	694.00
20	402.68	402.68	5.79	5.79	0.00	4582.58	694.00
24	403.81	403.81	5.81	5.81	0.00	4582.58	694.00
28	404.94	404.94	5.82	5.82	0.00	4582.58	694.00
32	406.07	406.07	5.84	5.84	0.00	4582.58	694.00
36	407.20	407.20	5.86	5.86	0.00	4582.58	694.00
40	410.52	410.52	5.89	5.89	0.00	4582.58	694.00
44	413.84	413.84	5.94	5.94	0.00	4582.58	694.00
48	417.16	417.16	5.98	5.98	0.00	4582.58	694.00
52	420.48	420.48	6.03	6.03	0.00	4582.58	694.00
56	423.80	423.80	6.08	6.08	0.00	4582.58	694.00
60	427.12	427.12	6.13	6.13	0.00	4582.58	694.00
64	430.34	430.34	6.17	6.17	0.00	4582.58	694.00
68	433.57	433.57	6.22	6.22	0.00	4582.58	694.00
72	436.80	436.80	6.27	6.27	0.00	4582.58	694.00
76	440.02	440.02	6.31	6.31	0.00	4582.58	694.00
80	443.25	443.25	6.36	6.36	0.00	4582.58	694.00
84	446.48	446.48	6.41	6.41	0.00	4582.58	694.00
88	449.47	449.47	6.45	6.45	0.00	4582.58	694.00
92	452.47	452.47	6.49	6.49	0.00	4582.58	694.00
96	455.47	455.47	6.54	6.54	0.00	4582.58	694.00
100	458.46	458.46	6.58	6.58	0.00	4582.58	694.00
104	461.46	461.46	6.62	6.62	0.00	4582.58	694.00
108	464.45	464.45	6.67	6.67	0.00	4582.58	694.00
112	468.15	468.15	6.71	6.71	0.00	4582.58	694.00
116	471.84	471.84	6.77	6.77	0.00	4582.58	694.00
120	475.53	475.53	6.82	6.82	0.00	4582.58	694.00
124	479.23	479.23	6.87	6.87	0.00	4582.58	694.00
128	482.92	482.92	6.93	6.93	0.00	4582.58	694.00
132	486.61	486.61	6.98	6.98	0.00	4582.58	694.00
136	491.20	491.20	7.04	7.04	0.00	4582.58	694.00
140	495.79	495.79	7.11	7.11	0.00	4582.58	694.00

Table A-16 Ermenek Dam Flood Routing Table (Q_{10000}) (Continued)

Time	Ermenek Dam Inflow Discharges	Ermenek Dam Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
144	500.38	500.38	7.17	7.17	0.00	4582.58	694.00
148	504.98	504.98	7.24	7.24	0.00	4582.58	694.00
152	509.57	509.57	7.30	7.30	0.00	4582.58	694.00
156	514.16	514.16	7.37	7.37	0.00	4582.58	694.00
160	519.87	519.87	7.44	7.44	0.00	4582.58	694.00
164	525.58	525.58	7.53	7.53	0.00	4582.58	694.00
168	531.29	531.29	7.61	7.61	0.00	4582.58	694.00
172	537.01	537.01	7.69	7.69	0.00	4582.58	694.00
176	542.72	542.72	7.77	7.77	0.00	4582.58	694.00
180	548.43	548.43	7.86	7.86	0.00	4582.58	694.00
184	557.34	550.00	7.96	7.91	0.05	4582.63	694.00
188	566.25	565.00	8.09	8.03	0.06	4582.69	694.00
192	575.16	565.00	8.22	8.14	0.08	4582.78	694.00
196	584.07	565.00	8.35	8.14	0.21	4582.99	694.01
200	592.98	565.00	8.47	8.14	0.34	4583.33	694.01
204	601.89	565.00	8.60	8.14	0.47	4583.79	694.02
208	604.48	565.00	8.69	8.14	0.55	4584.34	694.03
212	607.08	565.00	8.72	8.14	0.59	4584.93	694.04
216	609.67	565.00	8.76	8.14	0.62	4585.55	694.05
220	612.26	565.00	8.80	8.14	0.66	4586.22	694.06
224	614.85	565.00	8.84	8.14	0.70	4586.92	694.07
228	617.44	565.00	8.87	8.14	0.74	4587.65	694.09
232	639.46	565.00	9.05	8.14	0.91	4588.57	694.10
236	661.47	565.00	9.37	8.14	1.23	4589.80	694.12
240	683.48	565.00	9.68	8.14	1.55	4591.34	694.15
244	705.50	565.00	10.00	8.14	1.86	4593.21	694.18
248	727.51	565.00	10.32	8.14	2.18	4595.39	694.22
252	749.52	565.00	10.63	8.14	2.50	4597.89	694.26
256	791.52	565.00	11.10	8.14	2.96	4600.85	694.31
260	833.51	565.00	11.70	8.14	3.56	4604.41	694.37
264	875.51	565.00	12.30	8.14	4.17	4608.58	694.44
268	917.50	565.00	12.91	8.14	4.77	4613.36	694.52
272	959.49	565.00	13.51	8.14	5.38	4618.73	694.61
276	1001.49	565.00	14.12	8.14	5.98	4624.72	694.71
280	1170.15	565.00	15.64	8.14	7.50	4632.22	694.84
284	1338.81	565.00	18.06	8.14	9.93	4642.15	695.01

Table A-16 Ermenek Dam Flood Routing Table (Q_{10000}) (Continued)

Time	Ermenek Dam Inflow Discharges	Ermenek Dam Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
288	1507.47	565.00	20.49	8.14	12.36	4654.50	695.22
292	1676.14	565.00	22.92	8.14	14.79	4669.29	695.47
296	2561.70	565.00	30.51	8.14	22.38	4691.67	695.84
300	4164.15	565.00	48.43	8.14	40.29	4731.96	696.52
304	2561.70	565.00	48.43	8.14	40.29	4772.25	697.21
308	1676.14	565.00	30.51	8.14	22.38	4794.62	697.58
312	1507.47	565.00	22.92	8.14	14.79	4809.41	697.83
316	1338.81	565.00	20.49	8.14	12.36	4821.76	698.04
320	1170.15	565.00	18.06	8.14	9.93	4831.69	698.21
324	1001.49	565.00	15.64	8.14	7.50	4839.19	698.34
328	959.49	565.00	14.12	8.14	5.98	4845.18	698.44
332	917.50	565.00	13.51	8.14	5.38	4850.55	698.53
336	875.51	565.00	12.91	8.14	4.77	4855.33	698.61
340	833.51	565.00	12.30	8.14	4.17	4859.50	698.68
344	791.52	565.00	11.70	8.14	3.56	4863.06	698.74
348	749.52	565.00	11.10	8.14	2.96	4866.02	698.79
352	727.51	565.00	10.63	8.14	2.50	4868.52	698.83
356	705.50	565.00	10.32	8.14	2.18	4870.70	698.87
360	683.48	565.00	10.00	8.14	1.86	4872.57	698.90
364	661.47	565.00	9.68	8.14	1.55	4874.11	698.93
368	639.46	565.00	9.37	8.14	1.23	4875.34	698.95
372	617.44	565.00	9.05	8.14	0.91	4876.26	698.96
376	614.85	565.00	8.87	8.14	0.74	4876.99	698.98
380	612.26	565.00	8.84	8.14	0.70	4877.69	698.99
384	609.67	565.00	8.80	8.14	0.66	4878.36	699.00
388	607.08	565.00	8.76	8.14	0.62	4878.98	699.01
392	604.48	565.00	8.72	8.14	0.59	4879.57	699.02
396	601.89	565.00	8.69	8.14	0.55	4880.12	699.03
400	592.98	565.00	8.60	8.14	0.47	4880.58	699.04
404	584.07	565.00	8.47	8.14	0.34	4880.92	699.04
408	575.16	565.00	8.35	8.14	0.21	4881.13	699.05
412	566.25	565.00	8.22	8.14	0.08	4881.22	**699.05**
416	557.34	565.00	8.09	8.14	-0.05	4881.17	699.05
420	548.43	565.00	7.96	8.14	-0.17	4880.99	699.04
424	542.72	565.00	7.86	8.14	-0.28	4880.72	699.04
428	537.01	565.00	7.77	8.14	-0.36	4880.35	699.03

Table A-16 Ermenek Dam Flood Routing Table (Q_{10000}) (Continued)

Time	Ermenek Dam Inflow Discharges	Ermenek Dam Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
432	531.29	565.00	7.69	8.14	-0.44	4879.91	699.02
436	525.58	565.00	7.61	8.14	-0.53	4879.38	699.02
440	519.87	565.00	7.53	8.14	-0.61	4878.77	699.01
444	514.16	565.00	7.44	8.14	-0.69	4878.08	698.99
448	509.57	565.00	7.37	8.14	-0.77	4877.32	698.98
452	504.98	565.00	7.30	8.14	-0.83	4876.49	698.97
456	500.38	565.00	7.24	8.14	-0.90	4875.59	698.95
460	495.79	565.00	7.17	8.14	-0.96	4874.63	698.94
464	491.20	565.00	7.11	8.14	-1.03	4873.60	698.92
468	486.61	565.00	7.04	8.14	-1.10	4872.50	698.90
472	482.92	565.00	6.98	8.14	-1.16	4871.34	698.88
476	479.23	565.00	6.93	8.14	-1.21	4870.14	698.86
480	475.53	565.00	6.87	8.14	-1.26	4868.87	698.84
484	471.84	565.00	6.82	8.14	-1.31	4867.56	698.82
488	468.15	565.00	6.77	8.14	-1.37	4866.19	698.79
492	464.45	565.00	6.71	8.14	-1.42	4864.77	698.77
496	461.46	565.00	6.67	8.14	-1.47	4863.30	698.74
500	458.46	565.00	6.62	8.14	-1.51	4861.79	698.72
504	455.47	565.00	6.58	8.14	-1.56	4860.23	698.69
508	452.47	565.00	6.54	8.14	-1.60	4858.63	698.66
512	449.47	565.00	6.49	8.14	-1.64	4856.99	698.64
516	446.48	565.00	6.45	8.14	-1.69	4855.31	698.61
520	443.25	565.00	6.41	8.14	-1.73	4853.58	698.58
524	440.02	565.00	6.36	8.14	-1.78	4851.80	698.55
528	436.80	565.00	6.31	8.14	-1.82	4849.98	698.52
532	433.57	565.00	6.27	8.14	-1.87	4848.11	698.49
536	430.34	565.00	6.22	8.14	-1.92	4846.19	698.45
540	427.12	565.00	6.17	8.14	-1.96	4844.23	698.42
544	423.80	565.00	6.13	8.14	-2.01	4842.22	698.39
548	420.48	565.00	6.08	8.14	-2.06	4840.16	698.35
552	417.16	565.00	6.03	8.14	-2.11	4838.06	698.32
556	413.84	565.00	5.98	8.14	-2.15	4835.90	698.28
560	410.52	565.00	5.94	8.14	-2.20	4833.70	698.24
564	407.20	565.00	5.89	8.14	-2.25	4831.46	698.21
568	406.07	565.00	5.86	8.14	-2.28	4829.18	698.17
572	404.94	565.00	5.84	8.14	-2.30	4826.88	698.13

Table A-16 Ermenek Dam Flood Routing Table (Q_{10000}) (Continued)

Time	Ermenek Dam Inflow Discharges	Ermenek Dam Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
576	403.81	565.00	5.82	8.14	-2.31	4824.57	698.09
580	402.68	565.00	5.81	8.14	-2.33	4822.24	698.05
584	401.55	565.00	5.79	8.14	-2.35	4819.89	698.01
588	400.43	565.00	5.77	8.14	-2.36	4817.53	697.97
592	400.43	565.00	5.77	8.14	-2.37	4815.16	697.93
596	400.43	565.00	5.77	8.14	-2.37	4812.79	697.89
600	400.43	565.00	5.77	8.14	-2.37	4810.42	697.85

Table A-17 Gezende Dam Flood Routing Table (Q_{500})

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
0	355.87	355.87				48.90	320.00
4	355.87	355.87	5.12	5.12	0.00	48.90	320.00
8	355.87	355.87	5.12	5.12	0.00	48.90	320.00
12	355.87	355.87	5.12	5.12	0.00	48.90	320.00
16	357.27	357.27	5.13	5.13	0.00	48.90	320.00
20	358.67	358.67	5.15	5.15	0.00	48.90	320.00
24	360.07	360.07	5.17	5.17	0.00	48.90	320.00
28	361.47	361.47	5.20	5.20	0.00	48.90	320.00
32	362.87	362.87	5.22	5.22	0.00	48.90	320.00
36	364.27	364.27	5.24	5.24	0.00	48.90	320.00
40	366.67	366.67	5.26	5.26	0.00	48.90	320.00
44	369.06	369.06	5.30	5.30	0.00	48.90	320.00
48	371.46	371.46	5.33	5.33	0.00	48.90	320.00
52	373.86	373.86	5.37	5.37	0.00	48.90	320.00
56	376.25	376.25	5.40	5.40	0.00	48.90	320.00
60	378.33	378.33	5.43	5.43	0.00	48.90	320.00
64	378.93	378.93	5.45	5.45	0.00	48.90	320.00
68	379.52	379.52	5.46	5.46	0.00	48.90	320.00
72	380.12	380.12	5.47	5.47	0.00	48.90	320.00
76	380.71	380.71	5.48	5.48	0.00	48.90	320.00
80	381.31	381.31	5.49	5.49	0.00	48.90	320.00
84	381.90	381.90	5.50	5.50	0.00	48.90	320.00
88	382.68	382.68	5.51	5.51	0.00	48.90	320.00
92	383.46	383.46	5.52	5.52	0.00	48.90	320.00
96	384.24	384.24	5.53	5.53	0.00	48.90	320.00
100	385.01	385.01	5.54	5.54	0.00	48.90	320.00
104	385.79	385.79	5.55	5.55	0.00	48.90	320.00
108	386.57	386.57	5.56	5.56	0.00	48.90	320.00
112	387.20	387.20	5.57	5.57	0.00	48.90	320.00
116	387.83	387.83	5.58	5.58	0.00	48.90	320.00
120	388.46	388.46	5.59	5.59	0.00	48.90	320.00
124	389.08	389.08	5.60	5.60	0.00	48.90	320.00
128	389.71	389.71	5.61	5.61	0.00	48.90	320.00
132	390.34	390.34	5.62	5.62	0.00	48.90	320.00
136	390.46	390.46	5.62	5.62	0.00	48.90	320.00
140	390.58	390.58	5.62	5.62	0.00	48.90	320.00

Table A-17 Gezende Dam Flood Routing Table (Q_{500}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
144	390.70	390.70	5.63	5.63	0.00	48.90	320.00
148	390.82	390.82	5.63	5.63	0.00	48.90	320.00
152	390.94	390.94	5.63	5.63	0.00	48.90	320.00
156	391.06	391.06	5.63	5.63	0.00	48.90	320.00
160	391.04	391.04	5.63	5.63	0.00	48.90	320.00
164	391.02	391.02	5.63	5.63	0.00	48.90	320.00
168	391.00	391.00	5.63	5.63	0.00	48.90	320.00
172	390.99	390.99	5.63	5.63	0.00	48.90	320.00
176	390.97	390.97	5.63	5.63	0.00	48.90	320.00
180	390.95	390.95	5.63	5.63	0.00	48.90	320.00
184	392.48	392.48	5.64	5.64	0.00	48.90	320.00
188	394.01	394.01	5.66	5.66	0.00	48.90	320.00
192	395.54	395.54	5.68	5.68	0.00	48.90	320.00
196	397.08	397.08	5.71	5.71	0.00	48.90	320.00
200	398.61	398.61	5.73	5.73	0.00	48.90	320.00
204	400.14	400.14	5.75	5.75	0.00	48.90	320.00
208	401.90	401.90	5.77	5.77	0.00	48.90	320.00
212	403.66	403.66	5.80	5.80	0.00	48.90	320.00
216	405.42	405.42	5.83	5.83	0.00	48.90	320.00
220	407.18	407.18	5.85	5.85	0.00	48.90	320.00
224	408.93	408.93	5.88	5.88	0.00	48.90	320.00
228	410.69	410.69	5.90	5.90	0.00	48.90	320.00
232	414.86	411.84	5.94	5.92	0.02	48.92	320.01
236	419.03	411.84	6.00	5.93	0.07	48.99	320.03
240	423.20	411.84	6.06	5.93	0.13	49.13	320.08
244	427.37	411.84	6.12	5.93	0.19	49.32	320.15
248	431.54	411.84	6.18	5.93	0.25	49.57	320.24
252	435.71	411.84	6.24	5.93	0.31	49.89	320.36
256	445.37	411.84	6.34	5.93	0.41	50.30	320.50
260	455.02	411.84	6.48	5.93	0.55	50.85	320.70
264	464.68	411.84	6.62	5.93	0.69	51.54	320.94
268	474.34	411.84	6.76	5.93	0.83	52.37	321.24
272	483.99	411.84	6.90	5.93	0.97	53.34	321.58
276	493.65	411.84	7.04	5.93	1.11	54.45	321.96
280	513.86	411.84	7.25	5.93	1.32	55.78	322.42
284	534.07	411.84	7.55	5.93	1.61	57.39	322.97

Table A-17 Gezende Dam Flood Routing Table (Q_{500}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
288	554.28	411.84	7.84	5.93	1.91	59.30	323.61
292	574.50	411.84	8.13	5.93	2.20	61.49	324.34
296	696.06	411.84	9.15	5.93	3.22	64.71	325.38
300	918.96	411.84	11.63	5.93	5.70	70.41	327.14
304	696.06	411.84	11.63	5.93	5.70	76.11	328.81
308	574.50	411.84	9.15	5.93	3.22	79.32	329.72
312	554.28	411.84	8.13	5.93	2.20	81.52	330.32
316	534.07	411.84	7.84	5.93	1.91	83.43	330.83
320	513.86	411.84	7.55	5.93	1.61	85.04	331.25
324	493.65	411.84	7.25	5.93	1.32	86.36	331.60
328	483.99	411.84	7.04	5.93	1.11	87.47	331.88
332	474.34	411.84	6.90	5.93	0.97	88.44	332.13
336	464.68	411.84	6.76	5.93	0.83	89.27	332.34
340	455.02	411.84	6.62	5.93	0.69	89.96	332.51
344	445.37	411.84	6.48	5.93	0.55	90.52	332.65
348	435.71	411.84	6.34	5.93	0.41	90.93	332.76
352	431.54	411.84	6.24	5.93	0.31	91.24	332.83
356	427.37	411.84	6.18	5.93	0.25	91.50	332.90
360	423.20	411.84	6.12	5.93	0.19	91.69	332.95
364	419.03	411.84	6.06	5.93	0.13	91.82	332.98
368	414.86	411.84	6.00	5.93	0.07	91.90	333.00
372	410.69	411.84	5.94	5.93	0.01	91.91	**333.00**
376	408.93	411.84	5.90	5.93	-0.03	91.88	332.99
380	407.18	411.84	5.88	5.93	-0.05	91.83	332.98
384	405.42	411.84	5.85	5.93	-0.08	91.75	332.96
388	403.66	411.84	5.83	5.93	-0.11	91.64	332.93
392	401.90	411.84	5.80	5.93	-0.13	91.51	332.90
396	400.14	411.84	5.77	5.93	-0.16	91.36	332.86
400	398.61	411.84	5.75	5.93	-0.18	91.18	332.82
404	397.08	411.84	5.73	5.93	-0.20	90.98	332.77
408	395.54	411.84	5.71	5.93	-0.22	90.75	332.71
412	394.01	411.84	5.68	5.93	-0.25	90.51	332.65
416	392.48	411.84	5.66	5.93	-0.27	90.24	332.58
420	390.95	411.84	5.64	5.93	-0.29	89.95	332.51
424	390.97	411.84	5.63	5.93	-0.30	89.65	332.43
428	390.99	411.84	5.63	5.93	-0.30	89.35	332.36

Table A-17 Gezende Dam Flood Routing Table (Q_{500}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
432	391.00	411.84	5.63	5.93	-0.30	89.05	332.28
436	391.02	411.84	5.63	5.93	-0.30	88.75	332.21
440	391.04	411.84	5.63	5.93	-0.30	88.45	332.13
444	391.06	411.84	5.63	5.93	-0.30	88.15	332.05
448	390.94	411.84	5.63	5.93	-0.30	87.85	331.98
452	390.82	411.84	5.63	5.93	-0.30	87.55	331.90
456	390.70	411.84	5.63	5.93	-0.30	87.24	331.82
460	390.58	411.84	5.63	5.93	-0.31	86.94	331.74
464	390.46	411.84	5.62	5.93	-0.31	86.63	331.67
468	390.34	411.84	5.62	5.93	-0.31	86.32	331.59
472	389.71	411.84	5.62	5.93	-0.31	86.01	331.50
476	389.08	411.84	5.61	5.93	-0.32	85.69	331.42
480	388.46	411.84	5.60	5.93	-0.33	85.35	331.33
484	387.83	411.84	5.59	5.93	-0.34	85.01	331.24
488	387.20	411.84	5.58	5.93	-0.35	84.66	331.15
492	386.57	411.84	5.57	5.93	-0.36	84.30	331.06
496	385.79	411.84	5.56	5.93	-0.37	83.93	330.96
500	385.01	411.84	5.55	5.93	-0.38	83.55	330.86
504	384.24	411.84	5.54	5.93	-0.39	83.16	330.76
508	383.46	411.84	5.53	5.93	-0.40	82.76	330.65
512	382.68	411.84	5.52	5.93	-0.41	82.34	330.54
516	381.90	411.84	5.51	5.93	-0.43	81.92	330.42
520	381.31	411.84	5.50	5.93	-0.44	81.48	330.31
524	380.71	411.84	5.49	5.93	-0.44	81.04	330.19
528	380.12	411.84	5.48	5.93	-0.45	80.59	330.06
532	379.52	411.84	5.47	5.93	-0.46	80.13	329.94
536	378.93	411.84	5.46	5.93	-0.47	79.66	329.81
540	378.33	411.84	5.45	5.93	-0.48	79.18	329.68
544	378.03	411.84	5.45	5.93	-0.48	78.69	329.54
548	377.74	411.84	5.44	5.93	-0.49	78.20	329.40
552	377.44	411.84	5.44	5.93	-0.49	77.71	329.27
556	377.15	411.84	5.43	5.93	-0.50	77.21	329.13
560	376.85	411.84	5.43	5.93	-0.50	76.71	328.99
564	376.56	411.84	5.42	5.93	-0.51	76.21	328.84
568	376.12	411.84	5.42	5.93	-0.51	75.70	328.70
572	375.69	411.84	5.41	5.93	-0.52	75.18	328.55

Table A-17 Gezende Dam Flood Routing Table (Q_{500}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
576	375.25	411.84	5.41	5.93	-0.52	74.65	328.40
580	374.82	411.84	5.40	5.93	-0.53	74.12	328.24
584	374.39	411.84	5.39	5.93	-0.54	73.59	328.09
588	373.95	411.84	5.39	5.93	-0.54	73.05	327.93
592	373.95	411.84	5.38	5.93	-0.55	72.50	327.77
596	373.95	411.84	5.38	5.93	-0.55	71.95	327.61
600	373.95	411.84	5.38	5.93	-0.55	71.41	327.44

Table A-18 Gezende Dam Flood Routing Table (Q_{500})

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
0	395.93	395.93				48.90	320.00
4	395.93	395.93	5.70	5.70	0.00	48.90	320.00
8	395.93	395.93	5.70	5.70	0.00	48.90	320.00
12	395.93	395.93	5.70	5.70	0.00	48.90	320.00
16	397.48	397.48	5.71	5.71	0.00	48.90	320.00
20	399.02	399.02	5.73	5.73	0.00	48.90	320.00
24	400.56	400.56	5.76	5.76	0.00	48.90	320.00
28	402.10	402.10	5.78	5.78	0.00	48.90	320.00
32	403.65	403.65	5.80	5.80	0.00	48.90	320.00
36	405.19	405.19	5.82	5.82	0.00	48.90	320.00
40	407.99	407.99	5.85	5.85	0.00	48.90	320.00
44	410.79	410.79	5.90	5.90	0.00	48.90	320.00
48	413.59	413.59	5.94	5.94	0.00	48.90	320.00
52	416.39	416.39	5.98	5.98	0.00	48.90	320.00
56	419.19	419.19	6.02	6.02	0.00	48.90	320.00
60	421.99	421.99	6.06	6.06	0.00	48.90	320.00
64	425.23	425.23	6.10	6.10	0.00	48.90	320.00
68	428.47	428.47	6.15	6.15	0.00	48.90	320.00
72	431.71	431.71	6.19	6.19	0.00	48.90	320.00
76	434.95	434.95	6.24	6.24	0.00	48.90	320.00
80	438.20	438.20	6.29	6.29	0.00	48.90	320.00
84	441.44	441.44	6.33	6.33	0.00	48.90	320.00
88	444.81	444.81	6.38	6.38	0.00	48.90	320.00
92	448.18	448.18	6.43	6.43	0.00	48.90	320.00
96	451.54	451.54	6.48	6.48	0.00	48.90	320.00
100	454.91	454.91	6.53	6.53	0.00	48.90	320.00
104	458.28	458.28	6.58	6.58	0.00	48.90	320.00
108	461.65	461.65	6.62	6.62	0.00	48.90	320.00
112	464.27	464.27	6.67	6.67	0.00	48.90	320.00
116	465.06	465.06	6.69	6.69	0.00	48.90	320.00
120	465.84	465.84	6.70	6.70	0.00	48.90	320.00
124	466.63	466.63	6.71	6.71	0.00	48.90	320.00
128	467.41	467.41	6.73	6.73	0.00	48.90	320.00
132	468.20	468.20	6.74	6.74	0.00	48.90	320.00
136	468.31	468.31	6.74	6.74	0.00	48.90	320.00
140	468.42	468.42	6.74	6.74	0.00	48.90	320.00

Table A-18 Gezende Dam Flood Routing Table (Q_{500}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
144	468.54	468.54	6.75	6.75	0.00	48.90	320.00
148	468.65	468.65	6.75	6.75	0.00	48.90	320.00
152	468.76	468.76	6.75	6.75	0.00	48.90	320.00
156	468.87	468.87	6.75	6.75	0.00	48.90	320.00
160	468.79	468.79	6.75	6.75	0.00	48.90	320.00
164	468.72	468.72	6.75	6.75	0.00	48.90	320.00
168	468.64	468.64	6.75	6.75	0.00	48.90	320.00
172	468.56	468.56	6.75	6.75	0.00	48.90	320.00
176	468.49	468.49	6.75	6.75	0.00	48.90	320.00
180	468.41	468.41	6.75	6.75	0.00	48.90	320.00
184	470.38	470.38	6.76	6.76	0.00	48.90	320.00
188	472.34	472.34	6.79	6.79	0.00	48.90	320.00
192	474.31	474.31	6.82	6.82	0.00	48.90	320.00
196	476.27	476.27	6.84	6.84	0.00	48.90	320.00
200	478.24	478.24	6.87	6.87	0.00	48.90	320.00
204	480.20	480.20	6.90	6.90	0.00	48.90	320.00
208	482.38	482.38	6.93	6.93	0.00	48.90	320.00
212	484.55	484.55	6.96	6.96	0.00	48.90	320.00
216	486.73	486.73	6.99	6.99	0.00	48.90	320.00
220	488.91	488.91	7.02	7.02	0.00	48.90	320.00
224	491.09	491.09	7.06	7.06	0.00	48.90	320.00
228	493.26	493.26	7.09	7.09	0.00	48.90	320.00
232	498.60	498.60	7.14	7.14	0.00	48.90	320.00
236	503.94	503.94	7.22	7.22	0.00	48.90	320.00
240	509.28	509.28	7.30	7.30	0.00	48.90	320.00
244	514.62	514.62	7.37	7.37	0.00	48.90	320.00
248	519.96	516.67	7.45	7.43	0.02	48.92	320.01
252	525.30	516.67	7.53	7.44	0.09	49.01	320.04
256	537.73	516.67	7.65	7.44	0.21	49.22	320.12
260	550.16	516.67	7.83	7.44	0.39	49.61	320.26
264	562.59	516.67	8.01	7.44	0.57	50.18	320.46
268	575.02	516.67	8.19	7.44	0.75	50.93	320.73
272	587.45	516.67	8.37	7.44	0.93	51.86	321.06
276	599.87	516.67	8.55	7.44	1.11	52.97	321.45
280	620.20	516.67	8.78	7.44	1.34	54.32	321.92
284	640.52	516.67	9.08	7.44	1.64	55.95	322.48

Table A-18 Gezende Dam Flood Routing Table (Q_{500}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
288	660.85	516.67	9.37	7.44	1.93	57.88	323.14
292	681.18	516.67	9.66	7.44	2.22	60.11	323.88
296	839.89	516.67	10.95	7.44	3.51	63.62	325.03
300	1136.99	516.67	14.23	7.44	6.79	70.41	327.14
304	839.89	516.67	14.23	7.44	6.79	77.21	329.12
308	681.18	516.67	10.95	7.44	3.51	80.72	330.10
312	660.85	516.67	9.66	7.44	2.22	82.94	330.70
316	640.52	516.67	9.37	7.44	1.93	84.87	331.21
320	620.20	516.67	9.08	7.44	1.64	86.51	331.63
324	599.87	516.67	8.78	7.44	1.34	87.85	331.98
328	587.45	516.67	8.55	7.44	1.11	88.96	332.26
332	575.02	516.67	8.37	7.44	0.93	89.89	332.50
336	562.59	516.67	8.19	7.44	0.75	90.64	332.68
340	550.16	516.67	8.01	7.44	0.57	91.21	332.83
344	537.73	516.67	7.83	7.44	0.39	91.60	332.92
348	525.30	516.67	7.65	7.44	0.21	91.82	332.98
352	519.96	516.67	7.53	7.44	0.09	91.90	333.00
356	514.62	516.67	7.45	7.44	0.01	91.91	**333.00**
360	509.28	516.67	7.37	7.44	-0.07	91.84	332.98
364	503.94	516.67	7.30	7.44	-0.14	91.70	332.95
368	498.60	516.67	7.22	7.44	-0.22	91.48	332.89
372	493.26	516.67	7.14	7.44	-0.30	91.18	332.82
376	491.09	516.67	7.09	7.44	-0.35	90.83	332.73
380	488.91	516.67	7.06	7.44	-0.38	90.44	332.63
384	486.73	516.67	7.02	7.44	-0.42	90.03	332.53
388	484.55	516.67	6.99	7.44	-0.45	89.58	332.42
392	482.38	516.67	6.96	7.44	-0.48	89.10	332.30
396	480.20	516.67	6.93	7.44	-0.51	88.59	332.17
400	478.24	516.67	6.90	7.44	-0.54	88.05	332.03
404	476.27	516.67	6.87	7.44	-0.57	87.49	331.88
408	474.31	516.67	6.84	7.44	-0.60	86.89	331.73
412	472.34	516.67	6.82	7.44	-0.62	86.26	331.57
416	470.38	516.67	6.79	7.44	-0.65	85.61	331.40
420	468.41	516.67	6.76	7.44	-0.68	84.93	331.22
424	468.49	516.67	6.75	7.44	-0.69	84.24	331.04
428	468.56	516.67	6.75	7.44	-0.69	83.54	330.86

Table A-18 Gezende Dam Flood Routing Table (Q_{500}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
432	468.64	516.67	6.75	7.44	-0.69	82.85	330.67
436	468.72	516.67	6.75	7.44	-0.69	82.16	330.49
440	468.79	516.67	6.75	7.44	-0.69	81.47	330.30
444	468.87	516.67	6.75	7.44	-0.69	80.78	330.12
448	468.76	516.67	6.75	7.44	-0.69	80.09	329.93
452	468.65	516.67	6.75	7.44	-0.69	79.40	329.74
456	468.54	516.67	6.75	7.44	-0.69	78.71	329.55
460	468.42	516.67	6.75	7.44	-0.69	78.02	329.35
464	468.31	516.67	6.74	7.44	-0.70	77.32	329.16
468	468.20	516.67	6.74	7.44	-0.70	76.62	328.96
472	467.41	516.67	6.74	7.44	-0.70	75.92	328.76
476	466.63	516.67	6.73	7.44	-0.71	75.20	328.55
480	465.84	516.67	6.71	7.44	-0.73	74.48	328.35
484	465.06	516.67	6.70	7.44	-0.74	73.74	328.13
488	464.27	516.67	6.69	7.44	-0.75	72.99	327.91
492	463.49	516.67	6.68	7.44	-0.76	72.23	327.69
496	462.49	516.67	6.67	7.44	-0.77	71.46	327.46
500	461.49	516.67	6.65	7.44	-0.79	70.67	327.22
504	460.49	516.67	6.64	7.44	-0.80	69.87	326.98
508	459.50	516.67	6.62	7.44	-0.82	69.05	326.73
512	458.50	516.67	6.61	7.44	-0.83	68.22	326.48
516	457.50	516.67	6.60	7.44	-0.84	67.38	326.22
520	456.74	516.67	6.58	7.44	-0.86	66.52	325.95
524	455.98	516.67	6.57	7.44	-0.87	65.65	325.68
528	455.22	516.67	6.56	7.44	-0.88	64.77	325.40
532	454.46	516.67	6.55	7.44	-0.89	63.88	325.11
536	453.70	516.67	6.54	7.44	-0.90	62.98	324.82
540	452.94	516.67	6.53	7.44	-0.91	62.07	324.53
544	452.57	516.67	6.52	7.44	-0.92	61.15	324.22
548	452.20	516.67	6.51	7.44	-0.93	60.22	323.92
552	451.84	516.67	6.51	7.44	-0.93	59.29	323.61
556	451.47	516.67	6.50	7.44	-0.94	58.35	323.30
560	451.11	516.67	6.50	7.44	-0.94	57.41	322.98
564	450.74	516.67	6.49	7.44	-0.95	56.47	322.66
568	450.19	516.67	6.49	7.44	-0.95	55.51	322.33
572	449.64	516.67	6.48	7.44	-0.96	54.55	322.00

Table A-18 Gezende Dam Flood Routing Table (Q_{500}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
576	449.09	516.67	6.47	7.44	-0.97	53.58	321.66
580	448.54	516.67	6.46	7.44	-0.98	52.60	321.32
584	448.00	516.67	6.46	7.44	-0.99	51.62	320.97
588	447.45	516.67	6.45	7.44	-0.99	50.63	320.62
592	447.45	516.67	6.44	7.44	-1.00	49.63	320.26
596	447.45	464.00	6.44	7.06	-0.62	49.01	320.04
600	447.45	447.45	6.44	6.56	-0.12	48.89	320.00

Table A-19 Gezende Dam Flood Routing Table (Q_{1000})

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
0	431.07	431.07				48.90	320.00
4	431.07	431.07	6.21	6.21	0.00	48.90	320.00
8	431.07	431.07	6.21	6.21	0.00	48.90	320.00
12	431.07	431.07	6.21	6.21	0.00	48.90	320.00
16	432.72	432.72	6.22	6.22	0.00	48.90	320.00
20	434.37	434.37	6.24	6.24	0.00	48.90	320.00
24	436.01	436.01	6.27	6.27	0.00	48.90	320.00
28	437.66	437.66	6.29	6.29	0.00	48.90	320.00
32	439.31	439.31	6.31	6.31	0.00	48.90	320.00
36	440.95	440.95	6.34	6.34	0.00	48.90	320.00
40	444.06	444.06	6.37	6.37	0.00	48.90	320.00
44	447.17	447.17	6.42	6.42	0.00	48.90	320.00
48	450.28	450.28	6.46	6.46	0.00	48.90	320.00
52	453.38	453.38	6.51	6.51	0.00	48.90	320.00
56	456.49	456.49	6.55	6.55	0.00	48.90	320.00
60	459.60	459.60	6.60	6.60	0.00	48.90	320.00
64	463.16	463.16	6.64	6.64	0.00	48.90	320.00
68	466.73	466.73	6.70	6.70	0.00	48.90	320.00
72	470.29	470.29	6.75	6.75	0.00	48.90	320.00
76	473.86	473.86	6.80	6.80	0.00	48.90	320.00
80	477.42	477.42	6.85	6.85	0.00	48.90	320.00
84	480.98	480.98	6.90	6.90	0.00	48.90	320.00
88	484.67	484.67	6.95	6.95	0.00	48.90	320.00
92	488.35	488.35	7.01	7.01	0.00	48.90	320.00
96	492.04	492.04	7.06	7.06	0.00	48.90	320.00
100	495.72	495.72	7.11	7.11	0.00	48.90	320.00
104	499.41	499.41	7.16	7.16	0.00	48.90	320.00
108	503.09	503.09	7.22	7.22	0.00	48.90	320.00
112	507.03	507.03	7.27	7.27	0.00	48.90	320.00
116	510.97	510.97	7.33	7.33	0.00	48.90	320.00
120	514.91	514.91	7.39	7.39	0.00	48.90	320.00
124	518.85	518.85	7.44	7.44	0.00	48.90	320.00
128	522.79	522.79	7.50	7.50	0.00	48.90	320.00
132	526.73	526.73	7.56	7.56	0.00	48.90	320.00
136	530.58	530.58	7.61	7.61	0.00	48.90	320.00
140	533.71	533.71	7.66	7.66	0.00	48.90	320.00

Table A-19 Gezende Dam Flood Routing Table (Q_{1000}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
144	533.82	533.82	7.69	7.69	0.00	48.90	320.00
148	533.93	533.93	7.69	7.69	0.00	48.90	320.00
152	534.04	534.04	7.69	7.69	0.00	48.90	320.00
156	534.14	534.14	7.69	7.69	0.00	48.90	320.00
160	534.04	534.04	7.69	7.69	0.00	48.90	320.00
164	533.94	533.94	7.69	7.69	0.00	48.90	320.00
168	533.84	533.84	7.69	7.69	0.00	48.90	320.00
172	533.73	533.73	7.69	7.69	0.00	48.90	320.00
176	533.63	533.63	7.69	7.69	0.00	48.90	320.00
180	533.53	533.53	7.68	7.68	0.00	48.90	320.00
184	535.69	535.69	7.70	7.70	0.00	48.90	320.00
188	537.84	537.84	7.73	7.73	0.00	48.90	320.00
192	540.00	540.00	7.76	7.76	0.00	48.90	320.00
196	542.15	542.15	7.79	7.79	0.00	48.90	320.00
200	544.31	544.31	7.82	7.82	0.00	48.90	320.00
204	546.47	546.47	7.85	7.85	0.00	48.90	320.00
208	548.83	548.83	7.89	7.89	0.00	48.90	320.00
212	551.19	551.19	7.92	7.92	0.00	48.90	320.00
216	553.55	553.55	7.95	7.95	0.00	48.90	320.00
220	555.92	555.92	7.99	7.99	0.00	48.90	320.00
224	558.28	558.28	8.02	8.02	0.00	48.90	320.00
228	560.64	560.64	8.06	8.06	0.00	48.90	320.00
232	566.50	566.50	8.12	8.12	0.00	48.90	320.00
236	572.35	572.35	8.20	8.20	0.00	48.90	320.00
240	578.21	578.21	8.28	8.28	0.00	48.90	320.00
244	584.07	584.07	8.37	8.37	0.00	48.90	320.00
248	589.93	589.93	8.45	8.45	0.00	48.90	320.00
252	595.78	595.78	8.54	8.54	0.00	48.90	320.00
256	609.44	600.00	8.68	8.61	0.07	48.96	320.02
260	623.09	600.00	8.87	8.64	0.23	49.20	320.11
264	636.74	600.00	9.07	8.64	0.43	49.63	320.26
268	650.39	600.00	9.27	8.64	0.63	50.26	320.49
272	664.05	600.00	9.46	8.64	0.82	51.08	320.78
276	677.70	600.00	9.66	8.64	1.02	52.10	321.14
280	701.95	600.00	9.93	8.64	1.29	53.39	321.60
284	726.20	600.00	10.28	8.64	1.64	55.04	322.17

Table A-19 Gezende Dam Flood Routing Table (Q_{1000}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
288	750.45	600.00	10.63	8.64	1.99	57.03	322.85
292	774.70	600.00	10.98	8.64	2.34	59.37	323.64
296	952.04	600.00	12.43	8.64	3.79	63.16	324.88
300	1282.46	600.00	16.09	8.64	7.45	70.61	327.20
304	952.04	600.00	16.09	8.64	7.45	78.06	329.36
308	774.70	600.00	12.43	8.64	3.79	81.85	330.41
312	750.45	600.00	10.98	8.64	2.34	84.19	331.03
316	726.20	600.00	10.63	8.64	1.99	86.19	331.55
320	701.95	600.00	10.28	8.64	1.64	87.83	331.97
324	677.70	602.00	9.93	8.65	1.28	89.11	332.30
328	664.05	605.00	9.66	8.69	0.97	90.08	332.54
332	650.39	605.00	9.46	8.71	0.75	90.83	332.73
336	636.74	605.00	9.27	8.71	0.56	91.38	332.87
340	623.09	605.00	9.07	8.71	0.36	91.74	332.96
344	609.44	605.00	8.87	8.71	0.16	91.91	**333.00**
348	595.78	605.00	8.68	8.71	-0.03	91.87	332.99
352	589.93	605.00	8.54	8.71	-0.17	91.70	332.95
356	584.07	605.00	8.45	8.71	-0.26	91.44	332.88
360	578.21	605.00	8.37	8.71	-0.34	91.09	332.80
364	572.35	605.00	8.28	8.71	-0.43	90.67	332.69
368	566.50	605.00	8.20	8.71	-0.51	90.15	332.56
372	560.64	605.00	8.12	8.71	-0.60	89.56	332.41
376	558.28	605.00	8.06	8.71	-0.66	88.90	332.25
380	555.92	605.00	8.02	8.71	-0.69	88.21	332.07
384	553.55	605.00	7.99	8.71	-0.72	87.49	331.89
388	551.19	605.00	7.95	8.71	-0.76	86.73	331.69
392	548.83	605.00	7.92	8.71	-0.79	85.94	331.49
396	546.47	605.00	7.89	8.71	-0.83	85.11	331.27
400	544.31	605.00	7.85	8.71	-0.86	84.25	331.05
404	542.15	605.00	7.82	8.71	-0.89	83.36	330.81
408	540.00	605.00	7.79	8.71	-0.92	82.44	330.56
412	537.84	605.00	7.76	8.71	-0.95	81.49	330.31
416	535.69	605.00	7.73	8.71	-0.98	80.51	330.04
420	533.53	605.00	7.70	8.71	-1.01	79.50	329.76
424	533.63	605.00	7.68	8.71	-1.03	78.47	329.48
428	533.73	605.00	7.69	8.71	-1.03	77.44	329.19

Table A-19 Gezende Dam Flood Routing Table (Q_{1000}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
432	533.84	605.00	7.69	8.71	-1.03	76.41	328.90
436	533.94	605.00	7.69	8.71	-1.02	75.39	328.61
440	534.04	605.00	7.69	8.71	-1.02	74.37	328.31
444	534.14	605.00	7.69	8.71	-1.02	73.35	328.02
448	534.04	605.00	7.69	8.71	-1.02	72.33	327.72
452	533.93	605.00	7.69	8.71	-1.02	71.30	327.41
456	533.82	605.00	7.69	8.71	-1.02	70.28	327.10
460	533.71	605.00	7.69	8.71	-1.03	69.25	326.79
464	533.60	605.00	7.68	8.71	-1.03	68.23	326.48
468	533.50	605.00	7.68	8.71	-1.03	67.20	326.16
472	532.64	605.00	7.68	8.71	-1.04	66.16	325.84
476	531.79	605.00	7.66	8.71	-1.05	65.11	325.51
480	530.93	605.00	7.65	8.71	-1.06	64.05	325.17
484	530.07	605.00	7.64	8.71	-1.07	62.98	324.82
488	529.22	605.00	7.63	8.71	-1.09	61.89	324.47
492	528.36	605.00	7.61	8.71	-1.10	60.80	324.11
496	527.27	605.00	7.60	8.71	-1.11	59.69	323.74
500	526.18	605.00	7.58	8.71	-1.13	58.56	323.37
504	525.08	605.00	7.57	8.71	-1.14	57.42	322.98
508	523.99	605.00	7.55	8.71	-1.16	56.26	322.58
512	522.89	605.00	7.54	8.71	-1.17	55.08	322.18
516	521.80	605.00	7.52	8.71	-1.19	53.89	321.77
520	520.97	605.00	7.51	8.71	-1.20	52.69	321.35
524	520.13	605.00	7.50	8.71	-1.22	51.47	320.92
528	519.30	605.00	7.48	8.71	-1.23	50.24	320.48
532	518.46	570.00	7.47	8.46	-0.99	49.26	320.13
536	517.63	517.63	7.46	7.83	-0.37	48.88	320.00
540	516.79	516.79	7.45	7.45	0.00	48.88	320.00
544	516.40	516.40	7.44	7.44	0.00	48.88	320.00
548	516.00	516.00	7.43	7.43	0.00	48.88	320.00
552	515.60	515.60	7.43	7.43	0.00	48.88	320.00
556	515.20	515.20	7.42	7.42	0.00	48.88	320.00
560	514.81	514.81	7.42	7.42	0.00	48.88	320.00
564	514.41	514.41	7.41	7.41	0.00	48.88	320.00
568	513.81	513.81	7.40	7.40	0.00	48.88	320.00
572	513.21	513.21	7.39	7.39	0.00	48.88	320.00

Table A-19 Gezende Dam Flood Routing Table (Q_{1000}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
576	512.61	512.61	7.39	7.39	0.00	48.88	320.00
580	512.01	512.01	7.38	7.38	0.00	48.88	320.00
584	511.41	511.41	7.37	7.37	0.00	48.88	320.00
588	510.81	510.81	7.36	7.36	0.00	48.88	320.00
592	510.81	510.81	7.36	7.36	0.00	48.88	320.00
596	510.81	510.81	7.36	7.36	0.00	48.88	320.00
600	510.81	510.81	7.36	7.36	0.00	48.88	320.00

Table A-20 Gezende Dam Flood Routing Table (Q_{10000})

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
0	506.27	506.27				48.90	320.00
4	506.27	506.27	7.29	7.29	0.00	48.90	320.00
8	506.27	506.27	7.29	7.29	0.00	48.90	320.00
12	506.27	506.27	7.29	7.29	0.00	48.90	320.00
16	508.17	508.17	7.30	7.30	0.00	48.90	320.00
20	510.06	510.06	7.33	7.33	0.00	48.90	320.00
24	511.95	511.95	7.36	7.36	0.00	48.90	320.00
28	513.85	513.85	7.39	7.39	0.00	48.90	320.00
32	515.74	515.74	7.41	7.41	0.00	48.90	320.00
36	517.64	517.64	7.44	7.44	0.00	48.90	320.00
40	521.45	521.45	7.48	7.48	0.00	48.90	320.00
44	525.27	525.27	7.54	7.54	0.00	48.90	320.00
48	529.09	529.09	7.59	7.59	0.00	48.90	320.00
52	532.91	532.91	7.65	7.65	0.00	48.90	320.00
56	536.73	536.73	7.70	7.70	0.00	48.90	320.00
60	540.55	540.55	7.76	7.76	0.00	48.90	320.00
64	544.85	544.85	7.81	7.81	0.00	48.90	320.00
68	549.15	549.15	7.88	7.88	0.00	48.90	320.00
72	553.45	553.45	7.94	7.94	0.00	48.90	320.00
76	557.75	557.75	8.00	8.00	0.00	48.90	320.00
80	562.05	562.05	8.06	8.06	0.00	48.90	320.00
84	566.35	566.35	8.12	8.12	0.00	48.90	320.00
88	570.75	570.75	8.19	8.19	0.00	48.90	320.00
92	575.16	575.16	8.25	8.25	0.00	48.90	320.00
96	579.57	579.57	8.31	8.31	0.00	48.90	320.00
100	583.97	583.97	8.38	8.38	0.00	48.90	320.00
104	588.38	588.38	8.44	8.44	0.00	48.90	320.00
108	592.78	592.78	8.50	8.50	0.00	48.90	320.00
112	597.56	597.56	8.57	8.57	0.00	48.90	320.00
116	602.33	602.33	8.64	8.64	0.00	48.90	320.00
120	607.11	607.11	8.71	8.71	0.00	48.90	320.00
124	611.89	611.89	8.78	8.78	0.00	48.90	320.00
128	616.66	616.66	8.85	8.85	0.00	48.90	320.00
132	621.44	621.44	8.91	8.91	0.00	48.90	320.00
136	626.12	626.12	8.98	8.98	0.00	48.90	320.00
140	630.81	630.81	9.05	9.05	0.00	48.90	320.00

Table A-20 Gezende Dam Flood Routing Table (Q_{10000}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
144	635.50	635.50	9.12	9.12	0.00	48.90	320.00
148	640.18	640.18	9.18	9.18	0.00	48.90	320.00
152	644.87	644.87	9.25	9.25	0.00	48.90	320.00
156	649.55	649.55	9.32	9.32	0.00	48.90	320.00
160	655.08	655.08	9.39	9.39	0.00	48.90	320.00
164	660.61	660.61	9.47	9.47	0.00	48.90	320.00
168	666.14	666.14	9.55	9.55	0.00	48.90	320.00
172	671.66	671.66	9.63	9.63	0.00	48.90	320.00
176	677.19	677.19	9.71	9.71	0.00	48.90	320.00
180	682.72	682.72	9.79	9.79	0.00	48.90	320.00
184	687.07	687.07	9.86	9.86	0.00	48.90	320.00
188	704.85	704.85	10.02	10.02	0.00	48.90	320.00
192	707.63	707.63	10.17	10.17	0.00	48.90	320.00
196	710.41	710.41	10.21	10.21	0.00	48.90	320.00
200	713.18	713.18	10.25	10.25	0.00	48.90	320.00
204	715.96	715.96	10.29	10.29	0.00	48.90	320.00
208	718.93	718.93	10.33	10.33	0.00	48.90	320.00
212	721.90	721.90	10.37	10.37	0.00	48.90	320.00
216	724.86	724.86	10.42	10.42	0.00	48.90	320.00
220	727.83	727.83	10.46	10.46	0.00	48.90	320.00
224	730.79	730.79	10.50	10.50	0.00	48.90	320.00
228	733.76	733.76	10.54	10.54	0.00	48.90	320.00
232	741.30	741.30	10.62	10.62	0.00	48.90	320.00
236	748.85	748.85	10.73	10.73	0.00	48.90	320.00
240	756.39	756.39	10.84	10.84	0.00	48.90	320.00
244	763.94	763.94	10.95	10.95	0.00	48.90	320.00
248	771.48	771.48	11.05	11.05	0.00	48.90	320.00
252	779.02	779.02	11.16	11.16	0.00	48.90	320.00
256	796.67	796.67	11.35	11.35	0.00	48.90	320.00
260	814.32	814.32	11.60	11.60	0.00	48.90	320.00
264	831.98	820.00	11.85	11.77	0.09	48.98	320.03
268	849.63	824.00	12.11	11.84	0.27	49.25	320.13
272	867.28	824.00	12.36	11.87	0.50	49.75	320.31
276	884.93	824.00	12.62	11.87	0.75	50.50	320.57
280	913.21	824.00	12.95	11.87	1.08	51.58	320.96
284	941.50	824.00	13.35	11.87	1.49	53.07	321.48

Table A-20 Gezende Dam Flood Routing Table (Q_{10000}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
288	969.79	824.00	13.76	11.87	1.90	54.96	322.14
292	998.08	824.00	14.17	11.87	2.30	57.27	322.93
296	1231.19	824.00	16.05	11.87	4.19	61.45	324.33
300	1669.14	824.00	20.88	11.87	9.02	70.47	327.16
304	1231.19	824.00	20.88	11.87	9.02	79.49	329.76
308	998.08	824.00	16.05	11.87	4.19	83.67	330.89
312	969.79	824.00	14.17	11.87	2.30	85.97	331.50
316	941.50	824.00	13.76	11.87	1.90	87.87	331.98
320	913.21	824.00	13.35	11.87	1.49	89.36	332.36
324	884.93	824.00	12.95	11.87	1.08	90.44	332.63
328	867.28	824.00	12.62	11.87	0.75	91.19	332.82
332	849.63	824.00	12.36	11.87	0.50	91.69	332.94
336	831.98	824.00	12.11	11.87	0.24	91.93	**333.00**
340	814.32	824.00	11.85	11.87	-0.01	91.92	333.00
344	796.67	824.00	11.60	11.87	-0.27	91.65	332.93
348	779.02	824.00	11.35	11.87	-0.52	91.13	332.81
352	771.48	824.00	11.16	11.87	-0.70	90.43	332.63
356	763.94	824.00	11.05	11.87	-0.81	89.62	332.43
360	756.39	824.00	10.95	11.87	-0.92	88.70	332.19
364	748.85	824.00	10.84	11.87	-1.03	87.67	331.93
368	741.30	824.00	10.73	11.87	-1.14	86.53	331.64
372	733.76	824.00	10.62	11.87	-1.25	85.29	331.32
376	730.79	824.00	10.54	11.87	-1.32	83.97	330.97
380	727.83	824.00	10.50	11.87	-1.36	82.60	330.61
384	724.86	824.00	10.46	11.87	-1.41	81.20	330.23
388	721.90	824.00	10.42	11.87	-1.45	79.75	329.83
392	718.93	824.00	10.37	11.87	-1.49	78.26	329.42
396	715.96	824.00	10.33	11.87	-1.53	76.72	328.99
400	713.18	824.00	10.29	11.87	-1.58	75.15	328.54
404	710.41	824.00	10.25	11.87	-1.62	73.53	328.07
408	707.63	824.00	10.21	11.87	-1.66	71.87	327.58
412	704.85	824.00	10.17	11.87	-1.70	70.18	327.07
416	702.07	824.00	10.13	11.87	-1.74	68.44	326.54
420	699.29	824.00	10.09	11.87	-1.78	66.67	325.99
424	699.47	824.00	10.07	11.87	-1.79	64.87	325.43
428	699.66	824.00	10.07	11.87	-1.79	63.08	324.85

Table A-20 Gezende Dam Flood Routing Table (Q_{10000}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
432	699.84	824.00	10.08	11.87	-1.79	61.29	324.27
436	700.03	824.00	10.08	11.87	-1.79	59.50	323.68
440	700.21	824.00	10.08	11.87	-1.78	57.72	323.08
444	700.40	824.00	10.08	11.87	-1.78	55.94	322.48
448	700.30	824.00	10.09	11.87	-1.78	54.16	321.86
452	700.21	824.00	10.08	11.87	-1.78	52.38	321.24
456	700.11	800.00	10.08	11.69	-1.61	50.77	320.67
460	700.02	750.00	10.08	11.16	-1.08	49.69	320.28
464	699.92	730.00	10.08	10.66	-0.58	49.11	320.08
468	699.83	699.83	10.08	10.29	-0.22	48.89	320.00
472	698.74	698.74	10.07	10.07	0.00	48.89	320.00
476	697.66	697.66	10.05	10.05	0.00	48.89	320.00
480	696.58	696.58	10.04	10.04	0.00	48.89	320.00
484	695.50	695.50	10.02	10.02	0.00	48.89	320.00
488	694.41	694.41	10.01	10.01	0.00	48.89	320.00
492	693.33	693.33	9.99	9.99	0.00	48.89	320.00
496	691.92	691.92	9.97	9.97	0.00	48.89	320.00
500	690.51	690.51	9.95	9.95	0.00	48.89	320.00
504	689.10	689.10	9.93	9.93	0.00	48.89	320.00
508	687.69	687.69	9.91	9.91	0.00	48.89	320.00
512	686.28	686.28	9.89	9.89	0.00	48.89	320.00
516	684.87	684.87	9.87	9.87	0.00	48.89	320.00
520	683.80	683.80	9.85	9.85	0.00	48.89	320.00
524	682.72	682.72	9.84	9.84	0.00	48.89	320.00
528	681.65	681.65	9.82	9.82	0.00	48.89	320.00
532	680.58	680.58	9.81	9.81	0.00	48.89	320.00
536	679.50	679.50	9.79	9.79	0.00	48.89	320.00
540	678.43	678.43	9.78	9.78	0.00	48.89	320.00
544	677.93	677.93	9.77	9.77	0.00	48.89	320.00
548	677.43	677.43	9.76	9.76	0.00	48.89	320.00
552	676.93	676.93	9.75	9.75	0.00	48.89	320.00
556	676.44	676.44	9.74	9.74	0.00	48.89	320.00
560	675.94	675.94	9.74	9.74	0.00	48.89	320.00
564	675.44	675.44	9.73	9.73	0.00	48.89	320.00
568	674.67	674.67	9.72	9.72	0.00	48.89	320.00
572	673.91	673.91	9.71	9.71	0.00	48.89	320.00

Table A-20 Gezende Dam Flood Routing Table (Q_{10000}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
576	673.14	673.14	9.70	9.70	0.00	48.89	320.00
580	672.38	672.38	9.69	9.69	0.00	48.89	320.00
584	671.61	671.61	9.68	9.68	0.00	48.89	320.00
588	670.85	670.85	9.67	9.67	0.00	48.89	320.00
592	670.85	670.85	9.66	9.66	0.00	48.89	320.00
596	670.85	670.85	9.66	9.66	0.00	48.89	320.00
600	670.85	670.85	9.66	9.66	0.00	48.89	320.00

Table A-21 Mut Dam Flood Routing Table (Q_{100})

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
0	216.49	216.49				1671.00	305.00
4	216.49	216.49	3.12	3.12	0.00	1671.00	305.00
8	216.49	216.49	3.12	3.12	0.00	1671.00	305.00
12	216.49	216.49	3.12	3.12	0.00	1671.00	305.00
16	217.34	217.34	3.12	3.12	0.00	1671.00	305.00
20	218.18	218.18	3.14	3.14	0.00	1671.00	305.00
24	219.03	219.03	3.15	3.15	0.00	1671.00	305.00
28	219.87	219.87	3.16	3.16	0.00	1671.00	305.00
32	220.72	220.72	3.17	3.17	0.00	1671.00	305.00
36	221.56	221.56	3.18	3.18	0.00	1671.00	305.00
40	223.14	223.14	3.20	3.20	0.00	1671.00	305.00
44	224.72	224.72	3.22	3.22	0.00	1671.00	305.00
48	226.29	226.29	3.25	3.25	0.00	1671.00	305.00
52	227.87	227.87	3.27	3.27	0.00	1671.00	305.00
56	229.45	229.45	3.29	3.29	0.00	1671.00	305.00
60	231.03	231.03	3.32	3.32	0.00	1671.00	305.00
64	232.81	232.17	3.34	3.34	0.00	1671.00	305.00
68	234.59	232.17	3.37	3.34	0.02	1671.03	305.00
72	236.37	232.17	3.39	3.34	0.05	1671.07	305.00
76	238.15	232.17	3.42	3.34	0.07	1671.15	305.00
80	239.93	232.17	3.44	3.34	0.10	1671.25	305.00
84	241.71	232.17	3.47	3.34	0.12	1671.37	305.01
88	242.47	232.17	3.49	3.34	0.14	1671.51	305.01
92	243.24	232.17	3.50	3.34	0.15	1671.67	305.01
96	244.00	232.17	3.51	3.34	0.16	1671.83	305.02
100	244.76	232.17	3.52	3.34	0.18	1672.01	305.02
104	245.52	232.17	3.53	3.34	0.19	1672.19	305.02
108	246.29	232.17	3.54	3.34	0.20	1672.39	305.03
112	247.94	232.17	3.56	3.34	0.22	1672.61	305.03
116	249.60	232.17	3.58	3.34	0.24	1672.85	305.04
120	251.26	232.17	3.61	3.34	0.26	1673.11	305.04
124	252.92	232.17	3.63	3.34	0.29	1673.40	305.05
128	254.57	232.17	3.65	3.34	0.31	1673.71	305.05
132	256.23	232.17	3.68	3.34	0.33	1674.04	305.06
136	257.70	232.17	3.70	3.34	0.36	1674.40	305.07
140	259.17	232.17	3.72	3.34	0.38	1674.78	305.07

Table A-21 Mut Dam Flood Routing Table (Q_{100}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
144	260.64	232.17	3.74	3.34	0.40	1675.18	305.08
148	262.11	232.17	3.76	3.34	0.42	1675.60	305.09
152	263.58	232.17	3.78	3.34	0.44	1676.04	305.10
156	265.05	232.17	3.81	3.34	0.46	1676.50	305.11
160	269.56	232.17	3.85	3.34	0.51	1677.01	305.12
164	274.07	232.17	3.91	3.34	0.57	1677.58	305.13
168	278.59	232.17	3.98	3.34	0.64	1678.21	305.14
172	283.10	232.17	4.04	3.34	0.70	1678.91	305.16
176	287.61	232.17	4.11	3.34	0.77	1679.68	305.17
180	292.12	232.17	4.17	3.34	0.83	1680.51	305.19
184	292.63	232.17	4.21	3.34	0.87	1681.38	305.21
188	293.14	232.17	4.22	3.34	0.87	1682.25	305.22
192	293.64	232.17	4.22	3.34	0.88	1683.13	305.24
196	294.15	232.17	4.23	3.34	0.89	1684.02	305.26
200	294.66	232.17	4.24	3.34	0.90	1684.92	305.28
204	295.17	232.17	4.25	3.34	0.90	1685.82	305.29
208	299.49	232.17	4.28	3.34	0.94	1686.76	305.31
212	303.82	232.17	4.34	3.34	1.00	1687.76	305.33
216	308.15	232.17	4.41	3.34	1.06	1688.82	305.35
220	312.48	232.17	4.47	3.34	1.13	1689.95	305.38
224	316.81	232.17	4.53	3.34	1.19	1691.14	305.40
228	321.13	232.17	4.59	3.34	1.25	1692.39	305.42
232	325.22	232.17	4.65	3.34	1.31	1693.70	305.45
236	329.30	232.17	4.71	3.34	1.37	1695.07	305.48
240	333.38	232.17	4.77	3.34	1.43	1696.49	305.51
244	337.46	232.17	4.83	3.34	1.49	1697.98	305.53
248	341.54	232.17	4.89	3.34	1.55	1699.53	305.57
252	345.62	232.17	4.95	3.34	1.60	1701.13	305.60
256	352.50	232.17	5.03	3.34	1.68	1702.81	305.63
260	359.39	232.17	5.13	3.34	1.78	1704.60	305.67
264	366.28	232.17	5.22	3.34	1.88	1706.48	305.70
268	373.16	232.17	5.32	3.34	1.98	1708.46	305.74
272	380.05	232.17	5.42	3.34	2.08	1710.54	305.78
276	386.94	232.17	5.52	3.34	2.18	1712.72	305.83
280	415.52	232.17	5.78	3.34	2.43	1715.15	305.87
284	444.11	232.17	6.19	3.34	2.85	1718.00	305.93

Table A-21 Mut Dam Flood Routing Table (Q_{100}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
288	472.70	232.17	6.60	3.34	3.26	1721.25	305.99
292	501.28	232.17	7.01	3.34	3.67	1724.92	306.07
296	573.22	232.17	7.74	3.34	4.39	1729.32	306.15
300	688.49	232.17	9.08	3.34	5.74	1735.06	306.26
304	573.22	232.17	9.08	3.34	5.74	1740.80	306.38
308	501.28	232.17	7.74	3.34	4.39	1745.19	306.46
312	472.70	232.17	7.01	3.34	3.67	1748.86	306.53
316	444.11	232.17	6.60	3.34	3.26	1752.12	306.60
320	415.52	232.17	6.19	3.34	2.85	1754.97	306.65
324	386.94	232.17	5.78	3.34	2.43	1757.40	306.70
328	380.05	232.17	5.52	3.34	2.18	1759.58	306.74
332	373.16	232.17	5.42	3.34	2.08	1761.66	306.78
336	366.28	232.17	5.32	3.34	1.98	1763.64	306.82
340	359.39	232.17	5.22	3.34	1.88	1765.52	306.85
344	352.50	232.17	5.13	3.34	1.78	1767.30	306.89
348	345.62	232.17	5.03	3.34	1.68	1768.99	306.92
352	341.54	232.17	4.95	3.34	1.60	1770.59	306.95
356	337.46	232.17	4.89	3.34	1.55	1772.14	306.98
360	333.38	232.17	4.83	3.34	1.49	1773.62	307.01
364	329.30	232.17	4.77	3.34	1.43	1775.05	307.04
368	325.22	232.17	4.71	3.34	1.37	1776.42	307.06
372	321.13	232.17	4.65	3.34	1.31	1777.73	307.09
376	316.81	232.17	4.59	3.34	1.25	1778.98	307.11
380	312.48	232.17	4.53	3.34	1.19	1780.17	307.14
384	308.15	232.17	4.47	3.34	1.13	1781.29	307.16
388	303.82	232.17	4.41	3.34	1.06	1782.36	307.18
392	299.49	232.17	4.34	3.34	1.00	1783.36	307.20
396	295.17	232.17	4.28	3.34	0.94	1784.29	307.22
400	294.66	232.17	4.25	3.34	0.90	1785.20	307.23
404	294.15	232.17	4.24	3.34	0.90	1786.09	307.25
408	293.64	232.17	4.23	3.34	0.89	1786.98	307.27
412	293.14	232.17	4.22	3.34	0.88	1787.86	307.28
416	292.63	232.17	4.22	3.34	0.87	1788.74	307.30
420	292.12	232.17	4.21	3.34	0.87	1789.61	307.32
424	287.61	232.17	4.17	3.34	0.83	1790.44	307.33
428	283.10	232.17	4.11	3.34	0.77	1791.20	307.35

Table A-21 Mut Dam Flood Routing Table (Q_{100}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
432	278.59	232.17	4.04	3.34	0.70	1791.90	307.36
436	274.07	232.17	3.98	3.34	0.64	1792.54	307.37
440	269.56	232.17	3.91	3.34	0.57	1793.11	307.39
444	265.05	232.17	3.85	3.34	0.51	1793.62	307.39
448	263.58	232.17	3.81	3.34	0.46	1794.08	307.40
452	262.11	232.17	3.78	3.34	0.44	1794.52	307.41
456	260.64	232.17	3.76	3.34	0.42	1794.94	307.42
460	259.17	232.17	3.74	3.34	0.40	1795.34	307.43
464	257.70	232.17	3.72	3.34	0.38	1795.72	307.44
468	256.23	232.17	3.70	3.34	0.36	1796.07	307.44
472	254.57	232.17	3.68	3.34	0.33	1796.41	307.45
476	252.92	232.17	3.65	3.34	0.31	1796.72	307.45
480	251.26	232.17	3.63	3.34	0.29	1797.01	307.46
484	249.60	232.17	3.61	3.34	0.26	1797.27	307.46
488	247.94	232.17	3.58	3.34	0.24	1797.51	307.47
492	246.29	232.17	3.56	3.34	0.22	1797.72	307.47
496	245.52	232.17	3.54	3.34	0.20	1797.92	307.48
500	244.76	232.17	3.53	3.34	0.19	1798.11	307.48
504	244.00	232.17	3.52	3.34	0.18	1798.28	307.48
508	243.24	232.17	3.51	3.34	0.16	1798.45	307.49
512	242.47	232.17	3.50	3.34	0.15	1798.60	307.49
516	241.71	232.17	3.49	3.34	0.14	1798.75	307.49
520	239.93	232.17	3.47	3.34	0.12	1798.87	307.50
524	238.15	232.17	3.44	3.34	0.10	1798.97	307.50
528	236.37	232.17	3.42	3.34	0.07	1799.04	307.50
532	234.59	232.17	3.39	3.34	0.05	1799.09	307.50
536	232.81	232.17	3.37	3.34	0.02	1799.11	**307.50**
540	231.03	232.17	3.34	3.34	0.00	1799.11	307.50
544	229.45	232.17	3.32	3.34	-0.03	1799.08	307.50
548	227.87	232.17	3.29	3.34	-0.05	1799.03	307.50
552	226.29	232.17	3.27	3.34	-0.07	1798.96	307.50
556	224.72	232.17	3.25	3.34	-0.10	1798.86	307.50
560	223.14	232.17	3.22	3.34	-0.12	1798.74	307.49
564	221.56	232.17	3.20	3.34	-0.14	1798.60	307.49
568	220.72	232.17	3.18	3.34	-0.16	1798.44	307.49
572	219.87	232.17	3.17	3.34	-0.17	1798.27	307.48

Table A-21 Mut Dam Flood Routing Table (Q_{100}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
576	219.03	232.17	3.16	3.34	-0.18	1798.09	307.48
580	218.18	232.17	3.15	3.34	-0.20	1797.89	307.48
584	217.34	232.17	3.14	3.34	-0.21	1797.68	307.47
588	216.49	232.17	3.12	3.34	-0.22	1797.46	307.47
592	216.49	232.17	3.12	3.34	-0.23	1797.24	307.46
596	216.49	232.17	3.12	3.34	-0.23	1797.01	307.46
600	216.49	232.17	3.12	3.34	-0.23	1796.79	307.46

Table A-22 Mut Dam Flood Routing Table (Q_{500})

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
0	239.51	239.51				1671.00	305.00
4	239.51	239.51	3.45	3.45	0.00	1671.00	305.00
8	239.51	239.51	3.45	3.45	0.00	1671.00	305.00
12	239.51	239.51	3.45	3.45	0.00	1671.00	305.00
16	240.54	240.54	3.46	3.46	0.00	1671.00	305.00
20	241.58	241.58	3.47	3.47	0.00	1671.00	305.00
24	242.61	242.61	3.49	3.49	0.00	1671.00	305.00
28	243.64	243.64	3.50	3.50	0.00	1671.00	305.00
32	244.68	244.68	3.52	3.52	0.00	1671.00	305.00
36	245.71	245.71	3.53	3.53	0.00	1671.00	305.00
40	247.60	247.60	3.55	3.55	0.00	1671.00	305.00
44	249.48	249.48	3.58	3.58	0.00	1671.00	305.00
48	251.37	251.37	3.61	3.61	0.00	1671.00	305.00
52	253.25	253.25	3.63	3.63	0.00	1671.00	305.00
56	255.14	255.14	3.66	3.66	0.00	1671.00	305.00
60	257.02	257.02	3.69	3.69	0.00	1671.00	305.00
64	259.28	259.28	3.72	3.72	0.00	1671.00	305.00
68	261.54	261.54	3.75	3.75	0.00	1671.00	305.00
72	263.80	263.80	3.78	3.78	0.00	1671.00	305.00
76	266.06	266.06	3.81	3.81	0.00	1671.00	305.00
80	268.32	268.32	3.85	3.85	0.00	1671.00	305.00
84	270.58	270.58	3.88	3.88	0.00	1671.00	305.00
88	271.43	271.43	3.90	3.90	0.00	1671.00	305.00
92	272.28	272.28	3.91	3.91	0.00	1671.00	305.00
96	273.13	273.13	3.93	3.93	0.00	1671.00	305.00
100	273.98	273.98	3.94	3.94	0.00	1671.00	305.00
104	274.83	274.83	3.95	3.95	0.00	1671.00	305.00
108	275.68	275.68	3.96	3.96	0.00	1671.00	305.00
112	277.71	277.71	3.98	3.98	0.00	1671.00	305.00
116	279.74	279.74	4.01	4.01	0.00	1671.00	305.00
120	281.78	281.78	4.04	4.04	0.00	1671.00	305.00
124	283.81	282.51	4.07	4.06	0.01	1671.01	305.00
128	285.84	282.51	4.10	4.07	0.03	1671.04	305.00
132	287.87	282.51	4.13	4.07	0.06	1671.11	305.00
136	289.64	282.51	4.16	4.07	0.09	1671.20	305.00
140	291.41	282.51	4.18	4.07	0.12	1671.31	305.01

Table A-22 Mut Dam Flood Routing Table (Q_{500}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
144	293.18	282.51	4.21	4.07	0.14	1671.45	305.01
148	294.94	282.51	4.23	4.07	0.17	1671.62	305.01
152	296.71	282.51	4.26	4.07	0.19	1671.81	305.02
156	298.48	282.51	4.29	4.07	0.22	1672.03	305.02
160	305.28	282.51	4.35	4.07	0.28	1672.31	305.03
164	312.08	282.51	4.44	4.07	0.38	1672.68	305.03
168	318.88	282.51	4.54	4.07	0.47	1673.16	305.04
172	325.68	282.51	4.64	4.07	0.57	1673.73	305.05
176	332.48	282.51	4.74	4.07	0.67	1674.40	305.07
180	339.28	282.51	4.84	4.07	0.77	1675.17	305.08
184	339.86	282.51	4.89	4.07	0.82	1675.99	305.10
188	340.44	282.51	4.90	4.07	0.83	1676.82	305.12
192	341.02	282.51	4.91	4.07	0.84	1677.66	305.13
196	341.60	282.51	4.91	4.07	0.85	1678.51	305.15
200	342.18	282.51	4.92	4.07	0.86	1679.36	305.17
204	342.76	282.51	4.93	4.07	0.86	1680.22	305.18
208	348.01	282.51	4.97	4.07	0.91	1681.13	305.20
212	353.26	282.51	5.05	4.07	0.98	1682.11	305.22
216	358.51	282.51	5.12	4.07	1.06	1683.17	305.24
220	363.76	282.51	5.20	4.07	1.13	1684.30	305.26
224	369.01	282.51	5.28	4.07	1.21	1685.51	305.29
228	374.26	282.51	5.35	4.07	1.28	1686.79	305.31
232	379.03	282.51	5.42	4.07	1.36	1688.15	305.34
236	383.81	282.51	5.49	4.07	1.42	1689.57	305.37
240	388.59	282.51	5.56	4.07	1.49	1691.06	305.40
244	393.37	282.51	5.63	4.07	1.56	1692.62	305.43
248	398.15	282.51	5.70	4.07	1.63	1694.26	305.46
252	402.93	282.51	5.77	4.07	1.70	1695.95	305.49
256	410.71	282.51	5.86	4.07	1.79	1697.74	305.53
260	418.49	282.51	5.97	4.07	1.90	1699.65	305.57
264	426.26	282.51	6.08	4.07	2.01	1701.66	305.61
268	434.04	282.51	6.19	4.07	2.13	1703.79	305.65
272	441.82	282.51	6.31	4.07	2.24	1706.03	305.69
276	449.60	282.51	6.42	4.07	2.35	1708.38	305.74
280	488.56	282.51	6.75	4.07	2.69	1711.06	305.79
284	527.53	282.51	7.32	4.07	3.25	1714.31	305.86

Table A-22 Mut Dam Flood Routing Table (Q_{500}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
288	566.50	282.51	7.88	4.07	3.81	1718.12	305.93
292	605.47	282.51	8.44	4.07	4.37	1722.49	306.02
296	704.01	282.51	9.43	4.07	5.36	1727.85	306.12
300	862.12	282.51	11.28	4.07	7.21	1735.06	306.26
304	704.01	282.51	11.28	4.07	7.21	1742.26	306.40
308	605.47	282.51	9.43	4.07	5.36	1747.62	306.51
312	566.50	282.51	8.44	4.07	4.37	1751.99	306.59
316	527.53	282.51	7.88	4.07	3.81	1755.80	306.67
320	488.56	282.51	7.32	4.07	3.25	1759.05	306.73
324	449.60	282.51	6.75	4.07	2.69	1761.74	306.78
328	441.82	282.51	6.42	4.07	2.35	1764.09	306.83
332	434.04	282.51	6.31	4.07	2.24	1766.33	306.87
336	426.26	282.51	6.19	4.07	2.13	1768.45	306.91
340	418.49	282.51	6.08	4.07	2.01	1770.47	306.95
344	410.71	282.51	5.97	4.07	1.90	1772.37	306.99
348	402.93	282.51	5.86	4.07	1.79	1774.16	307.02
352	398.15	282.51	5.77	4.07	1.70	1775.86	307.05
356	393.37	282.51	5.70	4.07	1.63	1777.49	307.09
360	388.59	282.51	5.63	4.07	1.56	1779.05	307.12
364	383.81	282.51	5.56	4.07	1.49	1780.54	307.14
368	379.03	282.51	5.49	4.07	1.42	1781.97	307.17
372	374.26	282.51	5.42	4.07	1.36	1783.32	307.20
376	369.01	282.51	5.35	4.07	1.28	1784.61	307.22
380	363.76	282.51	5.28	4.07	1.21	1785.81	307.25
384	358.51	282.51	5.20	4.07	1.13	1786.95	307.27
388	353.26	282.51	5.12	4.07	1.06	1788.00	307.29
392	348.01	282.51	5.05	4.07	0.98	1788.98	307.31
396	342.76	282.51	4.97	4.07	0.91	1789.89	307.32
400	342.18	282.51	4.93	4.07	0.86	1790.75	307.34
404	341.60	282.51	4.92	4.07	0.86	1791.61	307.36
408	341.02	282.51	4.91	4.07	0.85	1792.45	307.37
412	340.44	282.51	4.91	4.07	0.84	1793.29	307.39
416	339.86	282.51	4.90	4.07	0.83	1794.12	307.40
420	339.28	282.51	4.89	4.07	0.82	1794.94	307.42
424	332.48	282.51	4.84	4.07	0.77	1795.71	307.44
428	325.68	282.51	4.74	4.07	0.67	1796.38	307.45

Table A-22 Mut Dam Flood Routing Table (Q_{500}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
432	318.88	282.51	4.64	4.07	0.57	1796.96	307.46
436	312.08	282.51	4.54	4.07	0.47	1797.43	307.47
440	305.28	282.51	4.44	4.07	0.38	1797.81	307.48
444	298.48	282.51	4.35	4.07	0.28	1798.09	307.48
448	296.71	282.51	4.29	4.07	0.22	1798.30	307.48
452	294.94	282.51	4.26	4.07	0.19	1798.49	307.49
456	293.18	282.51	4.23	4.07	0.17	1798.66	307.49
460	291.41	282.51	4.21	4.07	0.14	1798.80	307.49
464	289.64	282.51	4.18	4.07	0.12	1798.92	307.50
468	287.87	282.51	4.16	4.07	0.09	1799.01	307.50
472	285.84	282.51	4.13	4.07	0.06	1799.07	307.50
476	283.81	282.51	4.10	4.07	0.03	1799.10	307.50
480	281.78	282.51	4.07	4.07	0.00	1799.11	**307.50**
484	279.74	282.51	4.04	4.07	-0.03	1799.08	307.50
488	277.71	282.51	4.01	4.07	-0.05	1799.03	307.50
492	275.68	282.51	3.98	4.07	-0.08	1798.94	307.50
496	274.83	282.51	3.96	4.07	-0.10	1798.84	307.49
500	273.98	282.51	3.95	4.07	-0.12	1798.72	307.49
504	273.13	282.51	3.94	4.07	-0.13	1798.59	307.49
508	272.28	282.51	3.93	4.07	-0.14	1798.45	307.49
512	271.43	282.51	3.91	4.07	-0.15	1798.30	307.48
516	270.58	282.51	3.90	4.07	-0.17	1798.13	307.48
520	268.32	282.51	3.88	4.07	-0.19	1797.94	307.48
524	266.06	282.51	3.85	4.07	-0.22	1797.72	307.47
528	263.80	282.51	3.81	4.07	-0.25	1797.47	307.47
532	261.54	282.51	3.78	4.07	-0.29	1797.18	307.46
536	259.28	282.51	3.75	4.07	-0.32	1796.87	307.46
540	257.02	282.51	3.72	4.07	-0.35	1796.52	307.45
544	255.14	282.51	3.69	4.07	-0.38	1796.14	307.44
548	253.25	282.51	3.66	4.07	-0.41	1795.73	307.44
552	251.37	282.51	3.63	4.07	-0.43	1795.29	307.43
556	249.48	282.51	3.61	4.07	-0.46	1794.83	307.42
560	247.60	282.51	3.58	4.07	-0.49	1794.34	307.41
564	245.71	282.51	3.55	4.07	-0.52	1793.82	307.40
568	244.68	282.51	3.53	4.07	-0.54	1793.29	307.39
572	243.64	282.51	3.52	4.07	-0.55	1792.74	307.38

Table A-22 Mut Dam Flood Routing Table (Q_{500}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
576	242.61	282.51	3.50	4.07	-0.57	1792.17	307.37
580	241.58	282.51	3.49	4.07	-0.58	1791.59	307.36
584	240.54	282.51	3.47	4.07	-0.60	1790.99	307.34
588	239.51	282.51	3.46	4.07	-0.61	1790.38	307.33
592	239.51	282.51	3.45	4.07	-0.62	1789.76	307.32
596	239.51	282.51	3.45	4.07	-0.62	1789.14	307.31
600	239.51	282.51	3.45	4.07	-0.62	1788.52	307.30

Table A-23 Mut Dam Flood Routing Table (Q_{1000})

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
0	262.82	262.82				1671.00	305.00
4	262.82	262.82	3.78	3.78	0.00	1671.00	305.00
8	262.82	262.82	3.78	3.78	0.00	1671.00	305.00
12	262.82	262.82	3.78	3.78	0.00	1671.00	305.00
16	263.97	263.97	3.79	3.79	0.00	1671.00	305.00
20	265.12	265.12	3.81	3.81	0.00	1671.00	305.00
24	266.28	266.28	3.83	3.83	0.00	1671.00	305.00
28	267.43	267.43	3.84	3.84	0.00	1671.00	305.00
32	268.58	268.58	3.86	3.86	0.00	1671.00	305.00
36	269.74	269.74	3.88	3.88	0.00	1671.00	305.00
40	271.94	271.94	3.90	3.90	0.00	1671.00	305.00
44	274.14	274.14	3.93	3.93	0.00	1671.00	305.00
48	276.34	276.34	3.96	3.96	0.00	1671.00	305.00
52	278.54	278.54	4.00	4.00	0.00	1671.00	305.00
56	280.75	280.75	4.03	4.03	0.00	1671.00	305.00
60	282.95	282.95	4.06	4.06	0.00	1671.00	305.00
64	285.52	285.52	4.09	4.09	0.00	1671.00	305.00
68	288.09	288.09	4.13	4.13	0.00	1671.00	305.00
72	290.66	290.66	4.17	4.17	0.00	1671.00	305.00
76	293.24	293.24	4.20	4.20	0.00	1671.00	305.00
80	295.81	295.81	4.24	4.24	0.00	1671.00	305.00
84	298.38	298.38	4.28	4.28	0.00	1671.00	305.00
88	299.32	299.32	4.30	4.30	0.00	1671.00	305.00
92	300.26	300.26	4.32	4.32	0.00	1671.00	305.00
96	301.21	301.21	4.33	4.33	0.00	1671.00	305.00
100	302.15	302.15	4.34	4.34	0.00	1671.00	305.00
104	303.09	303.09	4.36	4.36	0.00	1671.00	305.00
108	304.03	304.03	4.37	4.37	0.00	1671.00	305.00
112	306.32	306.32	4.39	4.39	0.00	1671.00	305.00
116	308.60	308.60	4.43	4.43	0.00	1671.00	305.00
120	310.89	310.89	4.46	4.46	0.00	1671.00	305.00
124	313.17	313.17	4.49	4.49	0.00	1671.00	305.00
128	315.46	315.46	4.53	4.53	0.00	1671.00	305.00
132	317.74	317.74	4.56	4.56	0.00	1671.00	305.00
136	319.75	318.00	4.59	4.58	0.01	1671.01	305.00
140	321.75	318.00	4.62	4.58	0.04	1671.05	305.00

Table A-23 Mut Dam Flood Routing Table (Q_{1000}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
144	323.76	318.00	4.65	4.58	0.07	1671.12	305.00
148	325.76	318.00	4.68	4.58	0.10	1671.22	305.00
152	327.77	318.00	4.71	4.58	0.13	1671.34	305.01
156	329.77	318.00	4.73	4.58	0.16	1671.50	305.01
160	336.80	318.00	4.80	4.58	0.22	1671.72	305.01
164	343.83	318.00	4.90	4.58	0.32	1672.04	305.02
168	350.86	318.00	5.00	4.58	0.42	1672.46	305.03
172	357.89	318.00	5.10	4.58	0.52	1672.99	305.04
176	364.92	318.00	5.20	4.58	0.63	1673.61	305.05
180	371.95	318.00	5.31	4.58	0.73	1674.34	305.07
184	372.17	318.00	5.36	4.58	0.78	1675.12	305.08
188	372.39	318.00	5.36	4.58	0.78	1675.90	305.10
192	372.61	318.00	5.36	4.58	0.78	1676.68	305.11
196	372.83	318.00	5.37	4.58	0.79	1677.47	305.13
200	373.05	318.00	5.37	4.58	0.79	1678.26	305.14
204	373.27	318.00	5.37	4.58	0.79	1679.06	305.16
208	378.97	318.00	5.42	4.58	0.84	1679.89	305.18
212	384.68	318.00	5.50	4.58	0.92	1680.81	305.19
216	390.39	318.00	5.58	4.58	1.00	1681.81	305.21
220	396.10	318.00	5.66	4.58	1.08	1682.90	305.24
224	401.81	318.00	5.74	4.58	1.17	1684.06	305.26
228	407.51	318.00	5.83	4.58	1.25	1685.31	305.28
232	412.71	318.00	5.91	4.58	1.33	1686.64	305.31
236	417.91	318.00	5.98	4.58	1.40	1688.04	305.34
240	423.11	318.00	6.06	4.58	1.48	1689.51	305.37
244	428.30	318.00	6.13	4.58	1.55	1691.07	305.40
248	433.50	318.00	6.20	4.58	1.63	1692.69	305.43
252	438.70	318.00	6.28	4.58	1.70	1694.39	305.46
256	447.38	318.00	6.38	4.58	1.80	1696.19	305.50
260	456.06	318.00	6.50	4.58	1.93	1698.12	305.54
264	464.74	318.00	6.63	4.58	2.05	1700.17	305.58
268	473.42	318.00	6.75	4.58	2.18	1702.34	305.62
272	482.10	318.00	6.88	4.58	2.30	1704.65	305.67
276	490.78	318.00	7.00	4.58	2.43	1707.07	305.71
280	532.37	318.00	7.37	4.58	2.79	1709.86	305.77
284	573.95	318.00	7.97	4.58	3.39	1713.24	305.84

Table A-23 Mut Dam Flood Routing Table (Q_{1000}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
288	615.54	318.00	8.56	4.58	3.99	1717.23	305.91
292	657.12	318.00	9.16	4.58	4.58	1721.81	306.00
296	761.55	318.00	10.21	4.58	5.64	1727.45	306.11
300	928.82	318.00	12.17	4.58	7.59	1735.04	306.26
304	761.55	318.00	12.17	4.58	7.59	1742.63	306.41
308	657.12	318.00	10.21	4.58	5.64	1748.27	306.52
312	615.54	318.00	9.16	4.58	4.58	1752.85	306.61
316	573.95	318.00	8.56	4.58	3.99	1756.84	306.69
320	532.37	318.00	7.97	4.58	3.39	1760.22	306.75
324	490.78	318.00	7.37	4.58	2.79	1763.01	306.81
328	482.10	318.00	7.00	4.58	2.43	1765.44	306.85
332	473.42	318.00	6.88	4.58	2.30	1767.74	306.90
336	464.74	318.00	6.75	4.58	2.18	1769.91	306.94
340	456.06	318.00	6.63	4.58	2.05	1771.96	306.98
344	447.38	318.00	6.50	4.58	1.93	1773.89	307.02
348	438.70	318.00	6.38	4.58	1.80	1775.69	307.05
352	433.50	318.00	6.28	4.58	1.70	1777.39	307.08
356	428.30	318.00	6.20	4.58	1.63	1779.01	307.11
360	423.11	318.00	6.13	4.58	1.55	1780.57	307.14
364	417.91	318.00	6.06	4.58	1.48	1782.04	307.17
368	412.71	318.00	5.98	4.58	1.40	1783.44	307.20
372	407.51	318.00	5.91	4.58	1.33	1784.77	307.23
376	401.81	318.00	5.83	4.58	1.25	1786.02	307.25
380	396.10	318.00	5.74	4.58	1.17	1787.18	307.27
384	390.39	318.00	5.66	4.58	1.08	1788.27	307.29
388	384.68	318.00	5.58	4.58	1.00	1789.27	307.31
392	378.97	318.00	5.50	4.58	0.92	1790.19	307.33
396	373.27	318.00	5.42	4.58	0.84	1791.02	307.35
400	373.05	318.00	5.37	4.58	0.79	1791.82	307.36
404	372.83	318.00	5.37	4.58	0.79	1792.61	307.38
408	372.61	318.00	5.37	4.58	0.79	1793.40	307.39
412	372.39	318.00	5.36	4.58	0.78	1794.18	307.41
416	372.17	318.00	5.36	4.58	0.78	1794.96	307.42
420	371.95	318.00	5.36	4.58	0.78	1795.74	307.44
424	364.92	318.00	5.31	4.58	0.73	1796.47	307.45
428	357.89	318.00	5.20	4.58	0.63	1797.09	307.46

Table A-23 Mut Dam Flood Routing Table (Q_{1000}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
432	350.86	318.00	5.10	4.58	0.52	1797.62	307.47
436	343.83	318.00	5.00	4.58	0.42	1798.04	307.48
440	336.80	318.00	4.90	4.58	0.32	1798.36	307.49
444	329.77	318.00	4.80	4.58	0.22	1798.58	307.49
448	327.77	318.00	4.73	4.58	0.16	1798.74	307.49
452	325.76	318.00	4.71	4.58	0.13	1798.86	307.50
456	323.76	318.00	4.68	4.58	0.10	1798.96	307.50
460	321.75	318.00	4.65	4.58	0.07	1799.03	307.50
464	319.75	318.00	4.62	4.58	0.04	1799.07	307.50
468	317.74	318.00	4.59	4.58	0.01	1799.08	**307.50**
472	315.46	318.00	4.56	4.58	-0.02	1799.06	307.50
476	313.17	318.00	4.53	4.58	-0.05	1799.00	307.50
480	310.89	318.00	4.49	4.58	-0.09	1798.92	307.50
484	308.60	318.00	4.46	4.58	-0.12	1798.80	307.49
488	306.32	318.00	4.43	4.58	-0.15	1798.65	307.49
492	304.03	318.00	4.39	4.58	-0.18	1798.46	307.49
496	303.09	318.00	4.37	4.58	-0.21	1798.26	307.48
500	302.15	318.00	4.36	4.58	-0.22	1798.03	307.48
504	301.21	318.00	4.34	4.58	-0.24	1797.80	307.47
508	300.26	318.00	4.33	4.58	-0.25	1797.55	307.47
512	299.32	318.00	4.32	4.58	-0.26	1797.29	307.47
516	298.38	318.00	4.30	4.58	-0.28	1797.01	307.46
520	295.81	318.00	4.28	4.58	-0.30	1796.71	307.45
524	293.24	318.00	4.24	4.58	-0.34	1796.37	307.45
528	290.66	318.00	4.20	4.58	-0.38	1796.00	307.44
532	288.09	318.00	4.17	4.58	-0.41	1795.59	307.43
536	285.52	318.00	4.13	4.58	-0.45	1795.14	307.42
540	282.95	318.00	4.09	4.58	-0.49	1794.65	307.41
544	280.75	318.00	4.06	4.58	-0.52	1794.13	307.40
548	278.54	318.00	4.03	4.58	-0.55	1793.58	307.39
552	276.34	318.00	4.00	4.58	-0.58	1792.99	307.38
556	274.14	318.00	3.96	4.58	-0.62	1792.38	307.37
560	271.94	318.00	3.93	4.58	-0.65	1791.73	307.36
564	269.74	318.00	3.90	4.58	-0.68	1791.05	307.35
568	268.58	318.00	3.88	4.58	-0.70	1790.35	307.33
572	267.43	318.00	3.86	4.58	-0.72	1789.63	307.32

Table A-23 Mut Dam Flood Routing Table (Q_{1000}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
576	266.28	318.00	3.84	4.58	-0.74	1788.89	307.30
580	265.12	318.00	3.83	4.58	-0.75	1788.14	307.29
584	263.97	318.00	3.81	4.58	-0.77	1787.37	307.28
588	262.82	318.00	3.79	4.58	-0.79	1786.58	307.26
592	262.82	318.00	3.78	4.58	-0.79	1785.79	307.24
596	262.82	318.00	3.78	4.58	-0.79	1784.99	307.23
600	262.82	318.00	3.78	4.58	-0.79	1784.20	307.21

Table A-24 Mut Dam Flood Routing Table (Q_{10000})

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
0	309.14	309.14				1671.00	305.00
4	309.14	309.14	4.45	4.45	0.00	1671.00	305.00
8	309.14	309.14	4.45	4.45	0.00	1671.00	305.00
12	309.14	309.14	4.45	4.45	0.00	1671.00	305.00
16	310.60	310.60	4.46	4.46	0.00	1671.00	305.00
20	312.06	312.06	4.48	4.48	0.00	1671.00	305.00
24	313.53	313.53	4.50	4.50	0.00	1671.00	305.00
28	314.99	314.99	4.53	4.53	0.00	1671.00	305.00
32	316.45	316.45	4.55	4.55	0.00	1671.00	305.00
36	317.91	317.91	4.57	4.57	0.00	1671.00	305.00
40	320.74	320.74	4.60	4.60	0.00	1671.00	305.00
44	323.57	323.57	4.64	4.64	0.00	1671.00	305.00
48	326.39	326.39	4.68	4.68	0.00	1671.00	305.00
52	329.22	329.22	4.72	4.72	0.00	1671.00	305.00
56	332.04	332.04	4.76	4.76	0.00	1671.00	305.00
60	334.87	334.87	4.80	4.80	0.00	1671.00	305.00
64	338.23	338.23	4.85	4.85	0.00	1671.00	305.00
68	341.60	341.60	4.89	4.89	0.00	1671.00	305.00
72	344.96	344.96	4.94	4.94	0.00	1671.00	305.00
76	348.32	348.32	4.99	4.99	0.00	1671.00	305.00
80	351.69	351.69	5.04	5.04	0.00	1671.00	305.00
84	355.05	355.05	5.09	5.09	0.00	1671.00	305.00
88	356.17	356.17	5.12	5.12	0.00	1671.00	305.00
92	357.29	357.29	5.14	5.14	0.00	1671.00	305.00
96	358.41	358.41	5.15	5.15	0.00	1671.00	305.00
100	359.54	359.54	5.17	5.17	0.00	1671.00	305.00
104	360.66	360.66	5.19	5.19	0.00	1671.00	305.00
108	361.78	361.78	5.20	5.20	0.00	1671.00	305.00
112	364.69	364.69	5.23	5.23	0.00	1671.00	305.00
116	367.60	367.60	5.27	5.27	0.00	1671.00	305.00
120	370.51	370.51	5.31	5.31	0.00	1671.00	305.00
124	373.43	373.43	5.36	5.36	0.00	1671.00	305.00
128	376.34	376.34	5.40	5.40	0.00	1671.00	305.00
132	379.25	379.25	5.44	5.44	0.00	1671.00	305.00
136	381.79	381.79	5.48	5.48	0.00	1671.00	305.00
140	384.33	384.33	5.52	5.52	0.00	1671.00	305.00

Table A-24 Mut Dam Flood Routing Table (Q_{10000}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
144	386.87	386.87	5.55	5.55	0.00	1671.00	305.00
148	389.41	389.41	5.59	5.59	0.00	1671.00	305.00
152	391.95	391.95	5.63	5.63	0.00	1671.00	305.00
156	394.49	394.49	5.66	5.66	0.00	1671.00	305.00
160	404.04	404.04	5.75	5.75	0.00	1671.00	305.00
164	413.59	412.94	5.89	5.88	0.00	1671.00	305.00
168	423.14	412.94	6.02	5.95	0.08	1671.08	305.00
172	432.69	412.94	6.16	5.95	0.22	1671.30	305.01
176	442.23	412.94	6.30	5.95	0.35	1671.65	305.01
180	451.78	412.94	6.44	5.95	0.49	1672.14	305.02
184	451.71	412.94	6.51	5.95	0.56	1672.70	305.03
188	451.64	412.94	6.50	5.95	0.56	1673.26	305.04
192	451.58	412.94	6.50	5.95	0.56	1673.82	305.06
196	451.51	412.94	6.50	5.95	0.56	1674.37	305.07
200	451.44	412.94	6.50	5.95	0.55	1674.93	305.08
204	451.37	412.94	6.50	5.95	0.55	1675.48	305.09
208	458.46	412.94	6.55	5.95	0.60	1676.08	305.10
212	465.54	412.94	6.65	5.95	0.71	1676.79	305.11
216	472.63	412.94	6.75	5.95	0.81	1677.60	305.13
220	479.72	412.94	6.86	5.95	0.91	1678.51	305.15
224	486.80	412.94	6.96	5.95	1.01	1679.52	305.17
228	493.89	412.94	7.06	5.95	1.11	1680.64	305.19
232	500.21	412.94	7.16	5.95	1.21	1681.85	305.22
236	506.52	412.94	7.25	5.95	1.30	1683.15	305.24
240	512.84	412.94	7.34	5.95	1.39	1684.54	305.27
244	519.15	412.94	7.43	5.95	1.48	1686.03	305.30
248	525.47	412.94	7.52	5.95	1.57	1687.60	305.33
252	531.78	412.94	7.61	5.95	1.67	1689.27	305.36
256	542.25	412.94	7.73	5.95	1.79	1691.05	305.40
260	552.73	412.94	7.88	5.95	1.94	1692.99	305.44
264	563.20	412.94	8.03	5.95	2.09	1695.08	305.48
268	573.67	412.94	8.19	5.95	2.24	1697.32	305.52
272	584.15	412.94	8.34	5.95	2.39	1699.71	305.57
276	594.62	412.94	8.49	5.95	2.54	1702.25	305.62
280	649.21	412.94	8.96	5.95	3.01	1705.26	305.68
284	703.79	412.94	9.74	5.95	3.80	1709.05	305.75

Table A-24 Mut Dam Flood Routing Table (Q_{10000}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
288	758.37	412.94	10.53	5.95	4.58	1713.63	305.84
292	812.96	412.94	11.31	5.95	5.37	1719.00	305.95
296	949.89	412.94	12.69	5.95	6.75	1725.75	306.08
300	1169.16	412.94	15.26	5.95	9.31	1735.06	306.26
304	949.89	412.94	15.26	5.95	9.31	1744.37	306.44
308	812.96	412.94	12.69	5.95	6.75	1751.12	306.58
312	758.37	412.94	11.31	5.95	5.37	1756.48	306.68
316	703.79	412.94	10.53	5.95	4.58	1761.06	306.77
320	649.21	412.94	9.74	5.95	3.80	1764.86	306.84
324	594.62	412.94	8.96	5.95	3.01	1767.87	306.90
328	584.15	412.94	8.49	5.95	2.54	1770.41	306.95
332	573.67	412.94	8.34	5.95	2.39	1772.80	307.00
336	563.20	412.94	8.19	5.95	2.24	1775.04	307.04
340	552.73	412.94	8.03	5.95	2.09	1777.13	307.08
344	542.25	412.94	7.88	5.95	1.94	1779.06	307.12
348	531.78	412.94	7.73	5.95	1.79	1780.85	307.15
352	525.47	412.94	7.61	5.95	1.67	1782.52	307.18
356	519.15	412.94	7.52	5.95	1.57	1784.09	307.21
360	512.84	412.94	7.43	5.95	1.48	1785.57	307.24
364	506.52	412.94	7.34	5.95	1.39	1786.97	307.27
368	500.21	412.94	7.25	5.95	1.30	1788.27	307.29
372	493.89	412.94	7.16	5.95	1.21	1789.48	307.32
376	486.80	412.94	7.06	5.95	1.11	1790.60	307.34
380	479.72	412.94	6.96	5.95	1.01	1791.61	307.36
384	472.63	412.94	6.86	5.95	0.91	1792.52	307.37
388	465.54	412.94	6.75	5.95	0.81	1793.33	307.39
392	458.46	412.94	6.65	5.95	0.71	1794.03	307.40
396	451.37	412.94	6.55	5.95	0.60	1794.64	307.41
400	451.44	412.94	6.50	5.95	0.55	1795.19	307.43
404	451.51	412.94	6.50	5.95	0.55	1795.75	307.44
408	451.58	412.94	6.50	5.95	0.56	1796.30	307.45
412	451.64	412.94	6.50	5.95	0.56	1796.86	307.46
416	451.71	412.94	6.50	5.95	0.56	1797.42	307.47
420	451.78	412.94	6.51	5.95	0.56	1797.98	307.48
424	442.23	412.94	6.44	5.95	0.49	1798.47	307.49
428	432.69	412.94	6.30	5.95	0.35	1798.82	307.49

Table A-24 Mut Dam Flood Routing Table (Q_{10000}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
432	423.14	412.94	6.16	5.95	0.22	1799.03	307.50
436	413.59	412.94	6.02	5.95	0.08	1799.11	**307.50**
440	404.04	412.94	5.89	5.95	-0.06	1799.05	307.50
444	394.49	412.94	5.75	5.95	-0.20	1798.86	307.50
448	391.95	412.94	5.66	5.95	-0.28	1798.57	307.49
452	389.41	412.94	5.63	5.95	-0.32	1798.25	307.48
456	386.87	412.94	5.59	5.95	-0.36	1797.89	307.48
460	384.33	412.94	5.55	5.95	-0.39	1797.50	307.47
464	381.79	412.94	5.52	5.95	-0.43	1797.07	307.46
468	379.25	412.94	5.48	5.95	-0.47	1796.60	307.45
472	376.34	412.94	5.44	5.95	-0.51	1796.10	307.44
476	373.43	412.94	5.40	5.95	-0.55	1795.55	307.43
480	370.51	412.94	5.36	5.95	-0.59	1794.96	307.42
484	367.60	412.94	5.31	5.95	-0.63	1794.33	307.41
488	364.69	412.94	5.27	5.95	-0.67	1793.65	307.40
492	361.78	412.94	5.23	5.95	-0.72	1792.94	307.38
496	360.66	412.94	5.20	5.95	-0.74	1792.19	307.37
500	359.54	412.94	5.19	5.95	-0.76	1791.43	307.35
504	358.41	412.94	5.17	5.95	-0.78	1790.65	307.34
508	357.29	412.94	5.15	5.95	-0.79	1789.86	307.32
512	356.17	412.94	5.14	5.95	-0.81	1789.05	307.31
516	355.05	412.94	5.12	5.95	-0.83	1788.23	307.29
520	351.69	412.94	5.09	5.95	-0.86	1787.37	307.28
524	348.32	412.94	5.04	5.95	-0.91	1786.46	307.26
528	344.96	412.94	4.99	5.95	-0.95	1785.51	307.24
532	341.60	412.94	4.94	5.95	-1.00	1784.50	307.22
536	338.23	412.94	4.89	5.95	-1.05	1783.45	307.20
540	334.87	412.94	4.85	5.95	-1.10	1782.35	307.18
544	332.04	412.94	4.80	5.95	-1.14	1781.21	307.16
548	329.22	412.94	4.76	5.95	-1.19	1780.02	307.13
552	326.39	412.94	4.72	5.95	-1.23	1778.80	307.11
556	323.57	412.94	4.68	5.95	-1.27	1777.53	307.09
560	320.74	412.94	4.64	5.95	-1.31	1776.22	307.06
564	317.91	412.94	4.60	5.95	-1.35	1774.87	307.04
568	316.45	412.94	4.57	5.95	-1.38	1773.49	307.01
572	314.99	412.94	4.55	5.95	-1.40	1772.09	306.98

Table A-24 Mut Dam Flood Routing Table (Q_{10000}) (Continued)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
576	313.53	412.94	4.53	5.95	-1.42	1770.67	306.95
580	312.06	412.94	4.50	5.95	-1.44	1769.23	306.93
584	310.60	412.94	4.48	5.95	-1.46	1767.77	306.90
588	309.14	412.94	4.46	5.95	-1.48	1766.28	306.87
592	309.14	412.94	4.45	5.95	-1.49	1764.79	306.84
596	309.14	412.94	4.45	5.95	-1.49	1763.29	306.81
600	309.14	412.94	4.45	5.95	-1.49	1761.80	306.78

Table A-25 Kayraktepe Dam Flood Routing Table (Q_{100})

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
0	826.16	826.16				96.15	85.00
2	826.16	826.16	5.95	5.95	0.00	96.15	85.00
4	826.16	826.16	5.95	5.95	0.00	96.15	85.00
6	826.16	826.16	5.95	5.95	0.00	96.15	85.00
8	826.16	826.16	5.95	5.95	0.00	96.15	85.00
10	826.16	826.16	5.95	5.95	0.00	96.15	85.00
12	826.16	826.16	5.95	5.95	0.00	96.15	85.00
14	827.83	827.83	5.95	5.95	0.00	96.15	85.00
16	829.51	829.51	5.97	5.97	0.00	96.15	85.00
18	831.18	831.18	5.98	5.98	0.00	96.15	85.00
20	832.86	832.86	5.99	5.99	0.00	96.15	85.00
22	834.53	834.53	6.00	6.00	0.00	96.15	85.00
24	836.21	836.21	6.01	6.01	0.00	96.15	85.00
26	837.88	837.88	6.03	6.03	0.00	96.15	85.00
28	839.56	839.56	6.04	6.04	0.00	96.15	85.00
30	841.24	841.24	6.05	6.05	0.00	96.15	85.00
32	842.91	842.91	6.06	6.06	0.00	96.15	85.00
34	844.59	844.59	6.07	6.07	0.00	96.15	85.00
36	846.26	846.26	6.09	6.09	0.00	96.15	85.00
38	849.06	849.06	6.10	6.10	0.00	96.15	85.00
40	851.86	851.86	6.12	6.12	0.00	96.15	85.00
42	854.66	854.66	6.14	6.14	0.00	96.15	85.00
44	857.46	857.46	6.16	6.16	0.00	96.15	85.00
46	860.26	860.26	6.18	6.18	0.00	96.15	85.00
48	863.06	863.06	6.20	6.20	0.00	96.15	85.00
50	865.86	865.86	6.22	6.22	0.00	96.15	85.00
52	868.66	868.66	6.24	6.24	0.00	96.15	85.00
54	871.46	871.46	6.26	6.26	0.00	96.15	85.00
56	874.26	874.26	6.28	6.28	0.00	96.15	85.00
58	876.88	876.88	6.30	6.30	0.00	96.15	85.00
60	879.50	879.50	6.32	6.32	0.00	96.15	85.00
62	881.20	881.20	6.34	6.34	0.00	96.15	85.00
64	882.91	882.91	6.35	6.35	0.00	96.15	85.00
66	883.97	883.97	6.36	6.36	0.00	96.15	85.00
68	885.02	885.02	6.37	6.37	0.00	96.15	85.00

Table A-25 Kayraktepe Dam Flood Routing Table (Q_{100}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
70	886.08	886.08	6.38	6.38	0.00	96.15	85.00
72	887.13	887.13	6.38	6.38	0.00	96.15	85.00
74	888.18	888.18	6.39	6.39	0.00	96.15	85.00
76	889.24	889.24	6.40	6.40	0.00	96.15	85.00
78	890.29	890.29	6.41	6.41	0.00	96.15	85.00
80	891.35	891.35	6.41	6.41	0.00	96.15	85.00
82	892.40	892.40	6.42	6.42	0.00	96.15	85.00
84	893.45	893.45	6.43	6.43	0.00	96.15	85.00
86	894.40	894.40	6.44	6.44	0.00	96.15	85.00
88	895.34	895.34	6.44	6.44	0.00	96.15	85.00
90	896.29	896.29	6.45	6.45	0.00	96.15	85.00
92	897.23	897.23	6.46	6.46	0.00	96.15	85.00
94	898.18	898.18	6.46	6.46	0.00	96.15	85.00
96	899.12	899.12	6.47	6.47	0.00	96.15	85.00
98	900.07	900.07	6.48	6.48	0.00	96.15	85.00
100	901.02	901.02	6.48	6.48	0.00	96.15	85.00
102	901.96	901.96	6.49	6.49	0.00	96.15	85.00
104	902.91	902.91	6.50	6.50	0.00	96.15	85.00
106	903.85	903.85	6.50	6.50	0.00	96.15	85.00
108	904.80	904.80	6.51	6.51	0.00	96.15	85.00
110	905.83	905.83	6.52	6.52	0.00	96.15	85.00
112	906.87	906.87	6.53	6.53	0.00	96.15	85.00
114	907.91	907.91	6.53	6.53	0.00	96.15	85.00
116	908.95	908.95	6.54	6.54	0.00	96.15	85.00
118	909.99	909.99	6.55	6.55	0.00	96.15	85.00
120	911.03	911.03	6.56	6.56	0.00	96.15	85.00
122	912.07	912.07	6.56	6.56	0.00	96.15	85.00
124	913.11	913.11	6.57	6.57	0.00	96.15	85.00
126	914.15	914.15	6.58	6.58	0.00	96.15	85.00
128	915.19	915.19	6.59	6.59	0.00	96.15	85.00
130	916.23	916.23	6.59	6.59	0.00	96.15	85.00
132	917.26	917.26	6.60	6.60	0.00	96.15	85.00
134	917.74	917.74	6.61	6.61	0.00	96.15	85.00
136	918.22	918.22	6.61	6.61	0.00	96.15	85.00
138	918.70	918.70	6.61	6.61	0.00	96.15	85.00

Table A-25 Kayraktepe Dam Flood Routing Table (Q_{100}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
140	919.18	919.18	6.62	6.62	0.00	96.15	85.00
142	919.65	919.65	6.62	6.62	0.00	96.15	85.00
144	920.13	920.13	6.62	6.62	0.00	96.15	85.00
146	920.61	920.61	6.63	6.63	0.00	96.15	85.00
148	921.09	921.09	6.63	6.63	0.00	96.15	85.00
150	921.57	921.57	6.63	6.63	0.00	96.15	85.00
152	922.04	922.04	6.64	6.64	0.00	96.15	85.00
154	922.52	922.52	6.64	6.64	0.00	96.15	85.00
156	923.00	923.00	6.64	6.64	0.00	96.15	85.00
158	924.16	924.16	6.65	6.65	0.00	96.15	85.00
160	925.31	925.31	6.66	6.66	0.00	96.15	85.00
162	926.47	926.47	6.67	6.67	0.00	96.15	85.00
164	927.63	927.63	6.67	6.67	0.00	96.15	85.00
166	928.79	928.79	6.68	6.68	0.00	96.15	85.00
168	929.94	929.94	6.69	6.69	0.00	96.15	85.00
170	931.10	931.10	6.70	6.70	0.00	96.15	85.00
172	932.26	932.26	6.71	6.71	0.00	96.15	85.00
174	933.41	933.41	6.72	6.72	0.00	96.15	85.00
176	934.57	934.57	6.72	6.72	0.00	96.15	85.00
178	935.73	935.73	6.73	6.73	0.00	96.15	85.00
180	936.88	936.88	6.74	6.74	0.00	96.15	85.00
182	938.45	938.45	6.75	6.75	0.00	96.15	85.00
184	940.01	940.01	6.76	6.76	0.00	96.15	85.00
186	941.58	941.58	6.77	6.77	0.00	96.15	85.00
188	943.14	943.14	6.79	6.79	0.00	96.15	85.00
190	944.71	944.71	6.80	6.80	0.00	96.15	85.00
192	946.27	946.27	6.81	6.81	0.00	96.15	85.00
194	947.84	947.84	6.82	6.82	0.00	96.15	85.00
196	949.40	949.40	6.83	6.83	0.00	96.15	85.00
198	950.97	950.97	6.84	6.84	0.00	96.15	85.00
200	952.53	952.53	6.85	6.85	0.00	96.15	85.00
202	954.10	954.10	6.86	6.86	0.00	96.15	85.00
204	955.66	955.66	6.88	6.88	0.00	96.15	85.00
206	958.44	958.44	6.89	6.89	0.00	96.15	85.00
208	961.21	961.21	6.91	6.91	0.00	96.15	85.00

Table A-25 Kayraktepe Dam Flood Routing Table (Q_{100}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
210	963.98	963.98	6.93	6.93	0.00	96.15	85.00
212	966.75	966.75	6.95	6.95	0.00	96.15	85.00
214	969.53	969.53	6.97	6.97	0.00	96.15	85.00
216	972.30	972.30	6.99	6.99	0.00	96.15	85.00
218	975.07	975.07	7.01	7.01	0.00	96.15	85.00
220	977.84	977.84	7.03	7.03	0.00	96.15	85.00
222	980.62	980.62	7.05	7.05	0.00	96.15	85.00
224	983.39	983.39	7.07	7.07	0.00	96.15	85.00
226	986.16	986.16	7.09	7.09	0.00	96.15	85.00
228	988.93	988.93	7.11	7.11	0.00	96.15	85.00
230	992.27	992.27	7.13	7.13	0.00	96.15	85.00
232	995.60	995.60	7.16	7.16	0.00	96.15	85.00
234	998.27	998.27	7.18	7.18	0.00	96.15	85.00
236	1000.95	1000.95	7.20	7.20	0.00	96.15	85.00
238	1003.63	1003.63	7.22	7.22	0.00	96.15	85.00
240	1006.31	1006.31	7.24	7.24	0.00	96.15	85.00
242	1008.99	1008.99	7.26	7.26	0.00	96.15	85.00
244	1011.67	1011.67	7.27	7.27	0.00	96.15	85.00
246	1014.34	1014.34	7.29	7.29	0.00	96.15	85.00
248	1017.02	1017.02	7.31	7.31	0.00	96.15	85.00
250	1019.70	1019.70	7.33	7.33	0.00	96.15	85.00
252	1022.38	1022.38	7.35	7.35	0.00	96.15	85.00
254	1027.98	1027.98	7.38	7.38	0.00	96.15	85.00
256	1033.59	1033.59	7.42	7.42	0.00	96.15	85.00
258	1039.19	1039.19	7.46	7.46	0.00	96.15	85.00
260	1044.80	1044.80	7.50	7.50	0.00	96.15	85.00
262	1050.40	1050.40	7.54	7.54	0.00	96.15	85.00
264	1056.01	1056.01	7.58	7.58	0.00	96.15	85.00
266	1061.61	1061.61	7.62	7.62	0.00	96.15	85.00
268	1067.22	1067.22	7.66	7.66	0.00	96.15	85.00
270	1072.82	1072.82	7.70	7.70	0.00	96.15	85.00
272	1078.43	1078.43	7.74	7.74	0.00	96.15	85.00
274	1084.03	1084.03	7.78	7.78	0.00	96.15	85.00
276	1089.64	1089.64	7.83	7.83	0.00	96.15	85.00
278	1104.85	1104.85	7.90	7.90	0.00	96.15	85.00

Table A-25 Kayraktepe Dam Flood Routing Table (Q_{100}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
280	1120.06	1120.06	8.01	8.01	0.00	96.15	85.00
282	1135.28	1135.28	8.12	8.12	0.00	96.15	85.00
284	1150.49	1150.00	8.23	8.23	0.00	96.15	85.00
286	1165.70	1150.00	8.34	8.28	0.06	96.21	85.01
288	1180.92	1150.00	8.45	8.28	0.17	96.38	85.03
290	1196.13	1150.00	8.56	8.28	0.28	96.66	85.07
292	1211.34	1150.00	8.67	8.28	0.39	97.04	85.13
294	1278.62	1150.00	8.96	8.28	0.68	97.73	85.23
296	1345.90	1150.00	9.45	8.28	1.17	98.89	85.40
298	1465.25	1150.00	10.12	8.28	1.84	100.73	85.67
300	1584.60	1150.00	10.98	8.28	2.70	103.43	86.05
302	1465.25	1150.00	10.98	8.28	2.70	106.13	86.42
304	1345.90	1150.00	10.12	8.28	1.84	107.97	86.66
306	1278.62	1150.00	9.45	8.28	1.17	109.14	86.81
308	1211.34	1150.00	8.96	8.28	0.68	109.83	86.90
310	1196.13	1150.00	8.67	8.28	0.39	110.21	86.95
312	1180.92	1150.00	8.56	8.28	0.28	110.49	86.98
314	1165.70	1150.00	8.45	8.28	0.17	110.66	87.00
316	1150.49	1150.00	8.34	8.28	0.06	110.72	**87.01**
318	1135.28	1150.00	8.23	8.28	-0.05	110.66	87.00
320	1120.06	1150.00	8.12	8.28	-0.16	110.50	86.98
322	1104.85	1150.00	8.01	8.28	-0.27	110.23	86.95
324	1089.64	1100.00	7.90	8.10	-0.20	110.03	86.92
326	1084.03	1100.00	7.83	7.92	-0.09	109.94	86.91
328	1078.43	1100.00	7.78	7.92	-0.14	109.80	86.89
330	1072.82	1100.00	7.74	7.92	-0.18	109.63	86.87
332	1067.22	1100.00	7.70	7.92	-0.22	109.41	86.84
334	1061.61	1100.00	7.66	7.92	-0.26	109.16	86.81
336	1056.01	1100.00	7.62	7.92	-0.30	108.86	86.77
338	1050.40	1100.00	7.58	7.92	-0.34	108.52	86.73
340	1044.80	1050.00	7.54	7.74	-0.20	108.33	86.71
342	1039.19	1050.00	7.50	7.56	-0.06	108.27	86.70
344	1033.59	1050.00	7.46	7.56	-0.10	108.17	86.69
346	1027.98	1050.00	7.42	7.56	-0.14	108.03	86.67
348	1022.38	1050.00	7.38	7.56	-0.18	107.85	86.64

Table A-25 Kayraktepe Dam Flood Routing Table (Q_{100}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
350	1019.70	1050.00	7.35	7.56	-0.21	107.64	86.62
352	1017.02	1050.00	7.33	7.56	-0.23	107.42	86.59
354	1014.34	1050.00	7.31	7.56	-0.25	107.17	86.55
356	1011.67	1050.00	7.29	7.56	-0.27	106.90	86.52
358	1008.99	1050.00	7.27	7.56	-0.29	106.62	86.48
360	1006.31	1050.00	7.26	7.56	-0.30	106.31	86.44
362	1003.63	1050.00	7.24	7.56	-0.32	105.99	86.40
364	1000.95	1050.00	7.22	7.56	-0.34	105.65	86.35
366	998.27	1000.00	7.20	7.38	-0.18	105.46	86.33
368	995.60	1000.00	7.18	7.20	-0.02	105.44	86.32
370	992.92	1000.00	7.16	7.20	-0.04	105.40	86.32
372	990.24	1000.00	7.14	7.20	-0.06	105.34	86.31
374	988.47	1000.00	7.12	7.20	-0.08	105.26	86.30
376	986.70	1000.00	7.11	7.20	-0.09	105.17	86.29
378	984.93	1000.00	7.10	7.20	-0.10	105.07	86.27
380	983.16	1000.00	7.09	7.20	-0.11	104.96	86.26
382	981.39	1000.00	7.07	7.20	-0.13	104.83	86.24
384	979.62	1000.00	7.06	7.20	-0.14	104.69	86.22
386	977.85	1000.00	7.05	7.20	-0.15	104.53	86.20
388	976.08	1000.00	7.03	7.20	-0.17	104.37	86.18
390	974.31	1000.00	7.02	7.20	-0.18	104.19	86.15
392	972.54	1000.00	7.01	7.20	-0.19	104.00	86.13
394	970.77	1000.00	7.00	7.20	-0.20	103.79	86.10
396	969.00	1000.00	6.98	7.20	-0.22	103.58	86.07
398	968.31	1000.00	6.97	7.20	-0.23	103.35	86.04
400	967.62	1000.00	6.97	7.20	-0.23	103.12	86.01
402	966.93	1000.00	6.96	7.20	-0.24	102.89	85.97
404	966.24	1000.00	6.96	7.20	-0.24	102.65	85.94
406	965.55	1000.00	6.95	7.20	-0.25	102.40	85.91
408	964.86	1000.00	6.95	7.20	-0.25	102.15	85.87
410	964.17	1000.00	6.94	7.20	-0.26	101.89	85.83
412	963.48	1000.00	6.94	7.20	-0.26	101.63	85.80
414	962.78	1000.00	6.93	7.20	-0.27	101.37	85.76
416	962.09	1000.00	6.93	7.20	-0.27	101.10	85.72
418	961.40	1000.00	6.92	7.20	-0.28	100.82	85.68

Table A-25 Kayraktepe Dam Flood Routing Table (Q_{100}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
420	960.71	1000.00	6.92	7.20	-0.28	100.54	85.64
422	959.54	1000.00	6.91	7.20	-0.29	100.25	85.60
424	958.38	1000.00	6.90	7.20	-0.30	99.96	85.56
426	957.21	1000.00	6.90	7.20	-0.30	99.65	85.51
428	956.04	1000.00	6.89	7.20	-0.31	99.34	85.47
430	954.87	1000.00	6.88	7.20	-0.32	99.02	85.42
432	953.70	1000.00	6.87	7.20	-0.33	98.69	85.37
434	952.54	1000.00	6.86	7.20	-0.34	98.36	85.32
436	951.37	1000.00	6.85	7.20	-0.35	98.01	85.27
438	950.20	1000.00	6.85	7.20	-0.35	97.65	85.22
440	949.03	950.00	6.84	7.02	-0.18	97.47	85.19
442	947.86	950.00	6.83	6.84	-0.01	97.46	85.19
444	946.70	950.00	6.82	6.84	-0.02	97.44	85.19
446	946.29	950.00	6.81	6.84	-0.03	97.42	85.19
448	945.88	950.00	6.81	6.84	-0.03	97.39	85.18
450	945.47	950.00	6.81	6.84	-0.03	97.36	85.18
452	945.06	950.00	6.81	6.84	-0.03	97.32	85.17
454	944.65	950.00	6.80	6.84	-0.04	97.29	85.17
456	944.24	950.00	6.80	6.84	-0.04	97.25	85.16
458	943.83	950.00	6.80	6.84	-0.04	97.20	85.15
460	943.42	950.00	6.79	6.84	-0.05	97.16	85.15
462	943.01	950.00	6.79	6.84	-0.05	97.11	85.14
464	942.60	950.00	6.79	6.84	-0.05	97.06	85.13
466	942.19	950.00	6.79	6.84	-0.05	97.00	85.12
468	941.78	950.00	6.78	6.84	-0.06	96.94	85.12
470	941.10	950.00	6.78	6.84	-0.06	96.88	85.11
472	940.42	950.00	6.77	6.84	-0.07	96.82	85.10
474	939.74	950.00	6.77	6.84	-0.07	96.74	85.09
476	939.06	950.00	6.76	6.84	-0.08	96.67	85.08
478	938.38	950.00	6.76	6.84	-0.08	96.59	85.06
480	937.70	950.00	6.75	6.84	-0.09	96.50	85.05
482	937.02	950.00	6.75	6.84	-0.09	96.41	85.04
484	936.34	950.00	6.74	6.84	-0.10	96.31	85.02
486	935.66	935.66	6.74	6.79	-0.05	96.26	85.01
488	934.98	934.98	6.73	6.73	0.00	96.26	85.01

Table A-25 Kayraktepe Dam Flood Routing Table (Q_{100}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
490	934.29	934.29	6.73	6.73	0.00	96.26	85.01
492	933.61	933.61	6.72	6.72	0.00	96.26	85.01
494	933.11	933.11	6.72	6.72	0.00	96.26	85.01
496	932.61	932.61	6.72	6.72	0.00	96.26	85.01
498	932.11	932.11	6.71	6.71	0.00	96.26	85.01
500	931.61	931.61	6.71	6.71	0.00	96.26	85.01
502	931.11	931.11	6.71	6.71	0.00	96.26	85.01
504	930.61	930.61	6.70	6.70	0.00	96.26	85.01
506	930.10	930.10	6.70	6.70	0.00	96.26	85.01
508	929.60	929.60	6.69	6.69	0.00	96.26	85.01
510	929.10	929.10	6.69	6.69	0.00	96.26	85.01
512	928.60	928.60	6.69	6.69	0.00	96.26	85.01
514	928.10	928.10	6.68	6.68	0.00	96.26	85.01
516	927.60	927.60	6.68	6.68	0.00	96.26	85.01
518	926.88	926.88	6.68	6.68	0.00	96.26	85.01
520	926.17	926.17	6.67	6.67	0.00	96.26	85.01
522	925.45	925.45	6.67	6.67	0.00	96.26	85.01
524	924.74	924.74	6.66	6.66	0.00	96.26	85.01
526	924.02	924.02	6.66	6.66	0.00	96.26	85.01
528	923.31	923.31	6.65	6.65	0.00	96.26	85.01
530	922.60	922.60	6.65	6.65	0.00	96.26	85.01
532	921.88	921.88	6.64	6.64	0.00	96.26	85.01
534	921.17	921.17	6.63	6.63	0.00	96.26	85.01
536	920.45	920.45	6.63	6.63	0.00	96.26	85.01
538	919.74	919.74	6.62	6.62	0.00	96.26	85.01
540	919.02	919.02	6.62	6.62	0.00	96.26	85.01
542	918.49	918.49	6.62	6.62	0.00	96.26	85.01
544	917.96	917.96	6.61	6.61	0.00	96.26	85.01
546	917.42	917.42	6.61	6.61	0.00	96.26	85.01
548	916.89	916.89	6.60	6.60	0.00	96.26	85.01
550	916.36	916.36	6.60	6.60	0.00	96.26	85.01
552	915.82	915.82	6.60	6.60	0.00	96.26	85.01
554	915.29	915.29	6.59	6.59	0.00	96.26	85.01
556	914.75	914.75	6.59	6.59	0.00	96.26	85.01
558	914.22	914.22	6.58	6.58	0.00	96.26	85.01

Table A-25 Kayraktepe Dam Flood Routing Table (Q_{100}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
560	913.69	913.69	6.58	6.58	0.00	96.26	85.01
562	913.15	913.15	6.58	6.58	0.00	96.26	85.01
564	912.62	912.62	6.57	6.57	0.00	96.26	85.01
566	912.23	912.23	6.57	6.57	0.00	96.26	85.01
568	911.83	911.83	6.57	6.57	0.00	96.26	85.01
570	911.43	911.43	6.56	6.56	0.00	96.26	85.01
572	911.04	911.04	6.56	6.56	0.00	96.26	85.01
574	910.64	910.64	6.56	6.56	0.00	96.26	85.01
576	910.25	910.25	6.56	6.56	0.00	96.26	85.01
578	909.85	909.85	6.55	6.55	0.00	96.26	85.01
580	909.46	909.46	6.55	6.55	0.00	96.26	85.01
582	909.06	909.06	6.55	6.55	0.00	96.26	85.01
584	908.67	908.67	6.54	6.54	0.00	96.26	85.01
586	908.27	908.27	6.54	6.54	0.00	96.26	85.01
588	907.88	907.88	6.54	6.54	0.00	96.26	85.01
590	907.88	907.88	6.54	6.54	0.00	96.26	85.01
592	907.88	907.88	6.54	6.54	0.00	96.26	85.01
594	907.88	907.88	6.54	6.54	0.00	96.26	85.01
596	907.88	907.88	6.54	6.54	0.00	96.26	85.01
598	907.88	907.88	6.54	6.54	0.00	96.26	85.01
600	907.88	907.88	6.54	6.54	0.00	96.26	85.01

Table A-26 Kayraktepe Dam Flood Routing Table (Q_{500})

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
0	923.56	923.56				96.15	85.00
2	923.56	923.56	6.65	6.65	0.00	96.15	85.00
4	923.56	923.56	6.65	6.65	0.00	96.15	85.00
6	923.56	923.56	6.65	6.65	0.00	96.15	85.00
8	923.56	923.56	6.65	6.65	0.00	96.15	85.00
10	923.56	923.56	6.65	6.65	0.00	96.15	85.00
12	923.56	923.56	6.65	6.65	0.00	96.15	85.00
14	925.53	925.53	6.66	6.66	0.00	96.15	85.00
16	927.49	927.49	6.67	6.67	0.00	96.15	85.00
18	929.46	929.46	6.69	6.69	0.00	96.15	85.00
20	931.42	931.42	6.70	6.70	0.00	96.15	85.00
22	933.38	933.38	6.71	6.71	0.00	96.15	85.00
24	935.35	935.35	6.73	6.73	0.00	96.15	85.00
26	937.31	937.31	6.74	6.74	0.00	96.15	85.00
28	939.27	939.27	6.76	6.76	0.00	96.15	85.00
30	941.24	941.24	6.77	6.77	0.00	96.15	85.00
32	943.20	943.20	6.78	6.78	0.00	96.15	85.00
34	945.16	945.16	6.80	6.80	0.00	96.15	85.00
36	947.13	947.13	6.81	6.81	0.00	96.15	85.00
38	950.44	950.44	6.83	6.83	0.00	96.15	85.00
40	953.76	953.76	6.86	6.86	0.00	96.15	85.00
42	957.08	957.08	6.88	6.88	0.00	96.15	85.00
44	960.39	960.39	6.90	6.90	0.00	96.15	85.00
46	963.71	963.71	6.93	6.93	0.00	96.15	85.00
48	967.02	967.02	6.95	6.95	0.00	96.15	85.00
50	970.34	970.34	6.97	6.97	0.00	96.15	85.00
52	973.66	973.66	7.00	7.00	0.00	96.15	85.00
54	976.97	976.97	7.02	7.02	0.00	96.15	85.00
56	980.29	980.29	7.05	7.05	0.00	96.15	85.00
58	983.61	983.61	7.07	7.07	0.00	96.15	85.00
60	986.92	986.92	7.09	7.09	0.00	96.15	85.00
62	990.97	990.97	7.12	7.12	0.00	96.15	85.00
64	995.02	995.02	7.15	7.15	0.00	96.15	85.00
66	999.07	999.07	7.18	7.18	0.00	96.15	85.00
68	1003.12	1003.12	7.21	7.21	0.00	96.15	85.00

Table A-26 Kayraktepe Dam Flood Routing Table (Q_{500}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
70	1007.17	1007.17	7.24	7.24	0.00	96.15	85.00
72	1011.23	1011.23	7.27	7.27	0.00	96.15	85.00
74	1015.28	1015.28	7.30	7.30	0.00	96.15	85.00
76	1019.33	1019.33	7.32	7.32	0.00	96.15	85.00
78	1023.38	1023.38	7.35	7.35	0.00	96.15	85.00
80	1027.43	1027.43	7.38	7.38	0.00	96.15	85.00
82	1031.48	1031.48	7.41	7.41	0.00	96.15	85.00
84	1035.53	1035.53	7.44	7.44	0.00	96.15	85.00
86	1038.55	1038.55	7.47	7.47	0.00	96.15	85.00
88	1041.57	1041.57	7.49	7.49	0.00	96.15	85.00
90	1044.59	1044.59	7.51	7.51	0.00	96.15	85.00
92	1047.61	1047.61	7.53	7.53	0.00	96.15	85.00
94	1050.63	1050.63	7.55	7.55	0.00	96.15	85.00
96	1053.65	1053.65	7.58	7.58	0.00	96.15	85.00
98	1056.67	1056.67	7.60	7.60	0.00	96.15	85.00
100	1059.69	1059.69	7.62	7.62	0.00	96.15	85.00
102	1062.71	1062.71	7.64	7.64	0.00	96.15	85.00
104	1065.73	1065.73	7.66	7.66	0.00	96.15	85.00
106	1068.75	1068.75	7.68	7.68	0.00	96.15	85.00
108	1071.77	1071.77	7.71	7.71	0.00	96.15	85.00
110	1075.27	1075.27	7.73	7.73	0.00	96.15	85.00
112	1078.77	1078.77	7.75	7.75	0.00	96.15	85.00
114	1081.22	1081.22	7.78	7.78	0.00	96.15	85.00
116	1083.67	1083.67	7.79	7.79	0.00	96.15	85.00
118	1086.12	1086.12	7.81	7.81	0.00	96.15	85.00
120	1088.58	1088.58	7.83	7.83	0.00	96.15	85.00
122	1090.29	1090.29	7.84	7.84	0.00	96.15	85.00
124	1092.00	1092.00	7.86	7.86	0.00	96.15	85.00
126	1093.30	1093.30	7.87	7.87	0.00	96.15	85.00
128	1094.59	1094.59	7.88	7.88	0.00	96.15	85.00
130	1095.88	1095.88	7.89	7.89	0.00	96.15	85.00
132	1097.18	1097.18	7.90	7.90	0.00	96.15	85.00
134	1097.72	1097.72	7.90	7.90	0.00	96.15	85.00
136	1098.27	1098.27	7.91	7.91	0.00	96.15	85.00
138	1098.81	1098.81	7.91	7.91	0.00	96.15	85.00

Table A-26 Kayraktepe Dam Flood Routing Table (Q_{500}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
140	1099.36	1099.36	7.91	7.91	0.00	96.15	85.00
142	1099.91	1099.91	7.92	7.92	0.00	96.15	85.00
144	1100.45	1100.45	7.92	7.92	0.00	96.15	85.00
146	1101.00	1101.00	7.93	7.93	0.00	96.15	85.00
148	1101.54	1101.54	7.93	7.93	0.00	96.15	85.00
150	1102.09	1102.09	7.93	7.93	0.00	96.15	85.00
152	1102.63	1102.63	7.94	7.94	0.00	96.15	85.00
154	1103.18	1103.18	7.94	7.94	0.00	96.15	85.00
156	1103.72	1103.72	7.94	7.94	0.00	96.15	85.00
158	1105.44	1105.44	7.95	7.95	0.00	96.15	85.00
160	1107.16	1107.16	7.97	7.97	0.00	96.15	85.00
162	1108.88	1108.88	7.98	7.98	0.00	96.15	85.00
164	1110.60	1110.60	7.99	7.99	0.00	96.15	85.00
166	1112.31	1112.31	8.00	8.00	0.00	96.15	85.00
168	1114.03	1114.03	8.01	8.01	0.00	96.15	85.00
170	1115.75	1115.75	8.03	8.03	0.00	96.15	85.00
172	1117.47	1117.47	8.04	8.04	0.00	96.15	85.00
174	1119.18	1119.18	8.05	8.05	0.00	96.15	85.00
176	1120.90	1120.90	8.06	8.06	0.00	96.15	85.00
178	1122.62	1122.62	8.08	8.08	0.00	96.15	85.00
180	1124.34	1124.34	8.09	8.09	0.00	96.15	85.00
182	1126.34	1126.34	8.10	8.10	0.00	96.15	85.00
184	1128.33	1128.33	8.12	8.12	0.00	96.15	85.00
186	1130.33	1130.33	8.13	8.13	0.00	96.15	85.00
188	1132.33	1132.33	8.15	8.15	0.00	96.15	85.00
190	1134.33	1134.33	8.16	8.16	0.00	96.15	85.00
192	1136.33	1136.33	8.17	8.17	0.00	96.15	85.00
194	1138.33	1138.33	8.19	8.19	0.00	96.15	85.00
196	1140.32	1140.32	8.20	8.20	0.00	96.15	85.00
198	1142.32	1142.32	8.22	8.22	0.00	96.15	85.00
200	1144.32	1144.32	8.23	8.23	0.00	96.15	85.00
202	1146.32	1146.32	8.25	8.25	0.00	96.15	85.00
204	1148.32	1148.32	8.26	8.26	0.00	96.15	85.00
206	1151.73	1151.73	8.28	8.28	0.00	96.15	85.00
208	1155.14	1155.14	8.30	8.30	0.00	96.15	85.00

Table A-26 Kayraktepe Dam Flood Routing Table (Q_{500}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
210	1158.56	1158.56	8.33	8.33	0.00	96.15	85.00
212	1161.97	1161.97	8.35	8.35	0.00	96.15	85.00
214	1165.38	1165.38	8.38	8.38	0.00	96.15	85.00
216	1168.80	1168.80	8.40	8.40	0.00	96.15	85.00
218	1172.21	1172.21	8.43	8.43	0.00	96.15	85.00
220	1175.62	1175.62	8.45	8.45	0.00	96.15	85.00
222	1179.04	1179.04	8.48	8.48	0.00	96.15	85.00
224	1182.45	1182.45	8.50	8.50	0.00	96.15	85.00
226	1185.86	1185.86	8.53	8.53	0.00	96.15	85.00
228	1189.28	1189.28	8.55	8.55	0.00	96.15	85.00
230	1195.65	1195.65	8.59	8.59	0.00	96.15	85.00
232	1202.02	1200.00	8.63	8.62	0.01	96.16	85.00
234	1208.40	1200.00	8.68	8.64	0.04	96.19	85.00
236	1214.77	1200.00	8.72	8.64	0.08	96.28	85.02
238	1221.15	1200.00	8.77	8.64	0.13	96.41	85.04
240	1227.52	1200.00	8.82	8.64	0.18	96.58	85.06
242	1233.90	1200.00	8.86	8.64	0.22	96.80	85.10
244	1240.27	1200.00	8.91	8.64	0.27	97.07	85.14
246	1244.77	1200.00	8.95	8.64	0.31	97.38	85.18
248	1249.27	1200.00	8.98	8.64	0.34	97.72	85.23
250	1252.60	1200.00	9.01	8.64	0.37	98.08	85.28
252	1255.93	1200.00	9.03	8.64	0.39	98.47	85.34
254	1262.88	1200.00	9.07	8.64	0.43	98.90	85.40
256	1269.84	1200.00	9.12	8.64	0.48	99.38	85.47
258	1276.80	1200.00	9.17	8.64	0.53	99.91	85.55
260	1283.76	1200.00	9.22	8.64	0.58	100.48	85.63
262	1290.72	1200.00	9.27	8.64	0.63	101.11	85.72
264	1297.68	1200.00	9.32	8.64	0.68	101.79	85.82
266	1304.64	1200.00	9.37	8.64	0.73	102.52	85.92
268	1311.60	1200.00	9.42	8.64	0.78	103.30	86.03
270	1318.56	1200.00	9.47	8.64	0.83	104.13	86.15
272	1325.52	1200.00	9.52	8.64	0.88	105.00	86.27
274	1332.48	1200.00	9.57	8.64	0.93	105.93	86.39
276	1339.44	1200.00	9.62	8.64	0.98	106.91	86.52
278	1357.26	1200.00	9.71	8.64	1.07	107.98	86.66

Table A-26 Kayraktepe Dam Flood Routing Table (Q_{500}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
280	1375.08	1200.00	9.84	8.64	1.20	109.18	86.81
282	1392.90	1200.00	9.96	8.64	1.32	110.50	86.98
284	1410.72	1200.00	10.09	8.64	1.45	111.95	87.16
286	1428.54	1200.00	10.22	8.64	1.58	113.54	87.35
288	1446.36	1200.00	10.35	8.64	1.71	115.25	87.56
290	1464.18	1200.00	10.48	8.64	1.84	117.08	87.77
292	1482.00	1200.00	10.61	8.64	1.97	119.05	87.99
294	1571.16	1200.00	10.99	8.64	2.35	121.40	88.25
296	1660.31	1200.00	11.63	8.64	2.99	124.39	88.56
298	1820.81	1200.00	12.53	8.64	3.89	128.29	88.96
300	1981.30	1200.00	13.69	8.64	5.05	133.33	89.45
302	1820.81	1200.00	13.69	8.64	5.05	138.38	89.92
304	1660.31	1200.00	12.53	8.64	3.89	142.27	90.28
306	1571.16	1200.00	11.63	8.64	2.99	145.27	90.55
308	1482.00	1200.00	10.99	8.64	2.35	147.62	90.75
310	1464.18	1200.00	10.61	8.64	1.97	149.58	90.93
312	1446.36	1200.00	10.48	8.64	1.84	151.42	91.08
314	1428.54	1200.00	10.35	8.64	1.71	153.13	91.23
316	1410.72	1200.00	10.22	8.64	1.58	154.71	91.36
318	1392.90	1200.00	10.09	8.64	1.45	156.17	91.48
320	1375.08	1200.00	9.96	8.64	1.32	157.49	91.59
322	1357.26	1200.00	9.84	8.64	1.20	158.69	91.69
324	1339.44	1200.00	9.71	8.64	1.07	159.76	91.78
326	1332.48	1200.00	9.62	8.64	0.98	160.73	91.85
328	1325.52	1200.00	9.57	8.64	0.93	161.66	91.93
330	1318.56	1200.00	9.52	8.64	0.88	162.54	92.00
332	1311.60	1200.00	9.47	8.64	0.83	163.37	92.06
334	1304.64	1200.00	9.42	8.64	0.78	164.15	92.12
336	1297.68	1200.00	9.37	8.64	0.73	164.88	92.18
338	1290.72	1200.00	9.32	8.64	0.68	165.56	92.23
340	1283.76	1200.00	9.27	8.64	0.63	166.18	92.28
342	1276.80	1200.00	9.22	8.64	0.58	166.76	92.33
344	1269.84	1200.00	9.17	8.64	0.53	167.29	92.37
346	1262.88	1200.00	9.12	8.64	0.48	167.77	92.40
348	1255.93	1200.00	9.07	8.64	0.43	168.20	92.43

Table A-26 Kayraktepe Dam Flood Routing Table (Q_{500}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
350	1252.60	1200.00	9.03	8.64	0.39	168.59	92.46
352	1249.27	1200.00	9.01	8.64	0.37	168.95	92.49
354	1245.94	1200.00	8.98	8.64	0.34	169.30	92.52
356	1242.61	1200.00	8.96	8.64	0.32	169.61	92.54
358	1239.28	1200.00	8.93	8.64	0.29	169.91	92.56
360	1235.95	1200.00	8.91	8.64	0.27	170.18	92.58
362	1232.62	1200.00	8.89	8.64	0.25	170.43	92.60
364	1229.29	1200.00	8.86	8.64	0.22	170.65	92.62
366	1225.96	1200.00	8.84	8.64	0.20	170.85	92.64
368	1222.64	1200.00	8.81	8.64	0.17	171.02	92.65
370	1219.31	1200.00	8.79	8.64	0.15	171.17	92.66
372	1215.98	1200.00	8.77	8.64	0.13	171.30	92.67
374	1213.81	1200.00	8.75	8.64	0.11	171.41	92.68
376	1211.63	1200.00	8.73	8.64	0.09	171.50	92.68
378	1209.46	1200.00	8.72	8.64	0.08	171.58	92.69
380	1207.29	1200.00	8.70	8.64	0.06	171.64	92.69
382	1205.12	1200.00	8.68	8.64	0.04	171.68	92.70
384	1202.95	1200.00	8.67	8.64	0.03	171.71	92.70
386	1200.78	1200.00	8.65	8.64	0.01	171.72	**92.70**
388	1198.60	1200.00	8.64	8.64	0.00	171.72	92.70
390	1196.43	1200.00	8.62	8.64	-0.02	171.70	92.70
392	1194.26	1200.00	8.61	8.64	-0.03	171.67	92.70
394	1192.09	1200.00	8.59	8.64	-0.05	171.62	92.69
396	1189.92	1200.00	8.58	8.64	-0.06	171.56	92.69
398	1189.04	1200.00	8.56	8.64	-0.08	171.48	92.68
400	1188.16	1200.00	8.56	8.64	-0.08	171.40	92.68
402	1187.28	1200.00	8.55	8.64	-0.09	171.31	92.67
404	1186.41	1200.00	8.55	8.64	-0.09	171.22	92.66
406	1185.53	1200.00	8.54	8.64	-0.10	171.11	92.66
408	1184.65	1200.00	8.53	8.64	-0.11	171.01	92.65
410	1183.77	1200.00	8.53	8.64	-0.11	170.89	92.64
412	1182.90	1200.00	8.52	8.64	-0.12	170.77	92.63
414	1182.02	1200.00	8.51	8.64	-0.13	170.65	92.62
416	1181.14	1200.00	8.51	8.64	-0.13	170.51	92.61
418	1180.26	1200.00	8.50	8.64	-0.14	170.38	92.60

Table A-26 Kayraktepe Dam Flood Routing Table (Q_{500}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
420	1179.39	1200.00	8.49	8.64	-0.15	170.23	92.59
422	1177.62	1200.00	8.49	8.64	-0.15	170.08	92.58
424	1175.86	1200.00	8.47	8.64	-0.17	169.91	92.56
426	1174.10	1200.00	8.46	8.64	-0.18	169.73	92.55
428	1172.34	1200.00	8.45	8.64	-0.19	169.54	92.54
430	1170.58	1200.00	8.43	8.64	-0.21	169.33	92.52
432	1168.82	1200.00	8.42	8.64	-0.22	169.11	92.50
434	1167.06	1200.00	8.41	8.64	-0.23	168.88	92.49
436	1165.29	1200.00	8.40	8.64	-0.24	168.64	92.47
438	1163.53	1200.00	8.38	8.64	-0.26	168.38	92.45
440	1161.77	1200.00	8.37	8.64	-0.27	168.11	92.43
442	1160.01	1200.00	8.36	8.64	-0.28	167.83	92.41
444	1158.25	1200.00	8.35	8.64	-0.29	167.54	92.38
446	1157.77	1200.00	8.34	8.64	-0.30	167.23	92.36
448	1157.28	1200.00	8.33	8.64	-0.31	166.93	92.34
450	1156.80	1200.00	8.33	8.64	-0.31	166.62	92.31
452	1156.32	1200.00	8.33	8.64	-0.31	166.31	92.29
454	1155.84	1200.00	8.32	8.64	-0.32	165.99	92.27
456	1155.36	1200.00	8.32	8.64	-0.32	165.67	92.24
458	1154.87	1200.00	8.32	8.64	-0.32	165.35	92.22
460	1154.39	1200.00	8.31	8.64	-0.33	165.02	92.19
462	1153.91	1200.00	8.31	8.64	-0.33	164.69	92.17
464	1153.43	1200.00	8.31	8.64	-0.33	164.36	92.14
466	1152.95	1200.00	8.30	8.64	-0.34	164.02	92.11
468	1152.47	1200.00	8.30	8.64	-0.34	163.68	92.09
470	1151.62	1200.00	8.29	8.64	-0.35	163.33	92.06
472	1150.77	1200.00	8.29	8.64	-0.35	162.98	92.03
474	1149.93	1200.00	8.28	8.64	-0.36	162.62	92.00
476	1149.08	1200.00	8.28	8.64	-0.36	162.26	91.98
478	1148.24	1200.00	8.27	8.64	-0.37	161.89	91.95
480	1147.39	1200.00	8.26	8.64	-0.38	161.52	91.92
482	1146.55	1200.00	8.26	8.64	-0.38	161.13	91.89
484	1145.70	1200.00	8.25	8.64	-0.39	160.75	91.85
486	1144.86	1200.00	8.25	8.64	-0.39	160.35	91.82
488	1144.01	1200.00	8.24	8.64	-0.40	159.95	91.79

Table A-26 Kayraktepe Dam Flood Routing Table (Q_{500}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
490	1143.16	1200.00	8.23	8.64	-0.41	159.55	91.76
492	1142.32	1200.00	8.23	8.64	-0.41	159.13	91.73
494	1141.71	1200.00	8.22	8.64	-0.42	158.72	91.69
496	1141.09	1200.00	8.22	8.64	-0.42	158.29	91.66
498	1140.48	1200.00	8.21	8.64	-0.43	157.87	91.62
500	1139.87	1200.00	8.21	8.64	-0.43	157.44	91.59
502	1139.25	1200.00	8.20	8.64	-0.44	157.00	91.55
504	1138.64	1200.00	8.20	8.64	-0.44	156.56	91.52
506	1138.03	1200.00	8.20	8.64	-0.44	156.12	91.48
508	1137.41	1200.00	8.19	8.64	-0.45	155.67	91.44
510	1136.80	1200.00	8.19	8.64	-0.45	155.22	91.40
512	1136.18	1200.00	8.18	8.64	-0.46	154.76	91.37
514	1135.57	1200.00	8.18	8.64	-0.46	154.30	91.33
516	1134.96	1200.00	8.17	8.64	-0.47	153.83	91.29
518	1134.04	1200.00	8.17	8.64	-0.47	153.36	91.25
520	1133.13	1200.00	8.16	8.64	-0.48	152.88	91.21
522	1132.22	1200.00	8.16	8.64	-0.48	152.40	91.17
524	1131.30	1200.00	8.15	8.64	-0.49	151.91	91.12
526	1130.39	1200.00	8.14	8.64	-0.50	151.41	91.08
528	1129.48	1200.00	8.14	8.64	-0.50	150.90	91.04
530	1128.56	1200.00	8.13	8.64	-0.51	150.39	91.00
532	1127.65	1200.00	8.12	8.64	-0.52	149.88	90.95
534	1126.74	1200.00	8.12	8.64	-0.52	149.35	90.91
536	1125.82	1200.00	8.11	8.64	-0.53	148.82	90.86
538	1124.91	1200.00	8.10	8.64	-0.54	148.28	90.81
540	1124.00	1200.00	8.10	8.64	-0.54	147.74	90.76
542	1123.35	1200.00	8.09	8.64	-0.55	147.19	90.72
544	1122.71	1200.00	8.09	8.64	-0.55	146.64	90.67
546	1122.06	1200.00	8.08	8.64	-0.56	146.08	90.62
548	1121.42	1200.00	8.08	8.64	-0.56	145.51	90.57
550	1120.77	1200.00	8.07	8.64	-0.57	144.94	90.52
552	1120.13	1200.00	8.07	8.64	-0.57	144.37	90.47
554	1119.48	1200.00	8.06	8.64	-0.58	143.79	90.42
556	1118.84	1200.00	8.06	8.64	-0.58	143.21	90.36
558	1118.19	1200.00	8.05	8.64	-0.59	142.63	90.31

Table A-26 Kayraktepe Dam Flood Routing Table (Q_{500}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
560	1117.55	1200.00	8.05	8.64	-0.59	142.03	90.26
562	1116.90	1200.00	8.04	8.64	-0.60	141.44	90.20
564	1116.26	1200.00	8.04	8.64	-0.60	140.84	90.15
566	1115.76	1200.00	8.04	8.64	-0.60	140.23	90.09
568	1115.27	1200.00	8.03	8.64	-0.61	139.62	90.04
570	1114.77	1200.00	8.03	8.64	-0.61	139.01	89.98
572	1114.28	1200.00	8.02	8.64	-0.62	138.40	89.93
574	1113.79	1200.00	8.02	8.64	-0.62	137.78	89.87
576	1113.29	1200.00	8.02	8.64	-0.62	137.16	89.81
578	1112.80	1200.00	8.01	8.64	-0.63	136.53	89.75
580	1112.31	1200.00	8.01	8.64	-0.63	135.90	89.69
582	1111.81	1200.00	8.01	8.64	-0.63	135.27	89.63
584	1111.32	1200.00	8.00	8.64	-0.64	134.63	89.57
586	1110.82	1200.00	8.00	8.64	-0.64	133.99	89.51
588	1110.33	1200.00	8.00	8.64	-0.64	133.35	89.45
590	1110.33	1200.00	7.99	8.64	-0.65	132.70	89.39
592	1110.33	1200.00	7.99	8.64	-0.65	132.06	89.33
594	1080.29	1200.00	7.89	8.64	-0.75	131.30	89.25
596	1050.25	1200.00	7.67	8.64	-0.97	130.33	89.16
598	1040.81	1200.00	7.53	8.64	-1.11	129.22	89.05
600	1031.37	1200.00	7.46	8.64	-1.18	128.04	88.93

Table A-27 Kayraktepe Dam Flood Routing Table (Q_{1000})

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
0	1051.51	1051.51				96.15	85.00
2	1051.51	1051.51	7.57	7.57	0.00	96.15	85.00
4	1051.51	1051.51	7.57	7.57	0.00	96.15	85.00
6	1051.51	1051.51	7.57	7.57	0.00	96.15	85.00
8	1051.51	1051.51	7.57	7.57	0.00	96.15	85.00
10	1051.51	1051.51	7.57	7.57	0.00	96.15	85.00
12	1051.51	1051.51	7.57	7.57	0.00	96.15	85.00
14	1053.81	1053.81	7.58	7.58	0.00	96.15	85.00
16	1056.10	1056.10	7.60	7.60	0.00	96.15	85.00
18	1058.40	1058.40	7.61	7.61	0.00	96.15	85.00
20	1060.69	1060.69	7.63	7.63	0.00	96.15	85.00
22	1062.99	1062.99	7.65	7.65	0.00	96.15	85.00
24	1065.28	1065.28	7.66	7.66	0.00	96.15	85.00
26	1067.58	1067.58	7.68	7.68	0.00	96.15	85.00
28	1069.87	1069.87	7.69	7.69	0.00	96.15	85.00
30	1072.17	1072.17	7.71	7.71	0.00	96.15	85.00
32	1074.46	1074.46	7.73	7.73	0.00	96.15	85.00
34	1076.76	1076.76	7.74	7.74	0.00	96.15	85.00
36	1079.05	1079.05	7.76	7.76	0.00	96.15	85.00
38	1082.93	1082.93	7.78	7.78	0.00	96.15	85.00
40	1086.80	1086.80	7.81	7.81	0.00	96.15	85.00
42	1090.67	1090.67	7.84	7.84	0.00	96.15	85.00
44	1094.54	1094.54	7.87	7.87	0.00	96.15	85.00
46	1098.41	1098.41	7.89	7.89	0.00	96.15	85.00
48	1102.28	1200.00	7.92	8.27	-0.35	95.80	84.94
50	1106.16	1200.00	7.95	8.64	-0.69	95.11	84.84
52	1110.03	1200.00	7.98	8.64	-0.66	94.45	84.74
54	1113.90	1200.00	8.01	8.64	-0.63	93.81	84.65
56	1117.77	1200.00	8.03	8.64	-0.61	93.21	84.55
58	1121.64	1200.00	8.06	8.64	-0.58	92.63	84.46
60	1125.51	1200.00	8.09	8.64	-0.55	92.08	84.38
62	1130.25	1200.00	8.12	8.64	-0.52	91.56	84.30
64	1134.99	1200.00	8.15	8.64	-0.49	91.07	84.23
66	1139.73	1200.00	8.19	8.64	-0.45	90.62	84.16
68	1144.47	1200.00	8.22	8.64	-0.42	90.21	84.09

Table A-27 Kayraktepe Dam Flood Routing Table (Q_{1000}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
70	1149.21	1200.00	8.26	8.64	-0.38	89.82	84.53
72	1153.95	1200.00	8.29	8.64	-0.35	89.48	84.49
74	1158.69	1200.00	8.33	8.64	-0.31	89.16	84.45
76	1163.43	1200.00	8.36	8.64	-0.28	88.88	84.41
78	1168.17	1200.00	8.39	8.64	-0.25	88.63	84.38
80	1172.90	1200.00	8.43	8.64	-0.21	88.42	84.35
82	1177.64	1200.00	8.46	8.64	-0.18	88.24	84.32
84	1182.38	1200.00	8.50	8.64	-0.14	88.10	84.30
86	1185.97	1200.00	8.53	8.64	-0.11	87.99	84.29
88	1189.56	1200.00	8.55	8.64	-0.09	87.90	84.28
90	1193.15	1200.00	8.58	8.64	-0.06	87.84	84.27
92	1196.75	1200.00	8.60	8.64	-0.04	87.80	84.26
94	1200.34	1300.00	8.63	9.00	-0.37	87.43	84.21
96	1203.93	1300.00	8.66	9.36	-0.70	86.72	84.10
98	1207.52	1300.00	8.68	9.36	-0.68	86.05	83.99
100	1211.11	1300.00	8.71	9.36	-0.65	85.39	83.88
102	1214.70	1300.00	8.73	9.36	-0.63	84.77	83.78
104	1218.29	1300.00	8.76	9.36	-0.60	84.16	83.67
106	1221.88	1300.00	8.78	9.36	-0.58	83.59	83.56
108	1225.47	1300.00	8.81	9.36	-0.55	83.04	83.46
110	1230.18	1300.00	8.84	9.36	-0.52	82.52	83.36
112	1234.88	1300.00	8.87	9.36	-0.49	82.03	83.26
114	1239.59	1300.00	8.91	9.36	-0.45	81.58	83.17
116	1244.30	1300.00	8.94	9.36	-0.42	81.16	83.09
118	1249.00	1300.00	8.98	9.36	-0.38	80.78	83.01
120	1253.71	1300.00	9.01	9.36	-0.35	80.43	82.93
122	1258.42	1300.00	9.04	9.36	-0.32	80.11	82.86
124	1263.12	1300.00	9.08	9.36	-0.28	79.83	82.80
126	1267.83	1300.00	9.11	9.36	-0.25	79.58	82.75
128	1272.54	1300.00	9.15	9.36	-0.21	79.37	82.70
130	1277.24	1300.00	9.18	9.36	-0.18	79.19	82.66
132	1281.95	1300.00	9.21	9.36	-0.15	79.04	82.63
134	1284.86	1300.00	9.24	9.36	-0.12	78.92	82.61
136	1287.78	1300.00	9.26	9.36	-0.10	78.82	82.58
138	1290.13	1300.00	9.28	9.36	-0.08	78.74	82.57

Table A-27 Kayraktepe Dam Flood Routing Table (Q_{1000}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
140	1292.48	1300.00	9.30	9.36	-0.06	78.68	82.55
142	1293.11	1300.00	9.31	9.36	-0.05	78.63	82.54
144	1293.74	1300.00	9.31	9.36	-0.05	78.58	82.53
146	1294.37	1300.00	9.32	9.36	-0.04	78.54	82.52
148	1295.00	1300.00	9.32	9.36	-0.04	78.50	82.51
150	1295.63	1300.00	9.33	9.36	-0.03	78.47	82.50
152	1296.26	1300.00	9.33	9.36	-0.03	78.44	82.50
154	1296.89	1300.00	9.34	9.36	-0.02	78.41	82.49
156	1297.51	1300.00	9.34	9.36	-0.02	78.39	82.49
158	1299.24	1300.00	9.35	9.36	-0.01	78.38	82.48
160	1300.96	1400.00	9.36	9.72	-0.36	78.02	82.40
162	1302.68	1400.00	9.37	10.08	-0.71	77.31	82.24
164	1304.41	1400.00	9.39	10.08	-0.69	76.62	82.08
166	1306.13	1400.00	9.40	10.08	-0.68	75.94	81.92
168	1307.85	1400.00	9.41	10.08	-0.67	75.27	81.76
170	1309.58	1400.00	9.42	10.08	-0.66	74.61	81.60
172	1311.30	1400.00	9.44	10.08	-0.64	73.97	81.44
174	1313.02	1400.00	9.45	10.08	-0.63	73.33	81.28
176	1314.74	1400.00	9.46	10.08	-0.62	72.71	81.13
178	1316.47	1400.00	9.47	10.08	-0.61	72.11	80.97
180	1318.19	1400.00	9.48	10.08	-0.60	71.51	80.82
182	1320.82	1400.00	9.50	10.08	-0.58	70.93	80.67
184	1323.44	1400.00	9.52	10.08	-0.56	70.37	80.53
186	1326.07	1400.00	9.54	10.08	-0.54	69.83	80.38
188	1328.69	1400.00	9.56	10.08	-0.52	69.30	80.25
190	1331.32	1400.00	9.58	10.08	-0.50	68.80	80.11
192	1333.95	1400.00	9.59	10.08	-0.49	68.32	79.99
194	1336.57	1400.00	9.61	10.08	-0.47	67.85	79.86
196	1339.20	1400.00	9.63	10.08	-0.45	67.40	79.74
198	1341.83	1400.00	9.65	10.08	-0.43	66.97	79.63
200	1344.45	1400.00	9.67	10.08	-0.41	66.56	79.52
202	1347.08	1400.00	9.69	10.08	-0.39	66.17	79.41
204	1349.70	1400.00	9.71	10.08	-0.37	65.80	79.31
206	1354.01	1400.00	9.73	10.08	-0.35	65.46	79.22
208	1358.31	1400.00	9.76	10.08	-0.32	65.14	79.13

Table A-27 Kayraktepe Dam Flood Routing Table (Q_{1000}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
210	1362.62	1400.00	9.80	10.08	-0.28	64.86	79.05
212	1366.92	1400.00	9.83	10.08	-0.25	64.60	78.98
214	1371.23	1400.00	9.86	10.08	-0.22	64.38	78.92
216	1375.54	1400.00	9.89	10.08	-0.19	64.19	78.87
218	1379.84	1400.00	9.92	10.08	-0.16	64.03	78.83
220	1384.15	1400.00	9.95	10.08	-0.13	63.90	78.79
222	1388.45	1400.00	9.98	10.08	-0.10	63.80	78.76
224	1392.76	1400.00	10.01	10.08	-0.07	63.73	78.75
226	1397.06	1400.00	10.04	10.08	-0.04	63.69	78.74
228	1401.37	1470.00	10.07	10.33	-0.26	63.44	78.66
230	1409.83	1470.00	10.12	10.58	-0.46	62.97	78.54
232	1418.30	1470.00	10.18	10.58	-0.40	62.57	78.43
234	1426.77	1470.00	10.24	10.58	-0.34	62.23	78.33
236	1435.23	1470.00	10.30	10.58	-0.28	61.95	78.25
238	1443.70	1470.00	10.36	10.58	-0.22	61.73	78.19
240	1452.17	1470.00	10.43	10.58	-0.16	61.57	78.15
242	1460.63	1470.00	10.49	10.58	-0.10	61.47	78.12
244	1469.10	1470.00	10.55	10.58	-0.04	61.43	78.11
246	1477.57	1470.00	10.61	10.58	0.02	61.46	78.12
248	1486.03	1470.00	10.67	10.58	0.08	61.54	78.14
250	1494.50	1470.00	10.73	10.58	0.15	61.69	78.18
252	1502.97	1470.00	10.79	10.58	0.21	61.90	78.24
254	1521.90	1470.00	10.89	10.58	0.31	62.20	78.32
256	1540.83	1470.00	11.03	10.58	0.44	62.64	78.45
258	1559.76	1470.00	11.16	10.58	0.58	63.22	78.61
260	1578.70	1470.00	11.30	10.58	0.71	63.94	78.80
262	1604.37	1470.00	11.46	10.58	0.88	64.81	79.04
264	1630.05	1470.00	11.64	10.58	1.06	65.87	79.33
266	1639.44	1470.00	11.77	10.58	1.19	67.06	79.65
268	1648.84	1470.00	11.84	10.58	1.25	68.31	79.98
270	1656.52	1470.00	11.90	10.58	1.32	69.63	80.33
272	1664.20	1470.00	11.95	10.58	1.37	71.00	80.69
274	1671.89	1470.00	12.01	10.58	1.43	72.42	81.05
276	1679.57	1470.00	12.07	10.58	1.48	73.90	81.42
278	1699.64	1470.00	12.17	10.58	1.58	75.49	81.81

Table A-27 Kayraktepe Dam Flood Routing Table (Q_{1000}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
280	1719.72	1470.00	12.31	10.58	1.73	77.21	82.22
282	1739.79	1470.00	12.45	10.58	1.87	79.08	82.64
284	1759.86	1470.00	12.60	10.58	2.01	81.10	83.07
286	1779.94	1470.00	12.74	10.58	2.16	83.26	83.50
288	1800.01	1470.00	12.89	10.58	2.30	85.56	83.91
290	1820.09	1470.00	13.03	10.58	2.45	88.01	84.29
292	1840.16	1470.00	13.18	10.58	2.59	90.60	84.16
294	1938.43	1470.00	13.60	10.58	3.02	93.62	84.62
296	2036.69	1470.00	14.31	10.58	3.73	97.35	85.18
298	2213.15	1470.00	15.30	10.58	4.72	102.06	85.86
300	2389.62	1470.00	16.57	10.58	5.99	108.05	86.67
302	2213.15	1470.00	16.57	10.58	5.99	114.03	87.41
304	2036.69	1470.00	15.30	10.58	4.72	118.75	87.96
306	1938.43	1470.00	14.31	10.58	3.73	122.47	88.36
308	1840.16	1470.00	13.60	10.58	3.02	125.49	88.67
310	1820.09	1470.00	13.18	10.58	2.59	128.09	88.94
312	1800.01	1470.00	13.03	10.58	2.45	130.54	89.18
314	1779.94	1470.00	12.89	10.58	2.30	132.84	89.40
316	1759.86	1470.00	12.74	10.58	2.16	135.00	89.61
318	1739.79	1470.00	12.60	10.58	2.01	137.01	89.80
320	1719.72	1470.00	12.45	10.58	1.87	138.88	89.97
322	1699.64	1470.00	12.31	10.58	1.73	140.61	90.13
324	1679.57	1470.00	12.17	10.58	1.58	142.19	90.27
326	1671.89	1470.00	12.07	10.58	1.48	143.67	90.40
328	1664.20	1470.00	12.01	10.58	1.43	145.10	90.53
330	1656.52	1470.00	11.95	10.58	1.37	146.47	90.65
332	1648.84	1470.00	11.90	10.58	1.32	147.78	90.77
334	1641.15	1470.00	11.84	10.58	1.26	149.04	90.88
336	1633.47	1470.00	11.79	10.58	1.20	150.25	90.98
338	1625.78	1470.00	11.73	10.58	1.15	151.40	91.08
340	1618.10	1470.00	11.68	10.58	1.09	152.49	91.17
342	1610.42	1470.00	11.62	10.58	1.04	153.53	91.26
344	1602.73	1470.00	11.57	10.58	0.98	154.51	91.34
346	1595.05	1470.00	11.51	10.58	0.93	155.44	91.42
348	1587.37	1470.00	11.46	10.58	0.87	156.31	91.49

Table A-27 Kayraktepe Dam Flood Routing Table (Q_{1000}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
350	1583.72	1470.00	11.42	10.58	0.83	157.15	91.56
352	1580.08	1470.00	11.39	10.58	0.81	157.95	91.63
354	1576.44	1470.00	11.36	10.58	0.78	158.73	91.69
356	1572.80	1470.00	11.34	10.58	0.75	159.48	91.75
358	1569.16	1470.00	11.31	10.58	0.73	160.21	91.81
360	1565.52	1470.00	11.28	10.58	0.70	160.91	91.87
362	1561.88	1470.00	11.26	10.58	0.67	161.59	91.92
364	1558.24	1470.00	11.23	10.58	0.65	162.24	91.97
366	1554.60	1470.00	11.21	10.58	0.62	162.86	92.02
368	1550.96	1470.00	11.18	10.58	0.60	163.45	92.07
370	1547.32	1470.00	11.15	10.58	0.57	164.02	92.11
372	1543.67	1470.00	11.13	10.58	0.54	164.57	92.16
374	1541.32	1470.00	11.11	10.58	0.52	165.09	92.20
376	1538.96	1470.00	11.09	10.58	0.50	165.59	92.24
378	1536.60	1470.00	11.07	10.58	0.49	166.08	92.27
380	1534.24	1470.00	11.06	10.58	0.47	166.55	92.31
382	1531.88	1470.00	11.04	10.58	0.45	167.01	92.34
384	1529.52	1470.00	11.02	10.58	0.44	167.44	92.38
386	1527.16	1470.00	11.00	10.58	0.42	167.86	92.41
388	1524.80	1470.00	10.99	10.58	0.40	168.27	92.44
390	1522.44	1470.00	10.97	10.58	0.39	168.65	92.47
392	1520.08	1470.00	10.95	10.58	0.37	169.02	92.50
394	1517.73	1470.00	10.94	10.58	0.35	169.37	92.52
396	1515.37	1470.00	10.92	10.58	0.34	169.71	92.55
398	1514.52	1470.00	10.91	10.58	0.32	170.03	92.57
400	1513.67	1470.00	10.90	10.58	0.32	170.35	92.60
402	1512.82	1470.00	10.90	10.58	0.31	170.66	92.62
404	1511.97	1470.00	10.89	10.58	0.31	170.97	92.64
406	1511.12	1470.00	10.88	10.58	0.30	171.27	92.67
408	1510.27	1470.00	10.88	10.58	0.29	171.56	92.69
410	1509.42	1470.00	10.87	10.58	0.29	171.85	92.71
412	1508.57	1470.00	10.86	10.58	0.28	172.13	92.73
414	1507.72	1470.00	10.86	10.58	0.27	172.40	92.75
416	1506.87	1470.00	10.85	10.58	0.27	172.67	92.77
418	1506.02	1470.00	10.85	10.58	0.26	172.93	92.79

Table A-27 Kayraktepe Dam Flood Routing Table (Q_{1000}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
420	1505.17	1470.00	10.84	10.58	0.26	173.19	92.81
422	1503.36	1470.00	10.83	10.58	0.25	173.44	92.83
424	1501.56	1470.00	10.82	10.58	0.23	173.67	92.85
426	1474.09	1470.00	10.71	10.58	0.13	173.80	**92.86**
428	1446.62	1470.00	10.51	10.58	-0.07	173.73	92.85
430	1444.81	1470.00	10.41	10.58	-0.17	173.55	92.84
432	1443.00	1470.00	10.40	10.58	-0.19	173.36	92.82
434	1392.72	1470.00	10.21	10.58	-0.38	172.99	92.80
436	1342.44	1470.00	9.85	10.58	-0.74	172.25	92.74
438	1321.70	1470.00	9.59	10.58	-0.99	171.26	92.67
440	1300.96	1470.00	9.44	10.58	-1.14	170.12	92.58
442	1299.24	1470.00	9.36	10.58	-1.22	168.89	92.49
444	1297.51	1470.00	9.35	10.58	-1.24	167.66	92.39
446	1296.89	1470.00	9.34	10.58	-1.24	166.41	92.30
448	1296.26	1470.00	9.34	10.58	-1.25	165.16	92.20
450	1295.63	1470.00	9.33	10.58	-1.25	163.91	92.10
452	1295.00	1470.00	9.33	10.58	-1.26	162.65	92.01
454	1294.37	1470.00	9.32	10.58	-1.26	161.39	91.91
456	1293.74	1470.00	9.32	10.58	-1.27	160.12	91.80
458	1293.11	1470.00	9.31	10.58	-1.27	158.85	91.70
460	1292.48	1470.00	9.31	10.58	-1.28	157.58	91.60
462	1291.85	1470.00	9.30	10.58	-1.28	156.30	91.49
464	1291.22	1470.00	9.30	10.58	-1.28	155.01	91.39
466	1290.60	1470.00	9.29	10.58	-1.29	153.72	91.28
468	1289.97	1470.00	9.29	10.58	-1.29	152.43	91.17
470	1288.32	1470.00	9.28	10.58	-1.30	151.13	91.06
472	1286.68	1470.00	9.27	10.58	-1.31	149.81	90.95
474	1285.03	1470.00	9.26	10.58	-1.33	148.49	90.83
476	1283.39	1470.00	9.25	10.58	-1.34	147.15	90.71
478	1281.74	1470.00	9.23	10.58	-1.35	145.80	90.59
480	1280.10	1470.00	9.22	10.58	-1.36	144.44	90.47
482	1278.45	1470.00	9.21	10.58	-1.37	143.06	90.35
484	1276.81	1470.00	9.20	10.58	-1.39	141.68	90.23
486	1275.16	1470.00	9.19	10.58	-1.40	140.28	90.10
488	1273.52	1470.00	9.18	10.58	-1.41	138.87	89.97

Table A-27 Kayraktepe Dam Flood Routing Table (Q_{1000}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
490	1271.87	1470.00	9.16	10.58	-1.42	137.45	89.84
492	1270.23	1470.00	9.15	10.58	-1.43	136.02	89.70
494	1268.65	1470.00	9.14	10.58	-1.44	134.58	89.57
496	1267.08	1470.00	9.13	10.58	-1.46	133.12	89.43
498	1265.50	1470.00	9.12	10.58	-1.47	131.66	89.29
500	1263.92	1470.00	9.11	10.58	-1.48	130.18	89.14
502	1262.35	1470.00	9.09	10.58	-1.49	128.69	89.00
504	1260.77	1470.00	9.08	10.58	-1.50	127.19	88.85
506	1259.20	1470.00	9.07	10.58	-1.51	125.67	88.69
508	1257.62	1470.00	9.06	10.58	-1.52	124.15	88.54
510	1256.04	1470.00	9.05	10.58	-1.53	122.62	88.37
512	1254.47	1470.00	9.04	10.58	-1.55	121.07	88.21
514	1252.89	1470.00	9.03	10.58	-1.56	119.51	88.04
516	1251.31	1470.00	9.02	10.58	-1.57	117.94	87.87
518	1249.60	1470.00	9.00	10.58	-1.58	116.36	87.69
520	1247.88	1470.00	8.99	10.58	-1.59	114.77	87.50
522	1246.17	1470.00	8.98	10.58	-1.61	113.16	87.31
524	1244.45	1470.00	8.97	10.58	-1.62	111.55	87.11
526	1242.74	1470.00	8.95	10.58	-1.63	109.92	86.91
528	1241.02	1470.00	8.94	10.58	-1.64	108.27	86.70
530	1239.31	1470.00	8.93	10.58	-1.65	106.62	86.48
532	1237.59	1470.00	8.92	10.58	-1.67	104.95	86.26
534	1235.88	1470.00	8.90	10.58	-1.68	103.27	86.03
536	1234.16	1470.00	8.89	10.58	-1.69	101.58	85.79
538	1232.45	1470.00	8.88	10.58	-1.70	99.88	85.55
540	1230.73	1470.00	8.87	10.58	-1.72	98.16	85.30
542	1229.66	1390.00	8.86	10.30	-1.44	96.72	85.08
544	1228.59	1228.59	8.85	9.43	-0.58	96.14	85.00
546	1227.52	1227.52	8.84	8.84	0.00	96.14	85.00
548	1226.45	1226.45	8.83	8.83	0.00	96.14	85.00
550	1225.38	1225.38	8.83	8.83	0.00	96.14	85.00
552	1224.31	1224.31	8.82	8.82	0.00	96.14	85.00
554	1223.24	1223.24	8.81	8.81	0.00	96.14	85.00
556	1222.17	1222.17	8.80	8.80	0.00	96.14	85.00
558	1221.10	1221.10	8.80	8.80	0.00	96.14	85.00

Table A-27 Kayraktepe Dam Flood Routing Table (Q_{1000}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
560	1220.03	1220.03	8.79	8.79	0.00	96.14	85.00
562	1218.96	1218.96	8.78	8.78	0.00	96.14	85.00
564	1217.89	1217.89	8.77	8.77	0.00	96.14	85.00
566	1216.85	1216.85	8.77	8.77	0.00	96.14	85.00
568	1215.81	1215.81	8.76	8.76	0.00	96.14	85.00
570	1214.77	1214.77	8.75	8.75	0.00	96.14	85.00
572	1213.73	1213.73	8.74	8.74	0.00	96.14	85.00
574	1212.69	1212.69	8.74	8.74	0.00	96.14	85.00
576	1211.65	1211.65	8.73	8.73	0.00	96.14	85.00
578	1210.61	1210.61	8.72	8.72	0.00	96.14	85.00
580	1209.57	1209.57	8.71	8.71	0.00	96.14	85.00
582	1208.53	1208.53	8.71	8.71	0.00	96.14	85.00
584	1207.49	1207.49	8.70	8.70	0.00	96.14	85.00
586	1206.45	1206.45	8.69	8.69	0.00	96.14	85.00
588	1205.41	1205.41	8.68	8.68	0.00	96.14	85.00
590	1205.41	1205.41	8.68	8.68	0.00	96.14	85.00
592	1205.41	1205.41	8.68	8.68	0.00	96.14	85.00
594	1205.41	1205.41	8.68	8.68	0.00	96.14	85.00
596	1205.41	1205.41	8.68	8.68	0.00	96.14	85.00
598	1205.41	1205.41	8.68	8.68	0.00	96.14	85.00
600	1205.41	1205.41	8.68	8.68	0.00	96.14	85.00

Table A-28 Kayraktepe Dam Flood Routing Table (Q_{10000})

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
0	1191.48	1200.00				96.15	85.00
2	1191.48	1200.00	8.58	8.64	-0.06	96.09	84.99
4	1191.48	1200.00	8.58	8.64	-0.06	96.03	84.98
6	1191.48	1200.00	8.58	8.64	-0.06	95.97	84.97
8	1191.48	1200.00	8.58	8.64	-0.06	95.90	84.96
10	1191.48	1200.00	8.58	8.64	-0.06	95.84	84.95
12	1191.48	1200.00	8.58	8.64	-0.06	95.78	84.94
14	1194.09	1200.00	8.59	8.64	-0.05	95.73	84.93
16	1196.70	1200.00	8.61	8.64	-0.03	95.70	84.93
18	1199.31	1200.00	8.63	8.64	-0.01	95.68	84.93
20	1201.92	1300.00	8.64	9.00	-0.36	95.33	84.87
22	1204.53	1300.00	8.66	9.36	-0.70	94.63	84.77
24	1207.14	1300.00	8.68	9.36	-0.68	93.95	84.67
26	1209.75	1300.00	8.70	9.36	-0.66	93.29	84.57
28	1212.37	1300.00	8.72	9.36	-0.64	92.65	84.47
30	1214.98	1300.00	8.74	9.36	-0.62	92.03	84.37
32	1217.59	1300.00	8.76	9.36	-0.60	91.43	84.28
34	1220.20	1300.00	8.78	9.36	-0.58	90.84	84.19
36	1222.81	1300.00	8.79	9.36	-0.57	90.28	84.11
38	1227.55	1300.00	8.82	9.36	-0.54	89.74	84.52
40	1232.29	1300.00	8.86	9.36	-0.50	89.24	84.46
42	1237.03	1300.00	8.89	9.36	-0.47	88.77	84.40
44	1241.78	1300.00	8.92	9.36	-0.44	88.33	84.34
46	1246.52	1300.00	8.96	9.36	-0.40	87.93	84.28
48	1251.26	1300.00	8.99	9.36	-0.37	87.56	84.23
50	1256.00	1300.00	9.03	9.36	-0.33	87.23	84.18
52	1260.74	1300.00	9.06	9.36	-0.30	86.93	84.13
54	1265.49	1300.00	9.09	9.36	-0.27	86.66	84.09
56	1270.23	1300.00	9.13	9.36	-0.23	86.43	84.05
58	1274.97	1300.00	9.16	9.36	-0.20	86.23	84.02
60	1279.71	1300.00	9.20	9.36	-0.16	86.07	84.00
62	1285.42	1300.00	9.23	9.36	-0.13	85.94	83.98
64	1291.13	1300.00	9.28	9.36	-0.08	85.86	83.96
66	1296.85	1300.00	9.32	9.36	-0.04	85.81	83.95
68	1302.56	1400.00	9.36	9.72	-0.36	85.45	83.89

Table A-28 Kayraktepe Dam Flood Routing Table (Q_{10000}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
70	1308.27	1400.00	9.40	10.08	-0.68	84.77	83.78
72	1313.98	1400.00	9.44	10.08	-0.64	84.13	83.66
74	1319.69	1400.00	9.48	10.08	-0.60	83.53	83.55
76	1325.40	1400.00	9.52	10.08	-0.56	82.98	83.45
78	1331.12	1400.00	9.56	10.08	-0.52	82.46	83.35
80	1336.83	1400.00	9.60	10.08	-0.48	81.98	83.25
82	1342.54	1400.00	9.65	10.08	-0.43	81.55	83.16
84	1348.25	1400.00	9.69	10.08	-0.39	81.16	83.08
86	1352.25	1400.00	9.72	10.08	-0.36	80.80	83.01
88	1356.25	1400.00	9.75	10.08	-0.33	80.47	82.94
90	1360.25	1400.00	9.78	10.08	-0.30	80.17	82.88
92	1364.25	1400.00	9.81	10.08	-0.27	79.90	82.82
94	1368.25	1400.00	9.84	10.08	-0.24	79.65	82.77
96	1372.25	1400.00	9.87	10.08	-0.21	79.44	82.72
98	1376.25	1400.00	9.89	10.08	-0.19	79.25	82.68
100	1380.25	1400.00	9.92	10.08	-0.16	79.10	82.64
102	1384.26	1400.00	9.95	10.08	-0.13	78.97	82.62
104	1388.26	1400.00	9.98	10.08	-0.10	78.87	82.59
106	1392.26	1400.00	10.01	10.08	-0.07	78.80	82.58
108	1396.26	1400.00	10.04	10.08	-0.04	78.76	82.57
110	1401.84	1500.00	10.07	10.44	-0.37	78.39	82.49
112	1407.42	1500.00	10.11	10.80	-0.69	77.71	82.33
114	1413.01	1500.00	10.15	10.80	-0.65	77.06	82.18
116	1418.59	1500.00	10.19	10.80	-0.61	76.45	82.04
118	1424.17	1500.00	10.23	10.80	-0.57	75.89	81.91
120	1429.76	1500.00	10.27	10.80	-0.53	75.36	81.78
122	1435.34	1500.00	10.31	10.80	-0.49	74.88	81.66
124	1440.92	1500.00	10.35	10.80	-0.45	74.43	81.55
126	1446.51	1500.00	10.39	10.80	-0.41	74.02	81.45
128	1452.09	1500.00	10.43	10.80	-0.37	73.66	81.36
130	1457.67	1500.00	10.48	10.80	-0.32	73.33	81.28
132	1463.26	1500.00	10.52	10.80	-0.28	73.05	81.21
134	1468.05	1500.00	10.55	10.80	-0.25	72.80	81.15
136	1472.84	1500.00	10.59	10.80	-0.21	72.59	81.10
138	1477.63	1500.00	10.62	10.80	-0.18	72.41	81.05

Table A-28 Kayraktepe Dam Flood Routing Table (Q_{10000}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
140	1482.43	1500.00	10.66	10.80	-0.14	72.27	81.01
142	1487.22	1500.00	10.69	10.80	-0.11	72.16	80.99
144	1492.01	1500.00	10.73	10.80	-0.07	72.08	80.97
146	1496.80	1500.00	10.76	10.80	-0.04	72.04	80.96
148	1501.59	1600.00	10.79	11.16	-0.37	71.68	80.86
150	1506.39	1600.00	10.83	11.52	-0.69	70.99	80.69
152	1511.18	1600.00	10.86	11.52	-0.66	70.33	80.52
154	1515.97	1600.00	10.90	11.52	-0.62	69.71	80.35
156	1520.76	1600.00	10.93	11.52	-0.59	69.12	80.20
158	1531.81	1600.00	10.99	11.52	-0.53	68.59	80.06
160	1542.85	1600.00	11.07	11.52	-0.45	68.14	79.94
162	1553.53	1600.00	11.15	11.52	-0.37	67.76	79.84
164	1564.20	1600.00	11.22	11.52	-0.30	67.47	79.76
166	1569.80	1600.00	11.28	11.52	-0.24	67.23	79.70
168	1575.40	1600.00	11.32	11.52	-0.20	67.03	79.64
170	1581.00	1600.00	11.36	11.52	-0.16	66.88	79.60
172	1586.59	1600.00	11.40	11.52	-0.12	66.76	79.57
174	1592.19	1600.00	11.44	11.52	-0.08	66.68	79.55
176	1597.79	1600.00	11.48	11.52	-0.04	66.65	79.54
178	1603.39	1700.00	11.52	11.88	-0.36	66.29	79.44
180	1608.99	1700.00	11.56	12.24	-0.68	65.62	79.26
182	1612.48	1700.00	11.60	12.24	-0.64	64.97	79.09
184	1615.97	1700.00	11.62	12.24	-0.62	64.36	78.92
186	1627.11	1700.00	11.68	12.24	-0.56	63.79	78.76
188	1638.26	1700.00	11.76	12.24	-0.48	63.31	78.63
190	1640.86	1700.00	11.80	12.24	-0.44	62.87	78.51
192	1643.45	1700.00	11.82	12.24	-0.42	62.45	78.39
194	1646.04	1700.00	11.84	12.24	-0.40	62.06	78.28
196	1648.64	1700.00	11.86	12.24	-0.38	61.68	78.18
198	1651.23	1700.00	11.88	12.24	-0.36	61.32	78.08
200	1653.83	1700.00	11.90	12.24	-0.34	60.98	77.98
202	1656.42	1700.00	11.92	12.24	-0.32	60.65	77.89
204	1659.01	1700.00	11.94	12.24	-0.30	60.35	77.81
206	1663.65	1700.00	11.96	12.24	-0.28	60.07	77.73
208	1668.29	1700.00	12.00	12.24	-0.24	59.82	77.66

Table A-28 Kayraktepe Dam Flood Routing Table (Q_{10000}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
210	1672.93	1700.00	12.03	12.24	-0.21	59.61	77.60
212	1677.57	1700.00	12.06	12.24	-0.18	59.43	77.55
214	1682.21	1700.00	12.10	12.24	-0.14	59.29	77.51
216	1686.85	1700.00	12.13	12.24	-0.11	59.18	77.48
218	1691.49	1765.00	12.16	12.47	-0.31	58.87	77.39
220	1696.13	1765.00	12.20	12.71	-0.51	58.35	77.25
222	1700.77	1765.00	12.23	12.71	-0.48	57.87	77.11
224	1705.41	1765.00	12.26	12.71	-0.45	57.43	76.99
226	1710.05	1765.00	12.30	12.71	-0.41	57.02	76.87
228	1714.69	1765.00	12.33	12.71	-0.38	56.64	76.76
230	1723.59	1765.00	12.38	12.71	-0.33	56.31	76.67
232	1732.50	1765.00	12.44	12.71	-0.27	56.04	76.59
234	1741.41	1765.00	12.51	12.71	-0.20	55.84	76.53
236	1750.31	1765.00	12.57	12.71	-0.14	55.70	76.50
238	1759.22	1765.00	12.63	12.71	-0.07	55.63	76.47
240	1768.12	1765.00	12.70	12.71	-0.01	55.62	76.47
242	1777.03	1765.00	12.76	12.71	0.05	55.67	76.49
244	1785.93	1765.00	12.83	12.71	0.12	55.79	76.52
246	1794.84	1765.00	12.89	12.71	0.18	55.97	76.57
248	1803.75	1765.00	12.95	12.71	0.25	56.22	76.64
250	1812.65	1765.00	13.02	12.71	0.31	56.53	76.73
252	1821.56	1765.00	13.08	12.71	0.38	56.91	76.84
254	1841.39	1765.00	13.19	12.71	0.48	57.39	76.97
256	1861.21	1765.00	13.33	12.71	0.62	58.01	77.15
258	1881.04	1765.00	13.47	12.71	0.76	58.77	77.37
260	1900.87	1765.00	13.61	12.71	0.91	59.68	77.62
262	1913.87	1765.00	13.73	12.71	1.03	60.70	77.91
264	1926.87	1765.00	13.83	12.71	1.12	61.82	78.22
266	1938.91	1765.00	13.92	12.71	1.21	63.03	78.55
268	1950.96	1765.00	14.00	12.71	1.30	64.33	78.91
270	1960.72	1765.00	14.08	12.71	1.37	65.70	79.28
272	1970.48	1765.00	14.15	12.71	1.44	67.15	79.67
274	1980.25	1765.00	14.22	12.71	1.51	68.66	80.08
276	1990.01	1765.00	14.29	12.71	1.58	70.24	80.49
278	2014.94	1765.00	14.42	12.71	1.71	71.95	80.93

Table A-28 Kayraktepe Dam Flood Routing Table (Q_{10000}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
280	2039.88	1765.00	14.60	12.71	1.89	73.84	81.41
282	2064.81	1765.00	14.78	12.71	2.07	75.91	81.91
284	2089.75	1765.00	14.96	12.71	2.25	78.16	82.44
286	2114.68	1765.00	15.14	12.71	2.43	80.59	82.97
288	2139.61	1765.00	15.32	12.71	2.61	83.20	83.49
290	2164.55	1765.00	15.49	12.71	2.79	85.98	83.98
292	2189.48	1765.00	15.67	12.71	2.97	88.95	84.42
294	2318.74	1765.00	16.23	12.71	3.52	92.47	84.44
296	2447.99	1765.00	17.16	12.71	4.45	96.92	85.11
298	2681.56	1765.00	18.47	12.71	5.76	102.68	85.95
300	2915.14	1765.00	20.15	12.71	7.44	110.12	86.93
302	2681.56	1765.00	20.15	12.71	7.44	117.56	87.82
304	2447.99	1765.00	18.47	12.71	5.76	123.32	88.45
306	2318.74	1765.00	17.16	12.71	4.45	127.77	88.91
308	2189.48	1765.00	16.23	12.71	3.52	131.29	89.25
310	2164.55	1765.00	15.67	12.71	2.97	134.26	89.54
312	2139.61	1765.00	15.49	12.71	2.79	137.05	89.80
314	2114.68	1765.00	15.32	12.71	2.61	139.66	90.04
316	2089.75	1765.00	15.14	12.71	2.43	142.08	90.26
318	2064.81	1765.00	14.96	12.71	2.25	144.33	90.46
320	2039.88	1765.00	14.78	12.71	2.07	146.40	90.65
322	2014.94	1765.00	14.60	12.71	1.89	148.29	90.81
324	1990.01	1765.00	14.42	12.71	1.71	150.00	90.96
326	1980.25	1765.00	14.29	12.71	1.58	151.58	91.10
328	1970.48	1765.00	14.22	12.71	1.51	153.10	91.23
330	1960.72	1765.00	14.15	12.71	1.44	154.54	91.35
332	1950.96	1765.00	14.08	12.71	1.37	155.92	91.46
334	1941.20	1765.00	14.01	12.71	1.30	157.22	91.57
336	1931.43	1765.00	13.94	12.71	1.23	158.46	91.67
338	1921.67	1765.00	13.87	12.71	1.16	159.62	91.76
340	1911.91	1765.00	13.80	12.71	1.09	160.71	91.85
342	1902.15	1765.00	13.73	12.71	1.02	161.73	91.93
344	1892.38	1765.00	13.66	12.71	0.95	162.69	92.01
346	1882.62	1765.00	13.59	12.71	0.88	163.57	92.08
348	1872.86	1765.00	13.52	12.71	0.81	164.38	92.14

Table A-28 Kayraktepe Dam Flood Routing Table (Q_{10000}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
350	1868.25	1765.00	13.47	12.71	0.76	165.14	92.20
352	1863.65	1765.00	13.43	12.71	0.73	165.87	92.26
354	1859.05	1765.00	13.40	12.71	0.69	166.56	92.31
356	1854.44	1765.00	13.37	12.71	0.66	167.22	92.36
358	1849.84	1765.00	13.34	12.71	0.63	167.85	92.41
360	1845.24	1765.00	13.30	12.71	0.59	168.44	92.45
362	1840.63	1765.00	13.27	12.71	0.56	169.00	92.50
364	1836.03	1765.00	13.24	12.71	0.53	169.53	92.54
366	1831.43	1765.00	13.20	12.71	0.49	170.03	92.57
368	1826.82	1765.00	13.17	12.71	0.46	170.49	92.61
370	1822.22	1765.00	13.14	12.71	0.43	170.92	92.64
372	1817.62	1765.00	13.10	12.71	0.40	171.31	92.67
374	1814.67	1765.00	13.08	12.71	0.37	171.68	92.70
376	1811.72	1765.00	13.05	12.71	0.35	172.03	92.72
378	1808.77	1765.00	13.03	12.71	0.33	172.35	92.75
380	1805.82	1765.00	13.01	12.71	0.30	172.66	92.77
382	1802.87	1765.00	12.99	12.71	0.28	172.94	92.79
384	1799.93	1765.00	12.97	12.71	0.26	173.20	92.81
386	1796.98	1765.00	12.95	12.71	0.24	173.44	92.83
388	1794.03	1765.00	12.93	12.71	0.22	173.66	92.85
390	1791.08	1765.00	12.91	12.71	0.20	173.86	92.86
392	1788.13	1765.00	12.89	12.71	0.18	174.04	92.88
394	1785.19	1765.00	12.86	12.71	0.16	174.20	92.89
396	1782.24	1765.00	12.84	12.71	0.13	174.33	92.90
398	1781.23	1765.00	12.83	12.71	0.12	174.45	92.91
400	1780.22	1765.00	12.82	12.71	0.11	174.56	92.92
402	1779.21	1765.00	12.81	12.71	0.11	174.67	92.92
404	1778.20	1765.00	12.81	12.71	0.10	174.77	92.93
406	1777.19	1765.00	12.80	12.71	0.09	174.86	92.94
408	1776.19	1765.00	12.79	12.71	0.08	174.94	92.94
410	1775.18	1765.00	12.78	12.71	0.08	175.02	92.95
412	1774.17	1765.00	12.78	12.71	0.07	175.09	92.96
414	1773.16	1765.00	12.77	12.71	0.06	175.15	92.96
416	1772.15	1765.00	12.76	12.71	0.06	175.21	92.96
418	1771.14	1765.00	12.76	12.71	0.05	175.26	92.97

Table A-28 Kayraktepe Dam Flood Routing Table (Q_{10000}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
420	1770.13	1765.00	12.75	12.71	0.04	175.30	92.97
422	1767.69	1765.00	12.74	12.71	0.03	175.32	92.97
424	1765.24	1765.00	12.72	12.71	0.01	175.33	**92.97**
426	1762.80	1765.00	12.70	12.71	-0.01	175.33	92.97
428	1760.35	1765.00	12.68	12.71	-0.02	175.30	92.97
430	1757.90	1765.00	12.67	12.71	-0.04	175.26	92.97
432	1755.46	1765.00	12.65	12.71	-0.06	175.20	92.96
434	1753.01	1765.00	12.63	12.71	-0.08	175.12	92.96
436	1750.56	1765.00	12.61	12.71	-0.10	175.03	92.95
438	1748.12	1765.00	12.60	12.71	-0.11	174.92	92.94
440	1745.67	1765.00	12.58	12.71	-0.13	174.79	92.93
442	1743.23	1765.00	12.56	12.71	-0.15	174.64	92.92
444	1740.78	1765.00	12.54	12.71	-0.17	174.47	92.91
446	1740.11	1765.00	12.53	12.71	-0.18	174.29	92.90
448	1739.44	1765.00	12.53	12.71	-0.18	174.11	92.88
450	1738.77	1765.00	12.52	12.71	-0.19	173.93	92.87
452	1738.09	1765.00	12.52	12.71	-0.19	173.74	92.85
454	1723.74	1765.00	12.46	12.71	-0.25	173.49	92.83
456	1709.38	1765.00	12.36	12.71	-0.35	173.14	92.81
458	1680.19	1765.00	12.20	12.71	-0.51	172.64	92.77
460	1651.01	1765.00	11.99	12.71	-0.72	171.92	92.72
462	1638.93	1765.00	11.84	12.71	-0.86	171.06	92.65
464	1626.85	1765.00	11.76	12.71	-0.95	170.10	92.58
466	1608.97	1765.00	11.65	12.71	-1.06	169.05	92.50
468	1591.10	1765.00	11.52	12.71	-1.19	167.86	92.41
470	1589.28	1765.00	11.45	12.71	-1.26	166.60	92.31
472	1587.46	1765.00	11.44	12.71	-1.27	165.33	92.21
474	1585.65	1765.00	11.42	12.71	-1.28	164.04	92.11
476	1583.83	1765.00	11.41	12.71	-1.30	162.74	92.01
478	1582.01	1765.00	11.40	12.71	-1.31	161.43	91.91
480	1580.20	1765.00	11.38	12.71	-1.32	160.11	91.80
482	1578.38	1765.00	11.37	12.71	-1.34	158.77	91.70
484	1576.57	1765.00	11.36	12.71	-1.35	157.42	91.59
486	1574.75	1765.00	11.34	12.71	-1.36	156.06	91.47
488	1572.93	1765.00	11.33	12.71	-1.38	154.68	91.36

Table A-28 Kayraktepe Dam Flood Routing Table (Q_{10000}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
490	1571.12	1765.00	11.32	12.71	-1.39	153.29	91.24
492	1569.30	1765.00	11.31	12.71	-1.40	151.89	91.12
494	1567.65	1765.00	11.29	12.71	-1.41	150.48	91.00
496	1565.99	1765.00	11.28	12.71	-1.43	149.05	90.88
498	1564.34	1765.00	11.27	12.71	-1.44	147.61	90.75
500	1562.69	1765.00	11.26	12.71	-1.45	146.16	90.63
502	1561.04	1765.00	11.25	12.71	-1.46	144.70	90.50
504	1559.38	1765.00	11.23	12.71	-1.47	143.22	90.36
506	1557.73	1765.00	11.22	12.71	-1.49	141.74	90.23
508	1556.08	1765.00	11.21	12.71	-1.50	140.24	90.09
510	1554.43	1765.00	11.20	12.71	-1.51	138.73	89.96
512	1552.77	1765.00	11.19	12.71	-1.52	137.21	89.81
514	1551.12	1765.00	11.17	12.71	-1.53	135.67	89.67
516	1549.47	1765.00	11.16	12.71	-1.55	134.13	89.53
518	1547.51	1765.00	11.15	12.71	-1.56	132.57	89.38
520	1545.56	1765.00	11.14	12.71	-1.57	130.99	89.22
522	1543.61	1765.00	11.12	12.71	-1.59	129.41	89.07
524	1541.66	1765.00	11.11	12.71	-1.60	127.81	88.91
526	1539.70	1765.00	11.09	12.71	-1.62	126.19	88.75
528	1537.75	1765.00	11.08	12.71	-1.63	124.56	88.58
530	1535.80	1765.00	11.06	12.71	-1.64	122.92	88.41
532	1533.84	1765.00	11.05	12.71	-1.66	121.26	88.23
534	1531.89	1765.00	11.04	12.71	-1.67	119.59	88.05
536	1529.94	1765.00	11.02	12.71	-1.69	117.90	87.86
538	1527.99	1765.00	11.01	12.71	-1.70	116.20	87.67
540	1526.03	1765.00	10.99	12.71	-1.71	114.49	87.47
542	1524.80	1765.00	10.98	12.71	-1.73	112.77	87.26
544	1523.56	1765.00	10.97	12.71	-1.73	111.03	87.05
546	1522.32	1765.00	10.97	12.71	-1.74	109.29	86.83
548	1521.08	1765.00	10.96	12.71	-1.75	107.54	86.60
550	1519.85	1765.00	10.95	12.71	-1.76	105.78	86.37
552	1518.61	1765.00	10.94	12.71	-1.77	104.01	86.13
554	1517.37	1765.00	10.93	12.71	-1.78	102.23	85.88
556	1516.13	1765.00	10.92	12.71	-1.79	100.44	85.63
558	1514.90	1765.00	10.91	12.71	-1.80	98.65	85.37

Table A-28 Kayraktepe Dam Flood Routing Table (Q_{10000}) (Continued)

(Mut Dam is in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
560	1513.66	1730.00	10.90	12.58	-1.68	96.97	85.12
562	1512.42	1512.42	10.89	11.67	-0.78	96.19	85.00
564	1511.18	1511.18	10.88	10.88	0.00	96.19	85.00
566	1510.05	1510.05	10.88	10.88	0.00	96.19	85.00
568	1508.92	1508.92	10.87	10.87	0.00	96.19	85.00
570	1507.79	1507.79	10.86	10.86	0.00	96.19	85.00
572	1506.65	1506.65	10.85	10.85	0.00	96.19	85.00
574	1505.52	1505.52	10.84	10.84	0.00	96.19	85.00
576	1504.39	1504.39	10.84	10.84	0.00	96.19	85.00
578	1503.25	1503.25	10.83	10.83	0.00	96.19	85.00
580	1502.12	1502.12	10.82	10.82	0.00	96.19	85.00
582	1500.99	1500.99	10.81	10.81	0.00	96.19	85.00
584	1499.86	1499.86	10.80	10.80	0.00	96.19	85.00
586	1498.72	1498.72	10.79	10.79	0.00	96.19	85.00
588	1497.59	1497.59	10.79	10.79	0.00	96.19	85.00
590	1497.59	1497.59	10.78	10.78	0.00	96.19	85.00
592	1497.59	1497.59	10.78	10.78	0.00	96.19	85.00
594	1497.59	1497.59	10.78	10.78	0.00	96.19	85.00
596	1497.59	1497.59	10.78	10.78	0.00	96.19	85.00
598	1497.59	1497.59	10.78	10.78	0.00	96.19	85.00
600	1497.59	1497.59	10.78	10.78	0.00	96.19	85.00

Table A-29 1, 3, 5,….23, 25 Day Maximum Average Discharges for Different Return Periods For EİE 1720 SGS

	Pik	1 Gün	3 Gün	5 Gün	7 Gün	9 Gün	11 Gün	13 Gün	15 Gün	17 Gün	19 Gün	21 Gün	23 Gün	25 Gün
Q_2	293.37	235.90	199.09	178.43	165.69	154.96	148.04	143.36	139.69	136.47	133.57	131.15	128.61	126.69
Q_5	417.64	336.85	275.16	242.16	223.34	210.39	200.56	193.39	187.55	182.46	177.47	173.14	169.06	166.02
Q_{10}	502.33	401.10	321.98	279.68	256.54	242.64	230.91	221.96	214.44	207.95	201.57	195.98	190.93	187.16
Q_{25}	611.73	480.05	378.14	323.25	294.50	279.62	265.51	254.21	244.54	236.31	228.17	220.98	214.78	210.11
Q_{50}	694.59	537.40	418.10	353.43	320.45	304.94	289.15	276.10	264.82	255.30	245.82	237.44	230.44	225.14
Q_{100}	778.78	593.87	456.84	382.11	344.86	328.70	311.25	296.48	283.58	272.76	262.04	252.53	244.77	238.85
Q_{500}	980.39	723.06	543.54	444.43	397.15	373.79	353.10	334.98	318.88	305.47	292.28	280.54	271.29	264.18
Q_{1000}	1052.46	784.71	590.36	483.52	432.29	413.90	390.78	370.25	352.04	336.92	321.90	308.52	298.06	290.02
Q_{10000}	1326.14	975.55	723.87	584.92	519.73	499.10	470.32	444.02	420.49	401.08	381.77	364.50	351.35	341.19

Table A-30 1, 3, 5,….23, 25 Day Maximum Average Discharges for Different Return Periods (Göksu River – Upstream of the Joint)

	Pik	1 Gün	3 Gün	5 Gün	7 Gün	9 Gün	11 Gün	13 Gün	15 Gün	17 Gün	19 Gün	21 Gün	23 Gün	25 Gün
Q_2	296.90	238.74	201.48	180.58	167.68	156.82	149.82	145.09	141.37	138.11	135.18	132.73	130.16	128.22
Q_5	422.67	340.90	278.48	245.08	226.03	212.93	202.97	195.72	189.80	184.66	179.60	175.23	171.10	168.02
Q_{10}	508.38	405.93	325.86	283.05	259.63	245.56	233.69	224.64	217.02	210.46	204.00	198.34	193.23	189.42
Q_{25}	619.10	485.83	382.69	327.14	298.05	282.98	268.71	257.28	247.49	239.15	230.92	223.64	217.37	212.64
Q_{50}	702.96	543.87	423.14	357.69	324.31	308.61	292.63	279.43	268.01	258.37	248.79	240.30	233.22	227.85
Q_{100}	788.16	601.02	462.35	386.71	349.01	332.66	315.00	300.05	287.00	276.05	265.20	255.57	247.71	241.73
Q_{500}	992.20	731.77	550.09	449.78	401.94	378.29	357.35	339.01	322.72	309.15	295.80	283.92	274.56	267.36
Q_{1000}	1065.14	794.16	597.47	489.34	437.50	418.89	395.49	374.71	356.28	340.98	325.78	312.23	301.65	293.52
Q_{10000}	1342.12	987.31	732.59	591.97	525.99	505.11	475.98	449.37	425.55	405.91	386.37	368.89	355.59	345.30

Table A-31 Kayraktepe Dam Flood Routing Table (Q_{100})

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
0	733.99	733.99				96.15	85.00
2	733.99	733.99	5.28	5.28	0.00	96.15	85.00
4	733.99	733.99	5.28	5.28	0.00	96.15	85.00
6	733.99	733.99	5.28	5.28	0.00	96.15	85.00
8	733.99	733.99	5.28	5.28	0.00	96.15	85.00
10	733.99	733.99	5.28	5.28	0.00	96.15	85.00
12	733.99	733.99	5.28	5.28	0.00	96.15	85.00
14	735.54	735.54	5.29	5.29	0.00	96.15	85.00
16	737.09	737.09	5.30	5.30	0.00	96.15	85.00
18	738.64	738.64	5.31	5.31	0.00	96.15	85.00
20	740.19	740.19	5.32	5.32	0.00	96.15	85.00
22	741.74	741.74	5.33	5.33	0.00	96.15	85.00
24	743.28	743.28	5.35	5.35	0.00	96.15	85.00
26	744.83	744.83	5.36	5.36	0.00	96.15	85.00
28	746.38	746.38	5.37	5.37	0.00	96.15	85.00
30	747.93	747.93	5.38	5.38	0.00	96.15	85.00
32	749.48	749.48	5.39	5.39	0.00	96.15	85.00
34	751.03	751.03	5.40	5.40	0.00	96.15	85.00
36	752.58	752.58	5.41	5.41	0.00	96.15	85.00
38	754.82	754.82	5.43	5.43	0.00	96.15	85.00
40	757.05	757.05	5.44	5.44	0.00	96.15	85.00
42	759.29	759.29	5.46	5.46	0.00	96.15	85.00
44	761.53	761.53	5.47	5.47	0.00	96.15	85.00
46	763.77	763.77	5.49	5.49	0.00	96.15	85.00
48	766.01	766.01	5.51	5.51	0.00	96.15	85.00
50	768.24	768.24	5.52	5.52	0.00	96.15	85.00
52	770.48	770.48	5.54	5.54	0.00	96.15	85.00
54	772.72	772.72	5.56	5.56	0.00	96.15	85.00
56	774.96	774.96	5.57	5.57	0.00	96.15	85.00
58	777.01	777.01	5.59	5.59	0.00	96.15	85.00
60	779.07	779.07	5.60	5.60	0.00	96.15	85.00
62	780.57	780.57	5.61	5.61	0.00	96.15	85.00
64	782.08	782.08	5.63	5.63	0.00	96.15	85.00
66	783.58	783.58	5.64	5.64	0.00	96.15	85.00
68	785.08	785.08	5.65	5.65	0.00	96.15	85.00

Table A-31 Kayraktepe Dam Flood Routing Table (Q_{100}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
70	786.59	786.59	5.66	5.66	0.00	96.15	85.00
72	788.09	788.09	5.67	5.67	0.00	96.15	85.00
74	789.60	789.60	5.68	5.68	0.00	96.15	85.00
76	791.10	791.10	5.69	5.69	0.00	96.15	85.00
78	792.60	792.60	5.70	5.70	0.00	96.15	85.00
80	794.11	794.11	5.71	5.71	0.00	96.15	85.00
82	795.61	795.61	5.72	5.72	0.00	96.15	85.00
84	797.11	797.11	5.73	5.73	0.00	96.15	85.00
86	798.92	798.92	5.75	5.75	0.00	96.15	85.00
88	800.72	800.72	5.76	5.76	0.00	96.15	85.00
90	802.52	802.52	5.77	5.77	0.00	96.15	85.00
92	804.32	804.32	5.78	5.78	0.00	96.15	85.00
94	806.12	806.12	5.80	5.80	0.00	96.15	85.00
96	807.92	807.92	5.81	5.81	0.00	96.15	85.00
98	809.72	809.72	5.82	5.82	0.00	96.15	85.00
100	811.52	811.52	5.84	5.84	0.00	96.15	85.00
102	813.32	813.32	5.85	5.85	0.00	96.15	85.00
104	815.12	815.12	5.86	5.86	0.00	96.15	85.00
106	816.92	816.92	5.88	5.88	0.00	96.15	85.00
108	818.72	818.72	5.89	5.89	0.00	96.15	85.00
110	820.39	820.39	5.90	5.90	0.00	96.15	85.00
112	822.05	822.05	5.91	5.91	0.00	96.15	85.00
114	823.71	823.71	5.92	5.92	0.00	96.15	85.00
116	825.38	825.38	5.94	5.94	0.00	96.15	85.00
118	827.04	827.04	5.95	5.95	0.00	96.15	85.00
120	828.70	828.70	5.96	5.96	0.00	96.15	85.00
122	830.36	830.36	5.97	5.97	0.00	96.15	85.00
124	832.03	832.03	5.98	5.98	0.00	96.15	85.00
126	833.69	833.69	6.00	6.00	0.00	96.15	85.00
128	835.35	835.35	6.01	6.01	0.00	96.15	85.00
130	837.01	837.01	6.02	6.02	0.00	96.15	85.00
132	838.68	838.68	6.03	6.03	0.00	96.15	85.00
134	840.04	840.04	6.04	6.04	0.00	96.15	85.00
136	841.40	841.40	6.05	6.05	0.00	96.15	85.00
138	842.76	842.76	6.06	6.06	0.00	96.15	85.00

Table A-31 Kayraktepe Dam Flood Routing Table (Q_{100}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
140	844.12	844.12	6.07	6.07	0.00	96.15	85.00
142	845.48	845.48	6.08	6.08	0.00	96.15	85.00
144	846.83	846.83	6.09	6.09	0.00	96.15	85.00
146	848.19	848.19	6.10	6.10	0.00	96.15	85.00
148	849.55	849.55	6.11	6.11	0.00	96.15	85.00
150	850.91	850.91	6.12	6.12	0.00	96.15	85.00
152	852.27	852.27	6.13	6.13	0.00	96.15	85.00
154	853.63	853.63	6.14	6.14	0.00	96.15	85.00
156	854.99	854.99	6.15	6.15	0.00	96.15	85.00
158	856.40	856.40	6.16	6.16	0.00	96.15	85.00
160	857.80	857.80	6.17	6.17	0.00	96.15	85.00
162	859.20	859.20	6.18	6.18	0.00	96.15	85.00
164	860.60	860.60	6.19	6.19	0.00	96.15	85.00
166	862.00	862.00	6.20	6.20	0.00	96.15	85.00
168	863.40	863.40	6.21	6.21	0.00	96.15	85.00
170	864.81	864.81	6.22	6.22	0.00	96.15	85.00
172	866.21	866.21	6.23	6.23	0.00	96.15	85.00
174	867.61	867.61	6.24	6.24	0.00	96.15	85.00
176	869.01	869.01	6.25	6.25	0.00	96.15	85.00
178	870.41	870.41	6.26	6.26	0.00	96.15	85.00
180	871.81	871.81	6.27	6.27	0.00	96.15	85.00
182	875.01	875.01	6.29	6.29	0.00	96.15	85.00
184	878.20	878.20	6.31	6.31	0.00	96.15	85.00
186	881.40	881.40	6.33	6.33	0.00	96.15	85.00
188	884.59	884.59	6.36	6.36	0.00	96.15	85.00
190	887.79	887.79	6.38	6.38	0.00	96.15	85.00
192	890.98	890.98	6.40	6.40	0.00	96.15	85.00
194	894.18	894.18	6.43	6.43	0.00	96.15	85.00
196	897.37	897.37	6.45	6.45	0.00	96.15	85.00
198	900.57	900.57	6.47	6.47	0.00	96.15	85.00
200	903.76	903.76	6.50	6.50	0.00	96.15	85.00
202	906.96	906.96	6.52	6.52	0.00	96.15	85.00
204	910.15	910.15	6.54	6.54	0.00	96.15	85.00
206	913.45	913.45	6.56	6.56	0.00	96.15	85.00
208	916.74	916.74	6.59	6.59	0.00	96.15	85.00

Table A-31 Kayraktepe Dam Flood Routing Table (Q_{100}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
210	920.04	920.04	6.61	6.61	0.00	96.15	85.00
212	923.33	923.33	6.64	6.64	0.00	96.15	85.00
214	926.62	926.62	6.66	6.66	0.00	96.15	85.00
216	929.92	929.92	6.68	6.68	0.00	96.15	85.00
218	933.21	933.21	6.71	6.71	0.00	96.15	85.00
220	936.51	936.51	6.73	6.73	0.00	96.15	85.00
222	939.80	939.80	6.75	6.75	0.00	96.15	85.00
224	943.09	943.09	6.78	6.78	0.00	96.15	85.00
226	946.39	946.39	6.80	6.80	0.00	96.15	85.00
228	949.68	949.68	6.83	6.83	0.00	96.15	85.00
230	955.66	955.66	6.86	6.86	0.00	96.15	85.00
232	961.65	961.65	6.90	6.90	0.00	96.15	85.00
234	966.98	966.98	6.94	6.94	0.00	96.15	85.00
236	972.31	972.31	6.98	6.98	0.00	96.15	85.00
238	977.64	977.64	7.02	7.02	0.00	96.15	85.00
240	982.97	982.97	7.06	7.06	0.00	96.15	85.00
242	988.30	988.30	7.10	7.10	0.00	96.15	85.00
244	993.63	993.63	7.13	7.13	0.00	96.15	85.00
246	998.96	998.96	7.17	7.17	0.00	96.15	85.00
248	1004.30	1004.30	7.21	7.21	0.00	96.15	85.00
250	1009.63	1009.63	7.25	7.25	0.00	96.15	85.00
252	1014.96	1014.96	7.29	7.29	0.00	96.15	85.00
254	1026.19	1026.19	7.35	7.35	0.00	96.15	85.00
256	1037.43	1037.43	7.43	7.43	0.00	96.15	85.00
258	1048.66	1048.66	7.51	7.51	0.00	96.15	85.00
260	1059.90	1059.90	7.59	7.59	0.00	96.15	85.00
262	1071.14	1071.14	7.67	7.67	0.00	96.15	85.00
264	1082.37	1082.37	7.75	7.75	0.00	96.15	85.00
266	1093.61	1093.61	7.83	7.83	0.00	96.15	85.00
268	1104.84	1104.84	7.91	7.91	0.00	96.15	85.00
270	1116.08	1116.08	8.00	8.00	0.00	96.15	85.00
272	1127.32	1127.32	8.08	8.08	0.00	96.15	85.00
274	1138.55	1138.55	8.16	8.16	0.00	96.15	85.00
276	1149.79	1149.79	8.24	8.24	0.00	96.15	85.00
278	1175.83	1175.83	8.37	8.37	0.00	96.15	85.00

Table A-31 Kayraktepe Dam Flood Routing Table (Q_{100}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
280	1201.88	1200.00	8.56	8.55	0.01	96.16	85.00
282	1227.92	1200.00	8.75	8.64	0.11	96.26	85.01
284	1253.97	1200.00	8.93	8.64	0.29	96.56	85.06
286	1280.01	1200.00	9.12	8.64	0.48	97.04	85.13
288	1306.06	1200.00	9.31	8.64	0.67	97.71	85.23
290	1332.10	1200.00	9.50	8.64	0.86	98.57	85.36
292	1358.15	1200.00	9.68	8.64	1.04	99.61	85.51
294	1453.45	1200.00	10.12	8.64	1.48	101.10	85.72
296	1548.76	1200.00	10.81	8.64	2.17	103.26	86.03
298	1713.33	1200.00	11.74	8.64	3.10	106.37	86.45
300	1877.90	1200.00	12.93	8.64	4.29	110.66	87.00
302	1713.33	1200.00	12.93	8.64	4.29	114.94	87.52
304	1548.76	1200.00	11.74	8.64	3.10	118.05	87.88
306	1453.45	1200.00	10.81	8.64	2.17	120.21	88.12
308	1358.15	1200.00	10.12	8.64	1.48	121.70	88.28
310	1332.10	1200.00	9.68	8.64	1.04	122.74	88.39
312	1306.06	1200.00	9.50	8.64	0.86	123.60	88.48
314	1280.01	1200.00	9.31	8.64	0.67	124.27	88.55
316	1253.97	1200.00	9.12	8.64	0.48	124.75	88.60
318	1227.92	1200.00	8.93	8.64	0.29	125.05	88.63
320	1201.88	1200.00	8.75	8.64	0.11	125.15	**88.64**
322	1175.83	1200.00	8.56	8.64	-0.08	125.07	88.63
324	1149.79	1200.00	8.37	8.64	-0.27	124.81	88.60
326	1138.55	1200.00	8.24	8.64	-0.40	124.40	88.56
328	1127.32	1200.00	8.16	8.64	-0.48	123.92	88.51
330	1116.08	1200.00	8.08	8.64	-0.56	123.36	88.45
332	1104.84	1200.00	8.00	8.64	-0.64	122.71	88.38
334	1093.61	1200.00	7.91	8.64	-0.73	121.99	88.31
336	1082.37	1200.00	7.83	8.64	-0.81	121.18	88.22
338	1071.14	1200.00	7.75	8.64	-0.89	120.29	88.13
340	1059.90	1200.00	7.67	8.64	-0.97	119.32	88.02
342	1048.66	1200.00	7.59	8.64	-1.05	118.28	87.90
344	1037.43	1200.00	7.51	8.64	-1.13	117.15	87.77
346	1026.19	1200.00	7.43	8.64	-1.21	115.93	87.64
348	1014.96	1200.00	7.35	8.64	-1.29	114.64	87.49

Table A-31 Kayraktepe Dam Flood Routing Table (Q_{100}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
350	1009.63	1200.00	7.29	8.64	-1.35	113.29	87.32
352	1004.30	1200.00	7.25	8.64	-1.39	111.90	87.16
354	998.96	1200.00	7.21	8.64	-1.43	110.47	86.98
356	993.63	1200.00	7.17	8.64	-1.47	109.01	86.79
358	988.30	1200.00	7.13	8.64	-1.51	107.50	86.60
360	982.97	1200.00	7.10	8.64	-1.54	105.96	86.39
362	977.64	1200.00	7.06	8.64	-1.58	104.38	86.18
364	972.31	1200.00	7.02	8.64	-1.62	102.76	85.96
366	966.98	1200.00	6.98	8.64	-1.66	101.10	85.72
368	961.65	1200.00	6.94	8.64	-1.70	99.40	85.48
370	956.32	1200.00	6.90	8.64	-1.74	97.66	85.22
372	950.99	1040.00	6.87	8.06	-1.20	96.47	85.05
374	948.70	948.70	6.84	7.16	-0.32	96.15	85.00
376	946.40	946.40	6.82	6.82	0.00	96.15	85.00
378	944.11	944.11	6.81	6.81	0.00	96.15	85.00
380	941.82	941.82	6.79	6.79	0.00	96.15	85.00
382	939.53	939.53	6.77	6.77	0.00	96.15	85.00
384	937.24	937.24	6.76	6.76	0.00	96.15	85.00
386	934.95	934.95	6.74	6.74	0.00	96.15	85.00
388	932.66	932.66	6.72	6.72	0.00	96.15	85.00
390	930.37	930.37	6.71	6.71	0.00	96.15	85.00
392	928.07	928.07	6.69	6.69	0.00	96.15	85.00
394	925.78	925.78	6.67	6.67	0.00	96.15	85.00
396	923.49	923.49	6.66	6.66	0.00	96.15	85.00
398	921.17	921.17	6.64	6.64	0.00	96.15	85.00
400	918.85	918.85	6.62	6.62	0.00	96.15	85.00
402	916.53	916.53	6.61	6.61	0.00	96.15	85.00
404	914.21	914.21	6.59	6.59	0.00	96.15	85.00
406	911.89	911.89	6.57	6.57	0.00	96.15	85.00
408	909.57	909.57	6.56	6.56	0.00	96.15	85.00
410	907.25	907.25	6.54	6.54	0.00	96.15	85.00
412	904.92	904.92	6.52	6.52	0.00	96.15	85.00
414	902.60	902.60	6.51	6.51	0.00	96.15	85.00
416	900.28	900.28	6.49	6.49	0.00	96.15	85.00
418	897.96	897.96	6.47	6.47	0.00	96.15	85.00

Table A-31 Kayraktepe Dam Flood Routing Table (Q_{100}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
420	895.64	895.64	6.46	6.46	0.00	96.15	85.00
422	894.23	894.23	6.44	6.44	0.00	96.15	85.00
424	892.82	892.82	6.43	6.43	0.00	96.15	85.00
426	891.40	891.40	6.42	6.42	0.00	96.15	85.00
428	889.99	889.99	6.41	6.41	0.00	96.15	85.00
430	888.58	888.58	6.40	6.40	0.00	96.15	85.00
432	887.17	887.17	6.39	6.39	0.00	96.15	85.00
434	885.75	885.75	6.38	6.38	0.00	96.15	85.00
436	884.34	884.34	6.37	6.37	0.00	96.15	85.00
438	882.93	882.93	6.36	6.36	0.00	96.15	85.00
440	881.51	881.51	6.35	6.35	0.00	96.15	85.00
442	880.10	880.10	6.34	6.34	0.00	96.15	85.00
444	878.69	878.69	6.33	6.33	0.00	96.15	85.00
446	877.40	877.40	6.32	6.32	0.00	96.15	85.00
448	876.11	876.11	6.31	6.31	0.00	96.15	85.00
450	874.82	874.82	6.30	6.30	0.00	96.15	85.00
452	873.52	873.52	6.29	6.29	0.00	96.15	85.00
454	872.23	872.23	6.28	6.28	0.00	96.15	85.00
456	870.94	870.94	6.28	6.28	0.00	96.15	85.00
458	869.65	869.65	6.27	6.27	0.00	96.15	85.00
460	868.36	868.36	6.26	6.26	0.00	96.15	85.00
462	867.07	867.07	6.25	6.25	0.00	96.15	85.00
464	865.78	865.78	6.24	6.24	0.00	96.15	85.00
466	864.49	864.49	6.23	6.23	0.00	96.15	85.00
468	863.20	863.20	6.22	6.22	0.00	96.15	85.00
470	861.89	861.89	6.21	6.21	0.00	96.15	85.00
472	860.59	860.59	6.20	6.20	0.00	96.15	85.00
474	859.28	859.28	6.19	6.19	0.00	96.15	85.00
476	857.98	857.98	6.18	6.18	0.00	96.15	85.00
478	856.67	856.67	6.17	6.17	0.00	96.15	85.00
480	855.37	855.37	6.16	6.16	0.00	96.15	85.00
482	854.07	854.07	6.15	6.15	0.00	96.15	85.00
484	852.76	852.76	6.14	6.14	0.00	96.15	85.00
486	851.46	851.46	6.14	6.14	0.00	96.15	85.00
488	850.15	850.15	6.13	6.13	0.00	96.15	85.00

Table A-31 Kayraktepe Dam Flood Routing Table (Q_{100}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
490	848.85	848.85	6.12	6.12	0.00	96.15	85.00
492	847.54	847.54	6.11	6.11	0.00	96.15	85.00
494	846.19	846.19	6.10	6.10	0.00	96.15	85.00
496	844.83	844.83	6.09	6.09	0.00	96.15	85.00
498	843.47	843.47	6.08	6.08	0.00	96.15	85.00
500	842.11	842.11	6.07	6.07	0.00	96.15	85.00
502	840.76	840.76	6.06	6.06	0.00	96.15	85.00
504	839.40	839.40	6.05	6.05	0.00	96.15	85.00
506	838.04	838.04	6.04	6.04	0.00	96.15	85.00
508	836.69	836.69	6.03	6.03	0.00	96.15	85.00
510	835.33	835.33	6.02	6.02	0.00	96.15	85.00
512	833.97	833.97	6.01	6.01	0.00	96.15	85.00
514	832.61	832.61	6.00	6.00	0.00	96.15	85.00
516	831.26	831.26	5.99	5.99	0.00	96.15	85.00
518	830.09	830.09	5.98	5.98	0.00	96.15	85.00
520	828.93	828.93	5.97	5.97	0.00	96.15	85.00
522	827.76	827.76	5.96	5.96	0.00	96.15	85.00
524	826.60	826.60	5.96	5.96	0.00	96.15	85.00
526	825.44	825.44	5.95	5.95	0.00	96.15	85.00
528	824.27	824.27	5.94	5.94	0.00	96.15	85.00
530	823.11	823.11	5.93	5.93	0.00	96.15	85.00
532	821.94	821.94	5.92	5.92	0.00	96.15	85.00
534	820.78	820.78	5.91	5.91	0.00	96.15	85.00
536	819.61	819.61	5.91	5.91	0.00	96.15	85.00
538	818.45	818.45	5.90	5.90	0.00	96.15	85.00
540	817.29	817.29	5.89	5.89	0.00	96.15	85.00
542	816.42	816.42	5.88	5.88	0.00	96.15	85.00
544	815.54	815.54	5.88	5.88	0.00	96.15	85.00
546	814.67	814.67	5.87	5.87	0.00	96.15	85.00
548	813.80	813.80	5.86	5.86	0.00	96.15	85.00
550	812.93	812.93	5.86	5.86	0.00	96.15	85.00
552	812.06	812.06	5.85	5.85	0.00	96.15	85.00
554	811.19	811.19	5.84	5.84	0.00	96.15	85.00
556	810.32	810.32	5.84	5.84	0.00	96.15	85.00
558	809.45	809.45	5.83	5.83	0.00	96.15	85.00

Table A-31 Kayraktepe Dam Flood Routing Table (Q_{100}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
560	808.58	808.58	5.82	5.82	0.00	96.15	85.00
562	807.70	807.70	5.82	5.82	0.00	96.15	85.00
564	806.83	806.83	5.81	5.81	0.00	96.15	85.00
566	806.08	806.08	5.81	5.81	0.00	96.15	85.00
568	805.33	805.33	5.80	5.80	0.00	96.15	85.00
570	804.58	804.58	5.80	5.80	0.00	96.15	85.00
572	803.83	803.83	5.79	5.79	0.00	96.15	85.00
574	803.08	803.08	5.78	5.78	0.00	96.15	85.00
576	802.33	802.33	5.78	5.78	0.00	96.15	85.00
578	801.58	801.58	5.77	5.77	0.00	96.15	85.00
580	800.83	800.83	5.77	5.77	0.00	96.15	85.00
582	800.08	800.08	5.76	5.76	0.00	96.15	85.00
584	799.33	799.33	5.76	5.76	0.00	96.15	85.00
586	798.58	798.58	5.75	5.75	0.00	96.15	85.00
588	797.82	797.82	5.75	5.75	0.00	96.15	85.00
590	797.82	797.82	5.74	5.74	0.00	96.15	85.00
592	797.82	797.82	5.74	5.74	0.00	96.15	85.00
594	797.82	797.82	5.74	5.74	0.00	96.15	85.00
596	797.82	797.82	5.74	5.74	0.00	96.15	85.00
598	797.82	797.82	5.74	5.74	0.00	96.15	85.00
600	797.82	797.82	5.74	5.74	0.00	96.15	85.00

Table A-32 Kayraktepe Dam Flood Routing Table (Q_{500})

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
0	821.52	821.52				96.15	85.00
2	821.52	821.52	5.91	5.91	0.00	96.15	85.00
4	821.52	821.52	5.91	5.91	0.00	96.15	85.00
6	821.52	821.52	5.91	5.91	0.00	96.15	85.00
8	821.52	821.52	5.91	5.91	0.00	96.15	85.00
10	821.52	821.52	5.91	5.91	0.00	96.15	85.00
12	821.52	821.52	5.91	5.91	0.00	96.15	85.00
14	823.32	823.32	5.92	5.92	0.00	96.15	85.00
16	825.11	825.11	5.93	5.93	0.00	96.15	85.00
18	826.91	826.91	5.95	5.95	0.00	96.15	85.00
20	828.70	828.70	5.96	5.96	0.00	96.15	85.00
22	830.49	830.49	5.97	5.97	0.00	96.15	85.00
24	832.29	832.29	5.99	5.99	0.00	96.15	85.00
26	834.08	834.08	6.00	6.00	0.00	96.15	85.00
28	835.88	835.88	6.01	6.01	0.00	96.15	85.00
30	837.67	837.67	6.02	6.02	0.00	96.15	85.00
32	839.47	839.47	6.04	6.04	0.00	96.15	85.00
34	841.26	841.26	6.05	6.05	0.00	96.15	85.00
36	843.05	843.05	6.06	6.06	0.00	96.15	85.00
38	845.69	845.69	6.08	6.08	0.00	96.15	85.00
40	848.33	848.33	6.10	6.10	0.00	96.15	85.00
42	850.97	850.97	6.12	6.12	0.00	96.15	85.00
44	853.61	853.61	6.14	6.14	0.00	96.15	85.00
46	856.25	856.25	6.16	6.16	0.00	96.15	85.00
48	858.89	858.89	6.17	6.17	0.00	96.15	85.00
50	861.53	861.53	6.19	6.19	0.00	96.15	85.00
52	864.17	864.17	6.21	6.21	0.00	96.15	85.00
54	866.81	866.81	6.23	6.23	0.00	96.15	85.00
56	869.45	869.45	6.25	6.25	0.00	96.15	85.00
58	872.09	872.09	6.27	6.27	0.00	96.15	85.00
60	874.73	874.73	6.29	6.29	0.00	96.15	85.00
62	878.03	878.03	6.31	6.31	0.00	96.15	85.00
64	881.33	881.33	6.33	6.33	0.00	96.15	85.00
66	884.62	884.62	6.36	6.36	0.00	96.15	85.00
68	887.92	887.92	6.38	6.38	0.00	96.15	85.00

Table A-32 Kayraktepe Dam Flood Routing Table (Q_{500}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
70	891.22	891.22	6.40	6.40	0.00	96.15	85.00
72	894.51	894.51	6.43	6.43	0.00	96.15	85.00
74	897.81	897.81	6.45	6.45	0.00	96.15	85.00
76	901.11	901.11	6.48	6.48	0.00	96.15	85.00
78	904.40	904.40	6.50	6.50	0.00	96.15	85.00
80	907.70	907.70	6.52	6.52	0.00	96.15	85.00
82	911.00	911.00	6.55	6.55	0.00	96.15	85.00
84	914.29	914.29	6.57	6.57	0.00	96.15	85.00
86	917.90	917.90	6.60	6.60	0.00	96.15	85.00
88	921.51	921.51	6.62	6.62	0.00	96.15	85.00
90	925.12	925.12	6.65	6.65	0.00	96.15	85.00
92	928.73	928.73	6.67	6.67	0.00	96.15	85.00
94	932.33	932.33	6.70	6.70	0.00	96.15	85.00
96	935.94	935.94	6.73	6.73	0.00	96.15	85.00
98	939.55	939.55	6.75	6.75	0.00	96.15	85.00
100	943.16	943.16	6.78	6.78	0.00	96.15	85.00
102	946.76	946.76	6.80	6.80	0.00	96.15	85.00
104	950.37	950.37	6.83	6.83	0.00	96.15	85.00
106	953.98	953.98	6.86	6.86	0.00	96.15	85.00
108	957.59	957.59	6.88	6.88	0.00	96.15	85.00
110	960.70	960.70	6.91	6.91	0.00	96.15	85.00
112	963.82	963.82	6.93	6.93	0.00	96.15	85.00
114	965.88	965.88	6.95	6.95	0.00	96.15	85.00
116	967.95	967.95	6.96	6.96	0.00	96.15	85.00
118	970.02	970.02	6.98	6.98	0.00	96.15	85.00
120	972.08	972.08	6.99	6.99	0.00	96.15	85.00
122	974.15	974.15	7.01	7.01	0.00	96.15	85.00
124	976.22	976.22	7.02	7.02	0.00	96.15	85.00
126	978.29	978.29	7.04	7.04	0.00	96.15	85.00
128	980.35	980.35	7.05	7.05	0.00	96.15	85.00
130	982.42	982.42	7.07	7.07	0.00	96.15	85.00
132	984.49	984.49	7.08	7.08	0.00	96.15	85.00
134	986.15	986.15	7.09	7.09	0.00	96.15	85.00
136	987.81	987.81	7.11	7.11	0.00	96.15	85.00
138	989.47	989.47	7.12	7.12	0.00	96.15	85.00

Table A-32 Kayraktepe Dam Flood Routing Table (Q_{500}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
140	991.12	991.12	7.13	7.13	0.00	96.15	85.00
142	992.78	992.78	7.14	7.14	0.00	96.15	85.00
144	994.44	994.44	7.15	7.15	0.00	96.15	85.00
146	996.10	996.10	7.17	7.17	0.00	96.15	85.00
148	997.76	997.76	7.18	7.18	0.00	96.15	85.00
150	999.42	999.42	7.19	7.19	0.00	96.15	85.00
152	1001.08	1001.08	7.20	7.20	0.00	96.15	85.00
154	1002.74	1002.74	7.21	7.21	0.00	96.15	85.00
156	1004.40	1004.40	7.23	7.23	0.00	96.15	85.00
158	1006.06	1006.06	7.24	7.24	0.00	96.15	85.00
160	1007.73	1007.73	7.25	7.25	0.00	96.15	85.00
162	1009.40	1009.40	7.26	7.26	0.00	96.15	85.00
164	1011.07	1011.07	7.27	7.27	0.00	96.15	85.00
166	1012.73	1012.73	7.29	7.29	0.00	96.15	85.00
168	1014.40	1014.40	7.30	7.30	0.00	96.15	85.00
170	1016.07	1016.07	7.31	7.31	0.00	96.15	85.00
172	1017.73	1017.73	7.32	7.32	0.00	96.15	85.00
174	1019.40	1019.40	7.33	7.33	0.00	96.15	85.00
176	1021.07	1021.07	7.35	7.35	0.00	96.15	85.00
178	1022.74	1200.00	7.36	8.00	-0.64	95.51	84.90
180	1024.40	1200.00	7.37	8.64	-1.27	94.24	84.71
182	1028.34	1200.00	7.39	8.64	-1.25	92.99	84.52
184	1032.27	1200.00	7.42	8.64	-1.22	91.77	84.33
186	1036.21	1200.00	7.45	8.64	-1.19	90.58	84.15
188	1040.14	1200.00	7.47	8.64	-1.17	89.41	84.48
190	1044.08	1200.00	7.50	8.64	-1.14	88.27	84.33
192	1048.01	1200.00	7.53	8.64	-1.11	87.17	84.17
194	1051.95	1200.00	7.56	8.64	-1.08	86.09	84.00
196	1055.88	1200.00	7.59	8.64	-1.05	85.03	83.82
198	1059.81	1200.00	7.62	8.64	-1.02	84.01	83.64
200	1063.75	1200.00	7.64	8.64	-1.00	83.02	83.45
202	1067.68	1200.00	7.67	8.64	-0.97	82.05	83.26
204	1071.62	1200.00	7.70	8.64	-0.94	81.11	83.07
206	1076.02	1200.00	7.73	8.64	-0.91	80.20	82.88
208	1080.42	1200.00	7.76	8.64	-0.88	79.32	82.69

Table A-32 Kayraktepe Dam Flood Routing Table (Q_{500}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
210	1084.82	1200.00	7.79	8.64	-0.85	78.48	82.51
212	1089.22	1200.00	7.83	8.64	-0.81	77.67	82.32
214	1093.63	1200.00	7.86	8.64	-0.78	76.88	82.14
216	1098.03	1200.00	7.89	8.64	-0.75	76.13	81.96
218	1102.43	1200.00	7.92	8.64	-0.72	75.42	81.79
220	1106.83	1200.00	7.95	8.64	-0.69	74.73	81.63
222	1111.23	1200.00	7.99	8.64	-0.65	74.07	81.47
224	1115.63	1200.00	8.02	8.64	-0.62	73.45	81.31
226	1120.03	1200.00	8.05	8.64	-0.59	72.86	81.16
228	1124.43	1200.00	8.08	8.64	-0.56	72.30	81.02
230	1134.26	1200.00	8.13	8.64	-0.51	71.79	80.89
232	1144.10	1200.00	8.20	8.64	-0.44	71.35	80.78
234	1153.93	1200.00	8.27	8.64	-0.37	70.99	80.69
236	1163.76	1200.00	8.34	8.64	-0.30	70.69	80.61
238	1173.59	1200.00	8.41	8.64	-0.23	70.46	80.55
240	1183.42	1200.00	8.49	8.64	-0.15	70.31	80.51
242	1193.25	1200.00	8.56	8.64	-0.08	70.22	80.49
244	1203.08	1200.00	8.63	8.64	-0.01	70.21	80.48
246	1211.04	1200.00	8.69	8.64	0.05	70.26	80.50
248	1218.99	1200.00	8.75	8.64	0.11	70.37	80.53
250	1225.78	1200.00	8.80	8.64	0.16	70.53	80.57
252	1232.56	1200.00	8.85	8.64	0.21	70.74	80.62
254	1247.31	1200.00	8.93	8.64	0.29	71.03	80.70
256	1262.05	1200.00	9.03	8.64	0.39	71.42	80.80
258	1276.79	1200.00	9.14	8.64	0.50	71.92	80.93
260	1291.53	1200.00	9.25	8.64	0.61	72.53	81.08
262	1306.28	1200.00	9.35	8.64	0.71	73.24	81.26
264	1321.02	1200.00	9.46	8.64	0.82	74.06	81.46
266	1335.76	1200.00	9.56	8.64	0.92	74.98	81.69
268	1350.51	1200.00	9.67	8.64	1.03	76.01	81.94
270	1365.25	1200.00	9.78	8.64	1.14	77.15	82.20
272	1379.99	1200.00	9.88	8.64	1.24	78.39	82.49
274	1394.73	1200.00	9.99	8.64	1.35	79.74	82.79
276	1409.48	1200.00	10.10	8.64	1.46	81.20	83.09
278	1441.02	1200.00	10.26	8.64	1.62	82.82	83.42

Table A-32 Kayraktepe Dam Flood Routing Table (Q_{500}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
280	1472.56	1200.00	10.49	8.64	1.85	84.67	83.76
282	1504.11	1200.00	10.72	8.64	2.08	86.74	84.10
284	1535.65	1200.00	10.94	8.64	2.30	89.05	84.43
286	1567.19	1200.00	11.17	8.64	2.53	91.58	84.30
288	1598.73	1200.00	11.40	8.64	2.76	94.34	84.72
290	1630.28	1200.00	11.62	8.64	2.98	97.32	85.17
292	1661.82	1200.00	11.85	8.64	3.21	100.53	85.64
294	1789.36	1200.00	12.42	8.64	3.78	104.32	86.17
296	1916.89	1200.00	13.34	8.64	4.70	109.02	86.79
298	2140.42	1200.00	14.61	8.64	5.97	114.98	87.53
300	2363.95	1200.00	16.22	8.64	7.58	122.56	88.37
302	2140.42	1200.00	16.22	8.64	7.58	130.14	89.14
304	1916.89	1200.00	14.61	8.64	5.97	136.10	89.71
306	1789.36	1200.00	13.34	8.64	4.70	140.80	90.15
308	1661.82	1200.00	12.42	8.64	3.78	144.59	90.49
310	1630.28	1200.00	11.85	8.64	3.21	147.80	90.77
312	1598.73	1200.00	11.62	8.64	2.98	150.78	91.03
314	1567.19	1200.00	11.40	8.64	2.76	153.54	91.26
316	1535.65	1200.00	11.17	8.64	2.53	156.07	91.47
318	1504.11	1200.00	10.94	8.64	2.30	158.38	91.66
320	1472.56	1200.00	10.72	8.64	2.08	160.45	91.83
322	1441.02	1200.00	10.49	8.64	1.85	162.30	91.98
324	1409.48	1200.00	10.26	8.64	1.62	163.92	92.11
326	1394.73	1200.00	10.10	8.64	1.46	165.38	92.22
328	1379.99	1200.00	9.99	8.64	1.35	166.73	92.32
330	1365.25	1200.00	9.88	8.64	1.24	167.97	92.42
332	1350.51	1200.00	9.78	8.64	1.14	169.11	92.50
334	1335.76	1200.00	9.67	8.64	1.03	170.14	92.58
336	1321.02	1200.00	9.56	8.64	0.92	171.06	92.65
338	1306.28	1200.00	9.46	8.64	0.82	171.88	92.71
340	1291.53	1200.00	9.35	8.64	0.71	172.59	92.77
342	1276.79	1200.00	9.25	8.64	0.61	173.20	92.81
344	1262.05	1200.00	9.14	8.64	0.50	173.70	92.85
346	1247.31	1200.00	9.03	8.64	0.39	174.09	92.88
348	1232.56	1200.00	8.93	8.64	0.29	174.38	92.90

Table A-32 Kayraktepe Dam Flood Routing Table (Q_{500}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
350	1225.78	1200.00	8.85	8.64	0.21	174.59	92.92
352	1218.99	1200.00	8.80	8.64	0.16	174.75	92.93
354	1212.21	1200.00	8.75	8.64	0.11	174.86	92.94
356	1205.42	1200.00	8.70	8.64	0.06	174.93	92.94
358	1198.63	1200.00	8.65	8.64	0.01	174.94	**92.94**
360	1191.85	1200.00	8.61	8.64	-0.03	174.91	92.94
362	1185.06	1200.00	8.56	8.64	-0.08	174.82	92.94
364	1178.28	1200.00	8.51	8.64	-0.13	174.69	92.93
366	1171.49	1200.00	8.46	8.64	-0.18	174.51	92.91
368	1164.71	1200.00	8.41	8.64	-0.23	174.28	92.89
370	1157.92	1200.00	8.36	8.64	-0.28	174.00	92.87
372	1151.14	1200.00	8.31	8.64	-0.33	173.67	92.85
374	1147.98	1200.00	8.28	8.64	-0.36	173.31	92.82
376	1144.82	1200.00	8.25	8.64	-0.39	172.93	92.79
378	1141.66	1200.00	8.23	8.64	-0.41	172.52	92.76
380	1138.50	1200.00	8.21	8.64	-0.43	172.08	92.73
382	1135.34	1200.00	8.19	8.64	-0.45	171.63	92.69
384	1132.18	1200.00	8.16	8.64	-0.48	171.15	92.66
386	1129.02	1200.00	8.14	8.64	-0.50	170.65	92.62
388	1125.86	1200.00	8.12	8.64	-0.52	170.13	92.58
390	1122.70	1200.00	8.09	8.64	-0.55	169.59	92.54
392	1119.54	1200.00	8.07	8.64	-0.57	169.02	92.50
394	1116.38	1200.00	8.05	8.64	-0.59	168.43	92.45
396	1113.22	1200.00	8.03	8.64	-0.61	167.81	92.41
398	1110.41	1200.00	8.01	8.64	-0.63	167.18	92.36
400	1107.59	1200.00	7.98	8.64	-0.66	166.52	92.31
402	1104.78	1200.00	7.96	8.64	-0.68	165.85	92.25
404	1101.96	1200.00	7.94	8.64	-0.70	165.15	92.20
406	1099.15	1200.00	7.92	8.64	-0.72	164.44	92.15
408	1096.34	1200.00	7.90	8.64	-0.74	163.70	92.09
410	1093.52	1200.00	7.88	8.64	-0.76	162.94	92.03
412	1090.71	1200.00	7.86	8.64	-0.78	162.17	91.97
414	1087.89	1200.00	7.84	8.64	-0.80	161.37	91.90
416	1085.08	1200.00	7.82	8.64	-0.82	160.55	91.84
418	1082.27	1200.00	7.80	8.64	-0.84	159.72	91.77

Table A-32 Kayraktepe Dam Flood Routing Table (Q_{500}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
420	1079.45	1200.00	7.78	8.64	-0.86	158.86	91.70
422	1077.74	1200.00	7.77	8.64	-0.87	157.98	91.63
424	1076.03	1200.00	7.75	8.64	-0.89	157.10	91.56
426	1074.32	1200.00	7.74	8.64	-0.90	156.20	91.49
428	1072.61	1200.00	7.73	8.64	-0.91	155.29	91.41
430	1070.90	1200.00	7.72	8.64	-0.92	154.36	91.33
432	1069.19	1200.00	7.70	8.64	-0.94	153.43	91.25
434	1067.48	1200.00	7.69	8.64	-0.95	152.48	91.17
436	1065.76	1200.00	7.68	8.64	-0.96	151.52	91.09
438	1064.05	1200.00	7.67	8.64	-0.97	150.55	91.01
440	1062.34	1200.00	7.66	8.64	-0.98	149.56	90.92
442	1060.63	1200.00	7.64	8.64	-1.00	148.57	90.84
444	1058.92	1200.00	7.63	8.64	-1.01	147.56	90.75
446	1057.33	1200.00	7.62	8.64	-1.02	146.53	90.66
448	1055.73	1200.00	7.61	8.64	-1.03	145.50	90.57
450	1054.13	1200.00	7.60	8.64	-1.04	144.46	90.48
452	1052.54	1200.00	7.58	8.64	-1.06	143.40	90.38
454	1050.94	1200.00	7.57	8.64	-1.07	142.33	90.28
456	1049.35	1200.00	7.56	8.64	-1.08	141.25	90.19
458	1047.75	1200.00	7.55	8.64	-1.09	140.16	90.09
460	1046.16	1200.00	7.54	8.64	-1.10	139.06	89.99
462	1044.56	1200.00	7.53	8.64	-1.11	137.95	89.88
464	1042.97	1200.00	7.52	8.64	-1.12	136.82	89.78
466	1041.37	1200.00	7.50	8.64	-1.14	135.69	89.67
468	1039.78	1200.00	7.49	8.64	-1.15	134.54	89.56
470	1038.16	1200.00	7.48	8.64	-1.16	133.38	89.45
472	1036.54	1200.00	7.47	8.64	-1.17	132.21	89.34
474	1034.92	1200.00	7.46	8.64	-1.18	131.03	89.23
476	1033.30	1200.00	7.45	8.64	-1.19	129.83	89.11
478	1031.68	1200.00	7.43	8.64	-1.21	128.63	88.99
480	1030.06	1200.00	7.42	8.64	-1.22	127.41	88.87
482	1028.44	1200.00	7.41	8.64	-1.23	126.18	88.74
484	1026.82	1200.00	7.40	8.64	-1.24	124.94	88.62
486	1025.20	1200.00	7.39	8.64	-1.25	123.68	88.49
488	1023.58	1200.00	7.38	8.64	-1.26	122.42	88.35

Table A-32 Kayraktepe Dam Flood Routing Table (Q_{500}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
490	1021.97	1200.00	7.36	8.64	-1.28	121.14	88.22
492	1020.35	1200.00	7.35	8.64	-1.29	119.86	88.08
494	1018.66	1200.00	7.34	8.64	-1.30	118.56	87.93
496	1016.97	1200.00	7.33	8.64	-1.31	117.25	87.79
498	1015.29	1200.00	7.32	8.64	-1.32	115.92	87.63
500	1013.60	1200.00	7.30	8.64	-1.34	114.59	87.48
502	1011.91	1200.00	7.29	8.64	-1.35	113.24	87.32
504	1010.23	1200.00	7.28	8.64	-1.36	111.88	87.15
506	1008.54	1200.00	7.27	8.64	-1.37	110.50	86.98
508	1006.85	1200.00	7.26	8.64	-1.38	109.12	86.81
510	1005.17	1200.00	7.24	8.64	-1.40	107.72	86.63
512	1003.48	1200.00	7.23	8.64	-1.41	106.31	86.44
514	1001.79	1200.00	7.22	8.64	-1.42	104.89	86.25
516	1000.11	1200.00	7.21	8.64	-1.43	103.46	86.05
518	998.66	1200.00	7.20	8.64	-1.44	102.02	85.85
520	997.21	1200.00	7.19	8.64	-1.45	100.56	85.65
522	995.76	1200.00	7.17	8.64	-1.47	99.10	85.43
524	994.32	1200.00	7.16	8.64	-1.48	97.62	85.22
526	992.87	1090.00	7.15	8.24	-1.09	96.53	85.05
528	991.42	991.42	7.14	7.49	-0.35	96.18	85.00
530	989.97	989.97	7.13	7.13	0.00	96.18	85.00
532	988.52	988.52	7.12	7.12	0.00	96.18	85.00
534	987.08	987.08	7.11	7.11	0.00	96.18	85.00
536	985.63	985.63	7.10	7.10	0.00	96.18	85.00
538	984.18	984.18	7.09	7.09	0.00	96.18	85.00
540	982.73	982.73	7.08	7.08	0.00	96.18	85.00
542	981.69	981.69	7.07	7.07	0.00	96.18	85.00
544	980.64	980.64	7.06	7.06	0.00	96.18	85.00
546	979.60	979.60	7.06	7.06	0.00	96.18	85.00
548	978.56	978.56	7.05	7.05	0.00	96.18	85.00
550	977.51	977.51	7.04	7.04	0.00	96.18	85.00
552	976.47	976.47	7.03	7.03	0.00	96.18	85.00
554	975.43	975.43	7.03	7.03	0.00	96.18	85.00
556	974.38	974.38	7.02	7.02	0.00	96.18	85.00
558	973.34	973.34	7.01	7.01	0.00	96.18	85.00

Table A-32 Kayraktepe Dam Flood Routing Table (Q_{500}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
560	972.30	972.30	7.00	7.00	0.00	96.18	85.00
562	971.25	971.25	7.00	7.00	0.00	96.18	85.00
564	970.21	970.21	6.99	6.99	0.00	96.18	85.00
566	969.30	969.30	6.98	6.98	0.00	96.18	85.00
568	968.38	968.38	6.98	6.98	0.00	96.18	85.00
570	967.47	967.47	6.97	6.97	0.00	96.18	85.00
572	966.55	966.55	6.96	6.96	0.00	96.18	85.00
574	965.64	965.64	6.96	6.96	0.00	96.18	85.00
576	964.72	964.72	6.95	6.95	0.00	96.18	85.00
578	963.81	963.81	6.94	6.94	0.00	96.18	85.00
580	962.90	962.90	6.94	6.94	0.00	96.18	85.00
582	961.98	961.98	6.93	6.93	0.00	96.18	85.00
584	961.07	961.07	6.92	6.92	0.00	96.18	85.00
586	960.15	960.15	6.92	6.92	0.00	96.18	85.00
588	959.24	959.24	6.91	6.91	0.00	96.18	85.00
590	959.24	959.24	6.91	6.91	0.00	96.18	85.00
592	959.24	959.24	6.91	6.91	0.00	96.18	85.00
594	929.20	929.20	6.80	6.80	0.00	96.18	85.00
596	899.16	899.16	6.58	6.58	0.00	96.18	85.00
598	889.72	889.72	6.44	6.44	0.00	96.18	85.00
600	880.28	880.28	6.37	6.37	0.00	96.18	85.00

Table A-33 Kayraktepe Dam Flood Routing Table (Q_{1000})

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
0	939.70	939.70				96.15	85.00
2	939.70	939.70	6.77	6.77	0.00	96.15	85.00
4	939.70	939.70	6.77	6.77	0.00	96.15	85.00
6	939.70	939.70	6.77	6.77	0.00	96.15	85.00
8	939.70	939.70	6.77	6.77	0.00	96.15	85.00
10	939.70	939.70	6.77	6.77	0.00	96.15	85.00
12	939.70	939.70	6.77	6.77	0.00	96.15	85.00
14	941.82	941.82	6.77	6.77	0.00	96.15	85.00
16	943.93	943.93	6.79	6.79	0.00	96.15	85.00
18	946.05	946.05	6.80	6.80	0.00	96.15	85.00
20	948.16	948.16	6.82	6.82	0.00	96.15	85.00
22	950.28	950.28	6.83	6.83	0.00	96.15	85.00
24	952.39	952.39	6.85	6.85	0.00	96.15	85.00
26	954.51	954.51	6.86	6.86	0.00	96.15	85.00
28	956.62	956.62	6.88	6.88	0.00	96.15	85.00
30	958.74	958.74	6.90	6.90	0.00	96.15	85.00
32	960.85	960.85	6.91	6.91	0.00	96.15	85.00
34	962.97	962.97	6.93	6.93	0.00	96.15	85.00
36	965.09	965.09	6.94	6.94	0.00	96.15	85.00
38	968.13	968.13	6.96	6.96	0.00	96.15	85.00
40	971.18	971.18	6.98	6.98	0.00	96.15	85.00
42	974.22	974.22	7.00	7.00	0.00	96.15	85.00
44	977.27	977.27	7.03	7.03	0.00	96.15	85.00
46	980.31	980.31	7.05	7.05	0.00	96.15	85.00
48	983.36	983.36	7.07	7.07	0.00	96.15	85.00
50	986.40	986.40	7.09	7.09	0.00	96.15	85.00
52	989.45	989.45	7.11	7.11	0.00	96.15	85.00
54	992.49	992.49	7.13	7.13	0.00	96.15	85.00
56	995.54	995.54	7.16	7.16	0.00	96.15	85.00
58	998.58	998.58	7.18	7.18	0.00	96.15	85.00
60	1001.63	1001.63	7.20	7.20	0.00	96.15	85.00
62	1005.51	1005.51	7.23	7.23	0.00	96.15	85.00
64	1009.39	1009.39	7.25	7.25	0.00	96.15	85.00
66	1013.27	1013.27	7.28	7.28	0.00	96.15	85.00
68	1017.16	1017.16	7.31	7.31	0.00	96.15	85.00

Table A-33 Kayraktepe Dam Flood Routing Table (Q_{1000}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
70	1021.04	1021.04	7.34	7.34	0.00	96.15	85.00
72	1024.92	1024.92	7.37	7.37	0.00	96.15	85.00
74	1028.80	1028.80	7.39	7.39	0.00	96.15	85.00
76	1032.68	1032.68	7.42	7.42	0.00	96.15	85.00
78	1036.57	1036.57	7.45	7.45	0.00	96.15	85.00
80	1040.45	1040.45	7.48	7.48	0.00	96.15	85.00
82	1044.33	1044.33	7.51	7.51	0.00	96.15	85.00
84	1048.21	1048.21	7.53	7.53	0.00	96.15	85.00
86	1052.49	1052.49	7.56	7.56	0.00	96.15	85.00
88	1056.77	1056.77	7.59	7.59	0.00	96.15	85.00
90	1061.06	1061.06	7.62	7.62	0.00	96.15	85.00
92	1065.34	1065.34	7.66	7.66	0.00	96.15	85.00
94	1069.62	1069.62	7.69	7.69	0.00	96.15	85.00
96	1073.90	1073.90	7.72	7.72	0.00	96.15	85.00
98	1078.18	1078.18	7.75	7.75	0.00	96.15	85.00
100	1082.46	1082.46	7.78	7.78	0.00	96.15	85.00
102	1086.74	1086.74	7.81	7.81	0.00	96.15	85.00
104	1091.03	1091.03	7.84	7.84	0.00	96.15	85.00
106	1095.31	1095.31	7.87	7.87	0.00	96.15	85.00
108	1099.59	1099.59	7.90	7.90	0.00	96.15	85.00
110	1103.87	1200.00	7.93	8.28	-0.35	95.80	84.95
112	1108.14	1200.00	7.96	8.64	-0.68	95.13	84.84
114	1112.42	1200.00	7.99	8.64	-0.65	94.48	84.75
116	1116.69	1200.00	8.02	8.64	-0.62	93.87	84.65
118	1120.97	1200.00	8.06	8.64	-0.58	93.28	84.56
120	1125.25	1200.00	8.09	8.64	-0.55	92.73	84.48
122	1129.52	1200.00	8.12	8.64	-0.52	92.21	84.40
124	1133.80	1200.00	8.15	8.64	-0.49	91.71	84.33
126	1138.07	1200.00	8.18	8.64	-0.46	91.25	84.25
128	1142.35	1200.00	8.21	8.64	-0.43	90.82	84.19
130	1146.63	1200.00	8.24	8.64	-0.40	90.42	84.13
132	1150.90	1200.00	8.27	8.64	-0.37	90.05	84.07
134	1154.93	1200.00	8.30	8.64	-0.34	89.71	84.52
136	1158.95	1200.00	8.33	8.64	-0.31	89.40	84.48
138	1162.56	1200.00	8.36	8.64	-0.28	89.12	84.44

Table A-33 Kayraktepe Dam Flood Routing Table (Q_{1000}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
140	1166.17	1200.00	8.38	8.64	-0.26	88.86	84.41
142	1168.06	1200.00	8.40	8.64	-0.24	88.63	84.38
144	1169.94	1200.00	8.42	8.64	-0.22	88.40	84.35
146	1171.83	1200.00	8.43	8.64	-0.21	88.19	84.32
148	1173.72	1200.00	8.44	8.64	-0.20	88.00	84.29
150	1175.60	1200.00	8.46	8.64	-0.18	87.82	84.26
152	1177.49	1200.00	8.47	8.64	-0.17	87.65	84.24
154	1179.37	1200.00	8.48	8.64	-0.16	87.49	84.22
156	1181.26	1200.00	8.50	8.64	-0.14	87.35	84.20
158	1183.11	1200.00	8.51	8.64	-0.13	87.22	84.18
160	1184.96	1200.00	8.53	8.64	-0.11	87.11	84.16
162	1186.81	1200.00	8.54	8.64	-0.10	87.01	84.14
164	1188.65	1200.00	8.55	8.64	-0.09	86.92	84.13
166	1190.50	1200.00	8.56	8.64	-0.08	86.84	84.12
168	1192.35	1200.00	8.58	8.64	-0.06	86.78	84.11
170	1194.20	1200.00	8.59	8.64	-0.05	86.73	84.10
172	1196.04	1200.00	8.60	8.64	-0.04	86.70	84.10
174	1197.89	1200.00	8.62	8.64	-0.02	86.68	84.09
176	1199.74	1200.00	8.63	8.64	-0.01	86.67	84.09
178	1201.59	1300.00	8.64	9.00	-0.36	86.31	84.04
180	1203.44	1300.00	8.66	9.36	-0.70	85.61	83.92
182	1208.34	1300.00	8.68	9.36	-0.68	84.93	83.80
184	1213.24	1300.00	8.72	9.36	-0.64	84.29	83.69
186	1218.15	1300.00	8.75	9.36	-0.61	83.68	83.58
188	1223.05	1300.00	8.79	9.36	-0.57	83.11	83.47
190	1227.96	1300.00	8.82	9.36	-0.54	82.57	83.37
192	1232.86	1300.00	8.86	9.36	-0.50	82.07	83.27
194	1237.76	1300.00	8.89	9.36	-0.47	81.61	83.18
196	1242.67	1300.00	8.93	9.36	-0.43	81.18	83.09
198	1247.57	1300.00	8.96	9.36	-0.40	80.78	83.01
200	1252.48	1300.00	9.00	9.36	-0.36	80.42	82.93
202	1257.38	1300.00	9.04	9.36	-0.32	80.10	82.86
204	1262.28	1300.00	9.07	9.36	-0.29	79.81	82.80
206	1266.99	1300.00	9.11	9.36	-0.25	79.55	82.74
208	1271.69	1300.00	9.14	9.36	-0.22	79.33	82.70

Table A-33 Kayraktepe Dam Flood Routing Table (Q_{1000}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
210	1276.40	1300.00	9.17	9.36	-0.19	79.15	82.66
212	1281.10	1300.00	9.21	9.36	-0.15	78.99	82.62
214	1285.81	1300.00	9.24	9.36	-0.12	78.87	82.59
216	1290.51	1300.00	9.27	9.36	-0.09	78.79	82.58
218	1295.22	1300.00	9.31	9.36	-0.05	78.74	82.56
220	1299.93	1300.00	9.34	9.36	-0.02	78.72	82.56
222	1304.63	1400.00	9.38	9.72	-0.34	78.38	82.48
224	1309.34	1400.00	9.41	10.08	-0.67	77.71	82.33
226	1314.04	1400.00	9.44	10.08	-0.64	77.07	82.18
228	1318.75	1400.00	9.48	10.08	-0.60	76.47	82.04
230	1330.95	1400.00	9.54	10.08	-0.54	75.93	81.92
232	1343.16	1400.00	9.63	10.08	-0.45	75.47	81.81
234	1355.37	1400.00	9.71	10.08	-0.37	75.11	81.72
236	1367.58	1400.00	9.80	10.08	-0.28	74.83	81.65
238	1379.79	1400.00	9.89	10.08	-0.19	74.64	81.61
240	1391.99	1400.00	9.98	10.08	-0.10	74.54	81.58
242	1404.20	1535.00	10.07	10.57	-0.50	74.04	81.46
244	1416.41	1535.00	10.15	11.05	-0.90	73.14	81.23
246	1428.62	1535.00	10.24	11.05	-0.81	72.33	81.03
248	1440.82	1535.00	10.33	11.05	-0.72	71.61	80.85
250	1453.03	1535.00	10.42	11.05	-0.63	70.98	80.68
252	1465.24	1535.00	10.51	11.05	-0.55	70.43	80.54
254	1492.49	1535.00	10.65	11.05	-0.40	70.03	80.44
256	1519.74	1535.00	10.84	11.05	-0.21	69.82	80.38
258	1546.98	1535.00	11.04	11.05	-0.01	69.81	80.38
260	1574.23	1535.00	11.24	11.05	0.18	69.99	80.43
262	1608.22	1535.00	11.46	11.05	0.40	70.40	80.53
264	1642.21	1535.00	11.70	11.05	0.65	71.05	80.70
266	1659.92	1535.00	11.89	11.05	0.84	71.88	80.92
268	1677.63	1535.00	12.02	11.05	0.96	72.84	81.16
270	1693.63	1535.00	12.14	11.05	1.08	73.93	81.43
272	1709.63	1535.00	12.25	11.05	1.20	75.13	81.72
274	1725.63	1535.00	12.37	11.05	1.31	76.44	82.04
276	1741.63	1535.00	12.48	11.05	1.43	77.87	82.37
278	1776.72	1535.00	12.67	11.05	1.61	79.49	82.73

Table A-33 Kayraktepe Dam Flood Routing Table (Q_{1000}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
280	1811.81	1535.00	12.92	11.05	1.87	81.36	83.12
282	1846.90	1535.00	13.17	11.05	2.12	83.47	83.54
284	1881.99	1535.00	13.42	11.05	2.37	85.85	83.96
286	1917.08	1535.00	13.68	11.05	2.62	88.47	84.36
288	1952.17	1535.00	13.93	11.05	2.88	91.35	84.27
290	1987.26	1535.00	14.18	11.05	3.13	94.48	84.75
292	2022.35	1535.00	14.43	11.05	3.38	97.86	85.25
294	2160.65	1535.00	15.06	11.05	4.01	101.87	85.83
296	2298.95	1535.00	16.05	11.05	5.00	106.87	86.52
298	2540.45	1535.00	17.42	11.05	6.37	113.24	87.32
300	2781.96	1535.00	19.16	11.05	8.11	121.35	88.24
302	2540.45	1535.00	19.16	11.05	8.11	129.46	89.07
304	2298.95	1535.00	17.42	11.05	6.37	135.83	89.69
306	2160.65	1535.00	16.05	11.05	5.00	140.83	90.15
308	2022.35	1535.00	15.06	11.05	4.01	144.84	90.51
310	1987.26	1535.00	14.43	11.05	3.38	148.22	90.81
312	1952.17	1535.00	14.18	11.05	3.13	151.35	91.08
314	1917.08	1535.00	13.93	11.05	2.88	154.23	91.32
316	1881.99	1535.00	13.68	11.05	2.62	156.85	91.54
318	1846.90	1535.00	13.42	11.05	2.37	159.22	91.73
320	1811.81	1535.00	13.17	11.05	2.12	161.34	91.90
322	1776.72	1535.00	12.92	11.05	1.87	163.21	92.05
324	1741.63	1535.00	12.67	11.05	1.61	164.82	92.18
326	1725.63	1535.00	12.48	11.05	1.43	166.25	92.29
328	1709.63	1535.00	12.37	11.05	1.31	167.57	92.39
330	1693.63	1535.00	12.25	11.05	1.20	168.77	92.48
332	1677.63	1535.00	12.14	11.05	1.08	169.85	92.56
334	1661.63	1535.00	12.02	11.05	0.97	170.82	92.63
336	1645.63	1535.00	11.91	11.05	0.85	171.68	92.70
338	1629.63	1535.00	11.79	11.05	0.74	172.42	92.75
340	1613.64	1535.00	11.68	11.05	0.62	173.04	92.80
342	1597.64	1535.00	11.56	11.05	0.51	173.55	92.84
344	1581.64	1535.00	11.45	11.05	0.39	173.94	92.87
346	1565.64	1535.00	11.33	11.05	0.28	174.22	92.89
348	1549.64	1535.00	11.21	11.05	0.16	174.38	92.90

Table A-33 Kayraktepe Dam Flood Routing Table (Q_{1000}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
350	1542.26	1535.00	11.13	11.05	0.08	174.46	92.91
352	1534.87	1535.00	11.08	11.05	0.03	174.49	**92.91**
354	1527.49	1535.00	11.02	11.05	-0.03	174.46	92.91
356	1520.11	1535.00	10.97	11.05	-0.08	174.38	92.90
358	1512.73	1535.00	10.92	11.05	-0.13	174.24	92.89
360	1505.35	1535.00	10.87	11.05	-0.19	174.06	92.88
362	1497.96	1535.00	10.81	11.05	-0.24	173.82	92.86
364	1490.58	1535.00	10.76	11.05	-0.29	173.52	92.84
366	1483.20	1535.00	10.71	11.05	-0.35	173.18	92.81
368	1475.82	1535.00	10.65	11.05	-0.40	172.78	92.78
370	1468.44	1535.00	10.60	11.05	-0.45	172.33	92.75
372	1461.05	1535.00	10.55	11.05	-0.51	171.82	92.71
374	1458.30	1535.00	10.51	11.05	-0.54	171.28	92.67
376	1455.54	1535.00	10.49	11.05	-0.56	170.72	92.63
378	1452.78	1535.00	10.47	11.05	-0.58	170.13	92.58
380	1450.02	1535.00	10.45	11.05	-0.60	169.53	92.54
382	1447.26	1535.00	10.43	11.05	-0.62	168.91	92.49
384	1444.50	1535.00	10.41	11.05	-0.64	168.27	92.44
386	1441.74	1535.00	10.39	11.05	-0.66	167.61	92.39
388	1438.98	1535.00	10.37	11.05	-0.68	166.93	92.34
390	1436.22	1535.00	10.35	11.05	-0.70	166.22	92.28
392	1433.46	1535.00	10.33	11.05	-0.72	165.50	92.23
394	1430.70	1535.00	10.31	11.05	-0.74	164.76	92.17
396	1427.95	1535.00	10.29	11.05	-0.76	164.00	92.11
398	1424.82	1535.00	10.27	11.05	-0.78	163.22	92.05
400	1421.69	1535.00	10.25	11.05	-0.80	162.41	91.99
402	1418.56	1535.00	10.22	11.05	-0.83	161.59	91.92
404	1415.44	1535.00	10.20	11.05	-0.85	160.74	91.85
406	1412.31	1535.00	10.18	11.05	-0.87	159.87	91.78
408	1409.18	1535.00	10.16	11.05	-0.89	158.97	91.71
410	1406.05	1535.00	10.13	11.05	-0.92	158.05	91.64
412	1402.93	1535.00	10.11	11.05	-0.94	157.11	91.56
414	1399.80	1535.00	10.09	11.05	-0.96	156.15	91.48
416	1396.67	1535.00	10.07	11.05	-0.98	155.17	91.40
418	1393.54	1535.00	10.04	11.05	-1.01	154.16	91.32

Table A-33 Kayraktepe Dam Flood Routing Table (Q_{1000}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
420	1390.42	1535.00	10.02	11.05	-1.03	153.13	91.23
422	1388.48	1535.00	10.00	11.05	-1.05	152.08	91.14
424	1386.55	1535.00	9.99	11.05	-1.06	151.02	91.05
426	1358.96	1535.00	9.88	11.05	-1.17	149.85	90.95
428	1331.36	1535.00	9.69	11.05	-1.37	148.49	90.83
430	1329.43	1535.00	9.58	11.05	-1.47	147.01	90.70
432	1327.50	1535.00	9.56	11.05	-1.49	145.53	90.57
434	1277.09	1535.00	9.38	11.05	-1.68	143.85	90.42
436	1226.68	1535.00	9.01	11.05	-2.04	141.81	90.24
438	1205.82	1535.00	8.76	11.05	-2.29	139.52	90.03
440	1184.96	1535.00	8.61	11.05	-2.45	137.07	89.80
442	1183.11	1535.00	8.53	11.05	-2.53	134.54	89.56
444	1181.26	1535.00	8.51	11.05	-2.54	132.00	89.32
446	1179.37	1535.00	8.50	11.05	-2.55	129.45	89.07
448	1177.49	1535.00	8.48	11.05	-2.57	126.88	88.82
450	1175.60	1535.00	8.47	11.05	-2.58	124.30	88.55
452	1173.72	1535.00	8.46	11.05	-2.59	121.71	88.28
454	1171.83	1535.00	8.44	11.05	-2.61	119.10	87.99
456	1169.94	1535.00	8.43	11.05	-2.62	116.48	87.70
458	1168.06	1535.00	8.42	11.05	-2.64	113.84	87.39
460	1166.17	1535.00	8.40	11.05	-2.65	111.19	87.07
462	1164.28	1535.00	8.39	11.05	-2.66	108.53	86.73
464	1162.40	1535.00	8.38	11.05	-2.68	105.86	86.38
466	1160.51	1535.00	8.36	11.05	-2.69	103.17	86.01
468	1158.62	1535.00	8.35	11.05	-2.70	100.46	85.63
470	1156.11	1535.00	8.33	11.05	-2.72	97.74	85.23
472	1153.59	1180.00	8.31	9.77	-1.46	96.29	85.02
474	1151.07	1151.07	8.30	8.39	-0.10	96.19	85.00
476	1148.56	1148.56	8.28	8.28	0.00	96.19	85.00
478	1146.04	1146.04	8.26	8.26	0.00	96.19	85.00
480	1143.52	1143.52	8.24	8.24	0.00	96.19	85.00
482	1141.00	1141.00	8.22	8.22	0.00	96.19	85.00
484	1138.49	1138.49	8.21	8.21	0.00	96.19	85.00
486	1135.97	1135.97	8.19	8.19	0.00	96.19	85.00
488	1133.45	1133.45	8.17	8.17	0.00	96.19	85.00

Table A-33 Kayraktepe Dam Flood Routing Table (Q_{1000}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
490	1130.93	1130.93	8.15	8.15	0.00	96.19	85.00
492	1128.42	1128.42	8.13	8.13	0.00	96.19	85.00
494	1125.61	1125.61	8.11	8.11	0.00	96.19	85.00
496	1122.81	1122.81	8.09	8.09	0.00	96.19	85.00
498	1120.00	1120.00	8.07	8.07	0.00	96.19	85.00
500	1117.20	1117.20	8.05	8.05	0.00	96.19	85.00
502	1114.40	1114.40	8.03	8.03	0.00	96.19	85.00
504	1111.59	1111.59	8.01	8.01	0.00	96.19	85.00
506	1108.79	1108.79	7.99	7.99	0.00	96.19	85.00
508	1105.98	1105.98	7.97	7.97	0.00	96.19	85.00
510	1103.18	1103.18	7.95	7.95	0.00	96.19	85.00
512	1100.37	1100.37	7.93	7.93	0.00	96.19	85.00
514	1097.57	1097.57	7.91	7.91	0.00	96.19	85.00
516	1094.77	1094.77	7.89	7.89	0.00	96.19	85.00
518	1092.44	1092.44	7.87	7.87	0.00	96.19	85.00
520	1090.12	1090.12	7.86	7.86	0.00	96.19	85.00
522	1087.79	1087.79	7.84	7.84	0.00	96.19	85.00
524	1085.47	1085.47	7.82	7.82	0.00	96.19	85.00
526	1083.14	1083.14	7.81	7.81	0.00	96.19	85.00
528	1080.82	1080.82	7.79	7.79	0.00	96.19	85.00
530	1078.49	1078.49	7.77	7.77	0.00	96.19	85.00
532	1076.17	1076.17	7.76	7.76	0.00	96.19	85.00
534	1073.84	1073.84	7.74	7.74	0.00	96.19	85.00
536	1071.52	1071.52	7.72	7.72	0.00	96.19	85.00
538	1069.19	1069.19	7.71	7.71	0.00	96.19	85.00
540	1066.87	1066.87	7.69	7.69	0.00	96.19	85.00
542	1065.37	1065.37	7.68	7.68	0.00	96.19	85.00
544	1063.87	1063.87	7.67	7.67	0.00	96.19	85.00
546	1062.37	1062.37	7.65	7.65	0.00	96.19	85.00
548	1060.87	1060.87	7.64	7.64	0.00	96.19	85.00
550	1059.37	1059.37	7.63	7.63	0.00	96.19	85.00
552	1057.87	1057.87	7.62	7.62	0.00	96.19	85.00
554	1056.37	1056.37	7.61	7.61	0.00	96.19	85.00
556	1054.87	1054.87	7.60	7.60	0.00	96.19	85.00
558	1053.37	1053.37	7.59	7.59	0.00	96.19	85.00

Table A-33 Kayraktepe Dam Flood Routing Table (Q_{1000}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
560	1051.87	1051.87	7.58	7.58	0.00	96.19	85.00
562	1050.37	1050.37	7.57	7.57	0.00	96.19	85.00
564	1048.87	1048.87	7.56	7.56	0.00	96.19	85.00
566	1047.35	1047.35	7.55	7.55	0.00	96.19	85.00
568	1045.83	1045.83	7.54	7.54	0.00	96.19	85.00
570	1044.32	1044.32	7.52	7.52	0.00	96.19	85.00
572	1042.80	1042.80	7.51	7.51	0.00	96.19	85.00
574	1041.28	1041.28	7.50	7.50	0.00	96.19	85.00
576	1039.76	1039.76	7.49	7.49	0.00	96.19	85.00
578	1038.24	1038.24	7.48	7.48	0.00	96.19	85.00
580	1036.72	1036.72	7.47	7.47	0.00	96.19	85.00
582	1035.21	1035.21	7.46	7.46	0.00	96.19	85.00
584	1033.69	1033.69	7.45	7.45	0.00	96.19	85.00
586	1032.17	1032.17	7.44	7.44	0.00	96.19	85.00
588	1030.65	1030.65	7.43	7.43	0.00	96.19	85.00
590	1030.65	1030.65	7.42	7.42	0.00	96.19	85.00
592	1030.65	1030.65	7.42	7.42	0.00	96.19	85.00
594	1030.65	1030.65	7.42	7.42	0.00	96.19	85.00
596	1030.65	1030.65	7.42	7.42	0.00	96.19	85.00
598	1030.65	1030.65	7.42	7.42	0.00	96.19	85.00
600	1030.65	1030.65	7.42	7.42	0.00	96.19	85.00

Table A-34 Kayraktepe Dam Flood Routing Table (Q_{10000})

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
0	1060.02	1060.02				96.15	85.00
2	1060.02	1060.02	7.63	7.63	0.00	96.15	85.00
4	1060.02	1060.02	7.63	7.63	0.00	96.15	85.00
6	1060.02	1060.02	7.63	7.63	0.00	96.15	85.00
8	1060.02	1060.02	7.63	7.63	0.00	96.15	85.00
10	1060.02	1060.02	7.63	7.63	0.00	96.15	85.00
12	1060.02	1060.02	7.63	7.63	0.00	96.15	85.00
14	1062.40	1062.40	7.64	7.64	0.00	96.15	85.00
16	1064.77	1064.77	7.66	7.66	0.00	96.15	85.00
18	1067.15	1067.15	7.67	7.67	0.00	96.15	85.00
20	1069.53	1069.53	7.69	7.69	0.00	96.15	85.00
22	1071.91	1071.91	7.71	7.71	0.00	96.15	85.00
24	1074.28	1074.28	7.73	7.73	0.00	96.15	85.00
26	1076.66	1076.66	7.74	7.74	0.00	96.15	85.00
28	1079.04	1079.04	7.76	7.76	0.00	96.15	85.00
30	1081.42	1081.42	7.78	7.78	0.00	96.15	85.00
32	1083.80	1083.80	7.79	7.79	0.00	96.15	85.00
34	1086.17	1086.17	7.81	7.81	0.00	96.15	85.00
36	1088.55	1088.55	7.83	7.83	0.00	96.15	85.00
38	1092.20	1092.20	7.85	7.85	0.00	96.15	85.00
40	1095.86	1095.86	7.88	7.88	0.00	96.15	85.00
42	1099.51	1099.51	7.90	7.90	0.00	96.15	85.00
44	1103.16	1200.00	7.93	8.28	-0.35	95.80	84.95
46	1106.81	1200.00	7.96	8.64	-0.68	95.12	84.84
48	1110.46	1200.00	7.98	8.64	-0.66	94.46	84.74
50	1114.11	1200.00	8.01	8.64	-0.63	93.83	84.65
52	1117.76	1200.00	8.03	8.64	-0.61	93.22	84.56
54	1121.41	1200.00	8.06	8.64	-0.58	92.64	84.47
56	1125.07	1200.00	8.09	8.64	-0.55	92.09	84.38
58	1128.72	1200.00	8.11	8.64	-0.53	91.56	84.30
60	1132.37	1200.00	8.14	8.64	-0.50	91.06	84.23
62	1136.93	1200.00	8.17	8.64	-0.47	90.59	84.15
64	1141.49	1200.00	8.20	8.64	-0.44	90.16	84.09
66	1146.06	1200.00	8.24	8.64	-0.40	89.75	84.52
68	1150.62	1200.00	8.27	8.64	-0.37	89.38	84.47

Table A-34 Kayraktepe Dam Flood Routing Table (Q_{10000}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
70	1155.18	1200.00	8.30	8.64	-0.34	89.04	84.43
72	1159.75	1200.00	8.33	8.64	-0.31	88.73	84.39
74	1164.31	1200.00	8.37	8.64	-0.27	88.46	84.35
76	1168.87	1200.00	8.40	8.64	-0.24	88.22	84.32
78	1173.44	1200.00	8.43	8.64	-0.21	88.01	84.29
80	1178.00	1200.00	8.47	8.64	-0.17	87.84	84.27
82	1182.56	1200.00	8.50	8.64	-0.14	87.70	84.25
84	1187.13	1200.00	8.53	8.64	-0.11	87.59	84.23
86	1192.09	1200.00	8.57	8.64	-0.07	87.51	84.22
88	1197.05	1200.00	8.60	8.64	-0.04	87.47	84.21
90	1202.01	1300.00	8.64	9.00	-0.36	87.11	84.16
92	1206.97	1300.00	8.67	9.36	-0.69	86.42	84.05
94	1211.93	1300.00	8.71	9.36	-0.65	85.77	83.95
96	1216.89	1300.00	8.74	9.36	-0.62	85.15	83.84
98	1221.85	1300.00	8.78	9.36	-0.58	84.57	83.74
100	1226.82	1300.00	8.82	9.36	-0.54	84.03	83.64
102	1231.78	1300.00	8.85	9.36	-0.51	83.52	83.55
104	1236.74	1300.00	8.89	9.36	-0.47	83.05	83.46
106	1241.70	1300.00	8.92	9.36	-0.44	82.61	83.38
108	1246.66	1300.00	8.96	9.36	-0.40	82.21	83.30
110	1251.71	1300.00	8.99	9.36	-0.37	81.84	83.22
112	1256.75	1300.00	9.03	9.36	-0.33	81.51	83.16
114	1261.79	1300.00	9.07	9.36	-0.29	81.22	83.10
116	1266.84	1300.00	9.10	9.36	-0.26	80.96	83.04
118	1271.88	1300.00	9.14	9.36	-0.22	80.74	83.00
120	1276.93	1300.00	9.18	9.36	-0.18	80.56	82.96
122	1281.97	1300.00	9.21	9.36	-0.15	80.41	82.93
124	1287.02	1300.00	9.25	9.36	-0.11	80.30	82.90
126	1292.06	1300.00	9.28	9.36	-0.08	80.22	82.89
128	1297.10	1300.00	9.32	9.36	-0.04	80.18	82.88
130	1302.15	1400.00	9.36	9.72	-0.36	79.82	82.80
132	1307.19	1400.00	9.39	10.08	-0.69	79.13	82.65
134	1312.17	1400.00	9.43	10.08	-0.65	78.48	82.51
136	1317.15	1400.00	9.47	10.08	-0.61	77.87	82.37
138	1322.12	1400.00	9.50	10.08	-0.58	77.29	82.24

Table A-34 Kayraktepe Dam Flood Routing Table (Q_{10000}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
140	1327.10	1400.00	9.54	10.08	-0.54	76.75	82.11
142	1332.07	1400.00	9.57	10.08	-0.51	76.24	81.99
144	1337.05	1400.00	9.61	10.08	-0.47	75.77	81.88
146	1342.03	1400.00	9.64	10.08	-0.44	75.33	81.77
148	1347.00	1400.00	9.68	10.08	-0.40	74.93	81.68
150	1351.98	1400.00	9.72	10.08	-0.36	74.57	81.59
152	1356.96	1400.00	9.75	10.08	-0.33	74.24	81.51
154	1361.93	1400.00	9.79	10.08	-0.29	73.95	81.44
156	1366.91	1400.00	9.82	10.08	-0.26	73.69	81.37
158	1372.51	1400.00	9.86	10.08	-0.22	73.48	81.32
160	1378.12	1400.00	9.90	10.08	-0.18	73.30	81.27
162	1383.72	1400.00	9.94	10.08	-0.14	73.16	81.24
164	1389.32	1400.00	9.98	10.08	-0.10	73.06	81.21
166	1394.93	1400.00	10.02	10.08	-0.06	73.01	81.20
168	1400.53	1500.00	10.06	10.44	-0.38	72.63	81.11
170	1406.13	1500.00	10.10	10.80	-0.70	71.93	80.93
172	1411.74	1500.00	10.14	10.80	-0.66	71.28	80.76
174	1417.34	1500.00	10.18	10.80	-0.62	70.66	80.60
176	1422.94	1500.00	10.23	10.80	-0.57	70.09	80.45
178	1428.55	1500.00	10.27	10.80	-0.53	69.55	80.31
180	1434.15	1500.00	10.31	10.80	-0.49	69.06	80.18
182	1440.57	1500.00	10.35	10.80	-0.45	68.61	80.06
184	1446.98	1500.00	10.40	10.80	-0.40	68.20	79.96
186	1461.05	1500.00	10.47	10.80	-0.33	67.87	79.87
188	1475.13	1500.00	10.57	10.80	-0.23	67.64	79.81
190	1480.65	1500.00	10.64	10.80	-0.16	67.48	79.76
192	1486.17	1500.00	10.68	10.80	-0.12	67.36	79.73
194	1491.69	1500.00	10.72	10.80	-0.08	67.28	79.71
196	1497.20	1500.00	10.76	10.80	-0.04	67.24	79.70
198	1502.72	1600.00	10.80	11.16	-0.36	66.88	79.60
200	1508.24	1600.00	10.84	11.52	-0.68	66.20	79.42
202	1513.76	1600.00	10.88	11.52	-0.64	65.56	79.25
204	1519.28	1600.00	10.92	11.52	-0.60	64.96	79.08
206	1524.20	1600.00	10.96	11.52	-0.56	64.40	78.93
208	1529.12	1600.00	10.99	11.52	-0.53	63.87	78.78

Table A-34 Kayraktepe Dam Flood Routing Table (Q_{10000}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
210	1534.04	1600.00	11.03	11.52	-0.49	63.38	78.65
212	1538.95	1600.00	11.06	11.52	-0.46	62.92	78.52
214	1543.87	1600.00	11.10	11.52	-0.42	62.50	78.41
216	1548.79	1600.00	11.13	11.52	-0.39	62.11	78.30
218	1553.71	1600.00	11.17	11.52	-0.35	61.76	78.20
220	1558.63	1600.00	11.20	11.52	-0.32	61.45	78.11
222	1563.55	1600.00	11.24	11.52	-0.28	61.17	78.04
224	1568.46	1600.00	11.28	11.52	-0.24	60.92	77.97
226	1573.38	1600.00	11.31	11.52	-0.21	60.71	77.91
228	1578.30	1600.00	11.35	11.52	-0.17	60.54	77.86
230	1592.04	1600.00	11.41	11.52	-0.11	60.43	77.83
232	1605.77	1700.00	11.51	11.88	-0.37	60.06	77.73
234	1619.51	1700.00	11.61	12.24	-0.63	59.43	77.55
236	1633.24	1700.00	11.71	12.24	-0.53	58.90	77.40
238	1646.98	1700.00	11.81	12.24	-0.43	58.47	77.28
240	1660.71	1700.00	11.91	12.24	-0.33	58.14	77.19
242	1674.45	1700.00	12.01	12.24	-0.23	57.91	77.12
244	1688.18	1700.00	12.11	12.24	-0.13	57.77	77.08
246	1701.92	1700.00	12.20	12.24	-0.04	57.74	77.07
248	1715.65	1700.00	12.30	12.24	0.06	57.80	77.09
250	1729.39	1700.00	12.40	12.24	0.16	57.96	77.14
252	1743.13	1700.00	12.50	12.24	0.26	58.22	77.21
254	1773.95	1700.00	12.66	12.24	0.42	58.64	77.33
256	1804.78	1835.00	12.88	12.73	0.16	58.80	77.37
258	1835.61	1835.00	13.11	13.21	-0.11	58.70	77.34
260	1866.44	1835.00	13.33	13.21	0.12	58.81	77.38
262	1890.44	1835.00	13.52	13.21	0.31	59.12	77.46
264	1914.44	1835.00	13.70	13.21	0.49	59.61	77.60
266	1937.48	1835.00	13.87	13.21	0.65	60.26	77.78
268	1960.53	1835.00	14.03	13.21	0.82	61.09	78.01
270	1981.29	1835.00	14.19	13.21	0.98	62.06	78.29
272	2002.05	1835.00	14.34	13.21	1.13	63.19	78.60
274	2022.82	1835.00	14.49	13.21	1.28	64.47	78.95
276	2043.58	1835.00	14.64	13.21	1.43	65.90	79.34
278	2087.71	1835.00	14.87	13.21	1.66	67.56	79.78

Table A-34 Kayraktepe Dam Flood Routing Table (Q_{10000}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
280	2131.85	1835.00	15.19	13.21	1.98	69.54	80.31
282	2175.99	1835.00	15.51	13.21	2.30	71.83	80.90
284	2220.12	1835.00	15.83	13.21	2.61	74.45	81.56
286	2264.26	1835.00	16.14	13.21	2.93	77.38	82.26
288	2308.39	1835.00	16.46	13.21	3.25	80.63	82.97
290	2352.53	1835.00	16.78	13.21	3.57	84.19	83.67
292	2396.67	1835.00	17.10	13.21	3.89	88.08	84.30
294	2577.95	1835.00	17.91	13.21	4.70	92.78	84.49
296	2759.24	1835.00	19.21	13.21	6.00	98.78	85.39
298	3077.68	1835.00	21.01	13.21	7.80	106.58	86.48
300	3396.12	1835.00	23.31	13.21	10.09	116.67	87.72
302	3077.68	1835.00	23.31	13.21	10.09	126.77	88.80
304	2759.24	1835.00	21.01	13.21	7.80	134.57	89.57
306	2577.95	1835.00	19.21	13.21	6.00	140.57	90.12
308	2396.67	1835.00	17.91	13.21	4.70	145.27	90.55
310	2352.53	1835.00	17.10	13.21	3.89	149.15	90.89
312	2308.39	1835.00	16.78	13.21	3.57	152.72	91.19
314	2264.26	1835.00	16.46	13.21	3.25	155.97	91.47
316	2220.12	1835.00	16.14	13.21	2.93	158.90	91.71
318	2175.99	1835.00	15.83	13.21	2.61	161.51	91.92
320	2131.85	1835.00	15.51	13.21	2.30	163.81	92.10
322	2087.71	1835.00	15.19	13.21	1.98	165.79	92.25
324	2043.58	1835.00	14.87	13.21	1.66	167.45	92.38
326	2022.82	1835.00	14.64	13.21	1.43	168.88	92.49
328	2002.05	1835.00	14.49	13.21	1.28	170.15	92.58
330	1981.29	1835.00	14.34	13.21	1.13	171.28	92.67
332	1960.53	1835.00	14.19	13.21	0.98	172.26	92.74
334	1939.76	1835.00	14.04	13.21	0.83	173.09	92.80
336	1919.00	1835.00	13.89	13.21	0.68	173.77	92.86
338	1898.24	1835.00	13.74	13.21	0.53	174.30	92.90
340	1877.48	1835.00	13.59	13.21	0.38	174.68	92.92
342	1856.71	1835.00	13.44	13.21	0.23	174.91	92.94
344	1835.95	1835.00	13.29	13.21	0.08	174.99	**92.95**
346	1815.19	1835.00	13.14	13.21	-0.07	174.92	92.94
348	1794.43	1835.00	12.99	13.21	-0.22	174.71	92.93

Table A-34 Kayraktepe Dam Flood Routing Table (Q_{10000}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
350	1784.99	1835.00	12.89	13.21	-0.33	174.38	92.90
352	1775.56	1835.00	12.82	13.21	-0.39	173.99	92.87
354	1766.13	1835.00	12.75	13.21	-0.46	173.52	92.84
356	1756.69	1835.00	12.68	13.21	-0.53	172.99	92.80
358	1747.26	1835.00	12.61	13.21	-0.60	172.40	92.75
360	1737.83	1835.00	12.55	13.21	-0.67	171.73	92.70
362	1728.39	1835.00	12.48	13.21	-0.73	171.00	92.65
364	1718.96	1835.00	12.41	13.21	-0.80	170.20	92.59
366	1709.53	1835.00	12.34	13.21	-0.87	169.33	92.52
368	1700.09	1835.00	12.27	13.21	-0.94	168.39	92.45
370	1690.66	1835.00	12.21	13.21	-1.01	167.38	92.37
372	1681.23	1835.00	12.14	13.21	-1.07	166.31	92.29
374	1678.00	1835.00	12.09	13.21	-1.12	165.19	92.20
376	1674.77	1835.00	12.07	13.21	-1.14	164.05	92.12
378	1671.55	1835.00	12.05	13.21	-1.17	162.88	92.02
380	1668.32	1835.00	12.02	13.21	-1.19	161.70	91.93
382	1665.09	1835.00	12.00	13.21	-1.21	160.48	91.83
384	1661.87	1835.00	11.98	13.21	-1.23	159.25	91.73
386	1658.64	1835.00	11.95	13.21	-1.26	157.99	91.63
388	1655.41	1835.00	11.93	13.21	-1.28	156.71	91.53
390	1652.19	1835.00	11.91	13.21	-1.30	155.41	91.42
392	1648.96	1835.00	11.88	13.21	-1.33	154.08	91.31
394	1645.73	1835.00	11.86	13.21	-1.35	152.73	91.19
396	1642.51	1835.00	11.84	13.21	-1.37	151.35	91.08
398	1638.57	1835.00	11.81	13.21	-1.40	149.95	90.96
400	1634.64	1835.00	11.78	13.21	-1.43	148.52	90.83
402	1630.70	1835.00	11.76	13.21	-1.46	147.07	90.71
404	1626.77	1835.00	11.73	13.21	-1.49	145.58	90.58
406	1622.84	1835.00	11.70	13.21	-1.51	144.07	90.44
408	1618.90	1835.00	11.67	13.21	-1.54	142.53	90.30
410	1614.97	1835.00	11.64	13.21	-1.57	140.96	90.16
412	1611.03	1835.00	11.61	13.21	-1.60	139.36	90.01
414	1607.10	1835.00	11.59	13.21	-1.63	137.73	89.86
416	1603.17	1835.00	11.56	13.21	-1.66	136.08	89.71
418	1599.23	1835.00	11.53	13.21	-1.68	134.39	89.55

Table A-34 Kayraktepe Dam Flood Routing Table (Q_{10000}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
420	1595.30	1835.00	11.50	13.21	-1.71	132.68	89.39
422	1592.85	1835.00	11.48	13.21	-1.73	130.95	89.22
424	1590.39	1835.00	11.46	13.21	-1.75	129.19	89.05
426	1587.94	1835.00	11.44	13.21	-1.77	127.42	88.87
428	1585.49	1835.00	11.42	13.21	-1.79	125.64	88.69
430	1583.04	1835.00	11.41	13.21	-1.81	123.83	88.50
432	1580.59	1835.00	11.39	13.21	-1.82	122.01	88.31
434	1578.14	1835.00	11.37	13.21	-1.84	120.17	88.11
436	1575.69	1835.00	11.35	13.21	-1.86	118.31	87.91
438	1573.23	1835.00	11.34	13.21	-1.88	116.43	87.69
440	1570.78	1835.00	11.32	13.21	-1.89	114.54	87.47
442	1568.33	1835.00	11.30	13.21	-1.91	112.63	87.24
444	1565.88	1835.00	11.28	13.21	-1.93	110.70	87.01
446	1563.57	1835.00	11.27	13.21	-1.95	108.75	86.76
448	1561.27	1835.00	11.25	13.21	-1.96	106.79	86.50
450	1558.97	1835.00	11.23	13.21	-1.98	104.81	86.24
452	1556.66	1835.00	11.22	13.21	-2.00	102.82	85.96
454	1540.67	1835.00	11.15	13.21	-2.06	100.75	85.67
456	1524.68	1835.00	11.04	13.21	-2.18	98.58	85.36
458	1493.86	1675.00	10.87	12.64	-1.77	96.81	85.10
460	1463.04	1463.04	10.64	11.30	-0.65	96.16	85.00
462	1449.33	1449.33	10.48	10.48	0.00	96.16	85.00
464	1435.62	1435.62	10.39	10.39	0.00	96.16	85.00
466	1416.11	1416.11	10.27	10.27	0.00	96.16	85.00
468	1396.60	1396.60	10.13	10.13	0.00	96.16	85.00
470	1393.66	1393.66	10.04	10.04	0.00	96.16	85.00
472	1390.72	1390.72	10.02	10.02	0.00	96.16	85.00
474	1387.79	1387.79	10.00	10.00	0.00	96.16	85.00
476	1384.85	1384.85	9.98	9.98	0.00	96.16	85.00
478	1381.91	1381.91	9.96	9.96	0.00	96.16	85.00
480	1378.97	1378.97	9.94	9.94	0.00	96.16	85.00
482	1376.03	1376.03	9.92	9.92	0.00	96.16	85.00
484	1373.10	1373.10	9.90	9.90	0.00	96.16	85.00
486	1370.16	1370.16	9.88	9.88	0.00	96.16	85.00
488	1367.22	1367.22	9.85	9.85	0.00	96.16	85.00

Table A-34 Kayraktepe Dam Flood Routing Table (Q_{10000}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
490	1364.28	1364.28	9.83	9.83	0.00	96.16	85.00
492	1361.34	1361.34	9.81	9.81	0.00	96.16	85.00
494	1358.09	1358.09	9.79	9.79	0.00	96.16	85.00
496	1354.84	1354.84	9.77	9.77	0.00	96.16	85.00
498	1351.59	1351.59	9.74	9.74	0.00	96.16	85.00
500	1348.33	1348.33	9.72	9.72	0.00	96.16	85.00
502	1345.08	1345.08	9.70	9.70	0.00	96.16	85.00
504	1341.83	1341.83	9.67	9.67	0.00	96.16	85.00
506	1338.57	1338.57	9.65	9.65	0.00	96.16	85.00
508	1335.32	1335.32	9.63	9.63	0.00	96.16	85.00
510	1332.07	1332.07	9.60	9.60	0.00	96.16	85.00
512	1328.82	1328.82	9.58	9.58	0.00	96.16	85.00
514	1325.56	1325.56	9.56	9.56	0.00	96.16	85.00
516	1322.31	1322.31	9.53	9.53	0.00	96.16	85.00
518	1319.59	1319.59	9.51	9.51	0.00	96.16	85.00
520	1316.86	1316.86	9.49	9.49	0.00	96.16	85.00
522	1314.14	1314.14	9.47	9.47	0.00	96.16	85.00
524	1311.42	1311.42	9.45	9.45	0.00	96.16	85.00
526	1308.70	1308.70	9.43	9.43	0.00	96.16	85.00
528	1305.97	1305.97	9.41	9.41	0.00	96.16	85.00
530	1303.25	1303.25	9.39	9.39	0.00	96.16	85.00
532	1300.53	1300.53	9.37	9.37	0.00	96.16	85.00
534	1297.80	1297.80	9.35	9.35	0.00	96.16	85.00
536	1295.08	1295.08	9.33	9.33	0.00	96.16	85.00
538	1292.36	1292.36	9.31	9.31	0.00	96.16	85.00
540	1289.64	1289.64	9.30	9.30	0.00	96.16	85.00
542	1287.88	1287.88	9.28	9.28	0.00	96.16	85.00
544	1286.12	1286.12	9.27	9.27	0.00	96.16	85.00
546	1284.36	1284.36	9.25	9.25	0.00	96.16	85.00
548	1282.60	1282.60	9.24	9.24	0.00	96.16	85.00
550	1280.85	1280.85	9.23	9.23	0.00	96.16	85.00
552	1279.09	1279.09	9.22	9.22	0.00	96.16	85.00
554	1277.33	1277.33	9.20	9.20	0.00	96.16	85.00
556	1275.57	1275.57	9.19	9.19	0.00	96.16	85.00
558	1273.81	1273.81	9.18	9.18	0.00	96.16	85.00

Table A-34 Kayraktepe Dam Flood Routing Table (Q_{10000}) (Continued)

(Mut Dam is not in Operation)

Time	Inflow Discharges	Outflow Discharges	Volume (Inflow)	Volume (Outflow)	Rem. Volume	Cum. Volume	Elevation
(hr)	m^3/s	m^3/s	hm^3	hm^3	hm^3	hm^3	m
560	1272.06	1272.06	9.17	9.17	0.00	96.16	85.00
562	1270.30	1270.30	9.15	9.15	0.00	96.16	85.00
564	1268.54	1268.54	9.14	9.14	0.00	96.16	85.00
566	1266.81	1266.81	9.13	9.13	0.00	96.16	85.00
568	1265.07	1265.07	9.11	9.11	0.00	96.16	85.00
570	1263.34	1263.34	9.10	9.10	0.00	96.16	85.00
572	1261.60	1261.60	9.09	9.09	0.00	96.16	85.00
574	1259.87	1259.87	9.08	9.08	0.00	96.16	85.00
576	1258.13	1258.13	9.06	9.06	0.00	96.16	85.00
578	1256.40	1256.40	9.05	9.05	0.00	96.16	85.00
580	1254.67	1254.67	9.04	9.04	0.00	96.16	85.00
582	1252.93	1252.93	9.03	9.03	0.00	96.16	85.00
584	1251.20	1251.20	9.01	9.01	0.00	96.16	85.00
586	1249.46	1249.46	9.00	9.00	0.00	96.16	85.00
588	1247.73	1247.73	8.99	8.99	0.00	96.16	85.00
590	1247.73	1247.73	8.98	8.98	0.00	96.16	85.00
592	1247.73	1247.73	8.98	8.98	0.00	96.16	85.00
594	1247.73	1247.73	8.98	8.98	0.00	96.16	85.00
596	1247.73	1247.73	8.98	8.98	0.00	96.16	85.00
598	1247.73	1247.73	8.98	8.98	0.00	96.16	85.00
600	1247.73	1247.73	8.98	8.98	0.00	96.16	85.00

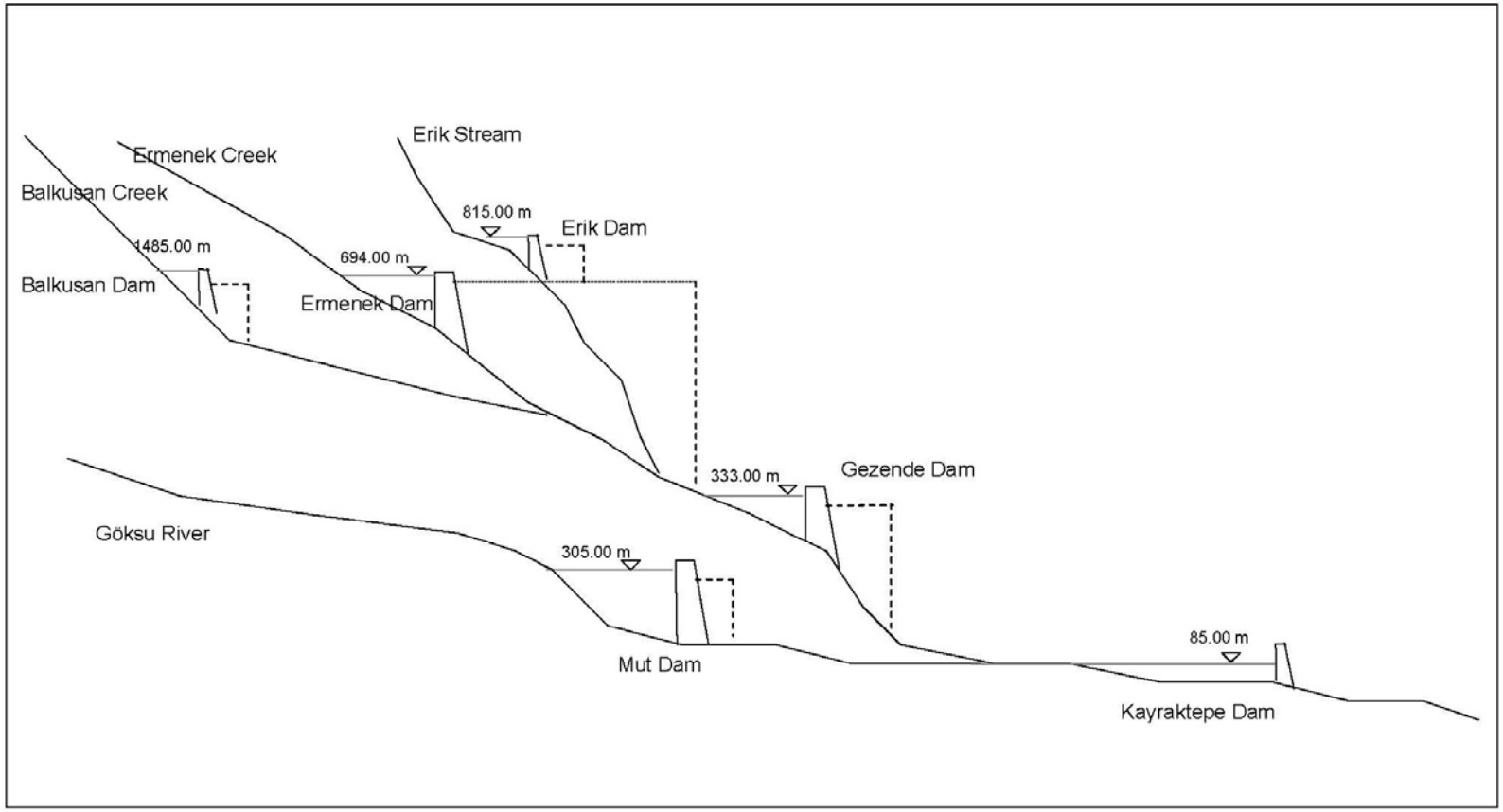


Figure A-4: Schematic Profile View of the Facilities at the Upstream of Kayraktepe Dam

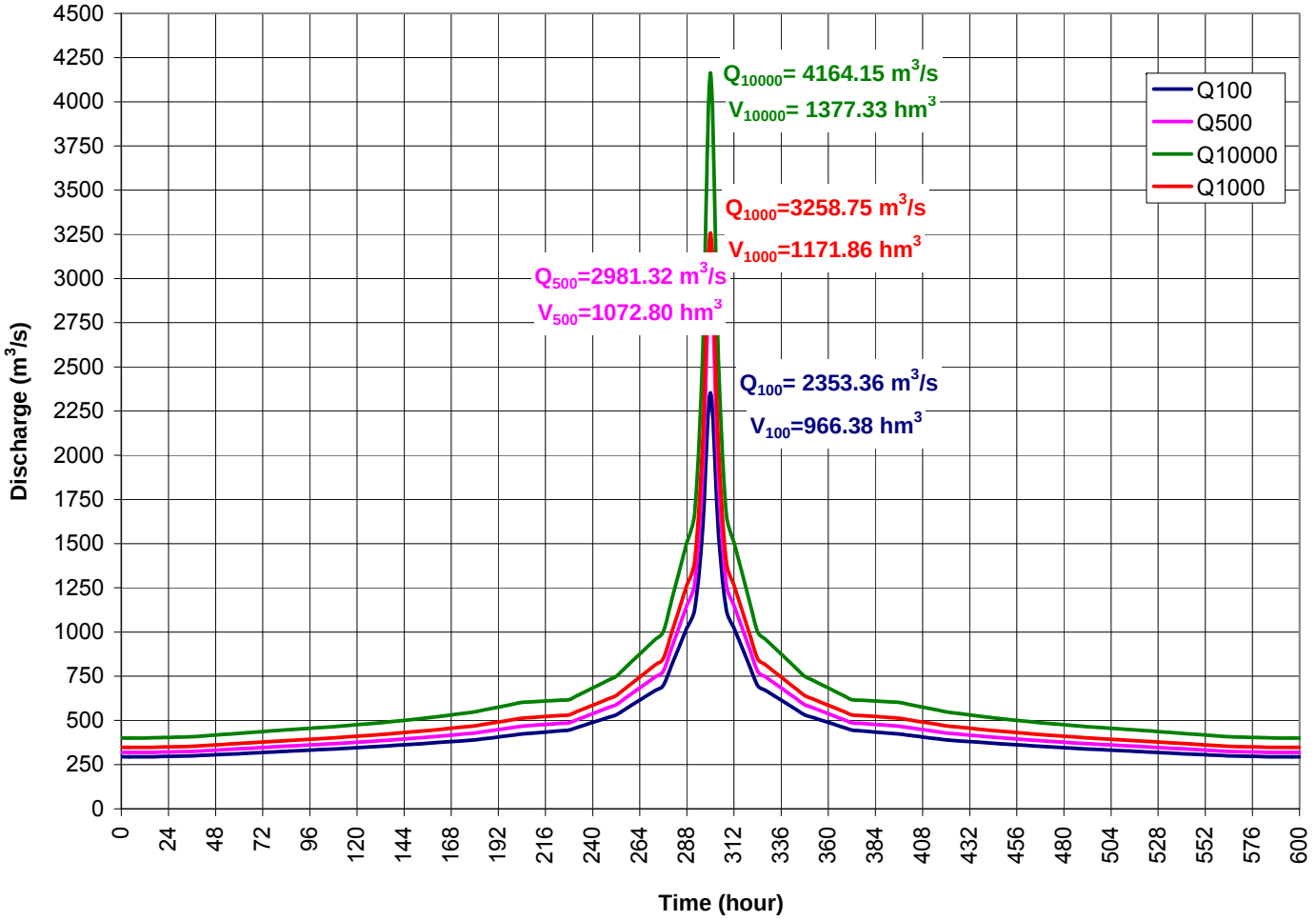


Figure A-5: Ermenek Dam Inflow Flood Hydrographs for 100, 500, 1000 and 10000 Year Return Periods

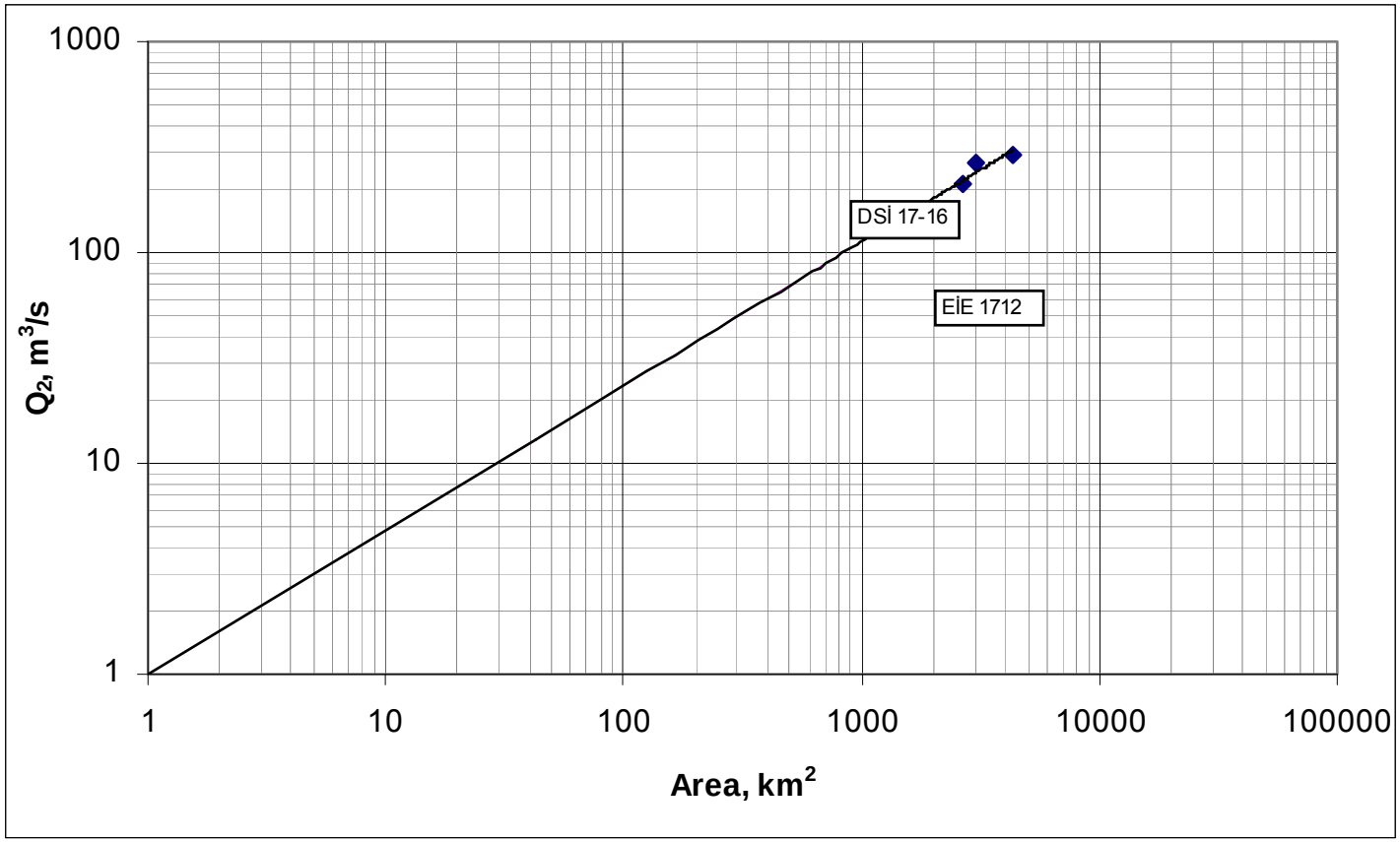


Figure A-6: Mut Dam Flood Envelope

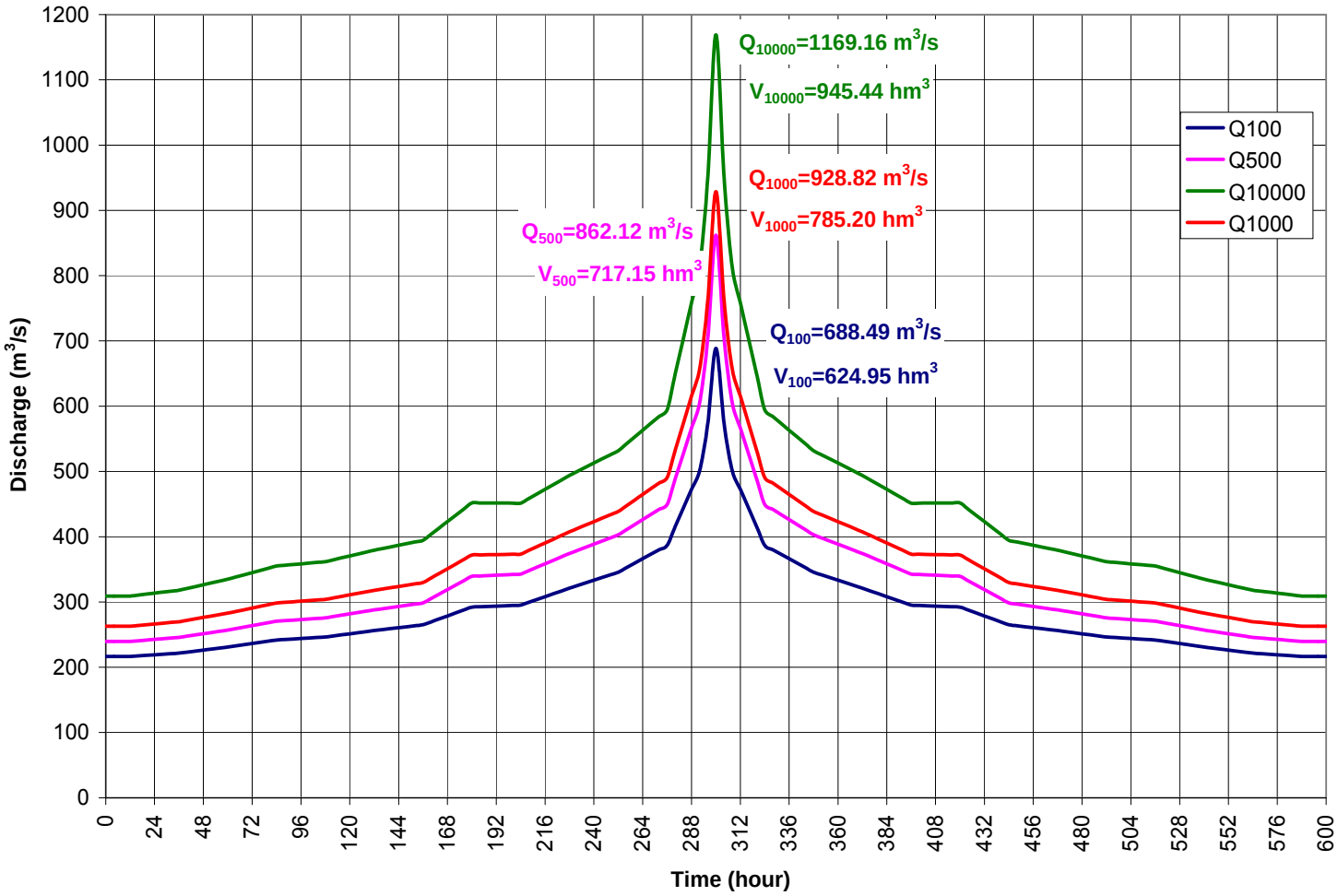


Figure A-7: Mut Dam Inflow Flood Hydrographs of 100, 500, 1000 and 10000 Year Return Periods

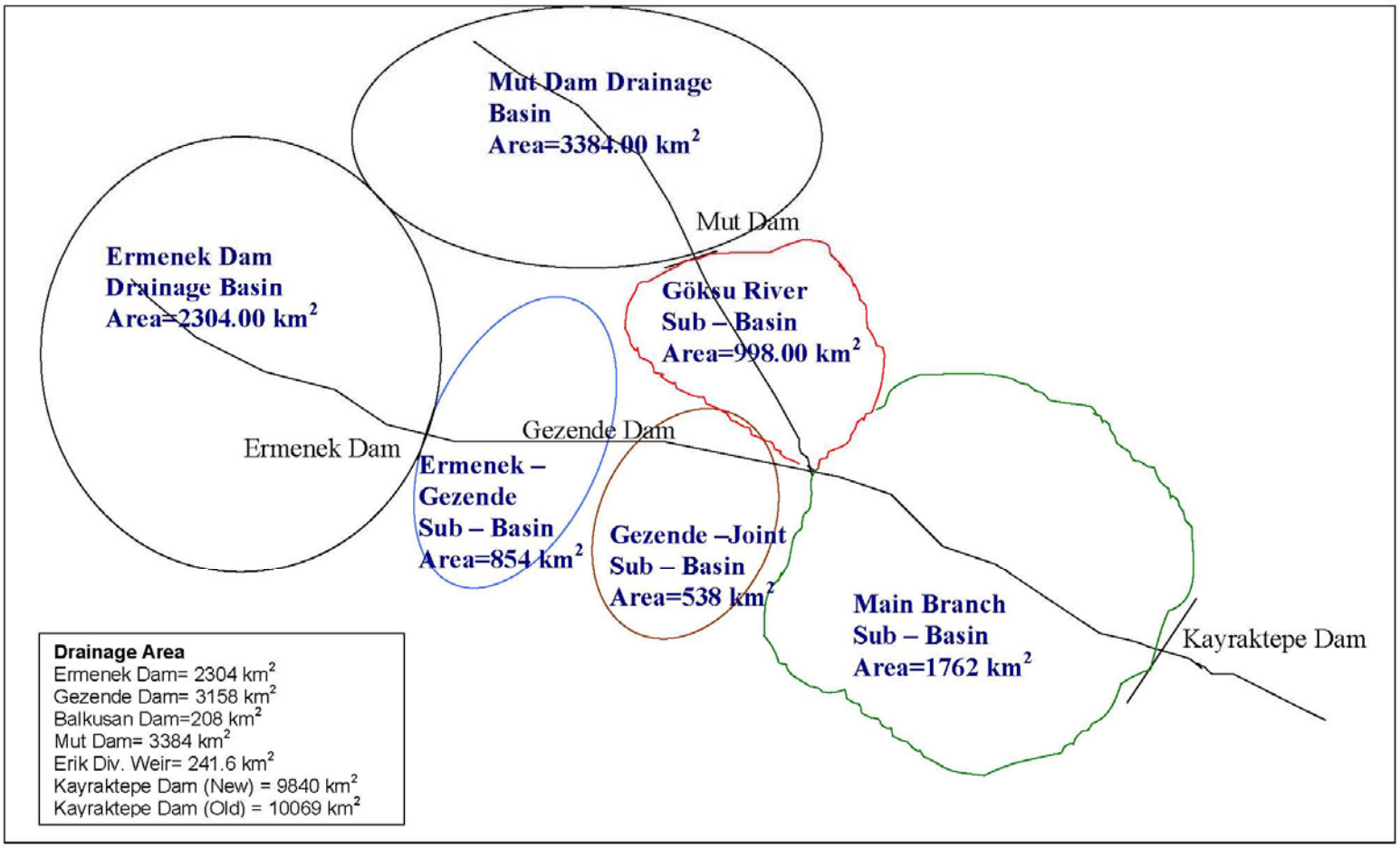


Figure A-8: Schematic View of Sub – Basins Used in Flood Calculations at the Upstream of Kayraktepe Dam

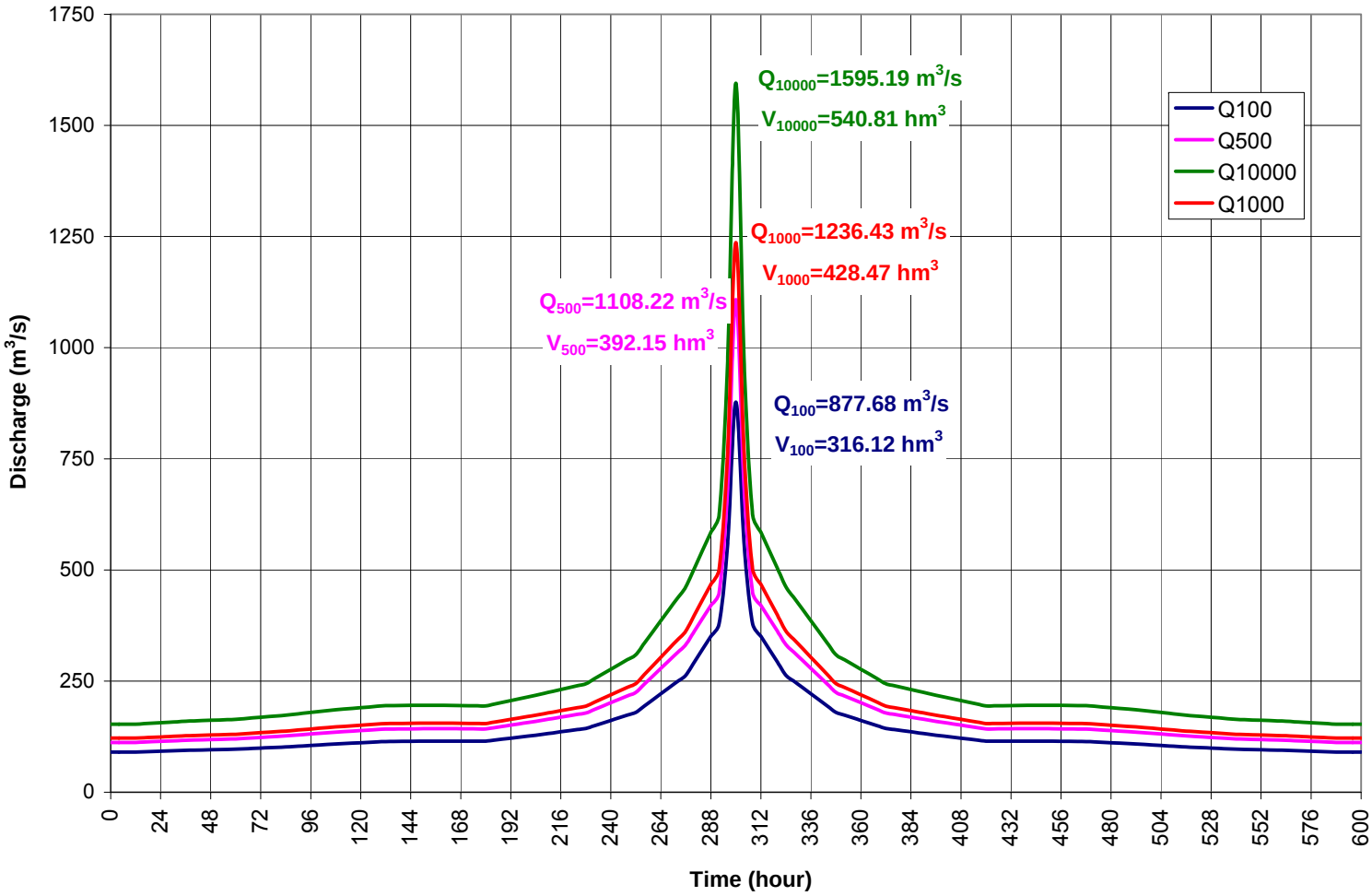


Figure A-9: Ermenek Branch Sub – Basin Flood Hydrographs of 100, 500, 1000 and 10000 Year Return Periods

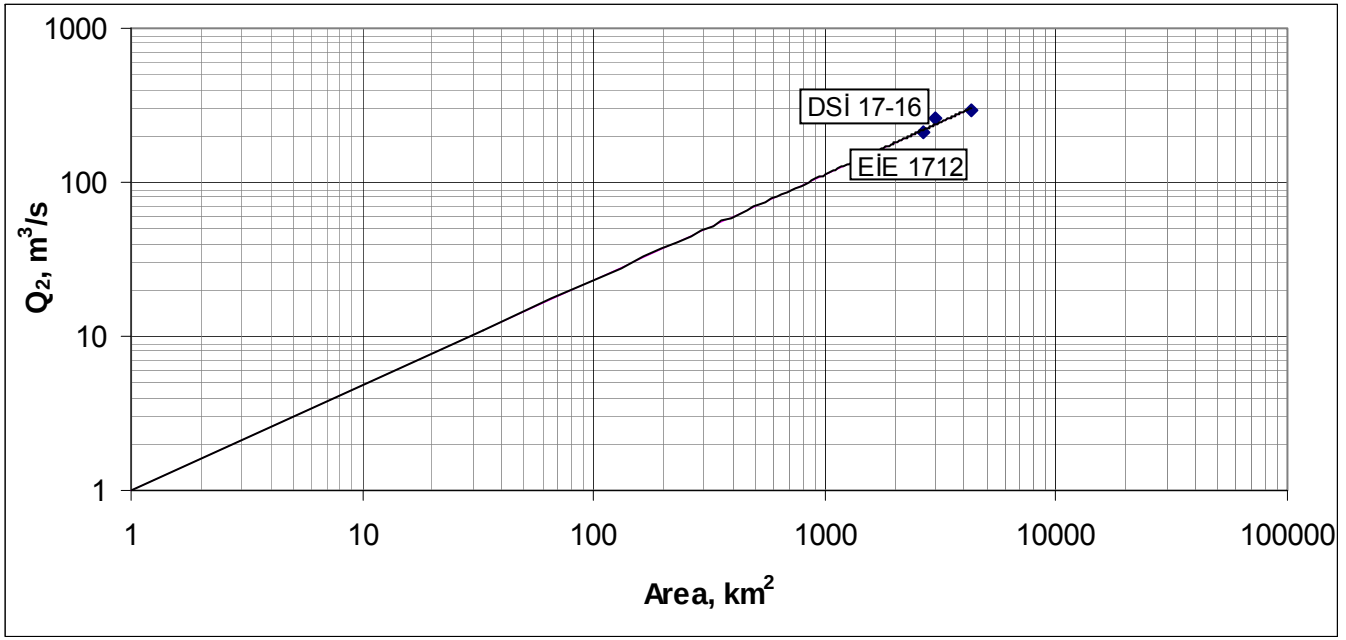


Figure A-10: Göksu Branch Sub - Basin Regional Flood Envelope

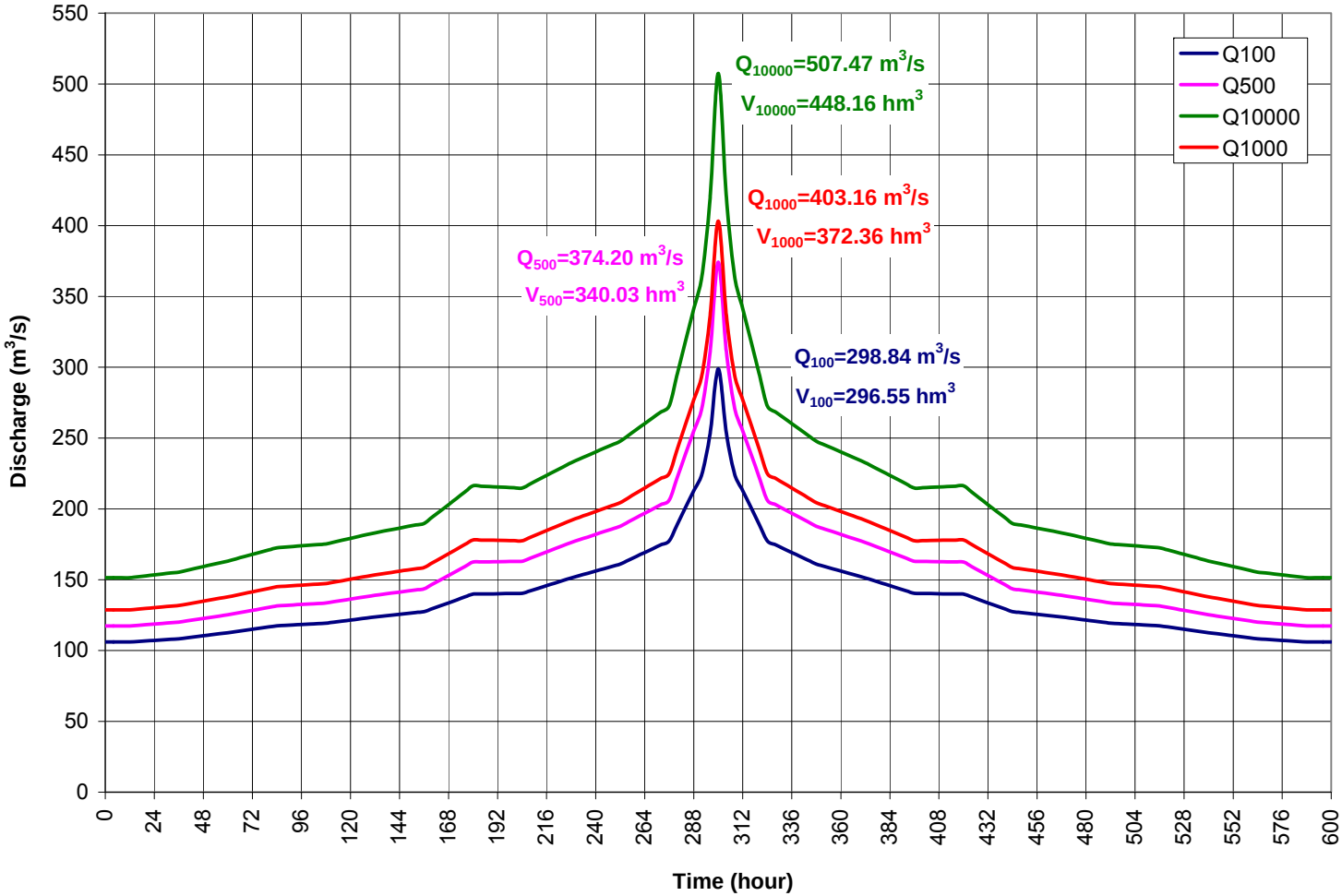


Figure A-11: Göksu Branch Sub – Basin Flood Hydrographs of 100, 500, 1000 and 10000 Year Return Periods

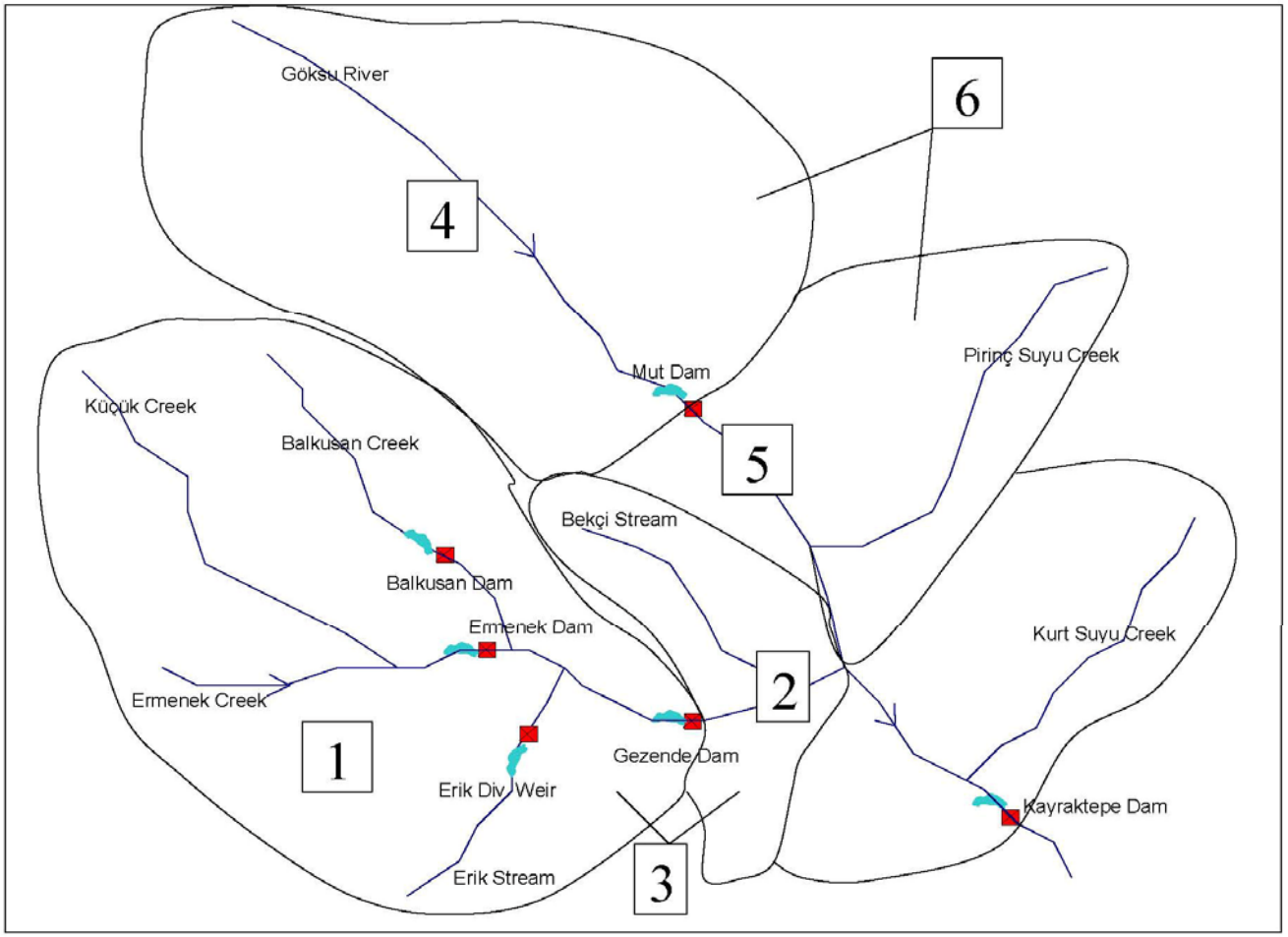


Figure A-12: The Generated Sub – Basins at the Upstream of Kayraktepe Dam

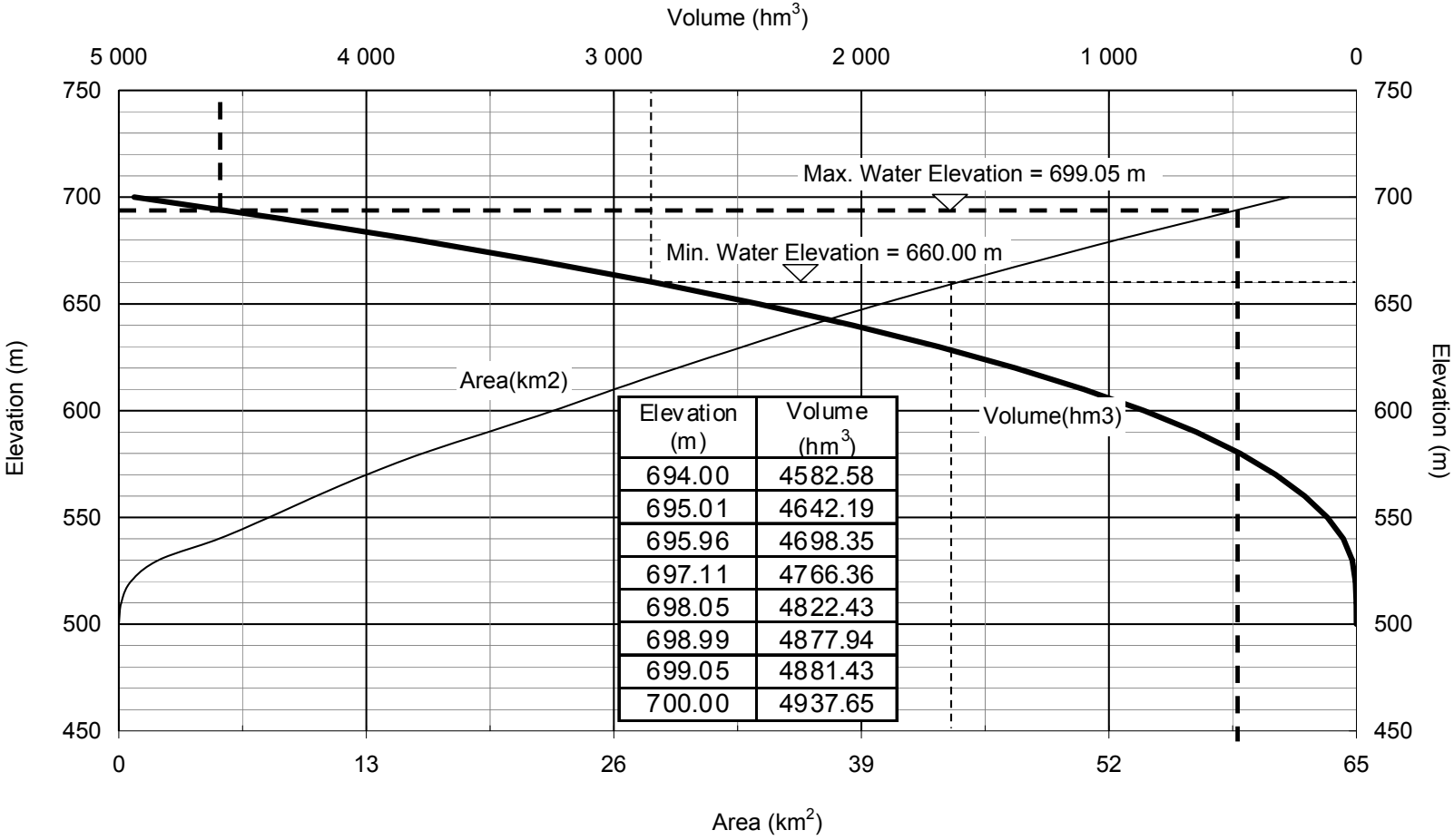


Figure A-13: Ermenek Dam Volume - Area Curve

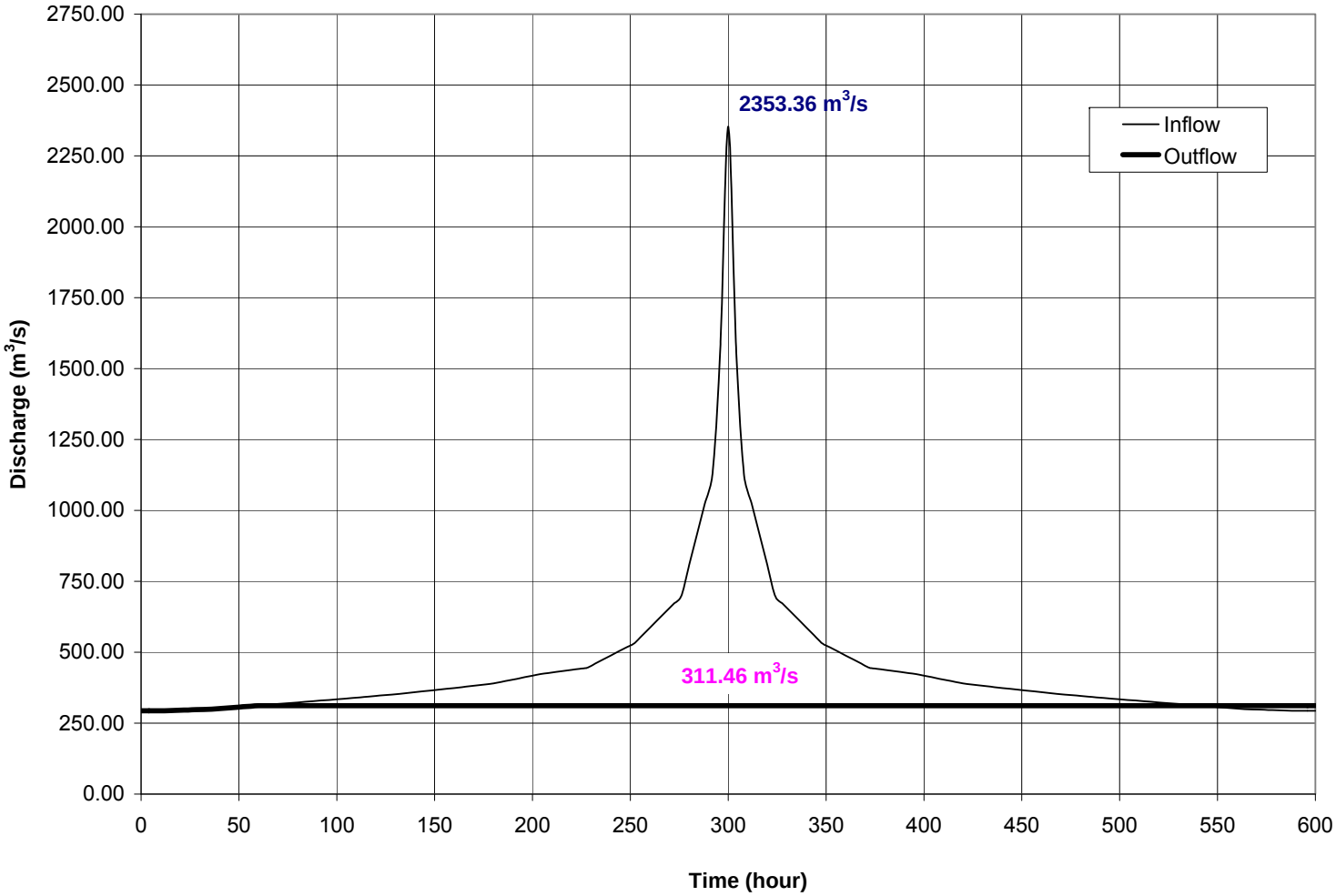


Figure A-14: Ermenek Dam Flood Inflow and Outflow Hydrographs (Q_{100})

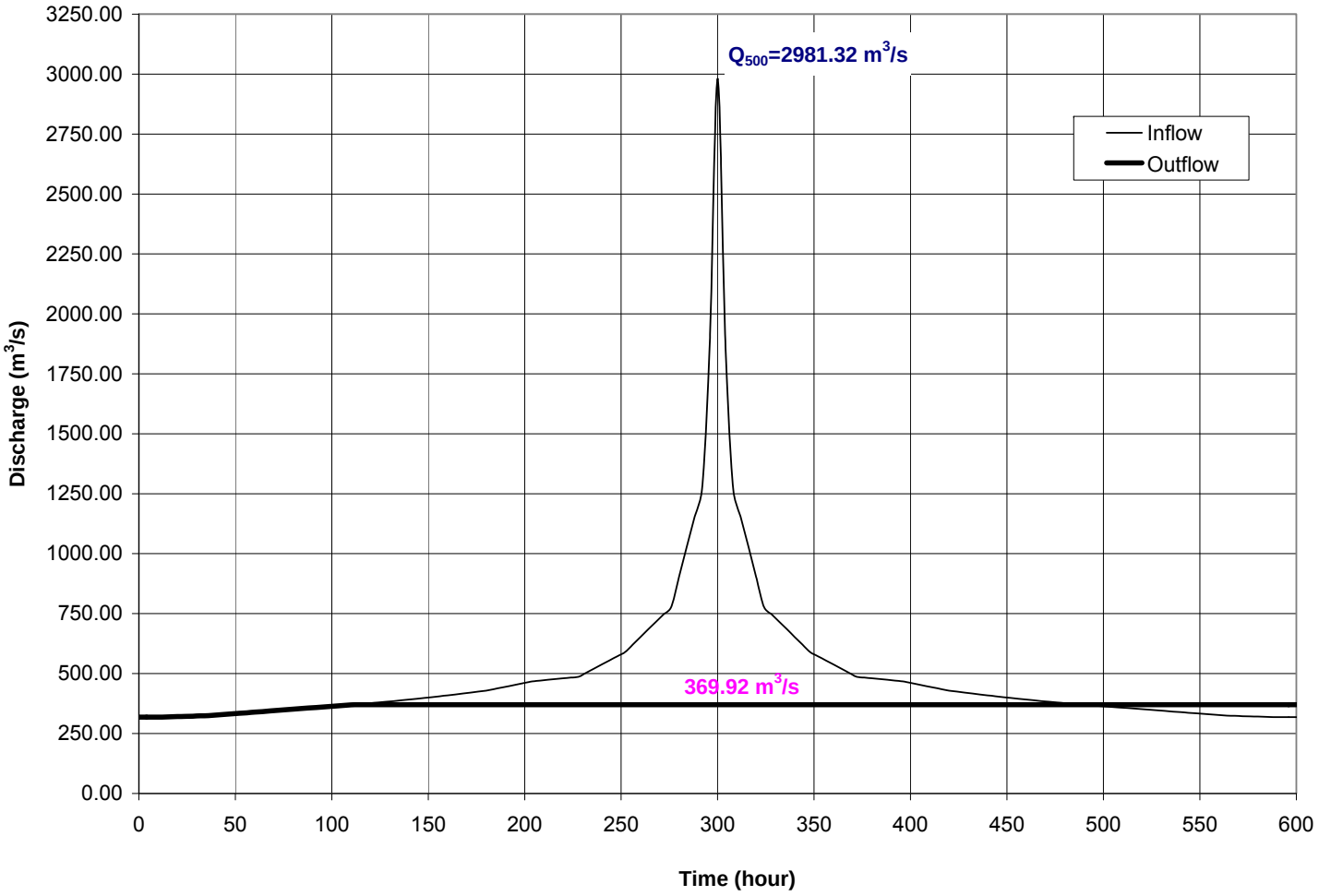


Figure A-15: Ermenek Dam Flood Inflow and Outflow Hydrographs (Q_{500})

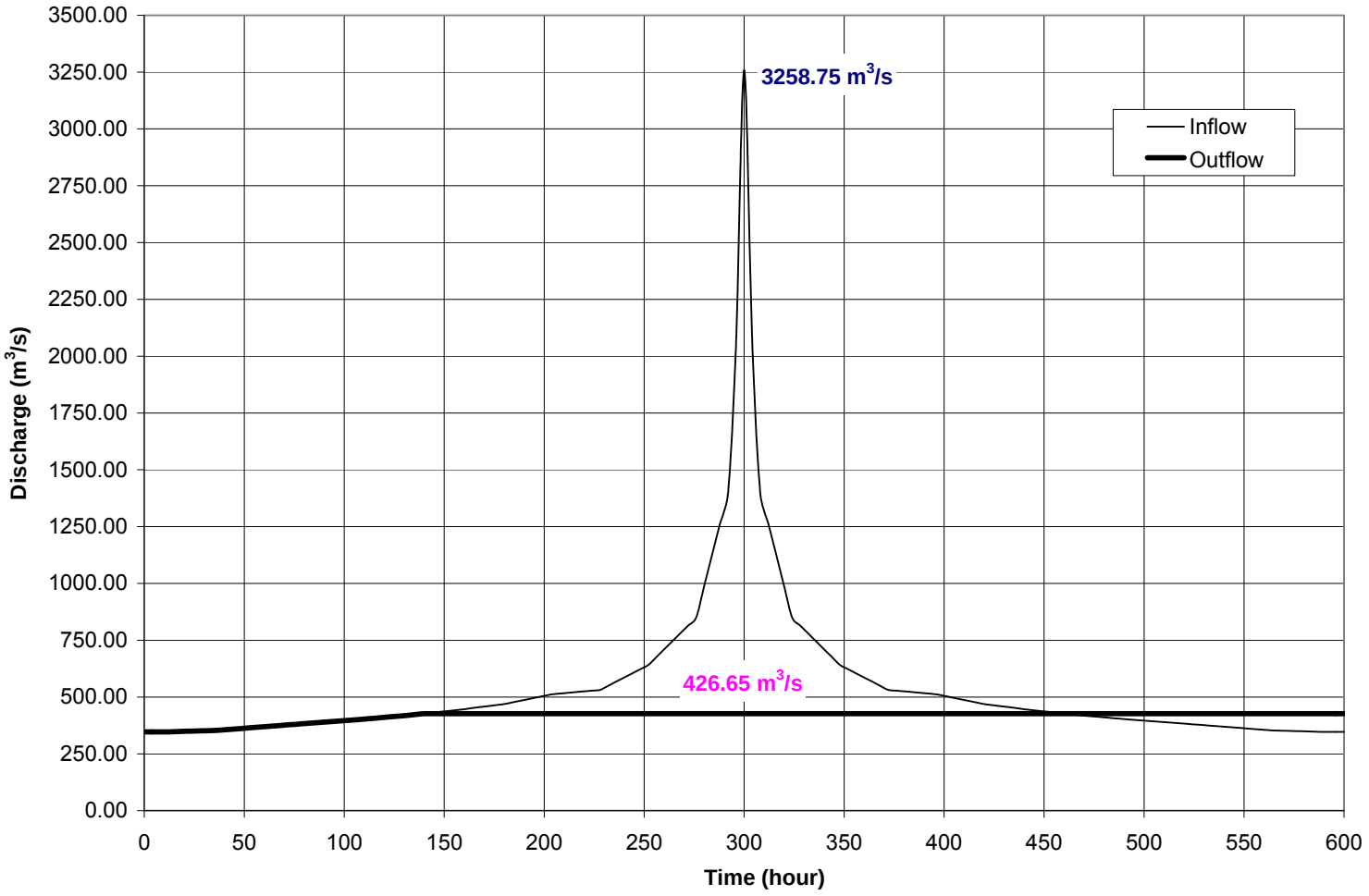


Figure A-16: Ermenek Dam Flood Inflow and Outflow Hydrographs (Q_{1000})

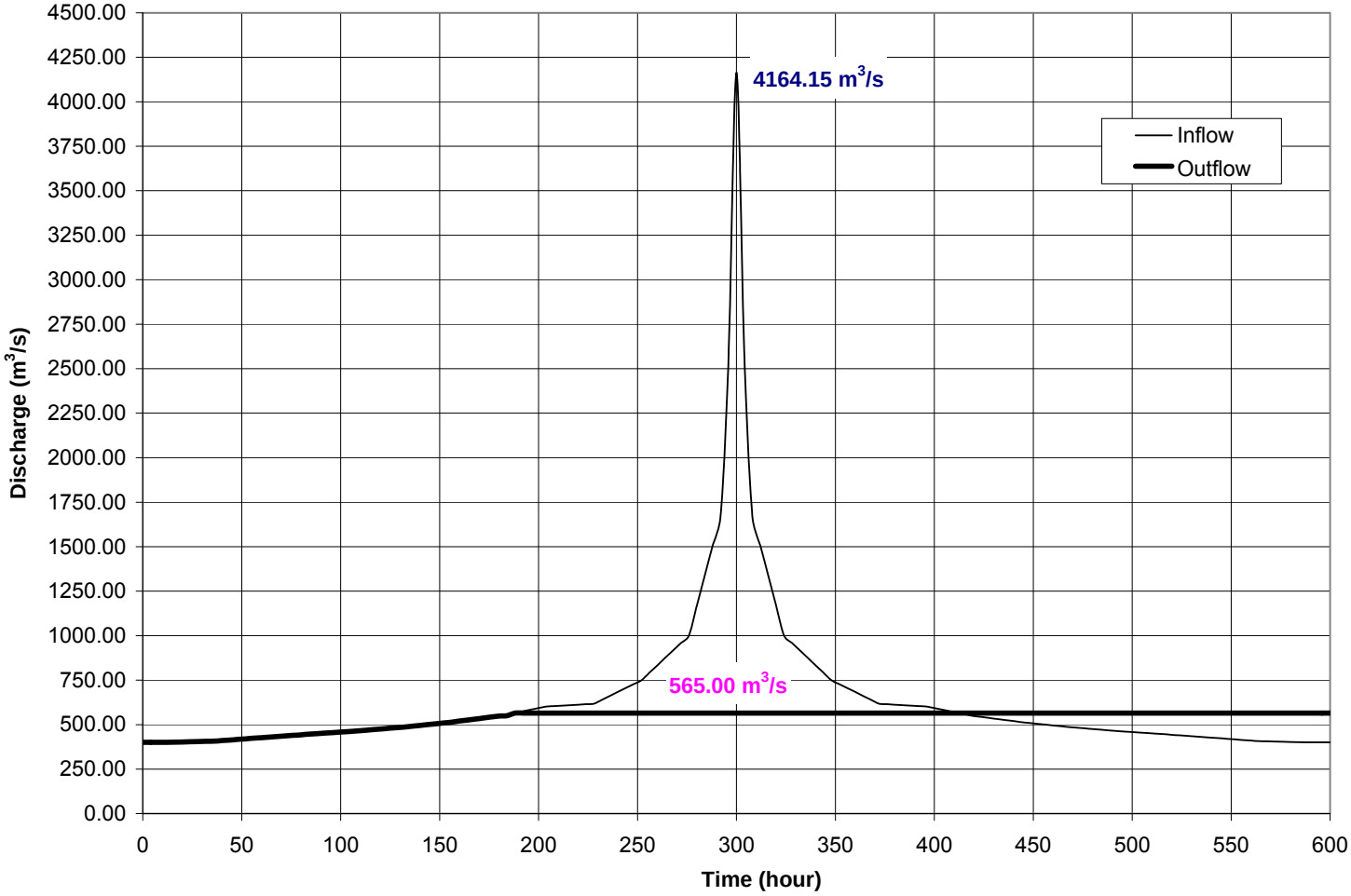


Figure A-17: Ermenek Dam Flood Inflow and Outflow Hydrographs (Q_{10000})

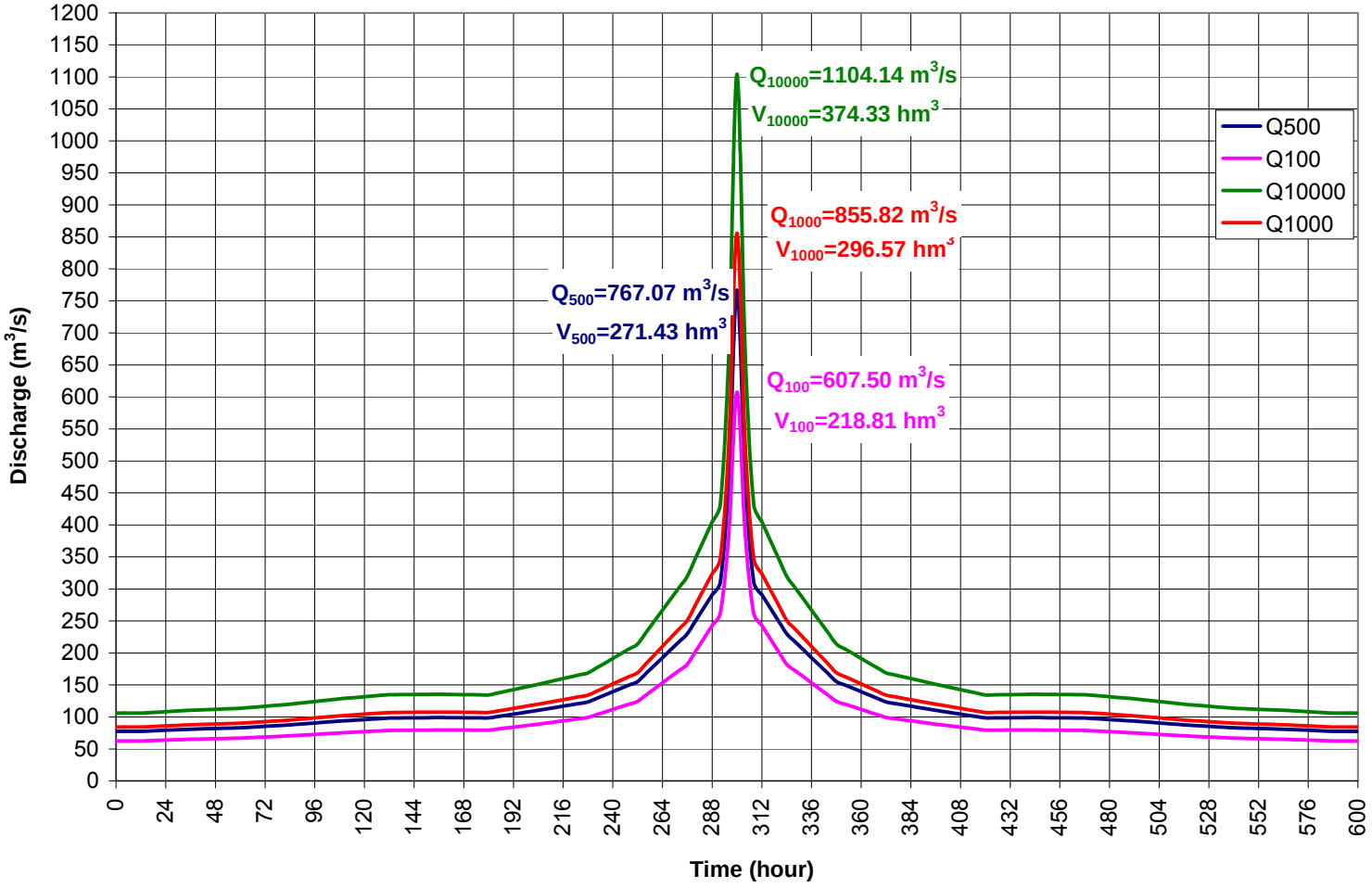


Figure A-18: Ermenek Dam - Gezende Dam Sub - Basin Flood Hydrograph

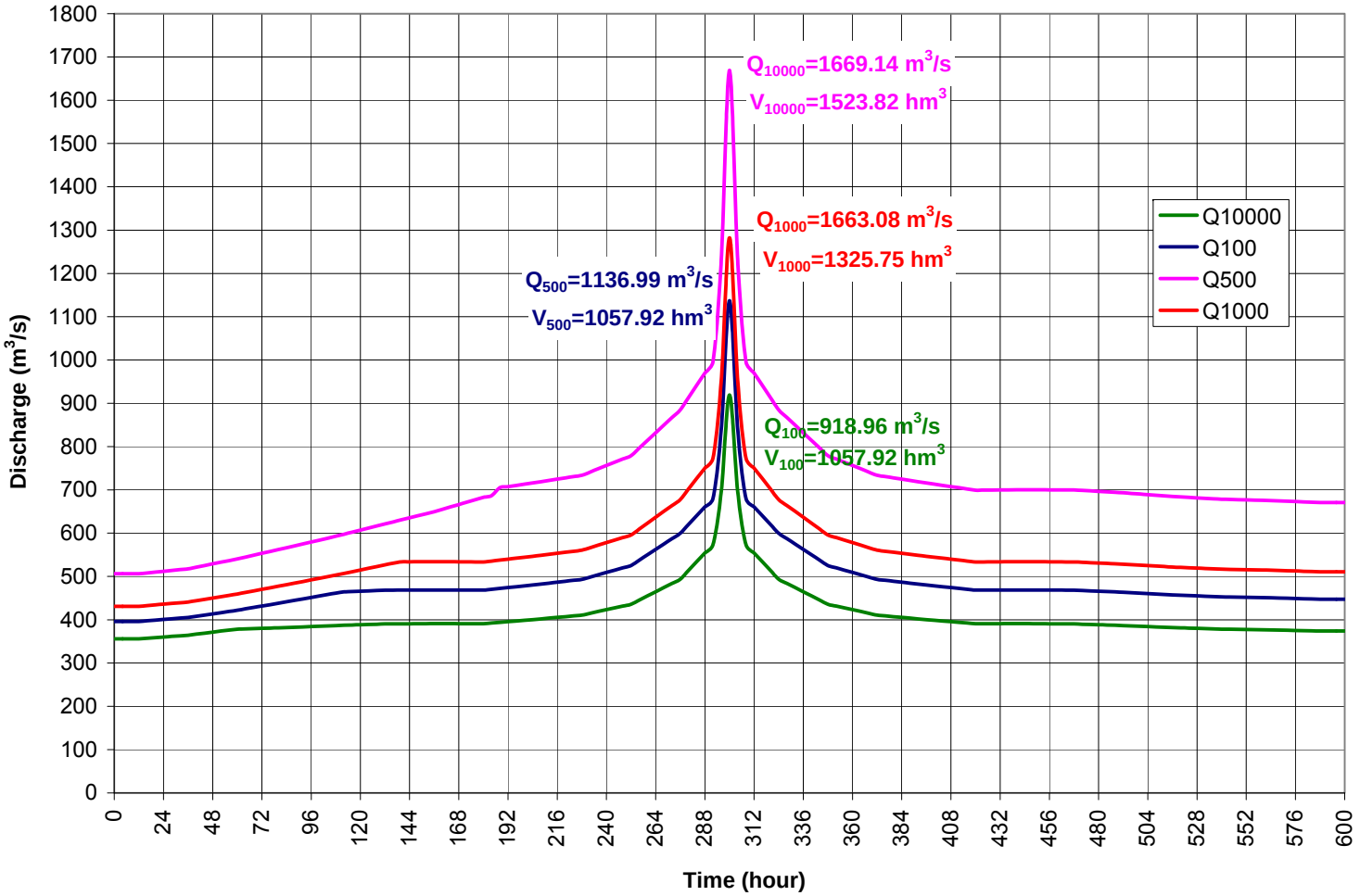
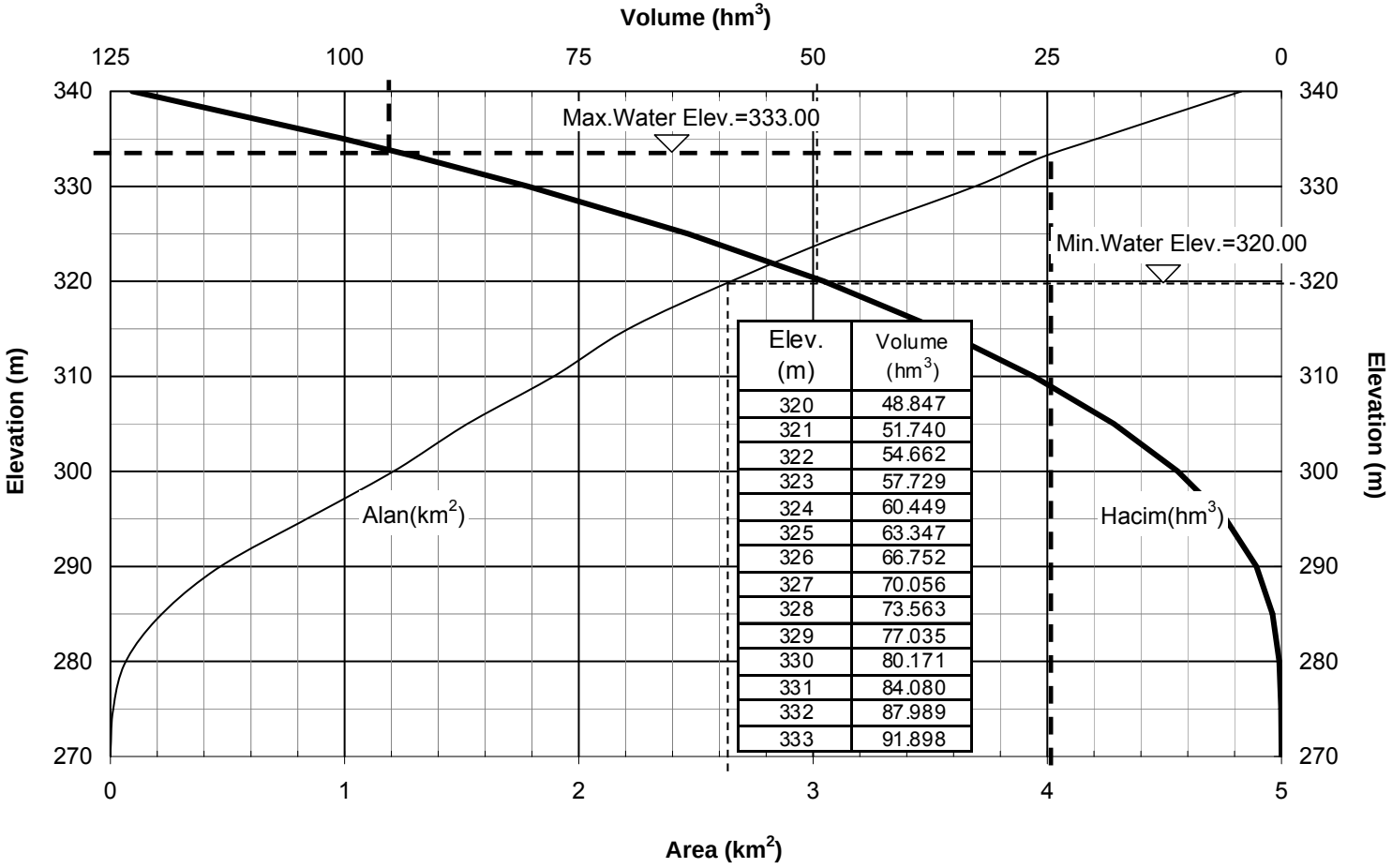


Figure A-19: Gezende Dam Inflow Flood Hydrographs



Elev. (m)	Volume (hm^3)
320	48.847
321	51.740
322	54.662
323	57.729
324	60.449
325	63.347
326	66.752
327	70.056
328	73.563
329	77.035
330	80.171
331	84.080
332	87.989
333	91.898

Figure A-20: Gezende Dam Volume – Area Hydrograph

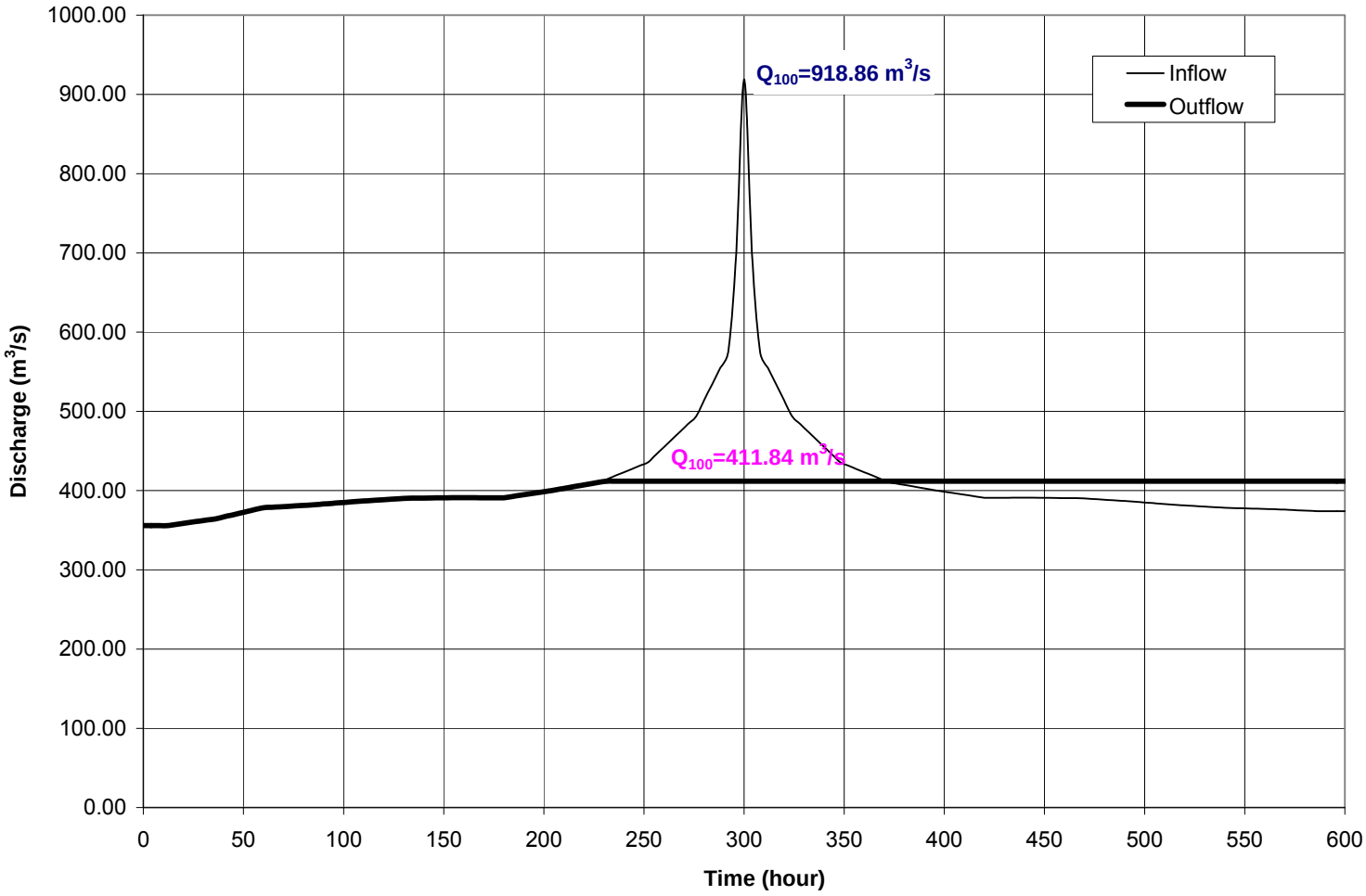


Figure A-21: Gezende Dam Inflow and Outflow Flood Hydrographs (Q_{100})

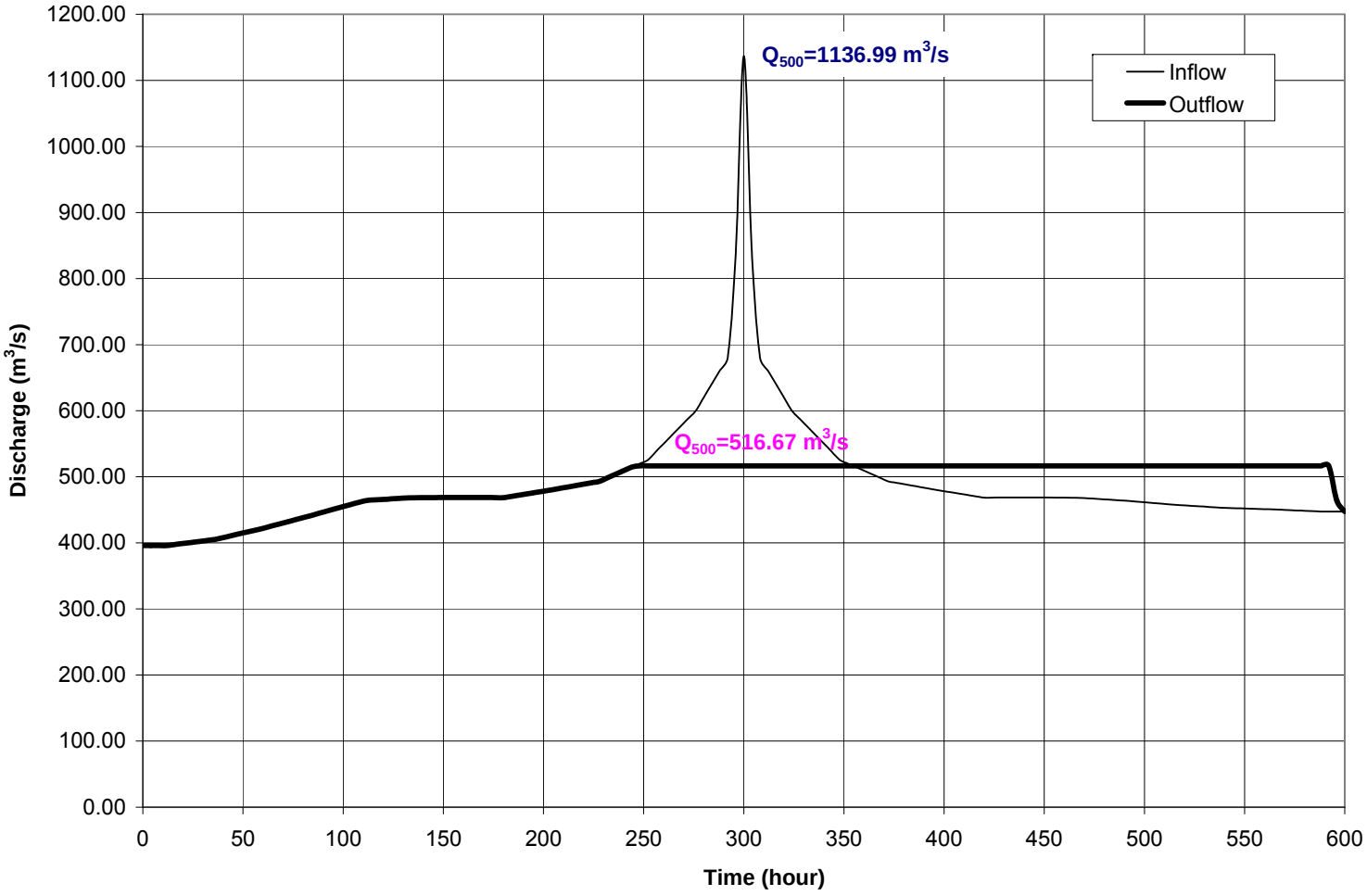


Figure A-22: Gezende Dam Inflow and Outflow Flood Hydrographs (Q_{500})

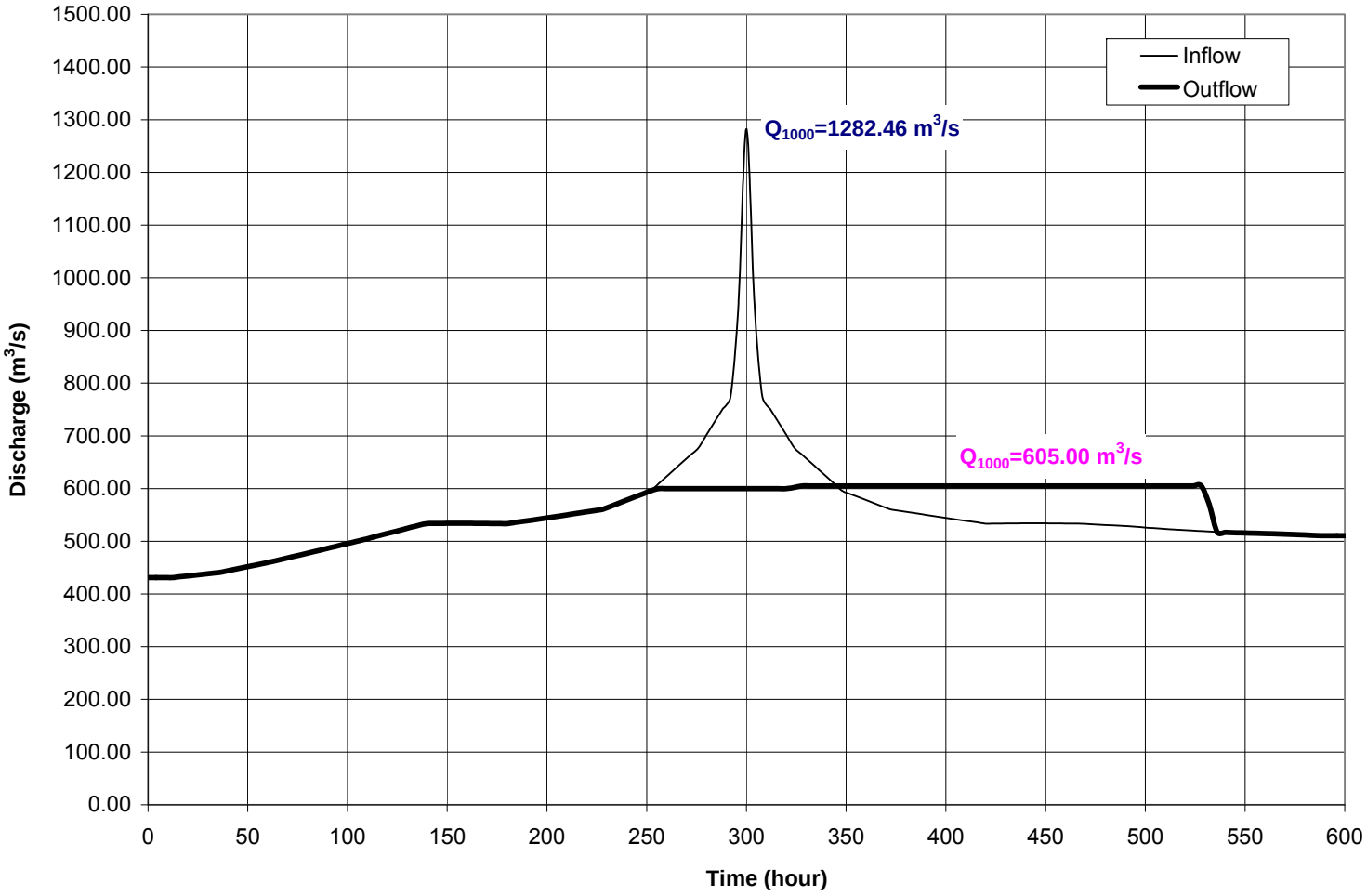


Figure A-23: Gezende Dam Inflow and Outflow Flood Hydrographs (Q_{1000})

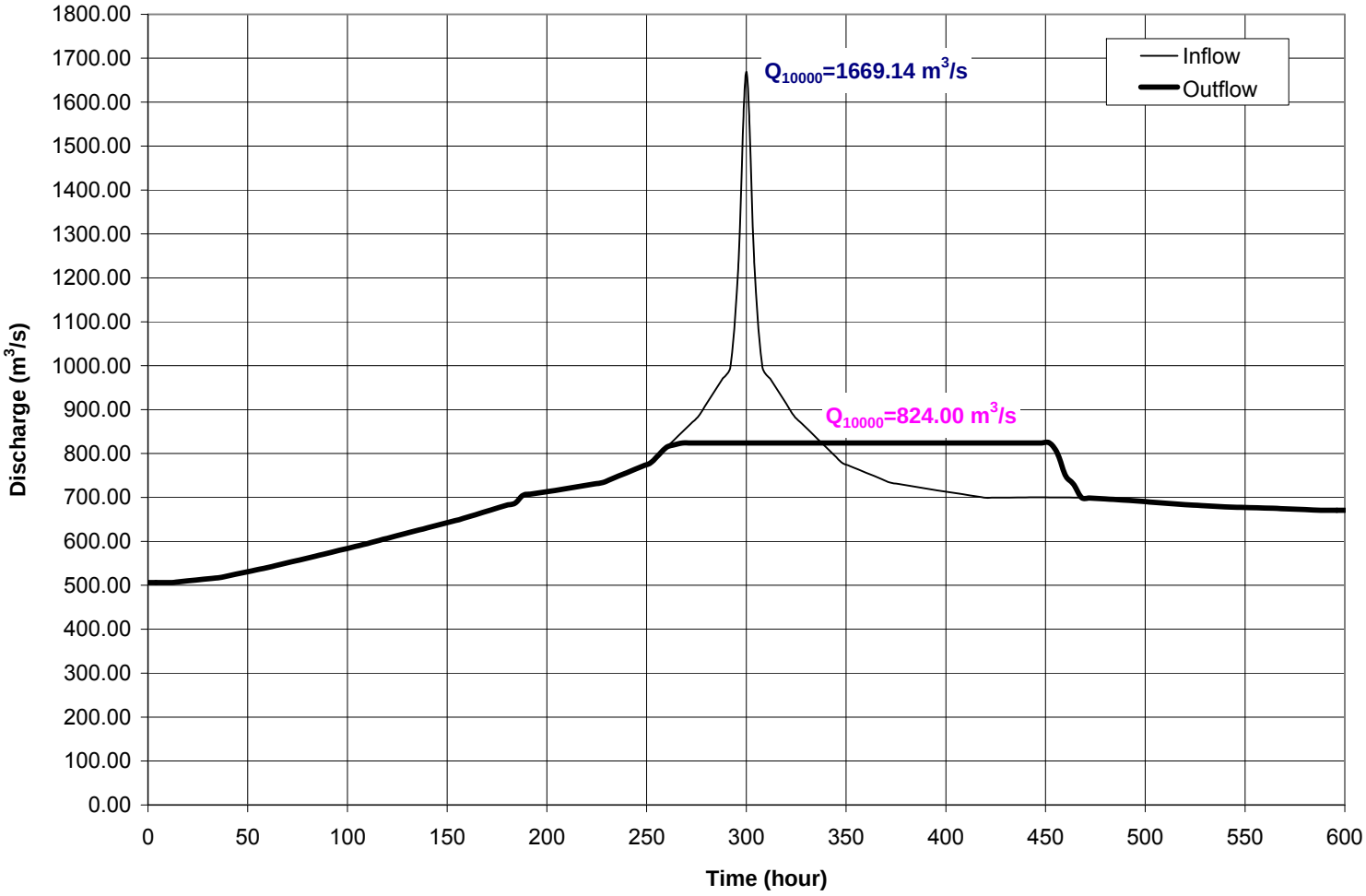


Figure A-24: Gezende Dam Inflow and Outflow Flood Hydrographs (Q_{10000})

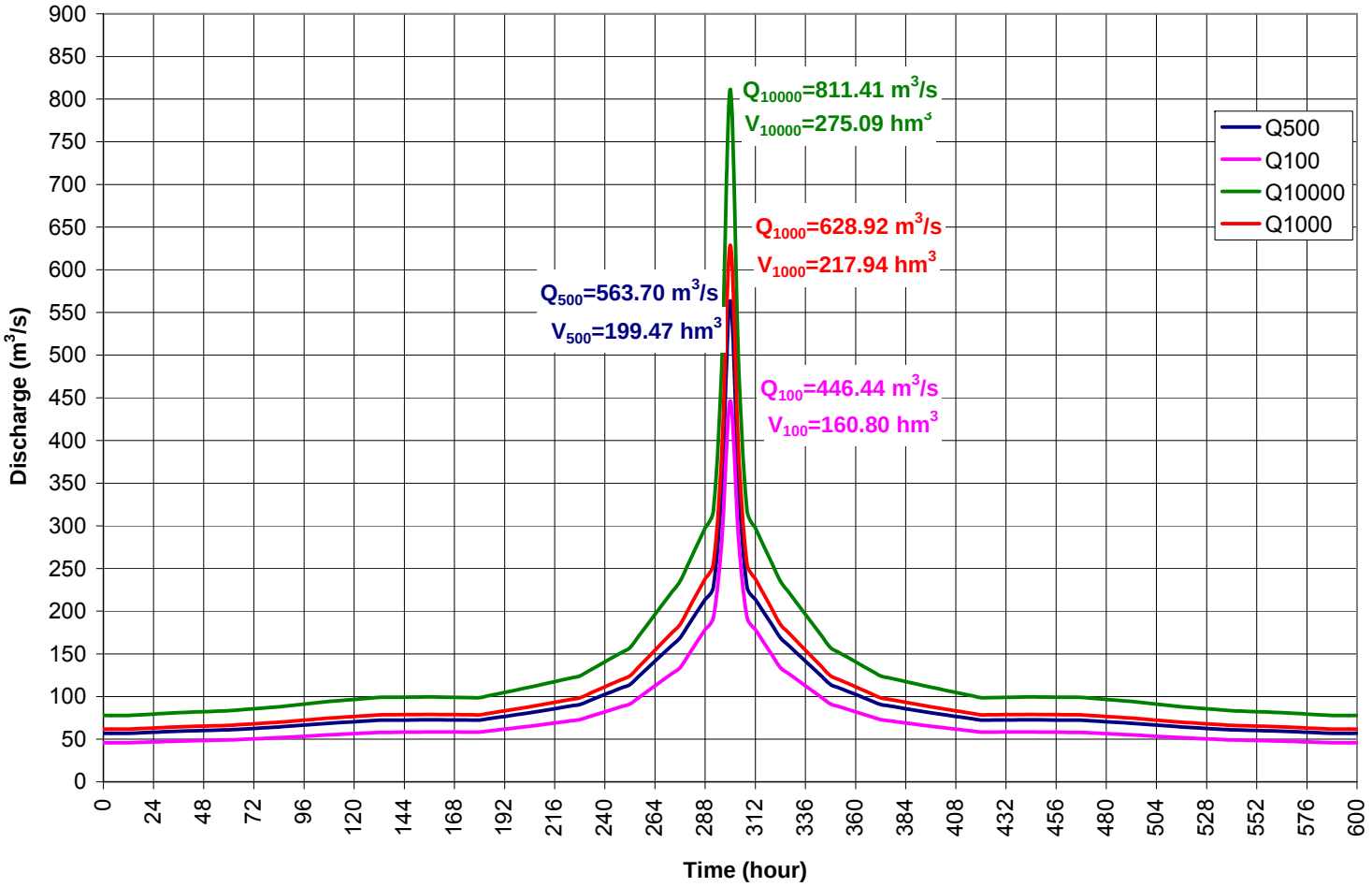


Figure A-25: Gezende Dam - Joint Sub - Basin Flood Hydrograph

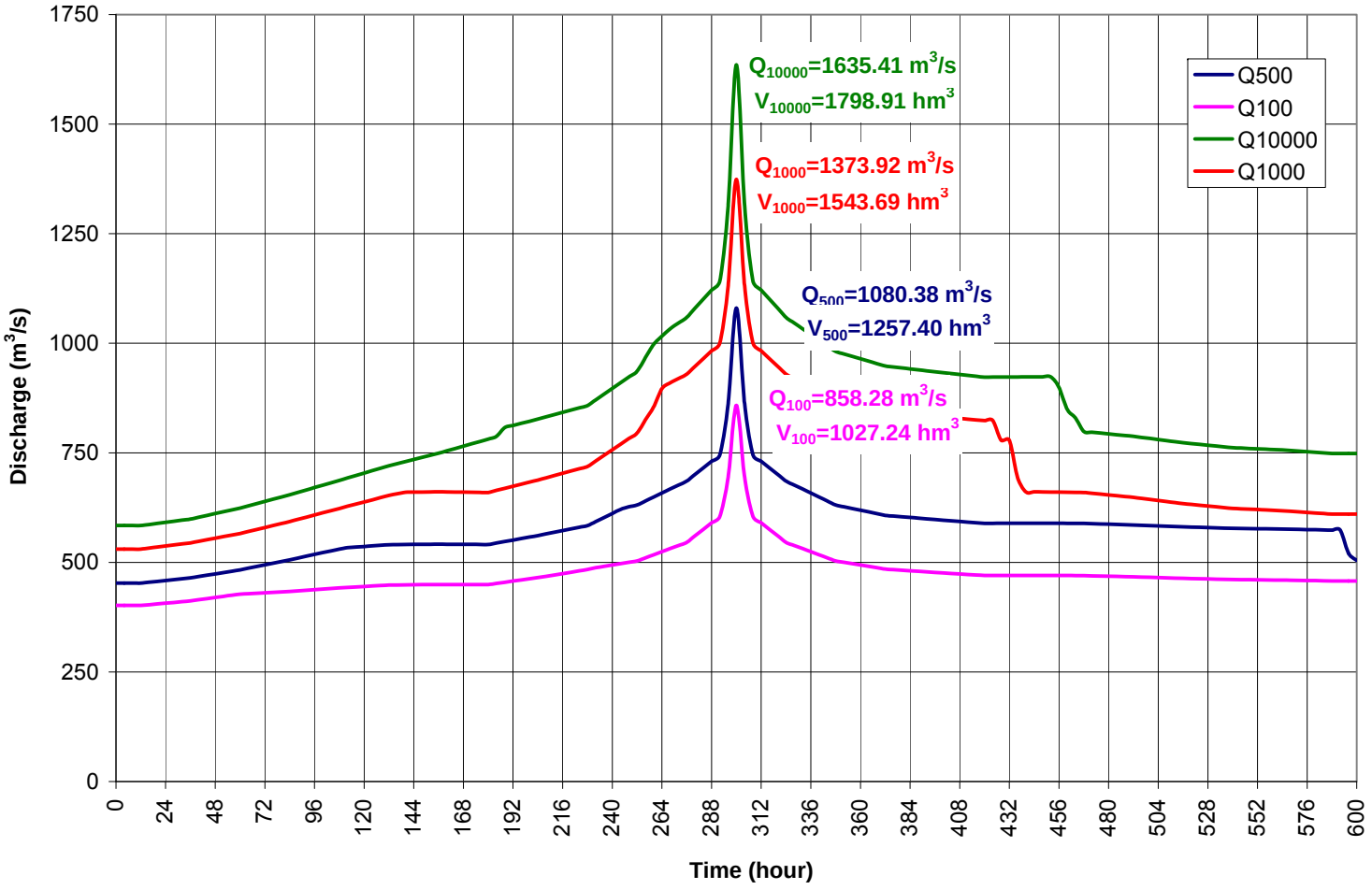


Figure A-26: Ermenek Creek Total Flood Hydrograph

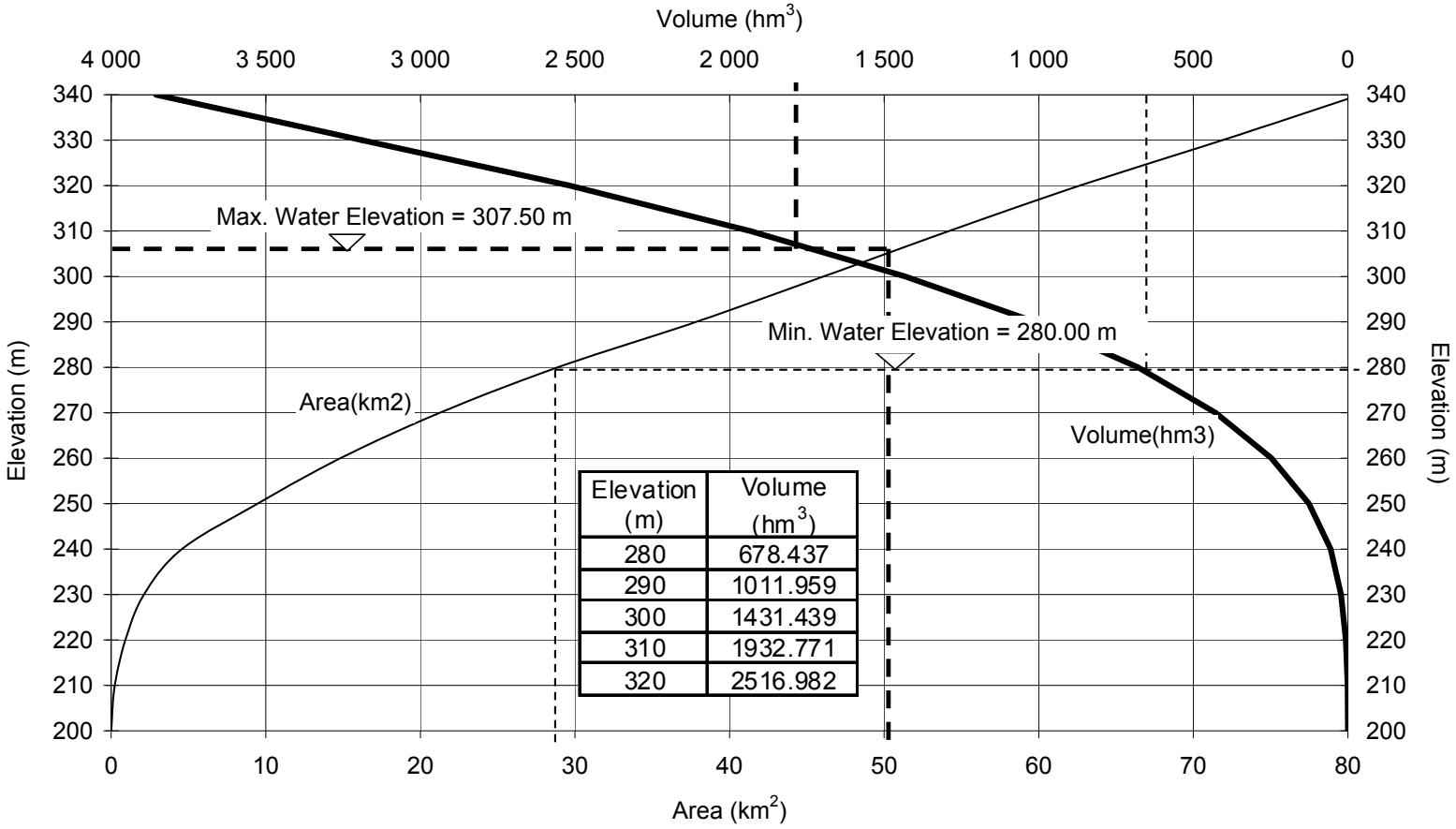


Figure A-27: Mut Dam Volume - Area Curve

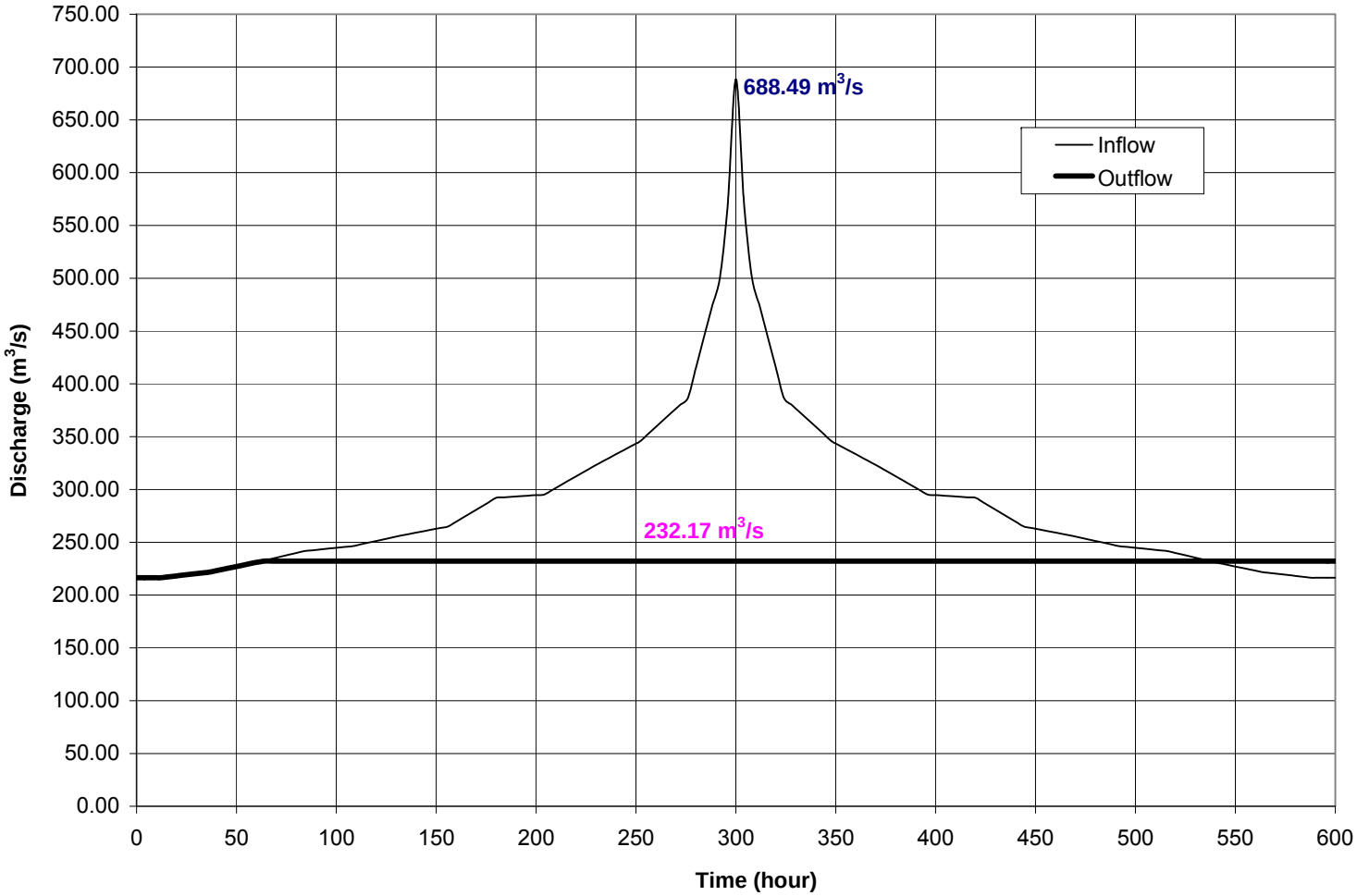


Figure A-28: Mut Dam Inflow and Outflow Flood Hydrographs (Q_{100})

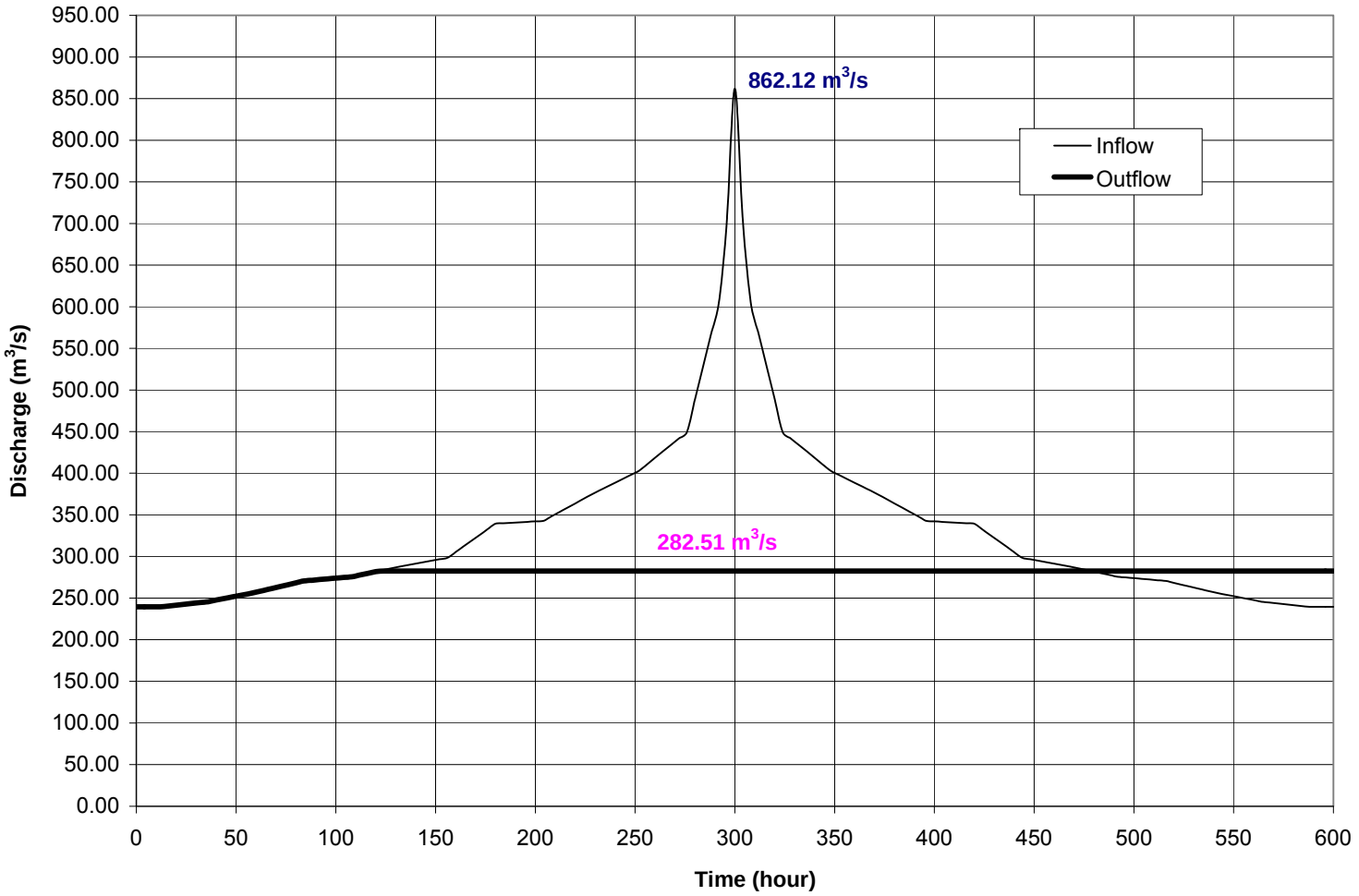


Figure A-29: Mut Dam Inflow and Outflow Flood Hydrographs (Q_{500})

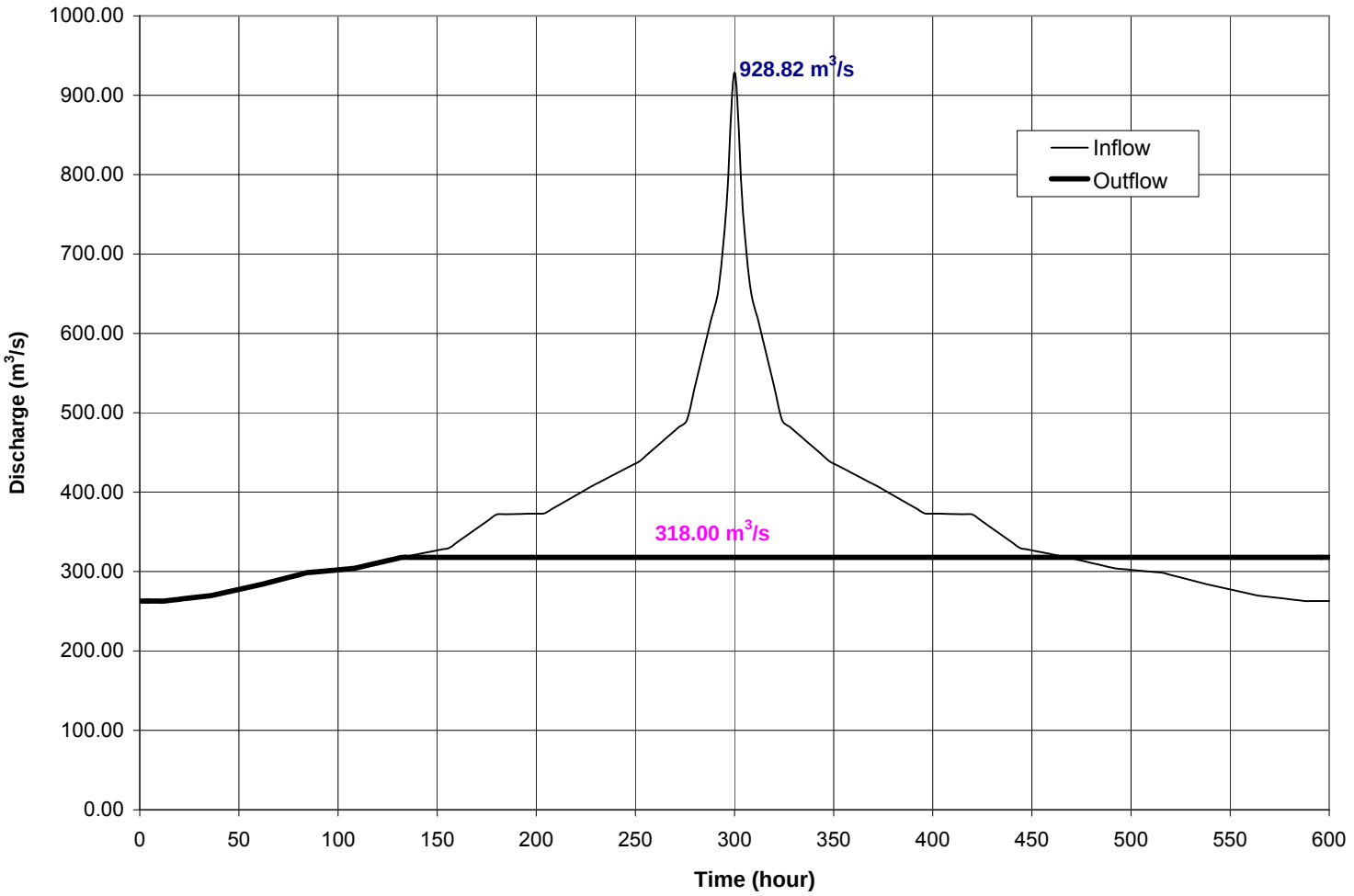


Figure A-30: Mut Dam Inflow and Outflow Flood Hydrographs (Q_{1000})

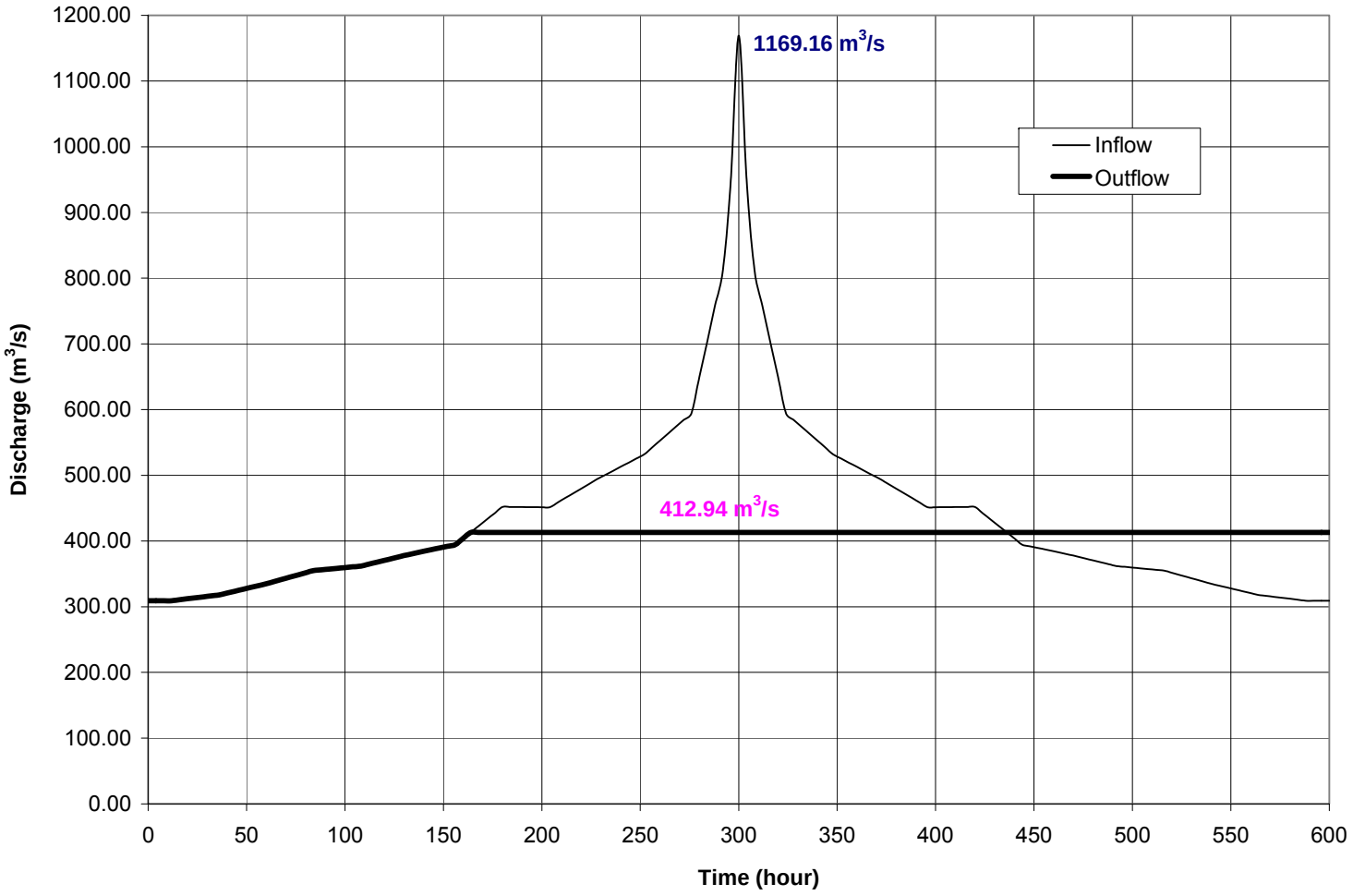


Figure A-31: Mut Dam Inflow and Outflow Flood Hydrographs (Q_{10000})

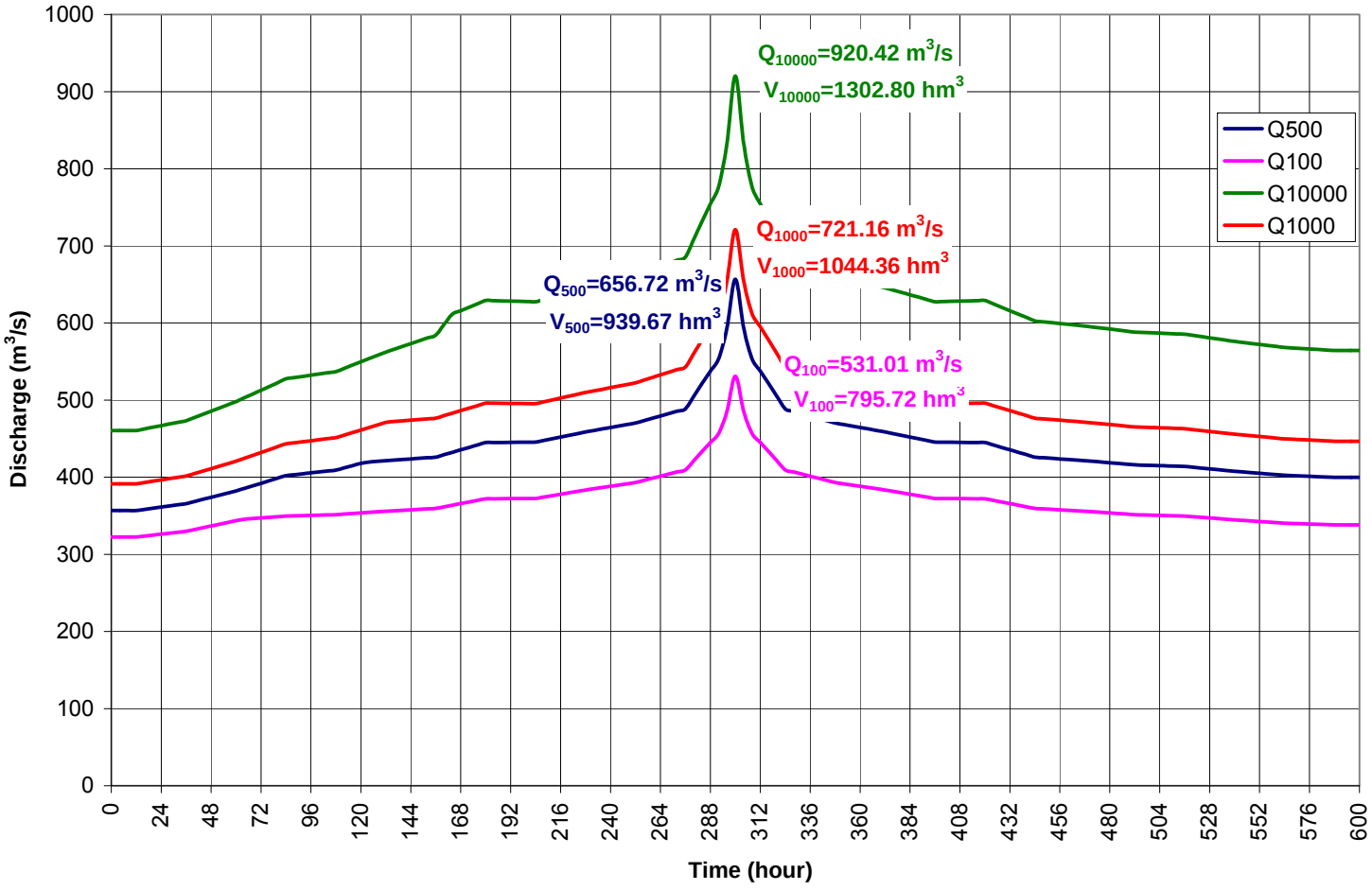


Figure A-32: Göksu River (Upstream Part of the Joint) Total Flood Hydrograph (Mut Dam Is in Operation)

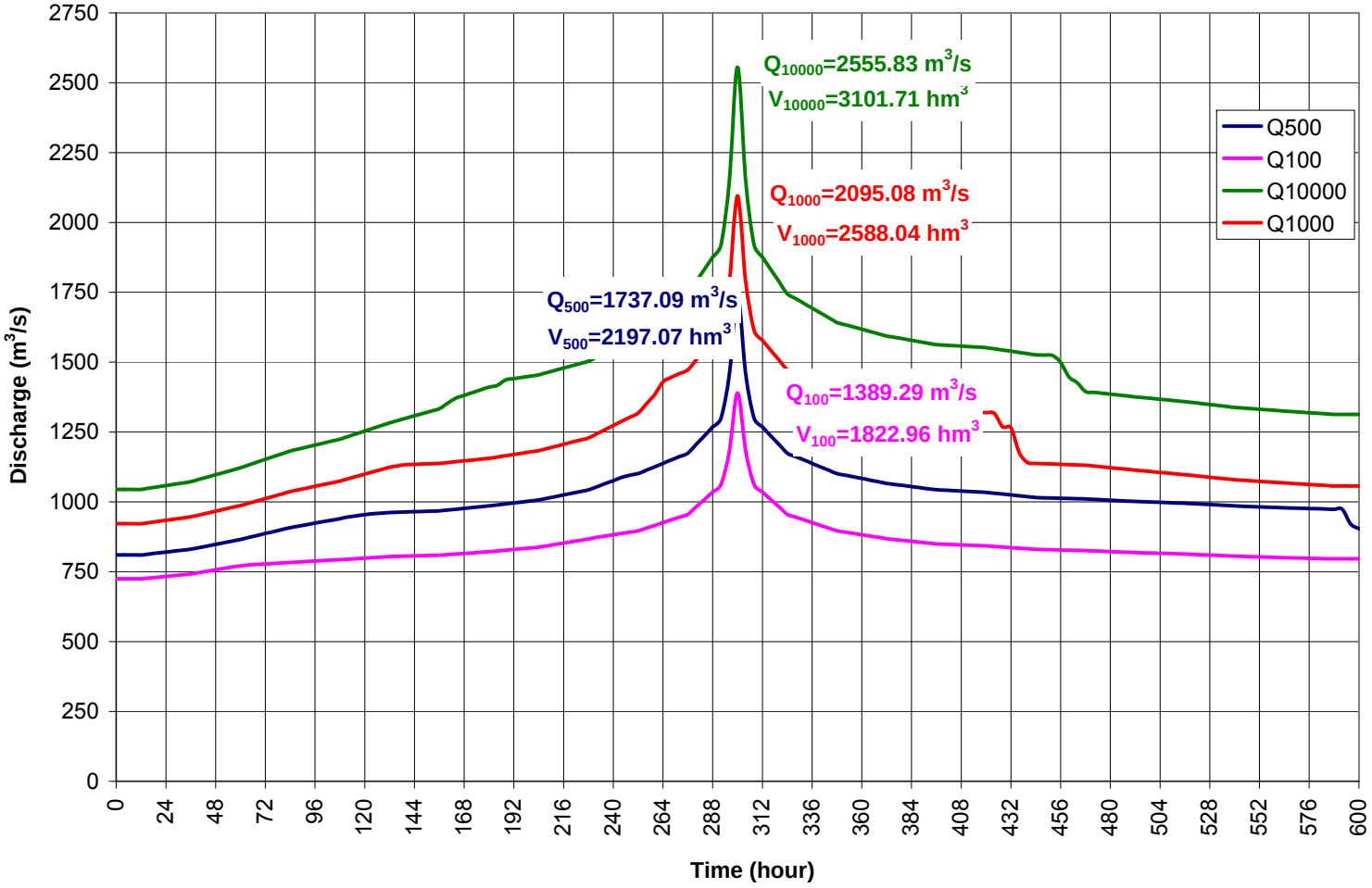


Figure A-33: Total Flood Hydrograph at the Joint (Mut Dam Is in Operation)

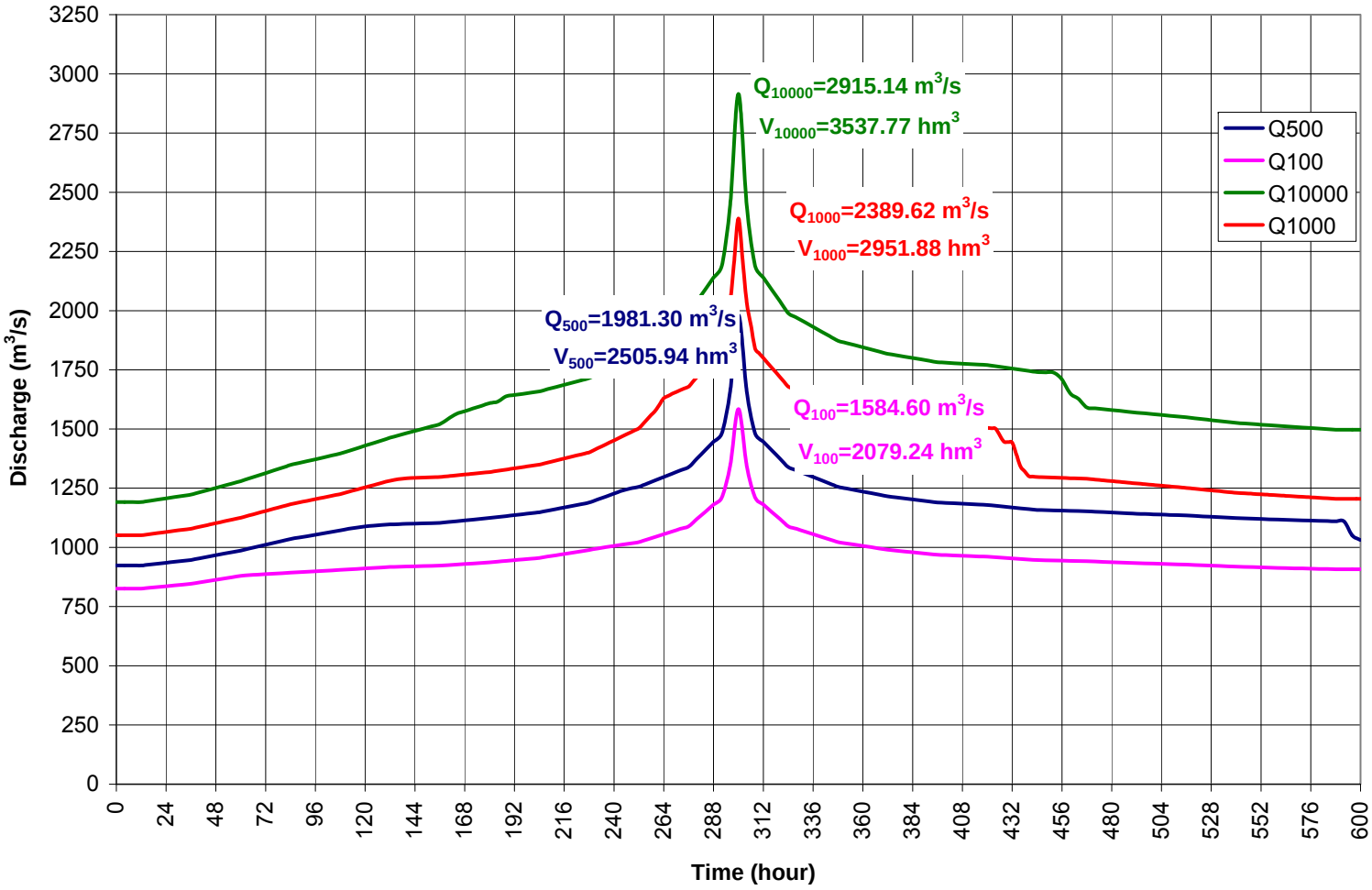
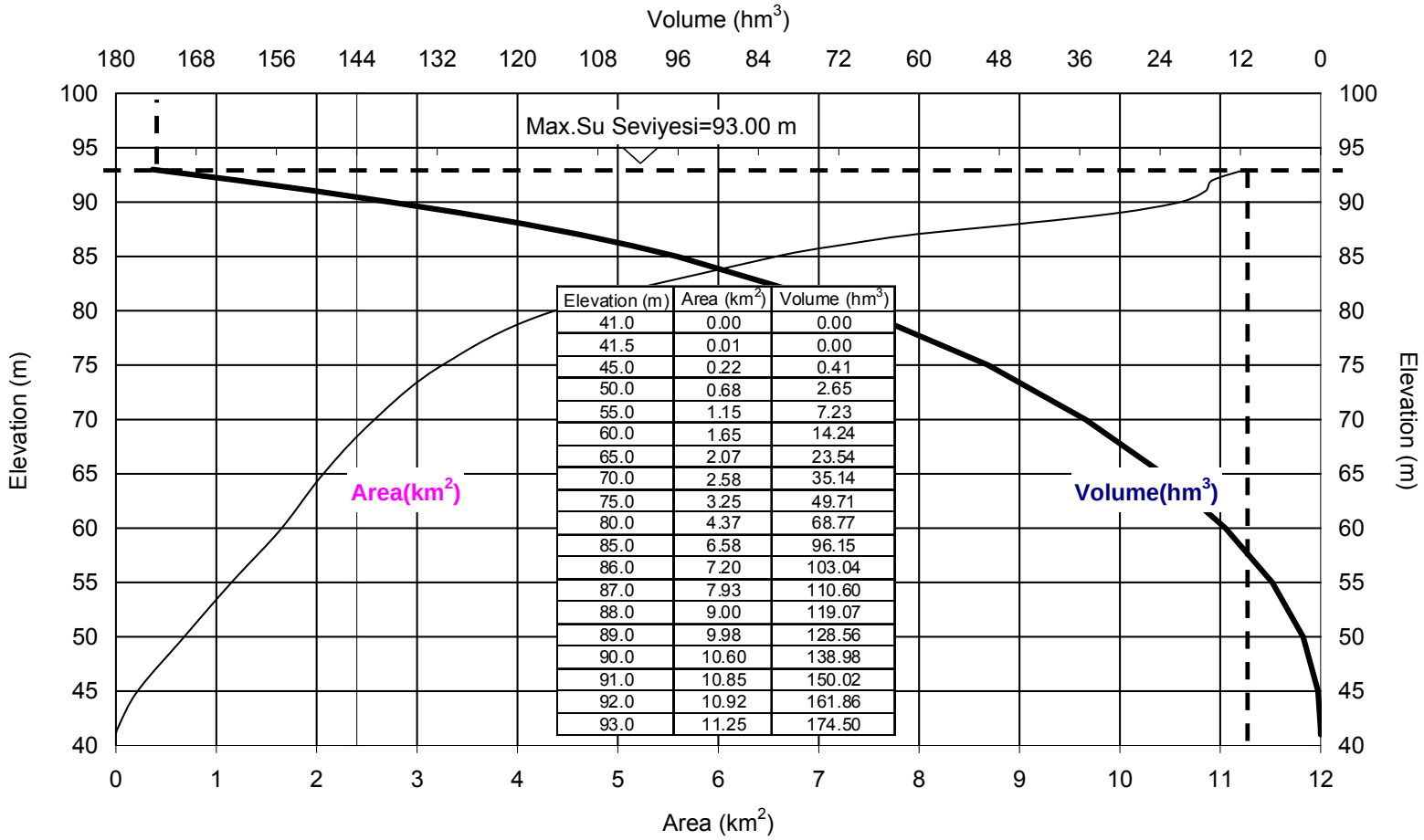


Figure A-34: Kayraktepe Dam Inflow Flood Hydrographs (Mut Dam Is in Operation)



Elevation (m)	Area (km^2)	Volume (hm^3)
41.0	0.00	0.00
41.5	0.01	0.00
45.0	0.22	0.41
50.0	0.68	2.65
55.0	1.15	7.23
60.0	1.65	14.24
65.0	2.07	23.54
70.0	2.58	35.14
75.0	3.25	49.71
80.0	4.37	68.77
85.0	6.58	96.15
86.0	7.20	103.04
87.0	7.93	110.60
88.0	9.00	119.07
89.0	9.98	128.56
90.0	10.60	138.98
91.0	10.85	150.02
92.0	10.92	161.86
93.0	11.25	174.50

Figure A-35: Kayraktepe Dam Volume - Area Curve

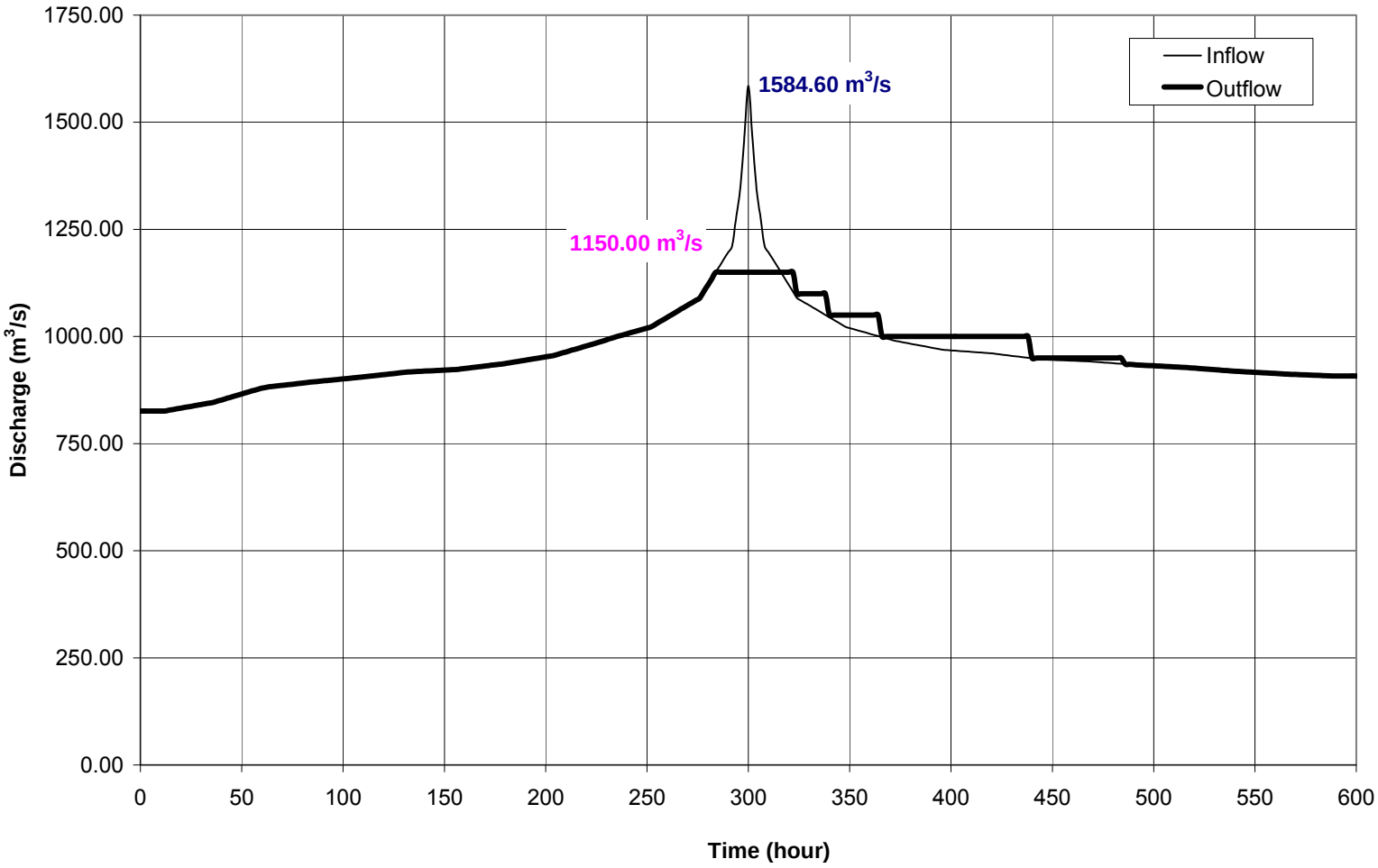


Figure A-36: Kayraktepe Dam Inflow and Outflow Hydrographs (Q_{100}) (Mut Dam is in Operation)

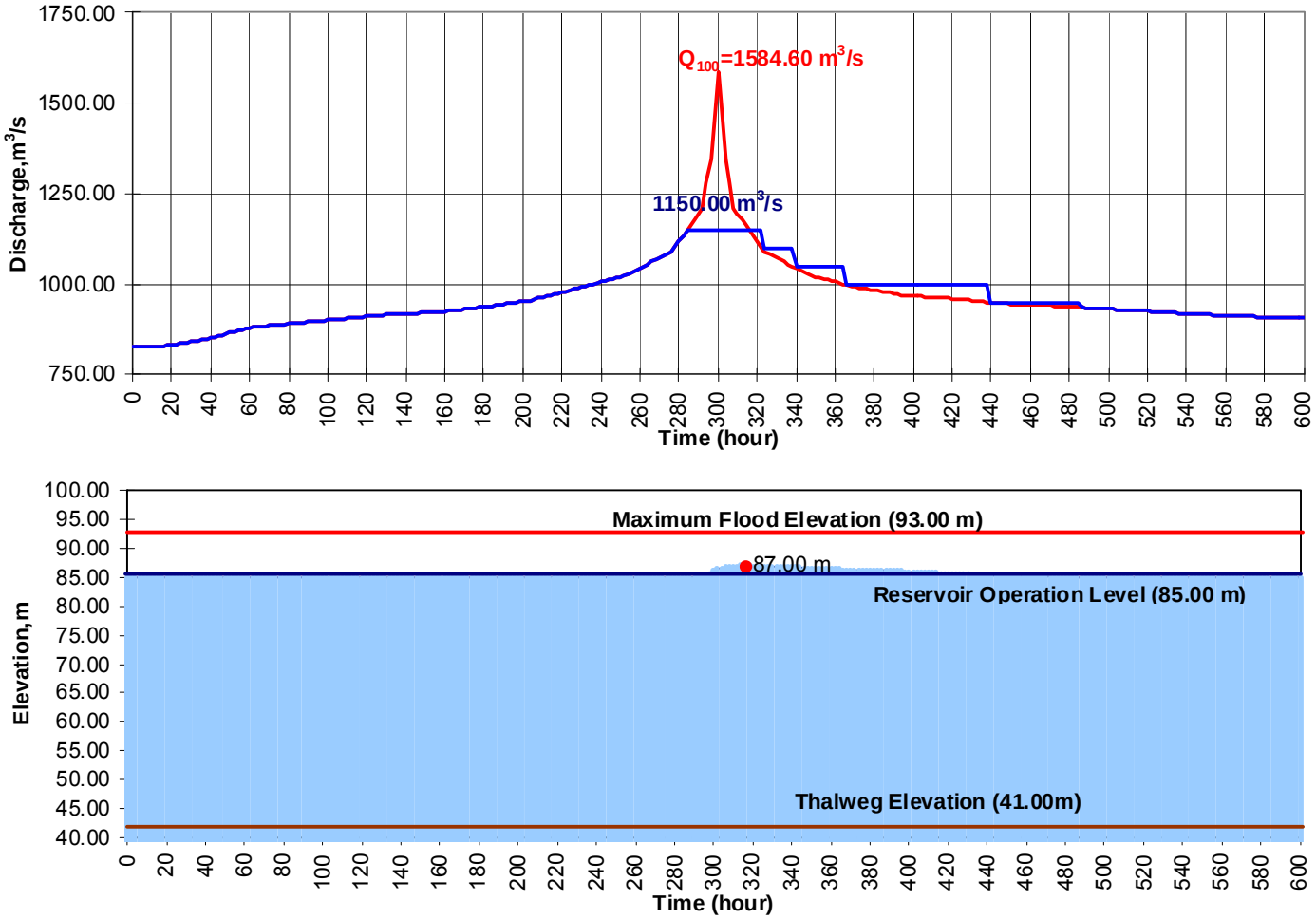


Figure A-37: Kayraktepe Dam Flood Routing Graphic (Q100, Mut Dam is in Operation)

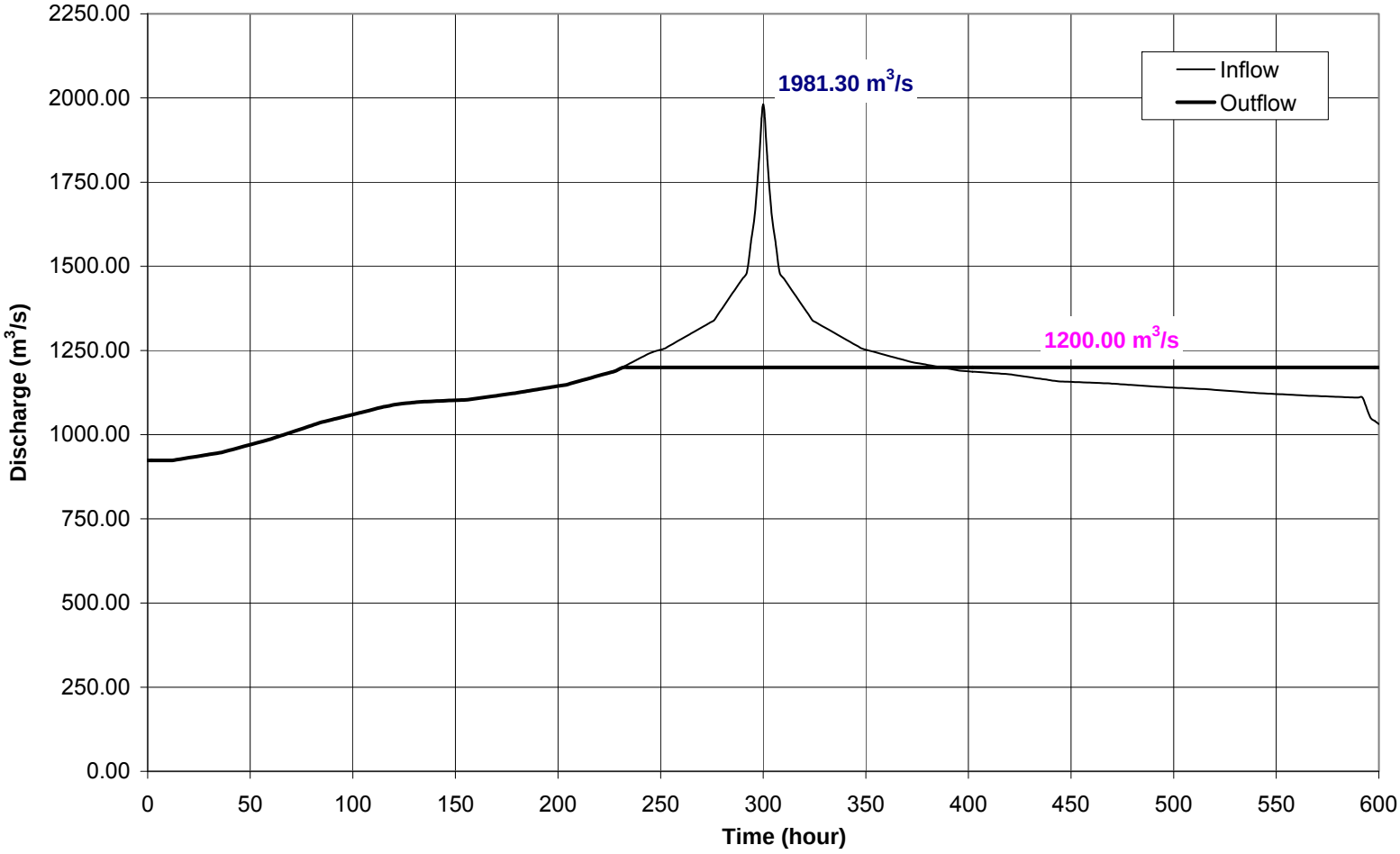


Figure A-38: Kayraktepe Dam Inflow and Outflow Hydrographs (Q_{500}) (Mut Dam is in Operation)

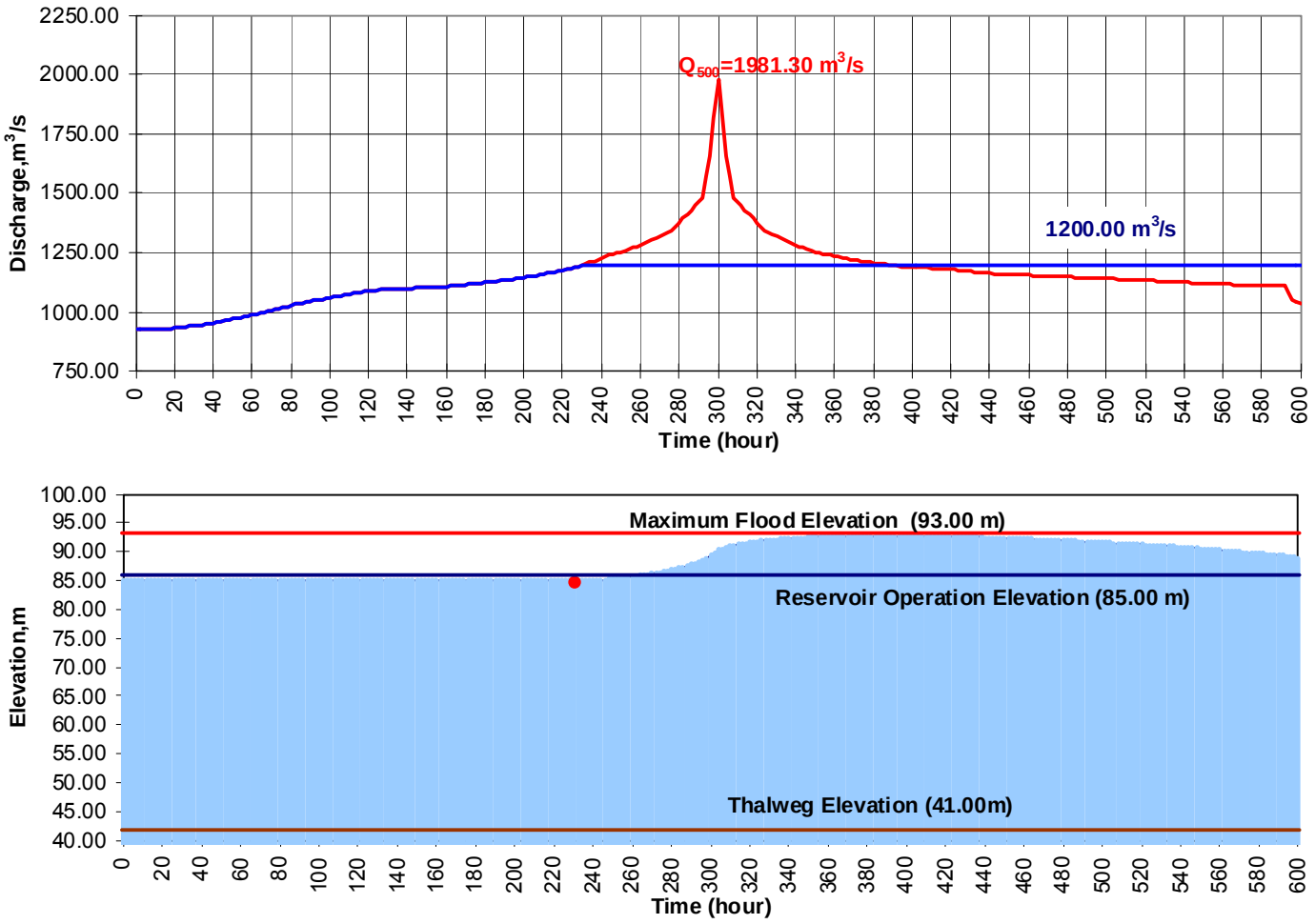


Figure A-39: Kayraktepe Dam Flood Routing Graphic (Q_{500}, Mut Dam is in Operation)

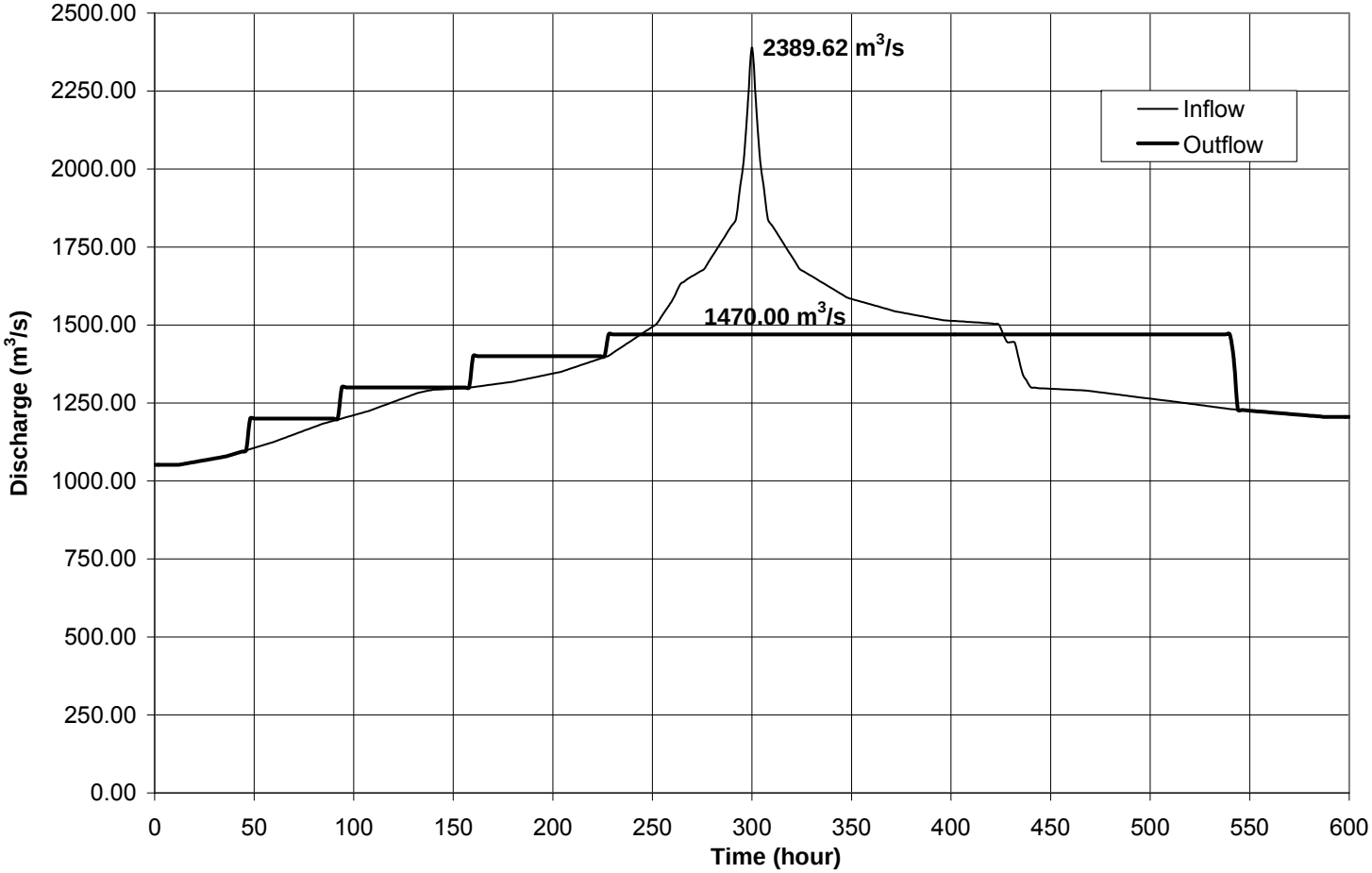


Figure A-40: Kayraktepe Dam Inflow and Outflow Hydrographs (Q_{1000}) (Mut Dam is in Operation)

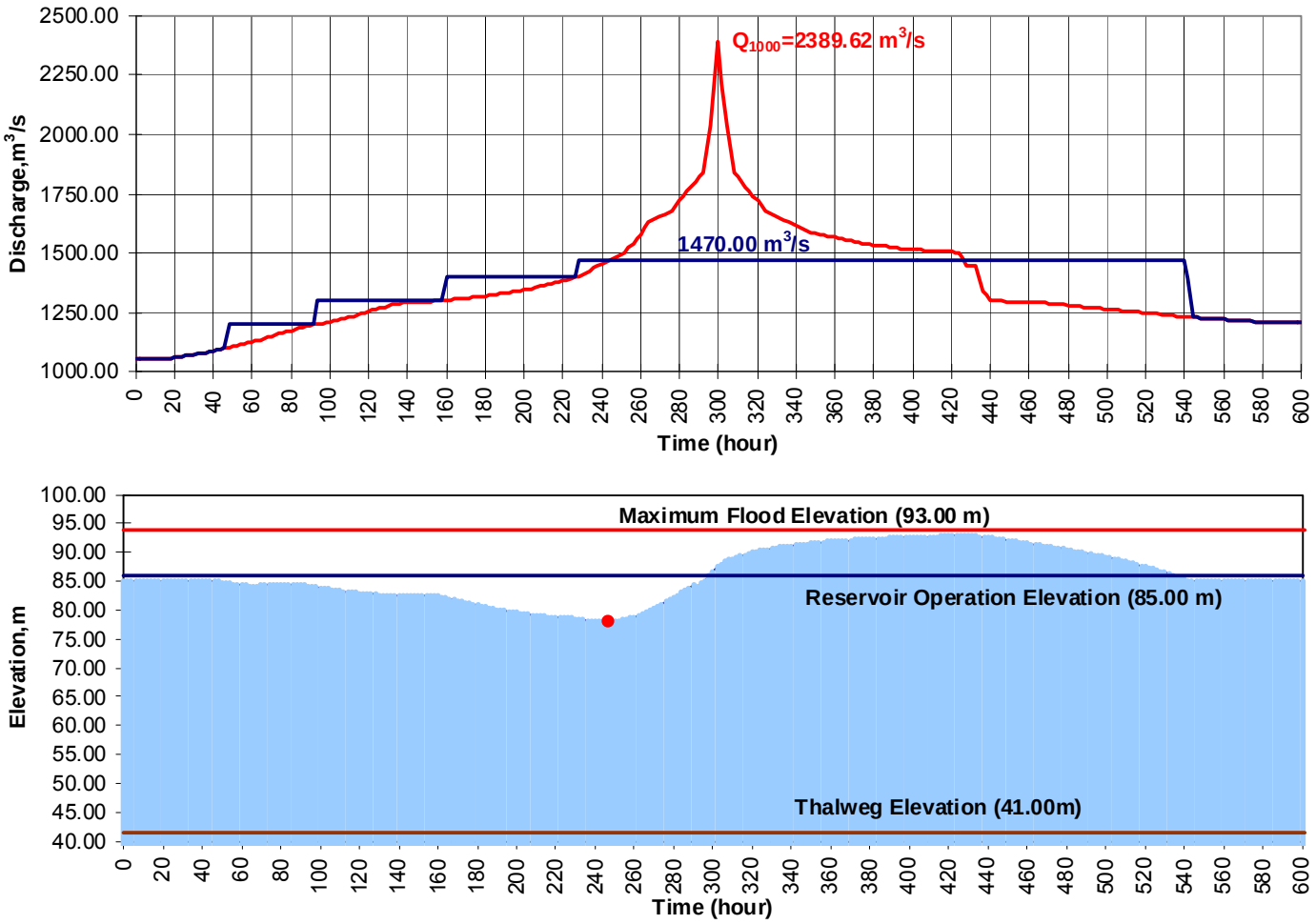


Figure A-41: Kayraktepe Dam Flood Routing Graphic (Q_{1000}, Mut Dam is in Operation)

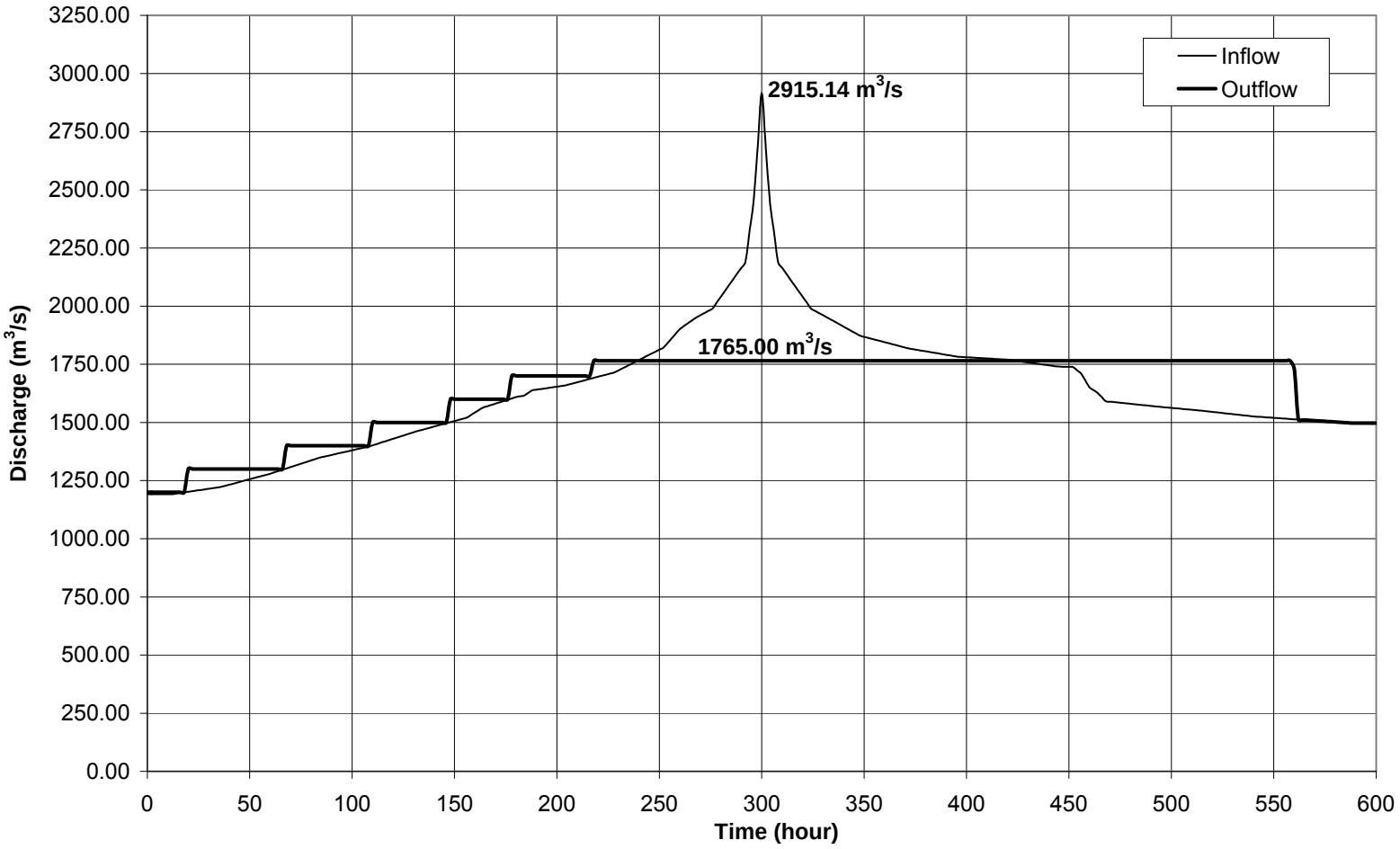


Figure A-42: Kayraktepe Dam Inflow and Outflow Hydrographs (Q_{10000}) (Mut Dam is in Operation)

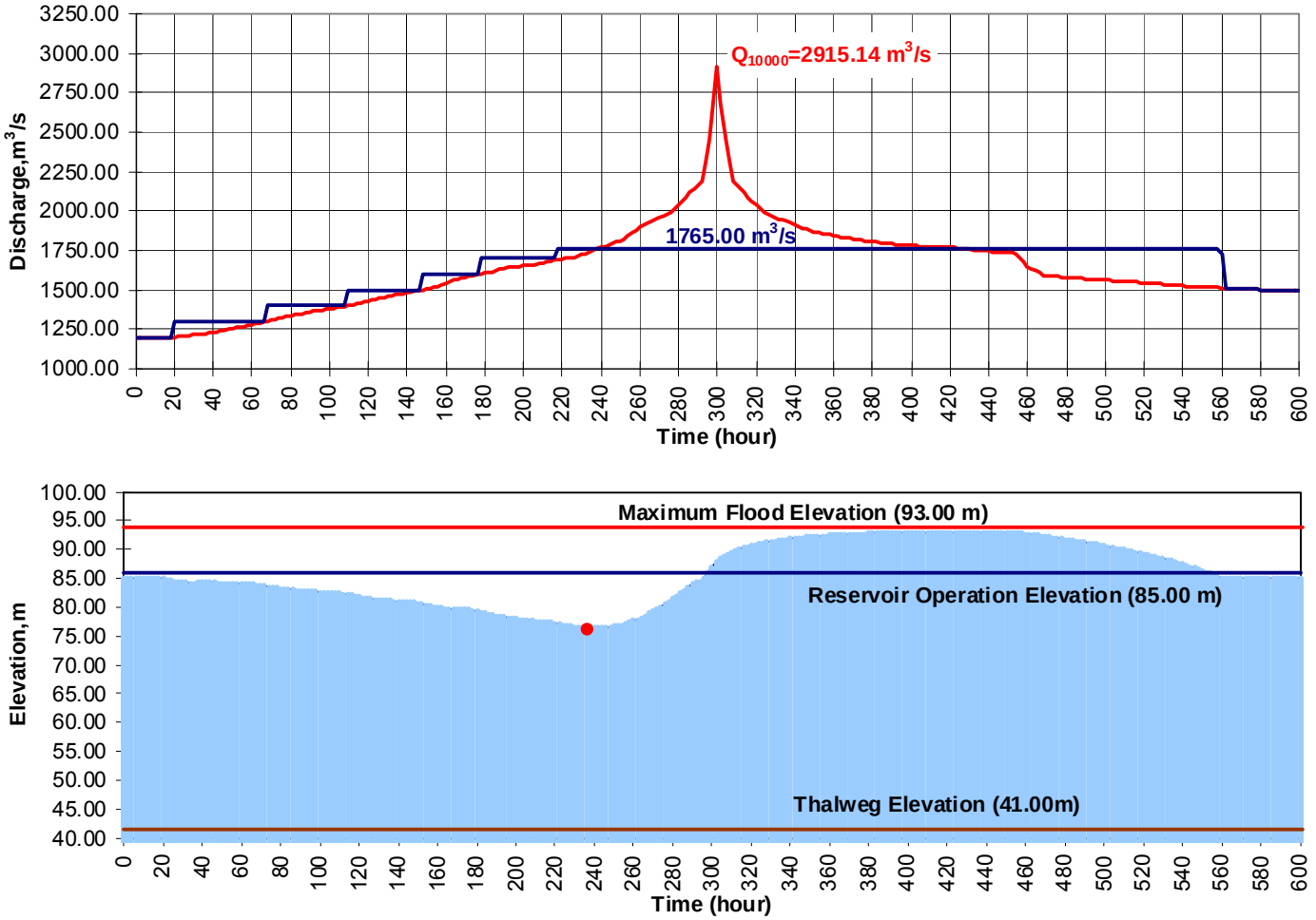


Figure A-43: Kayraktepe Dam Flood Routing Graphic (Q_{10000}, Mut Dam is in Operation)

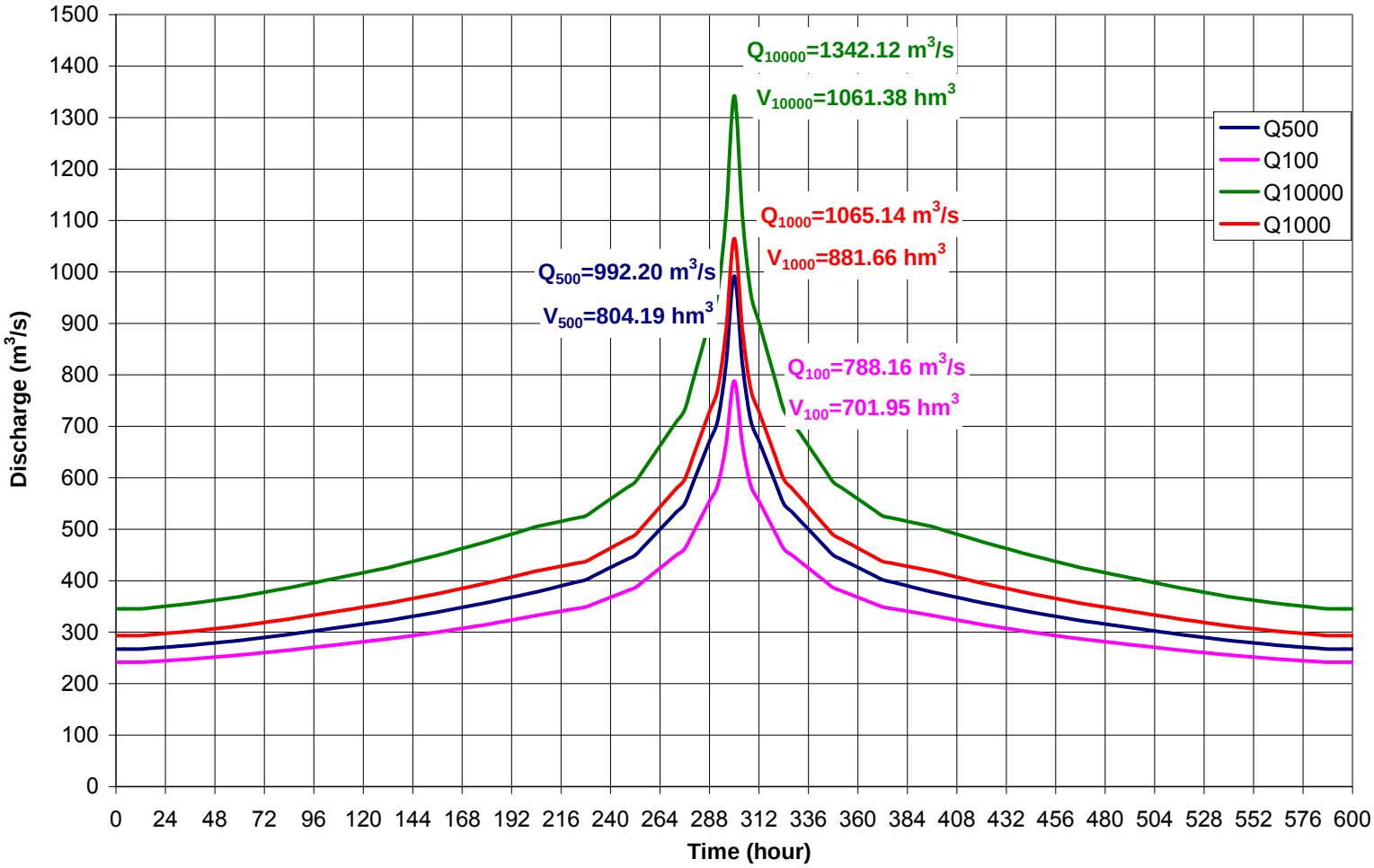


Figure A-44: Flood Hydrographs of Göksu River and Ermenek Creek Joint (Mut Dam is not in Operation)

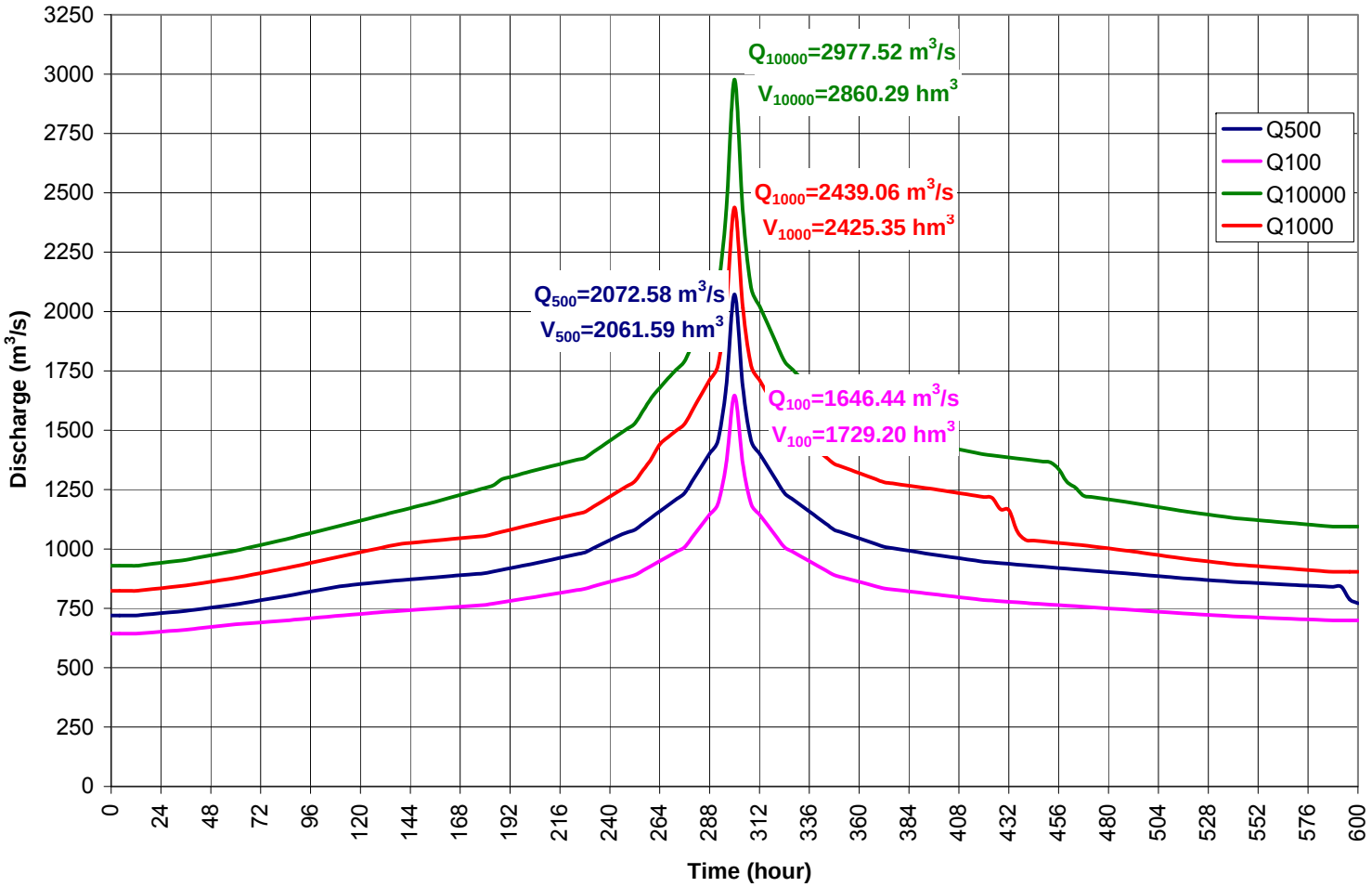


Figure A-45: Total Flood Hydrograph at the Joint (Mut Dam Is not in Operation)

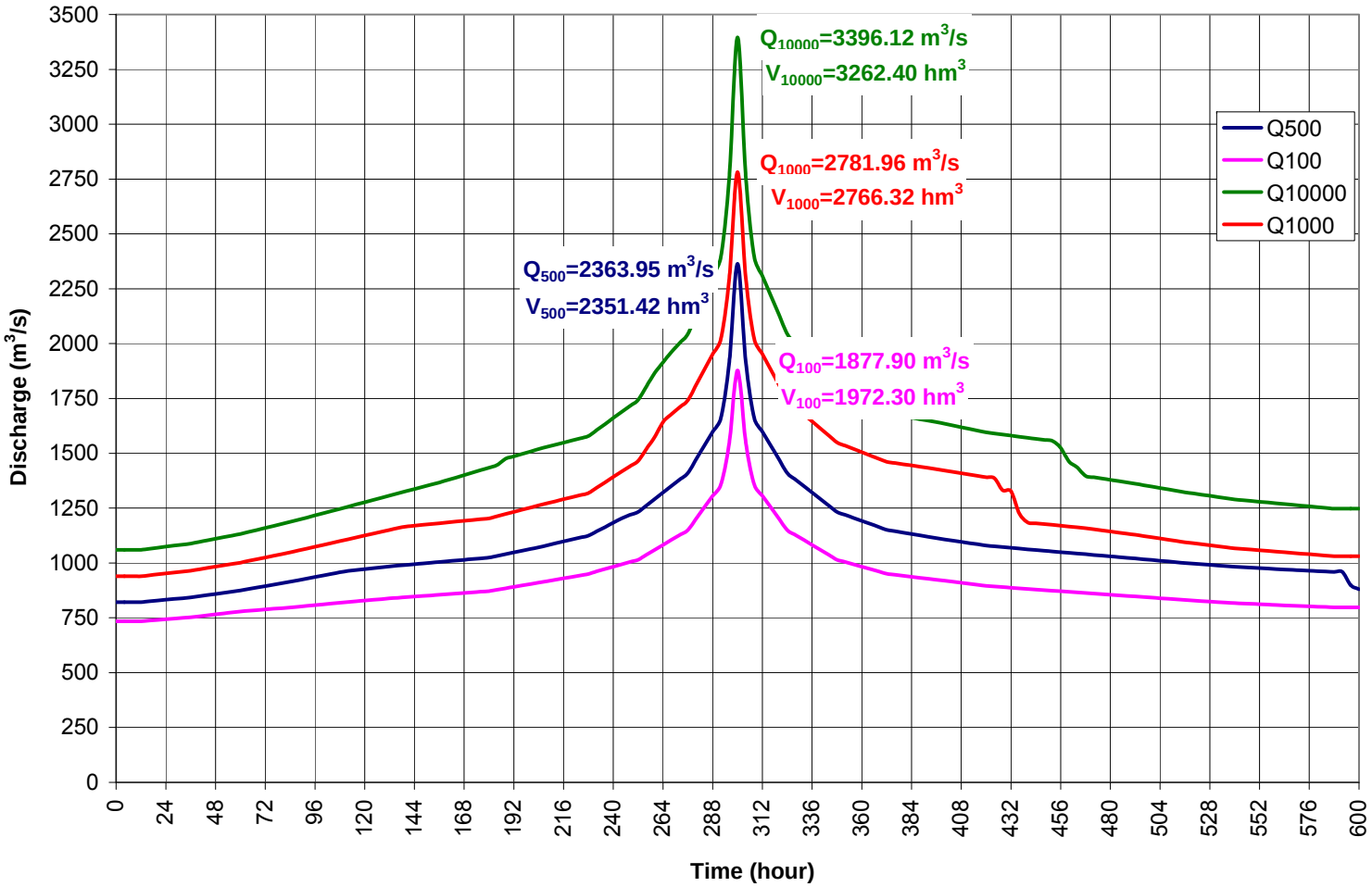


Figure A-46: Kayraktepe Dam Inflow Flood Hydrographs (Mut Dam Is not in Operation)

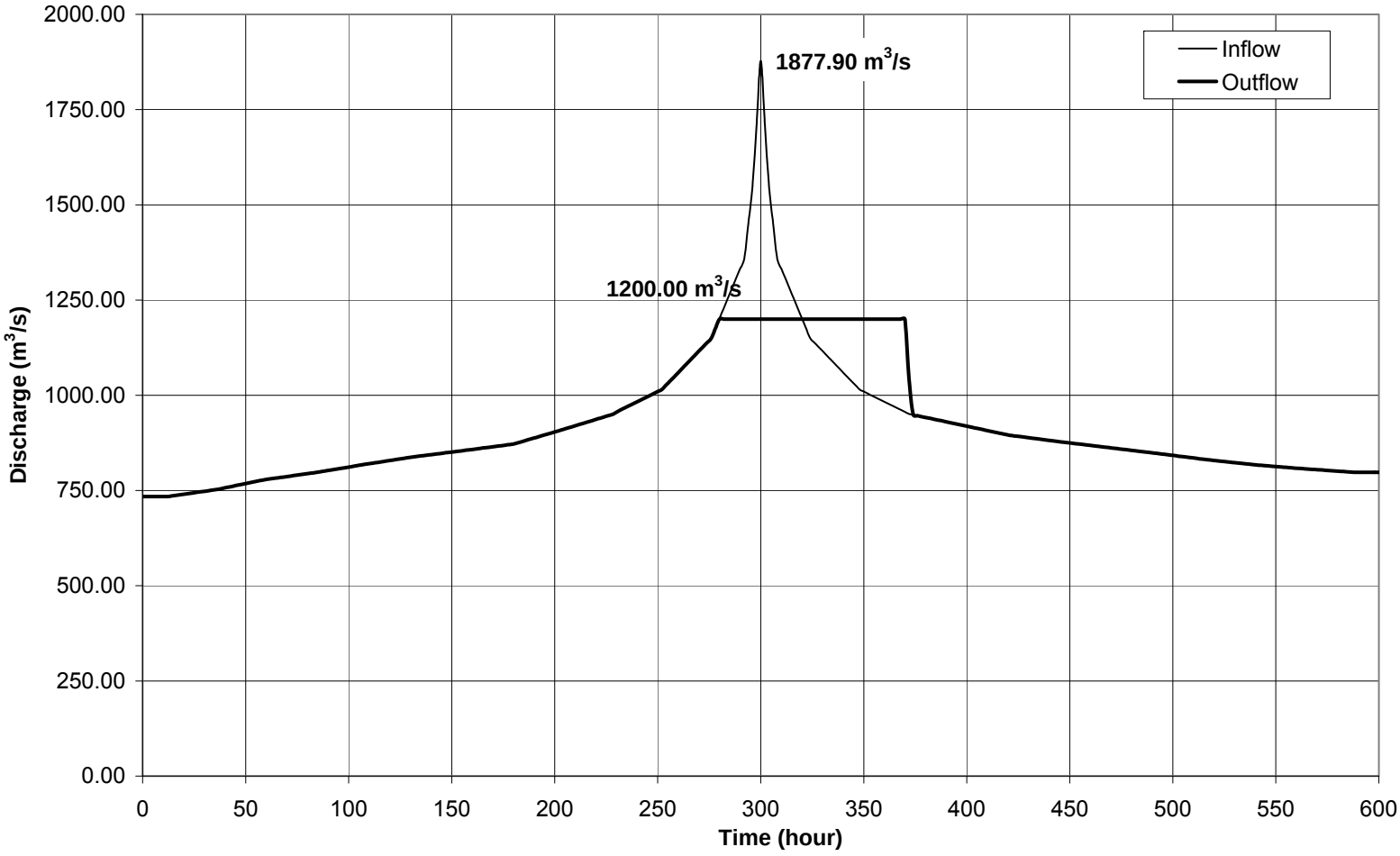


Figure A-47: Kayraktepe Dam Flood Inflow and Outflow Hydrographs (Q_{100}) (Mut Dam is not in operation)

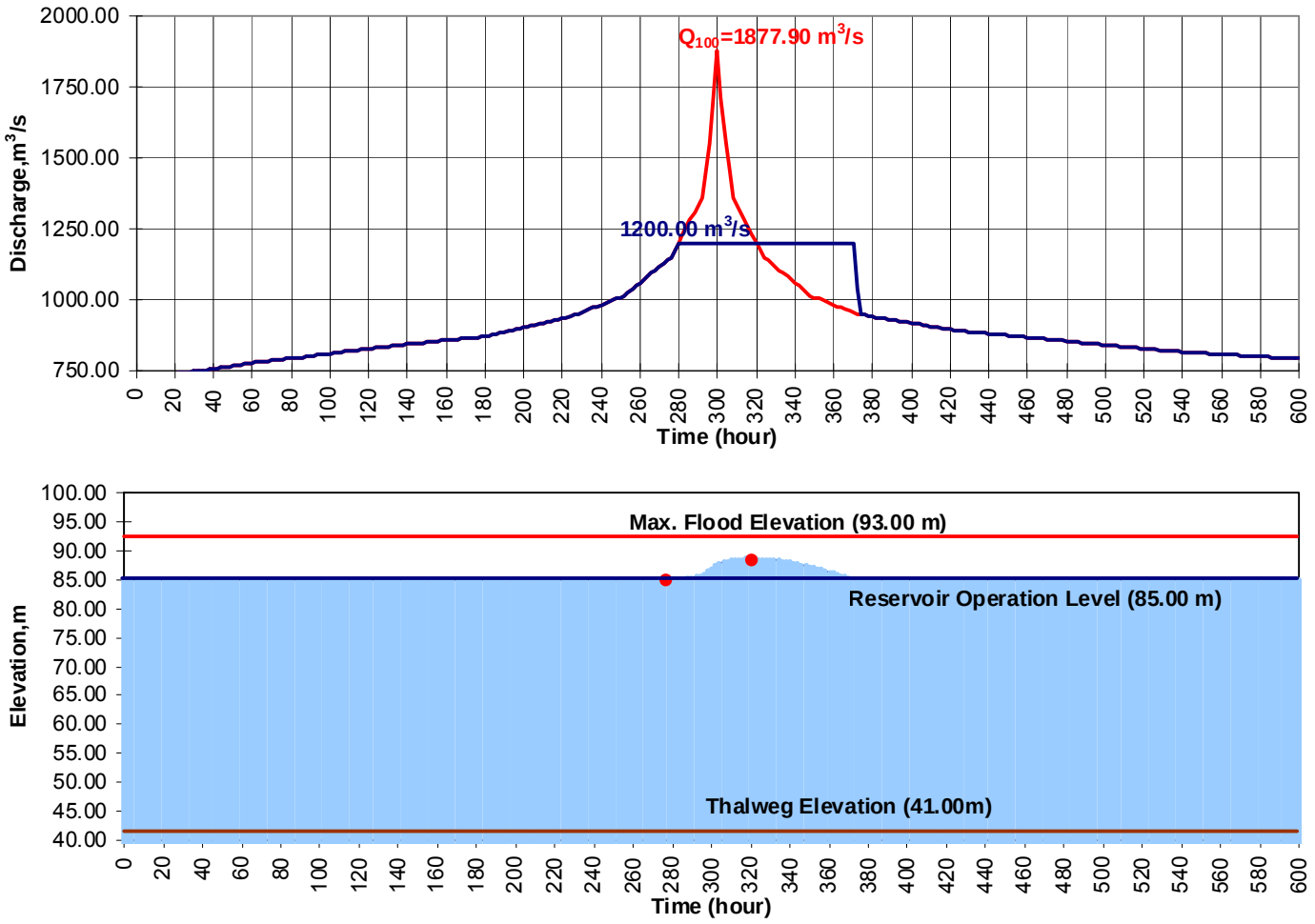


Figure A-48: Kayraktepe Dam Flood Routing Study for 100 Year Return Period Flood (Mut Dam is not in operation)

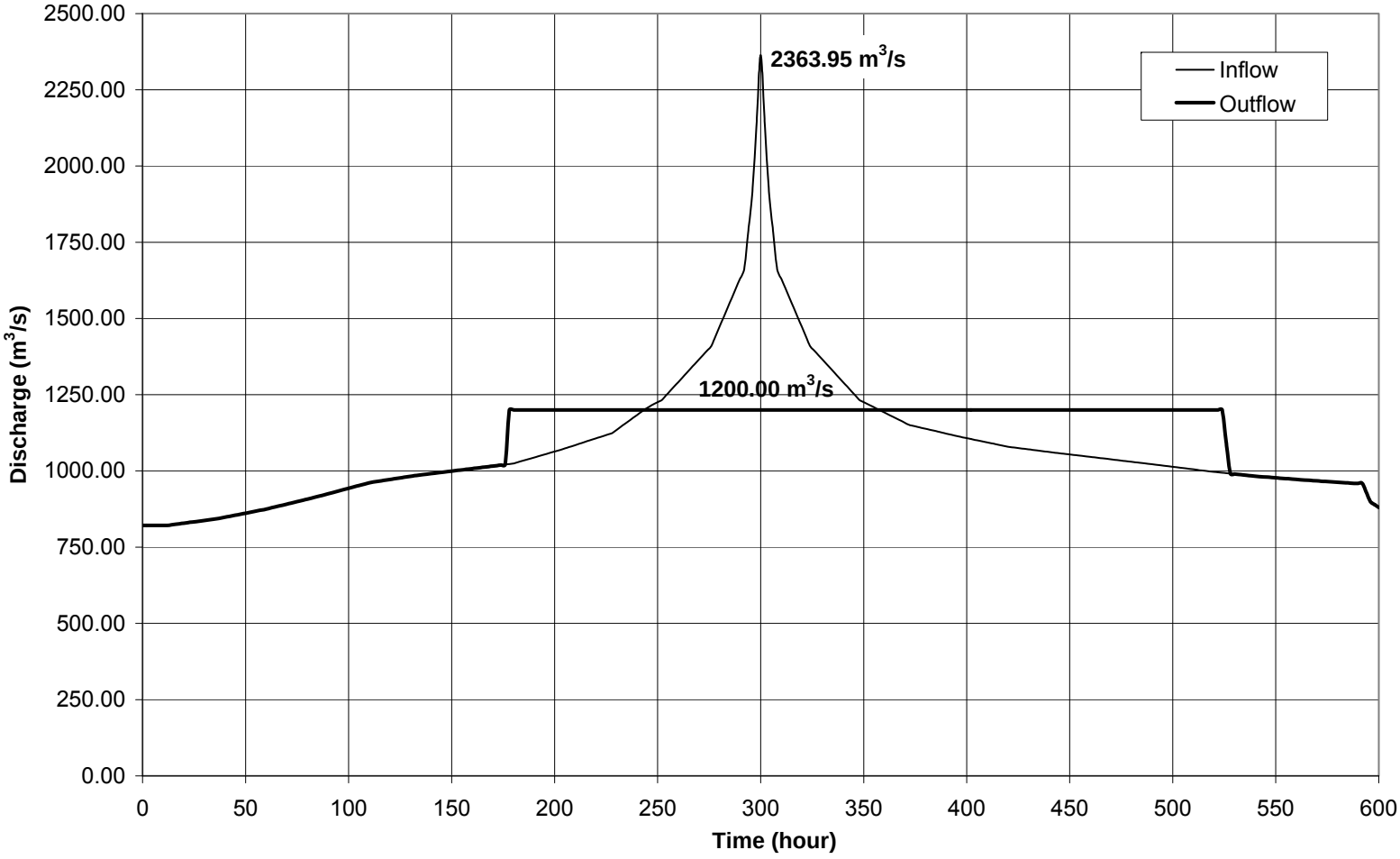


Figure A-49: Kayraktepe Dam Flood Inflow and Outflow Hydrographs (Q_{500}) (Mut Dam is not in operation)

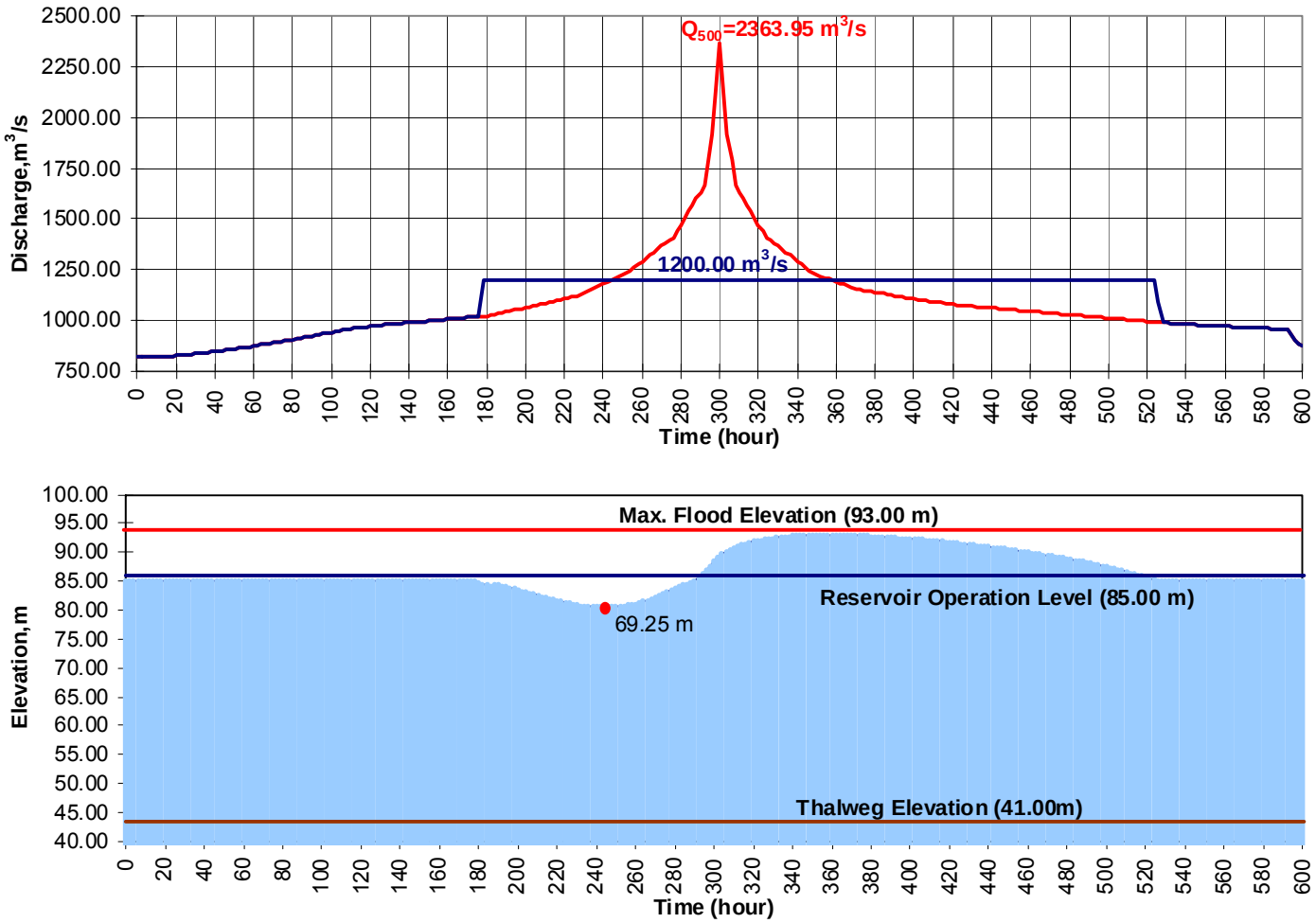


Figure A-50: Kayraktepe Dam Flood Routing Study for 500 Year Return Period Flood (Mut Dam is not in operation)

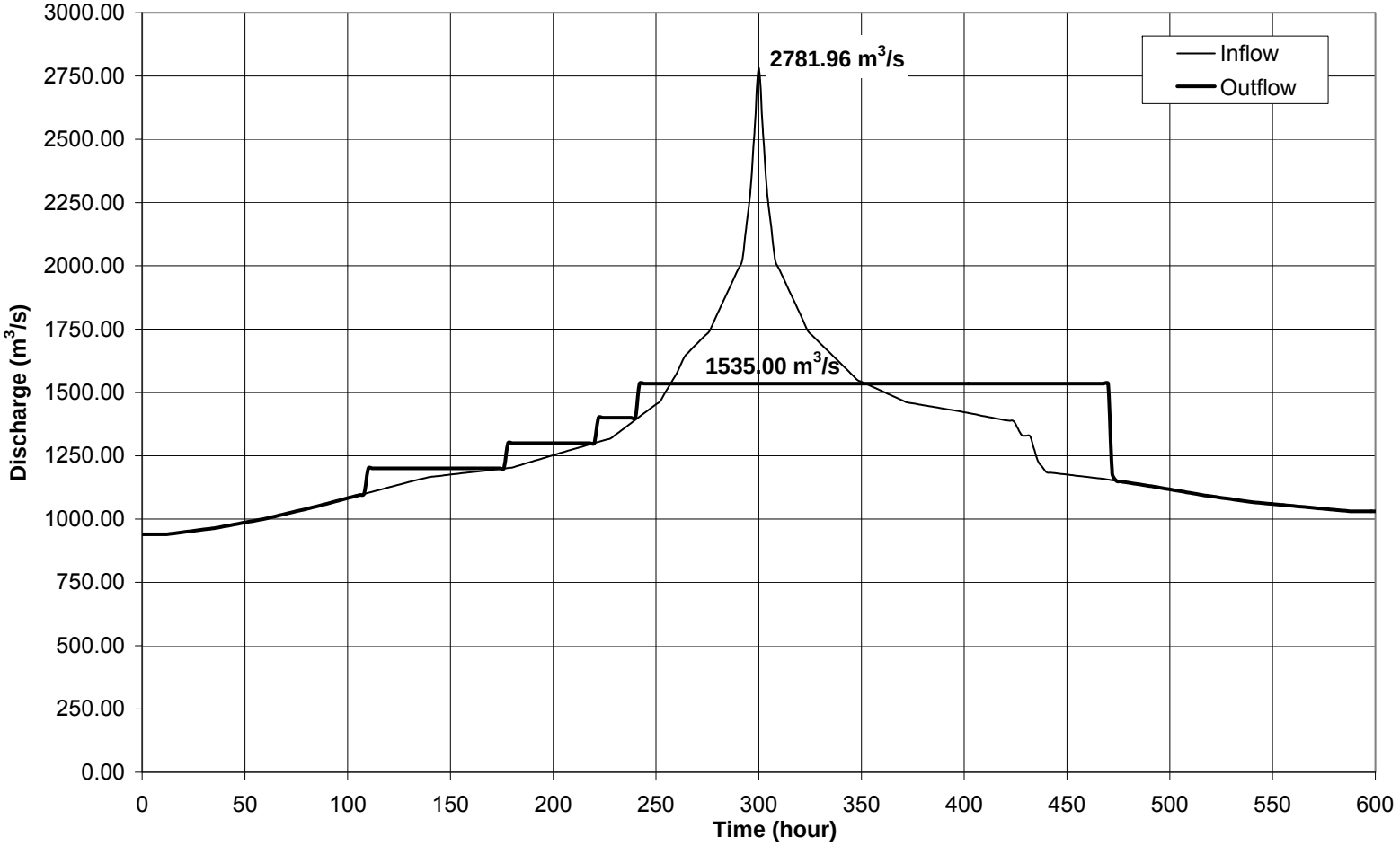


Figure A-51: Kayraktepe Dam Flood Inflow and Outflow Hydrographs (Q_{1000}) (Mut Dam is not in operation)

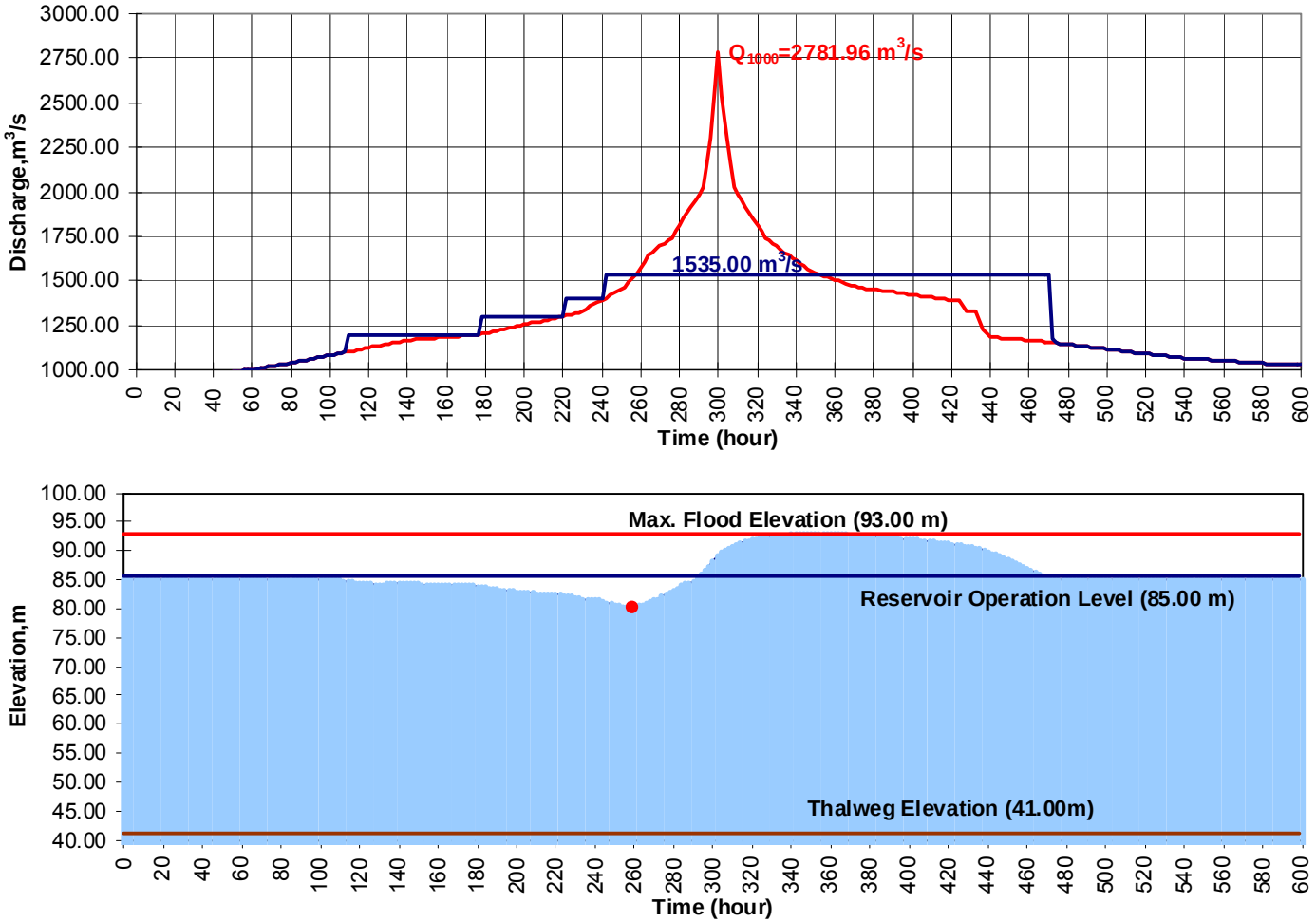


Figure A-52: Kayraktepe Dam Flood Routing Study for 1000 Year Return Period Flood (Mut Dam is not in operation)

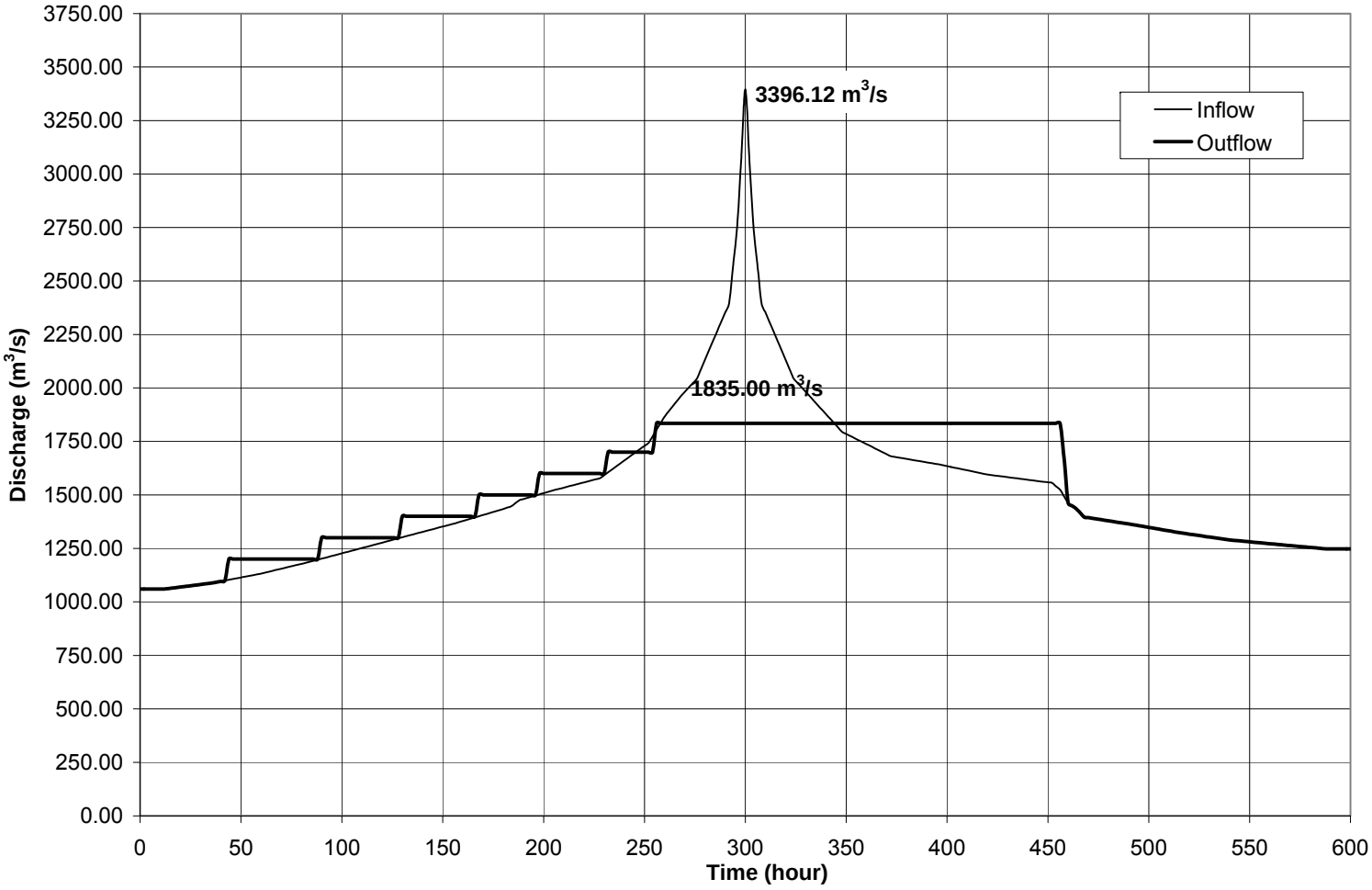


Figure A-53: Kayraktepe Dam Flood Inflow and Outflow Hydrographs (Q_{10000}) (Mut Dam is not in operation)

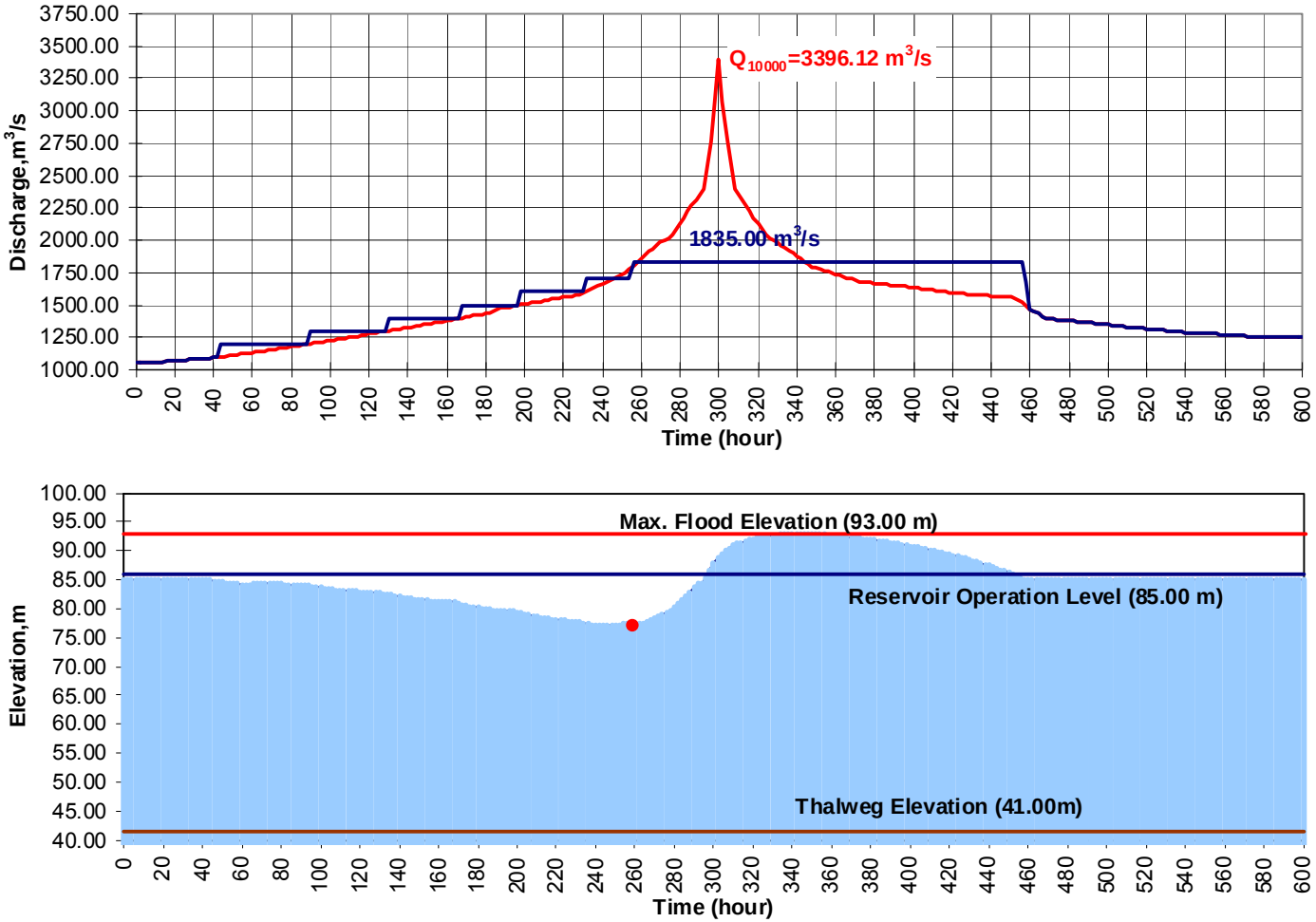


Figure A-54: Kayraktepe Dam Flood Routing Study for 10000 Year Return Period Flood (Mut Dam is not in operation)

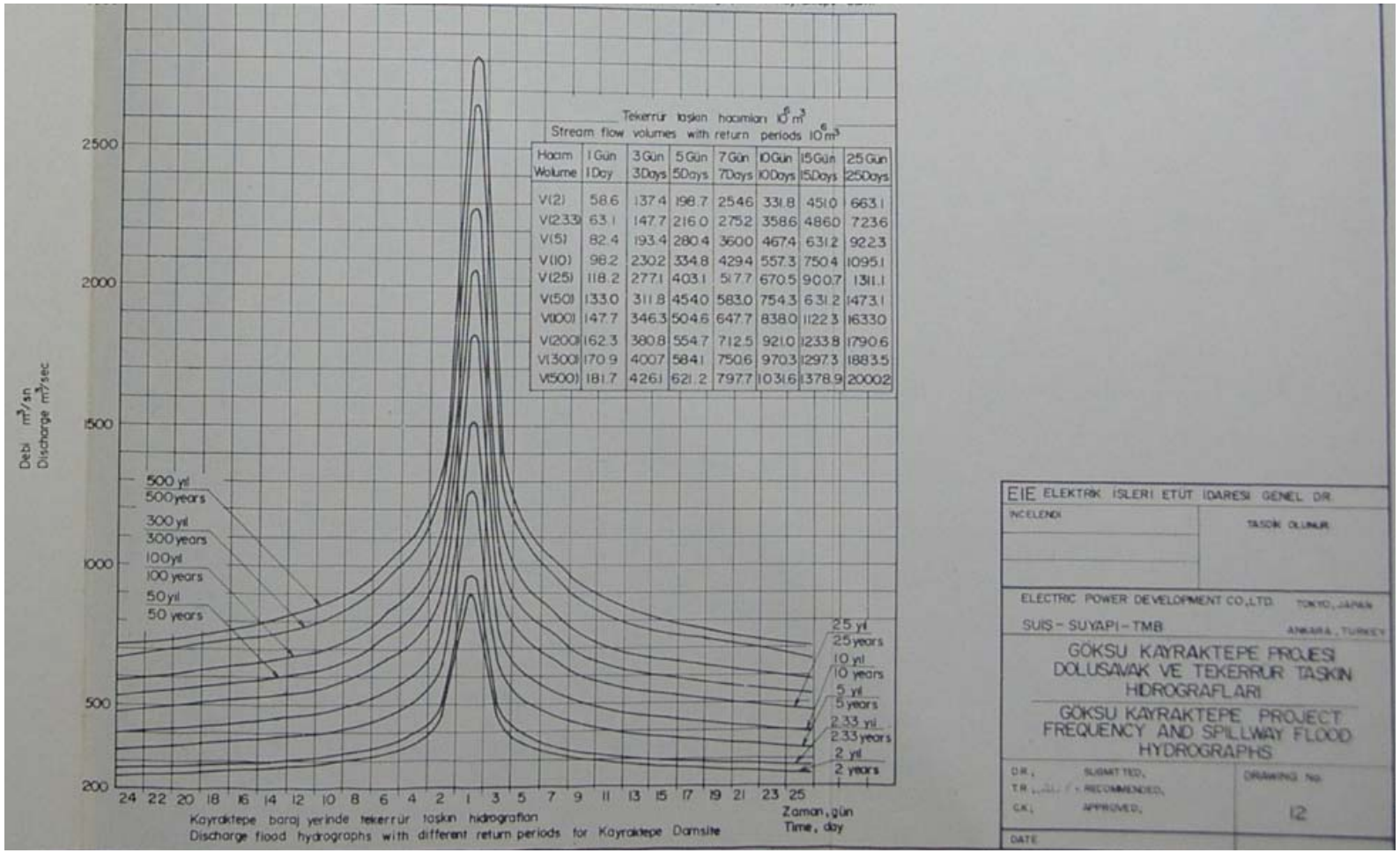


Figure A-55: Kayraktepe Dam Flood Hydrograph (Kayraktepe – 1982 Report)

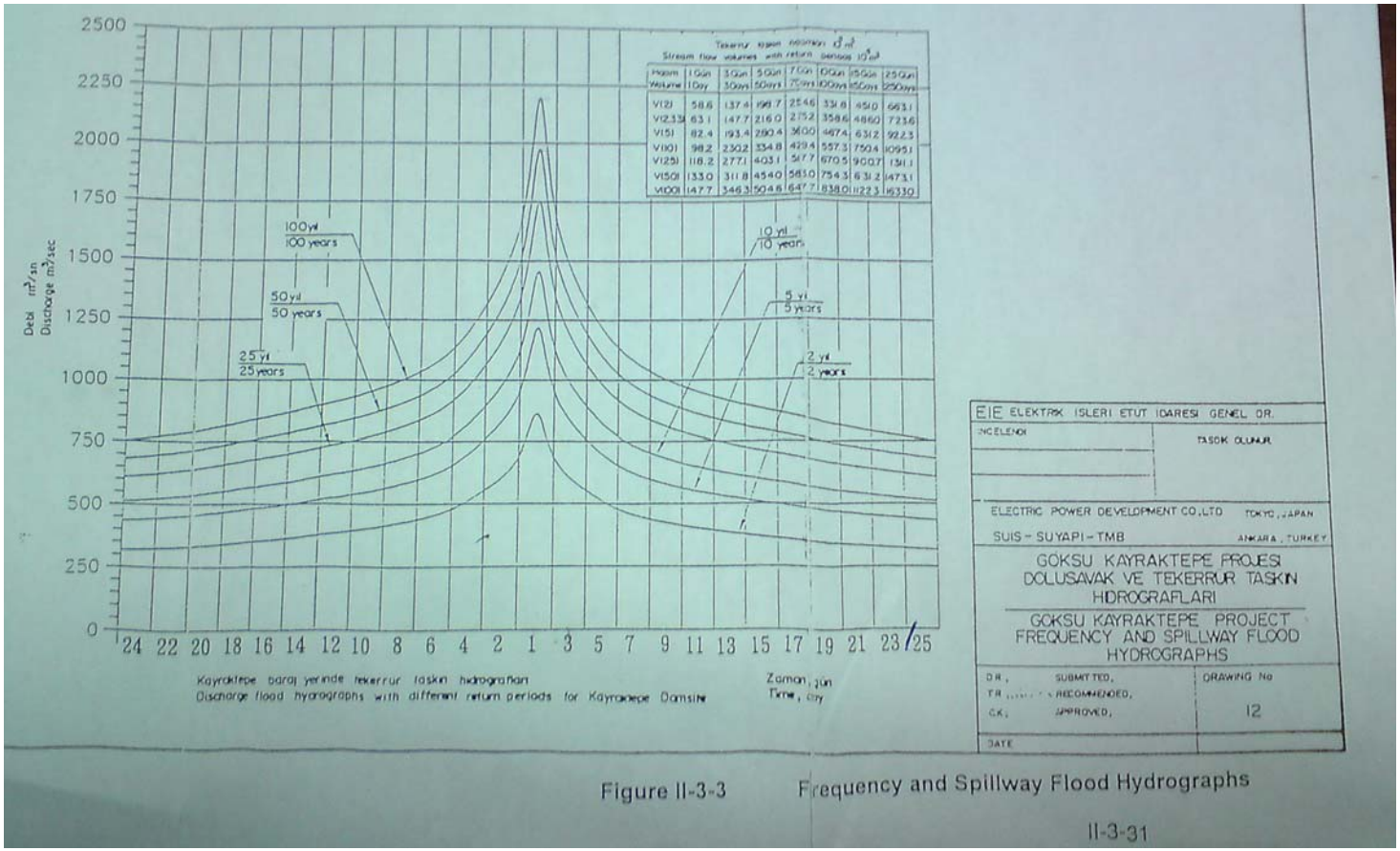


Figure II-3-3 Frequency and Spillway Flood Hydrographs

II-3-31

Figure A-56: Kayraktepe Dam Flood Hydrograph (Kayraktepe – 1997 Report)

APPENDIX B

RIVER SURFACE PROFILE CALCULATIONS

Göksu River has two main branches. The first branch appears from the hillside of Kızıldağ (2030 m). The second branch appears from the Erenler Hill (1914 m). These two branches are joined together at a location close to Gaziler district. After the joint, the river firstly flows to east and then to south – east. At a location where the thalweg elevation is about 750 m Yerköprü springs join to the river. After some distance to this point, Gökçay Creek joins with Ermenek Creek. After the joint, the river flows through Silifke District and finally reached Mediterranean Sea.

To calculate the water surface profile, a software called "HEC-RAS (Hydrologic Engineering Center's River Analysis System)" was used. HEC-RAS software was developed by U.S Army Corps of Engineers Hydrologic Engineering Center.

The HEC-RAS system contains four one – dimensional river analysis components for:

- Steady flow water surface profile computations,
- Unsteady flow simulations,
- Movable boundary sediment transport computations,
- Water quality analysis.

The flow regime of Göksu River within the Silifke District is sub-critic. Therefore, the calculations were made from downstream to upstream. To make the calculations,

firstly the topographic studies were made. According these studies, the river cross sections were prepared (with 50 m interval for a length of 6.35 km).

Manning coefficient (n) for the river is determined as 0.028. The boundary condition of downstream end is set as ~0.0013 m/m river bed slope. This condition was calculated by using the topographical map.

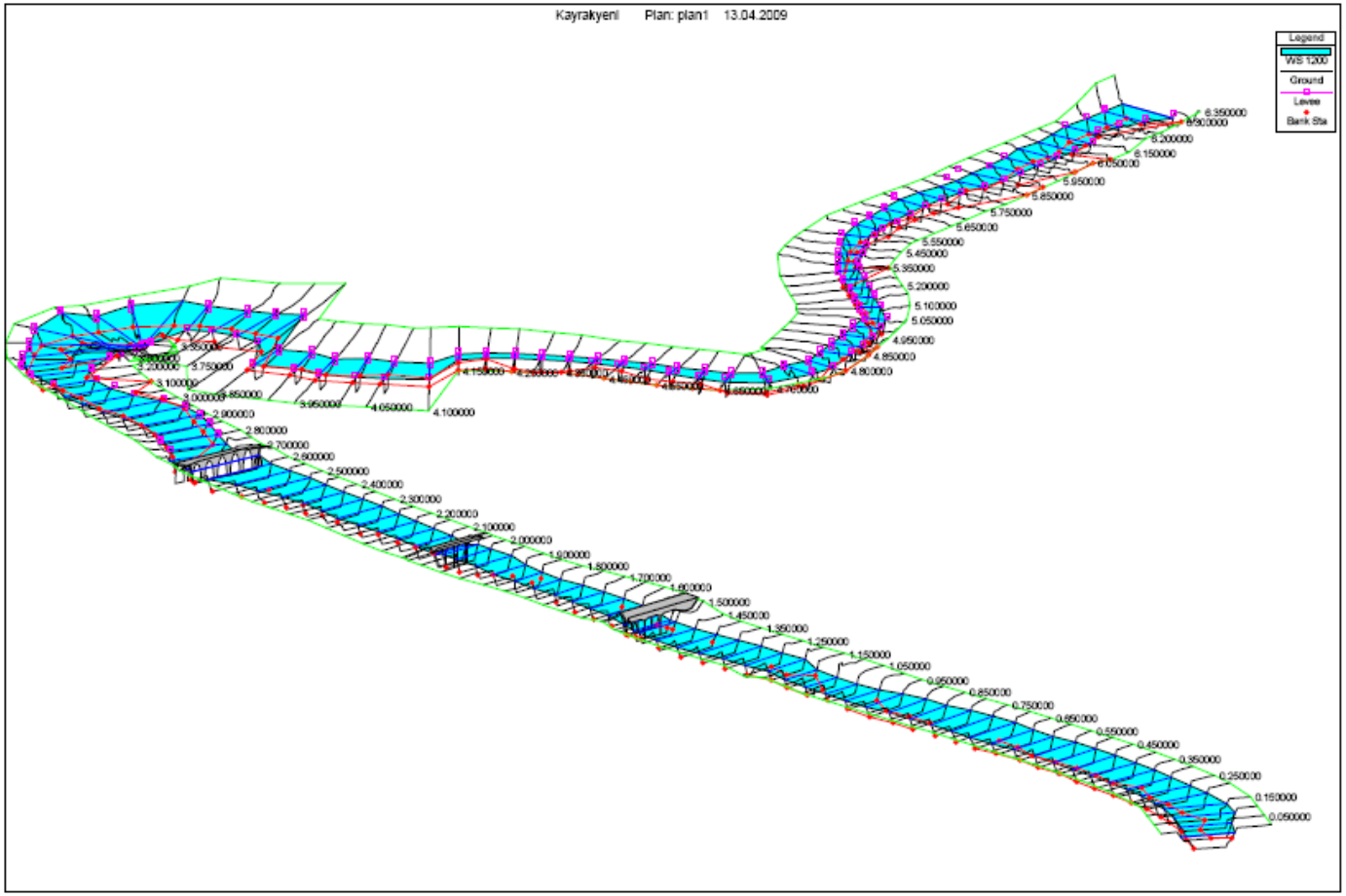


Figure B-1: General Layout (3D view)

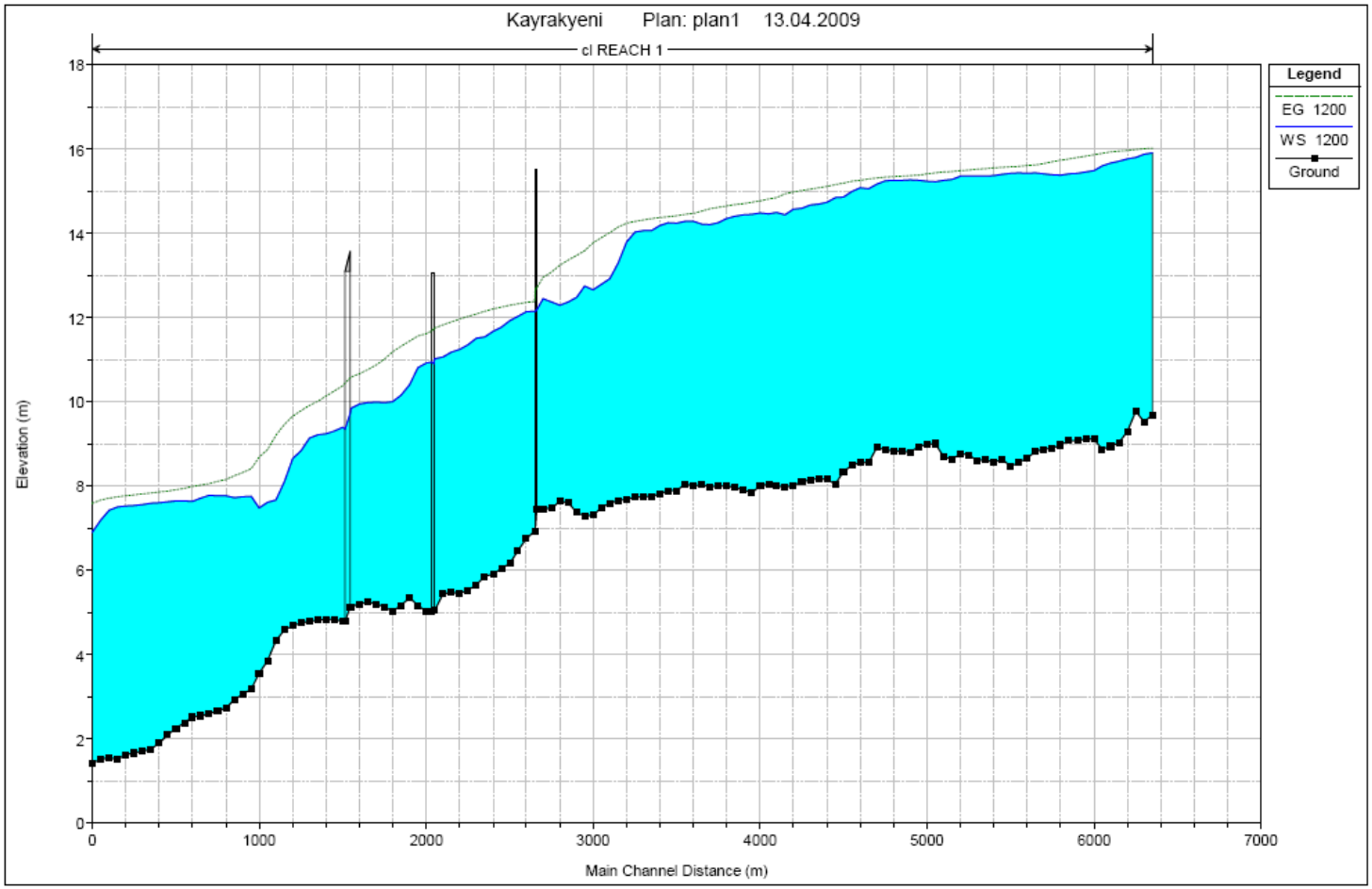


Figure B-2: Profile View

Table B-1 River Surface Profile Studies Results

River Station	Q_{total}	Min. Ch. Elev.	W.S. Elev.	Critical W.S.	E.G. Elevation	E.G. Slope	Velocity Channel	Flow Area	Top Width	Froud # Channel
	(m^3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
6.350000	1200	9.69	15.91	12.38	16.02	0.00	1.63	820.56	164.61	0.21
6.300000	1200	9.53	15.87	12.29	16.00	0.00	1.62	749.45	141.99	0.22
6.250000	1200	9.77	15.80	12.54	15.99	0.00	2.08	632.27	121.42	0.27
6.200000	1200	9.29	15.76	12.56	15.97	0.00	2.15	613.90	116.07	0.28
6.150000	1200	9.03	15.71	12.52	15.95	0.00	2.38	580.69	115.98	0.30
6.100000	1200	8.94	15.66	12.63	15.93	0.00	2.33	547.72	115.53	0.31
6.050000	1200	8.87	15.60	12.86	15.90	0.00	2.50	528.99	130.02	0.34
6.000000	1200	9.11	15.49	13.06	15.86	0.00	2.79	470.08	116.64	0.38
5.950000	1200	9.12	15.45	12.69	15.83	0.00	2.85	476.90	116.22	0.37
5.900000	1200	9.07	15.42	12.64	15.80	0.00	2.80	470.83	121.42	0.37
5.850000	1200	9.07	15.41	12.61	15.76	0.00	2.69	482.19	119.08	0.36
5.800000	1200	8.97	15.38	12.36	15.73	0.00	2.77	495.32	119.82	0.35
5.750000	1200	8.89	15.39	12.28	15.70	0.00	2.60	522.87	134.76	0.34
5.700000	1200	8.87	15.41	11.91	15.66	0.00	2.40	583.30	138.69	0.30
5.650000	1200	8.81	15.43	11.67	15.62	0.00	2.06	653.39	140.11	0.26
5.600000	1200	8.66	15.42	11.61	15.61	0.00	2.01	658.05	129.92	0.25
5.550000	1200	8.56	15.43	11.37	15.59	0.00	1.87	711.60	134.57	0.23
5.500000	1200	8.46	15.42	11.39	15.58	0.00	1.91	708.25	131.72	0.23
5.450000	1200	8.65	15.40	11.76	15.56	0.00	2.05	687.86	140.02	0.25
5.400000	1200	8.55	15.37	11.72	15.55	0.00	2.01	688.97	156.13	0.25

Table B-1 River Surface Profile Studies Results (Continued)

River Station	Q_{total}	Min. Ch. Elev.	W.S. Elev.	Critical W.S.	E.G. Elevation	E.G. Slope	Velocity Channel	Flow Area	Top Width	Froud # Channel
	(m^3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
5.350000	1200	8.63	15.36	11.71	15.54	0.00	1.88	655.65	129.95	0.26
5.300000	1200	8.60	15.36	11.39	15.52	0.00	1.92	713.06	143.95	0.24
5.250000	1200	8.74	15.36	11.58	15.50	0.00	1.89	744.87	155.53	0.24
5.200000	1200	8.76	15.35	11.56	15.49	0.00	1.79	746.26	134.55	0.22
5.150000	1200	8.64	15.28	11.98	15.47	0.00	2.22	638.91	130.12	0.28
5.100000	1200	8.69	15.26	12.09	15.45	0.00	2.25	637.64	133.53	0.28
5.050000	1200	9.01	15.23	12.15	15.44	0.00	2.21	627.88	136.81	0.29
5.000000	1200	8.99	15.24	11.90	15.41	0.00	2.10	691.18	163.93	0.27
4.950000	1200	8.93	15.25	11.65	15.38	0.00	1.81	799.87	183.34	0.23
4.900000	1200	8.81	15.26	11.49	15.36	0.00	1.48	869.49	194.12	0.21
4.850000	1200	8.82	15.26	11.44	15.35	0.00	1.44	895.71	196.85	0.20
4.800000	1200	8.84	15.26	11.19	15.34	0.00	1.40	943.63	199.70	0.19
4.750000	1200	8.85	15.24	11.40	15.33	0.00	1.55	973.82	237.44	0.20
4.700000	1200	8.92	15.16	12.18	15.32	0.00	2.01	743.19	187.11	0.26
4.650000	1200	8.55	15.06	12.46	15.29	0.00	2.32	614.91	167.78	0.31
4.600000	1200	8.56	15.08	12.45	15.26	0.00	2.05	691.53	168.82	0.27
4.550000	1200	8.49	14.99	12.34	15.23	0.00	2.38	581.36	141.82	0.32
4.500000	1200	8.34	14.85	12.88	15.19	0.00	2.83	507.62	137.05	0.38
4.450000	1200	8.05	14.84	12.55	15.15	0.00	2.62	510.17	120.81	0.36
4.400000	1200	8.16	14.74	12.09	15.12	0.00	2.82	465.98	112.16	0.38

Table B-1 River Surface Profile Studies Results (Continued)

River Station	Q_{total}	Min. Ch. Elev.	W.S. Elev.	Critical W.S.	E.G. Elevation	E.G. Slope	Velocity Channel	Flow Area	Top Width	Froud # Channel
	(m^3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
4.350000	1200	8.18	14.69	11.83	15.08	0.00	2.83	454.31	102.43	0.37
4.300000	1200	8.14	14.67	11.75	15.05	0.00	2.77	466.89	102.72	0.36
4.250000	1200	8.10	14.59	11.72	15.01	0.00	2.92	441.49	105.88	0.38
4.200000	1200	8.01	14.57	11.64	14.98	0.00	2.89	448.72	110.10	0.37
4.150000	1200	7.98	14.43	12.09	14.93	0.00	3.26	417.35	109.04	0.43
4.100000	1200	8.00	14.49	11.95	14.85	0.00	2.81	497.03	149.93	0.39
4.050000	1200	8.04	14.46	11.98	14.82	0.00	2.84	503.85	160.38	0.39
4.000000	1200	8.00	14.48	11.79	14.77	0.00	2.57	564.69	174.57	0.35
3.950000	1200	7.85	14.45	12.17	14.74	0.00	2.58	553.11	148.94	0.34
3.900000	1200	7.90	14.43	12.23	14.71	0.00	2.53	562.78	151.44	0.34
3.850000	1200	7.97	14.40	12.38	14.68	0.00	2.57	560.16	152.92	0.34
3.800000	1200	7.99	14.35	12.17	14.65	0.00	2.66	552.78	155.44	0.35
3.750000	1200	8.00	14.25	12.06	14.61	0.00	2.85	486.97	127.57	0.38
3.700000	1200	7.98	14.20	11.87	14.58	0.00	2.90	478.75	117.34	0.38
3.650000	1200	8.04	14.22	11.93	14.53	0.00	2.59	508.87	126.12	0.37
3.600000	1200	7.99	14.28	11.39	14.47	0.00	2.17	725.21	230.11	0.28
3.550000	1200	8.04	14.28	11.44	14.44	0.00	1.87	699.94	202.16	0.29
3.500000	1200	7.89	14.24	11.37	14.42	0.00	1.94	657.61	178.83	0.30
3.450000	1200	7.89	14.25	11.03	14.39	0.00	2.12	803.76	241.12	0.27
3.400000	1200	7.82	14.18	11.02	14.37	0.00	2.39	690.71	195.19	0.30

Table B-1 River Surface Profile Studies Results (Continued)

River Station	Q_{total}	Min. Ch. Elev.	W.S. Elev.	Critical W.S.	E.G. Elevation	E.G. Slope	Velocity Channel	Flow Area	Top Width	Froud # Channel
	(m^3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
3.350000	1200	7.75	14.06	11.40	14.34	0.00	2.59	592.31	185.65	0.33
3.300000	1200	7.75	14.06	11.00	14.31	0.00	2.51	635.71	207.51	0.32
3.250000	1200	7.73	14.03	11.03	14.29	0.00	2.28	539.50	137.76	0.36
3.200000	1200	7.68	13.80	11.04	14.24	0.00	2.96	421.89	83.50	0.39
3.150000	1200	7.66	13.30	11.69	14.15	0.00	4.08	293.94	59.35	0.59
3.100000	1200	7.59	12.92	11.85	14.02	0.00	4.64	258.39	56.89	0.70
3.050000	1200	7.48	12.79	11.71	13.90	0.00	4.66	257.71	55.22	0.69
3.000000	1200	7.30	12.65	11.66	13.77	0.00	4.69	256.07	56.77	0.70
2.950000	1200	7.29	12.74	11.21	13.58	0.00	4.06	295.79	60.96	0.58
2.900000	1200	7.37	12.48	11.35	13.47	0.00	4.43	275.08	65.67	0.66
2.850000	1200	7.60	12.37	11.36	13.36	0.00	4.43	275.99	68.65	0.67
2.800000	1200	7.63	12.30	11.30	13.24	0.00	4.35	285.15	71.66	0.66
2.750000	1200	7.46	12.36	10.99	13.08	0.00	3.96	323.54	77.16	0.58
2.700000	1200	7.46	12.45	10.62	12.95	0.00	3.27	396.98	98.52	0.47
2.660000	Culvert									
2.650000	1200	6.93	12.15		12.38	0.00	2.19	564.66	115.79	0.31
2.600000	1200	6.75	12.14		12.36	0.00	2.15	582.23	115.08	0.30
2.550000	1200	6.46	12.02		12.33	0.00	2.56	497.96	96.48	0.35
2.500000	1200	6.16	11.92		12.29	0.00	2.89	455.11	90.75	0.39
2.450000	1200	6.05	11.77		12.25	0.00	3.24	398.46	79.31	0.43

Table B-1 River Surface Profile Studies Results (Continued)

River Station	Q_{total}	Min. Ch. Elev.	W.S. Elev.	Critical W.S.	E.G. Elevation	E.G. Slope	Velocity Channel	Flow Area	Top Width	Froud # Channel
	(m^3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
2.400000	1200	5.91	11.68		12.20	0.00	3.34	381.80	72.40	0.45
2.350000	1200	5.85	11.54		12.14	0.00	3.46	354.27	70.35	0.48
2.300000	1200	5.66	11.51		12.09	0.00	3.38	360.38	71.44	0.47
2.250000	1200	5.52	11.35		12.02	0.00	3.69	337.20	66.07	0.50
2.200000	1200	5.46	11.24		11.96	0.00	3.80	322.45	63.49	0.52
2.150000	1200	5.47	11.18		11.90	0.00	3.77	321.77	62.97	0.52
2.100000	1200	5.44	11.06		11.83	0.00	3.90	314.27	64.85	0.55
2.050000	1200	5.05	11.02	9.06	11.75	0.00	3.81	319.02	62.94	0.53
2.040000										
2.000000	1200	5.01	10.92		11.62	0.00	3.76	327.52	62.74	0.51
1.950000	1200	5.17	10.81		11.56	0.00	3.85	318.76	63.73	0.53
1.900000	1200	5.34	10.40		11.44	0.00	4.56	268.13	60.48	0.67
1.850000	1200	5.17	10.16		11.31	0.00	4.78	253.02	55.72	0.70
1.800000	1200	5.02	10.01		11.18	0.00	4.80	249.77	57.60	0.74
1.750000	1200	5.12	9.98		11.02	0.00	4.55	271.49	63.18	0.67
1.700000	1200	5.20	9.99		10.88	0.00	4.22	293.70	68.65	0.63
1.650000	1200	5.25	9.98		10.76	0.00	4.00	312.30	72.78	0.59
1.600000	1200	5.20	9.95		10.66	0.00	3.82	326.88	74.84	0.56
1.550000	1200	5.14	9.84	8.44	10.58	0.00	3.89	321.69	74.55	0.57
1.530000	Bridge									

Table B-1 River Surface Profile Studies Results (Continued)

River Station	Q_{total}	Min. Ch. Elev.	W.S. Elev.	Critical W.S.	E.G. Elevation	E.G. Slope	Velocity Channel	Flow Area	Top Width	Froud # Channel
	(m^3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
1.500000	1200	4.78	9.40		10.37	0.00	4.41	279.15	68.81	0.67
1.450000	1200	4.83	9.30		10.26	0.00	4.39	282.54	70.96	0.67
1.400000	1200	4.83	9.24		10.14	0.00	4.28	292.57	75.41	0.65
1.350000	1200	4.81	9.22		10.01	0.00	4.04	310.99	78.03	0.62
1.300000	1200	4.80	9.14		9.92	0.00	4.04	311.91	76.89	0.62
1.250000	1200	4.75	8.84		9.79	0.00	4.49	281.16	73.91	0.71
1.200000	1200	4.68	8.66		9.66	0.00	4.64	273.74	75.50	0.75
1.150000	1200	4.59	8.10	7.88	9.46	0.00	5.22	235.61	72.39	0.89
1.100000	1200	4.33	7.67	7.67	9.21	0.01	5.76	220.46	72.94	1.02
1.050000	1200	3.85	7.61		8.86	0.00	5.05	245.65	70.89	0.84
1.000000	1200	3.55	7.48		8.68	0.00	4.92	252.61	71.13	0.80
0.950000	1200	3.18	7.75		8.41	0.00	3.80	338.33	83.32	0.57
0.900000	1200	3.05	7.75		8.32	0.00	3.55	364.17	89.11	0.53
0.850000	1200	2.93	7.73		8.24	0.00	3.34	384.79	89.65	0.49
0.800000	1200	2.73	7.77		8.15	0.00	2.90	444.21	99.94	0.41
0.750000	1200	2.67	7.77		8.10	0.00	2.70	476.99	107.01	0.38
0.700000	1200	2.59	7.78		8.06	0.00	2.46	522.04	113.94	0.35
0.650000	1200	2.55	7.71		8.03	0.00	2.60	487.68	104.66	0.37
0.600000	1200	2.51	7.64		7.99	0.00	2.79	460.97	99.35	0.39
0.550000	1200	2.37	7.64		7.94	0.00	2.53	501.96	103.90	0.35

Table B-1 River Surface Profile Studies Results (Continued)

River Station	Q_{total}	Min. Ch. Elev.	W.S. Elev.	Critical W.S.	E.G. Elevation	E.G. Slope	Velocity Channel	Flow Area	Top Width	Froud # Channel
	(m^3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
0.500000	1200	2.24	7.64		7.91	0.00	2.39	533.11	106.66	0.33
0.450000	1200	2.09	7.63		7.88	0.00	2.35	544.14	107.96	0.32
0.400000	1200	1.89	7.61		7.86	0.00	2.34	547.73	106.45	0.31
0.350000	1200	1.75	7.59		7.83	0.00	2.28	558.25	105.40	0.30
0.300000	1200	1.70	7.56		7.81	0.00	2.37	541.37	102.36	0.31
0.250000	1200	1.66	7.53		7.79	0.00	2.39	538.62	101.01	0.31
0.200000	1200	1.61	7.53		7.76	0.00	2.29	563.15	103.74	0.30
0.150000	1200	1.52	7.50		7.74	0.00	2.33	561.82	107.14	0.31
0.100000	1200	1.54	7.42		7.72	0.00	2.61	510.06	100.94	0.34
0.050000	1200	1.51	7.19		7.67	0.00	3.21	402.42	80.92	0.43
0.000000	1200	1.42	6.90	5.42	7.59	0.00	3.79	339.40	81.36	0.53