

IDI Water Series No. 4

THE RIVER LAW

WITH COMMENTARY BY ARTICLE

Legal Framework for River and Water Management in Japan

supervised by River Bureau, Ministry of Construction
JAPAN

compiled and commented by Toshikatsu Omachi
published by the Infrastructure Development Institute - Japan

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A WORD OF RECOMMENDATION

It would be unnecessary to cite the examples of ancient Egyptian and China to make the point that the relationship between rivers and humankind, that is, flood control and water use, has always been one of the greatest concerns of the rulers of the times. Japan, a country located at the outer edge of the Asian continent, was no exception. As the governmental system became increasingly centralized, the relationship between people and rivers, which in ancient times had been of local concern, gradually became a concern of communal, regional and, eventually, national importance. The governmental system was established through national unification by Toyotomi Hideyoshi (1585) and the establishment of the Tokugawa shogunate system (1603) by Tokugawa Ieyasu. The development of vast alluvial plains along the lower reaches of major rivers was begun in the mid-16th century by feudal lords during the "era of warring states" (*sengoku jidai*). This development started the cycle of development, increase in flood damage, flood control and development, and led to the expansion of river administration districts and the integration of river administration measures. By the mid-Edo period the foundations for the river administration system had been laid.

After the Tokugawa shogunate collapsed and the Meiji government took over (1867), traditional river administration continued to be practiced. The promulgation of the Imperial Constitution in 1889 stimulated work to institute laws and regulations, and in 1896 the River Law (old River Law) was enacted with the aim of coping with frequent floods. Through a number of revisions, the old River Law served the needs of the times. As Japan's social and economic conditions underwent dramatic change, it became evident that minor revisions were no longer enough to meet the changing needs, and the River Law was completely revised in 1964. The law has undergone a number of minor revisions since then.

Thus, introducing the River Law, which is founded on the pre-Meiji tradition and has evolved with Japan, to other countries is a meaningful undertaking. The publication of *The River Law with Commentary by Article* by the Infrastructure Development Institute, Japan, has been well timed. I hope this volume will be used by many people and thereby contribute to international exchanges in the area of river and water management.

February 1999

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FOREWORD

This is an English translation of the River Law as of July 1997 with commentary by article. The River Law is the legal foundation of river management in Japan, including flood control and water resources development.

The River Law was first enacted and promulgated in 1896, commonly known as the old River Law. This was one of the earliest, comprehensive, and modern river codes in the world. In 1964, the old River Law was replaced by a new one to accommodate changes in the social and economic environment. The present River Law (Law No.167 of 1964) was promulgated on July 10, 1964 and took effect on April 1, 1965 covers all aspects of river administration, namely: flood control and damage mitigation; water resources utilization and development; land and river water administration, including river zone and water use permission systems. The most recent amendment or reinforcement of the River Law also includes fluvial environment conservation as a clear objective of the river administration. The River Law in 1997 is supported by corresponding government ordinances, Ministry of Construction ordinances and other orders and regulations.

The purpose of this publication is to provide the full text of the most recent version of the River Law together with relevant ordinances and commentary and thus introduce the legal framework for river administration in Japan. We hope that this publication will be useful for international cooperation in the area of the river and water resources administration.

February 1999

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PREFACE

The river never ceases to flow, and yet the water will never be the same again. Foam floating on the pools disappears and reappears, never lingering long. So it is with man and his abode here on earth .

[Kamo-no-Chomei (1155-1216), Hojoki]

A great creation of nature and a cradle of humankind, rivers have always been a major factor in the birth and development of civilizations. It is true that rivers never cease to flow, but, from the perspective of human beings, rivers vary considerably depending on time and place. River administration, therefore, requires flexibility according to changing social conditions, although the general rules must be observed wherever applicable.

The original River Law, which combined the pre-Meiji tradition of Japanese river administration with Western logic, was later expanded and revised to meet the needs of the times, while adhering to the doctrine of river administration that rivers are common property belonging to the people of Japan.

The River Law with Commentary by Article is an attempt at explaining the background of the law, along with the related government and MOC (Ministry of Construction) ordinances, for the convenience of those involved in river and water management in other countries. I hope that the present volume will be a help in developing a legal framework for river administration and water management.

Finally, a word of caution: The commentaries on the laws and regulations contained here are my own interpretations and should by no means be construed as official reading.

February 1999

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Background of the River Law

Flood control projects that have been undertaken since the Meiji Period (1867-1912) have steadily increased safety in river basins against floods, rapidly expanding rich paddies and urban areas on flood-prone areas. In response to a succession of major disasters that struck Japan in the postwar years and social and economic losses due to flooding in areas undergoing rapid urbanization, various disaster rehabilitation and flood mitigation measures were taken. At the same time, water resources development projects, including the construction of dams to meet the growing demand for water, were undertaken. These efforts made rapid growth of society and economy possible, laying the foundations for today's economy and society in Japan.

Thus, river and water management in modern Japan evolved in the process of building a modern country and national strength during and after the Meiji Period (1867-1912), and in the process of rehabilitating the war-devastated economy and society, pursuing economic growth and raising the living standard of the people. To cope with the problems encountered in these years, Japan continuously developed its legal systems and found ways to solve those problems.

The sections that follow present a review of the centennial history of river and water management in modern Japan and outline current problems in flood control, water utilization, the environment and other areas.

1. River and water management in pre-modern period

(1) Flood mitigation by local countermeasures (-1867)

It is said that the oldest flood control project in Japan on record dates back to around the third century, when embankments called *manda-zutsumi* were built along the Yodo River. Before this project, however, the construction of facilities, such as irrigation ponds, channels to draw irrigation water from rivers and drainage works for wetland development, had been already practiced. With the growth of society and economy and advances in engineering in the subsequent years, river works gradually increased in size, and river improvement designed for rice field development and navigation began to be undertaken. Typical examples of this type of projects include the relocation of the Tone River channel toward east to protect Edo (present Tokyo) and excavation of new channel for the Yamato River carried out in the Edo Period (1603-1867). Projects in devastated mountains primarily involved restriction on deforestation and mountain forest control, except in some regions.

Flood control in those days depended mainly on local countermeasures. Flood control measures, which were designed according to factors such as the importance of the area to be protected and natural land characteristics, included the construction of embankments of different heights on the right and left banks or at different locations along the same river so as to protect valuable nearby farms and rice fields and local communities. Embankments were built not along rivers but around

communities to prevent flood water from entering them, and woods zones were formed at planned overflow points to reduce the energy of flood flows. In flood-prone regions, residents themselves built evacuation mounds (*mizuka*) and elevated shelters (*mizuya*) and even kept emergency boats in preparation for floods. In the Edo Period (1603-1867), river works were carried out under the control of the *shogunate*, and the cost of river improvement work was borne by the shogunate, feudal domains (*han*), villages, and the like, depending on the size of the work.

(2) River navigation and low-water works (1867-1895)

After the Meiji Restoration (1867), river works and sediment and erosion control (*sabo*) works in devastated mountains in upstream areas, which aimed to prevent sediments from flowing into river channels, began to be undertaken for major rivers such as the Yodo River. Effectiveness of these projects was limited, however, because of the country's weak financial base. During this period, the national policy for increasing production and fostering industry aiming to modernize the country was implemented. Since inland mass transportation in those days relied mainly on navigation, rivers were the major arteries of the economy. River improvement itself was a means of implementing the national economic policy, and in 1880 *low-water works* for navigation for the Yodo River was carried out as a national project. River improvement works in those days were implemented with the assistance of engineers invited from the Netherlands, and river projects were planned and implemented for many rivers including the Yodo and the Kiso rivers. *High-water works* for flood protection, however, were planned and executed by local governments and were designed mainly for local protection.

In the mid-Meiji Period, flood disasters occurred one after another along major rivers such as the Yodo, the Tone and the Kiso rivers. The necessity of fundamental flood control measures was felt strongly as a result of these disasters, and this was discussed repeatedly at the Imperial Diet. By this time, river navigation had declined as the development of railway networks progressed, and the importance of low-water works for river navigation declined rapidly.

These years coincided with the period during which Japan was building its legal system required for a modern state. To the Japanese government, which was trying to establish national institutional systems as soon as possible, the establishment of a legal system under which to implement flood control projects was a priority goal.

2. Beginning of modern flood control

(1) Government-led effort to control floods (1896-1945)

Under these circumstances, the River Law was enacted in 1896, and the Sabo Law and the Forest Law in 1897. These laws laid the foundations for modern flood and erosion control in Japan. The original River Law remained the basis for river administration in Japan until it was completely revised in 1964.

Under the River Law, rivers became national asset to be managed by local governments. The River Law denied private rights with respect to the use of rivers, riparian lands and river water in cases where their use seriously affects the interests of the public. The law requires local

governments to assume the primary responsibility for river works and maintenance as in the past, but the law stipulated that the national government undertake a river improvement project cases:

- (a) where a river improvement project affects other prefectures;
- (b) where a river improvement project is difficult to implement and requires a high level of technology;
- (c) where the cost of a river improvement project exceeds the financial capacity of the local government concerned; or
- (d) where a river improvement project is to be implemented as part of a master plan.

The enactment of the River Law made full-scale river improvement possible. A representative example is the excavation of the New Yodo River (floodway).

The Sabo Law was enacted with the aim of preventing disaster by designating particular areas for sediment and erosion and controlling sediment runoff from devastated mountains.

Following the nationwide flood of 1910, an Emergency Flood Control Committee was formed by an Imperial order. The committee framed a First-phase Flood Control Plan and deliberated on the selection of rivers to be improved through national projects, priority of improvement, and the costs and periods of construction. On the basis of these deliberations, the national government started flood control works, using funds set aside for that purpose.

In 1921, the Second-phase Flood Control Plan was formulated. In 1933, the Civil Works Commission, which succeeded the Emergency Flood Control Committee, drew up the Third Flood Control Plan. The plan also called for supplementary projects for smaller rivers; under the plan, the scope of projects was gradually expanded from main streams to tributaries. Large-scale river works during this period include the construction of the Arakawa Floodway for Ara River and the Okozu Diversion Floodway for Shinano River. As a result of the improvements of major rivers that were carried out by the early Showa Period (mid-1930s), continuous embankments were built in areas that could not be protected earlier, and the basic structure of rivers was formed. River works were designed on the basis of the maximum recorded flood. However, for the Tone River where floods exceeding the design flood discharge occurred, the plan was revised each time the design flood discharge was exceeded.

Utilization of river water during this period was still in its infancy and, except for hydroelectric power generation, which had just begun on a modest scale, was limited to irrigation. Consequently, the River Law's provisions regarding the use of river water were simple, and local governments possessed the power to administer water utilization including the use of river water. As iron and steel, machinery and other industries grew and, especially, as the economy grew after World War I, hydropower generation increased rapidly. As for agriculture, the arable land readjustment program initiated in the late Meiji Period began to progress steadily, contributing greatly to land improvement projects, particularly irrigation and drainage projects. As a result, friction associated with water rights among water users such as agriculture, power generation and municipal water supply became increasingly serious.

In order to meet the growing demand for water, the River Water Control Scheme for flood

control and water utilization, which focused on dams and weirs, was initiated. This scheme was stimulated by a number of factors including the TVA projects then underway in the United States as part of the New Deal Policy, increasing agricultural production to meet the growing demand for food, and changes in water demand, namely, growing drinking water consumption due to concentration of population in urban areas. Projects under this scheme were implemented by the national and local governments on the basis of the Study on River Water Control begun in 1937. The scheme, however, was discontinued shortly without achieving significant results when World War II broke out.

3. River and water management in postwar half century

(1) Infrastructure development for economic growth (1946-1964)

Little progress was made in river and water management during the war. In the period from the years immediately following the World War II to the 1950s, a series of large typhoons including Typhoon Kathleen (1947) struck war-devastated Japan and caused major disasters.

After World War II, the multiple fiscal year system was abandoned and a single fiscal year system was adopted as part of the postwar institutional reform. In 1953, Guidelines for Emergency Measures for Erosion and Flood Control were formulated in order to ensure successful implementation of flood control projects that extend over two or more years and to promote drastic and systematic flood control projects. The guidelines were not approved by the Cabinet for financial reasons but became the basis for subsequent long-term flood control plans.

The Ise Bay Typhoon which resulted in devastating damage to the country in 1959 led to the enactment of the Erosion and Flood Control Emergency Measures Law and the Flood Control Special Account Law in 1960. Thus, for the first time a legal basis was established for long-term flood control plans (10- or 5-year plans). Repeated occurrences of flood damage raised awareness of the importance of flood fighting, as well as flood control. In response to this growing awareness, the Flood Defense Association Law was revised in 1949, and the Flood Fighting Law, which provides for flood-fighting activities to be performed by flood defense associations, was enacted in the same year.

As for sediment disasters, in 1958 the Landslide Prevention Law was enacted, followed by the Law for Prevention of Disasters Due to Collapse of Steep Slopes in 1969.

In 1950, the Comprehensive National Land Development Law was enacted with the aim of rehabilitating the war-ravaged land and economy. The centerpiece of comprehensive national land development is comprehensive development of rivers, and in 1952 the Electric Power Development Promotion Law was enacted to meet the growing demand for electricity. Multi-purpose dams designed for both flood control and water utilization were constructed to develop water resources needed to meet the rapidly growing demands for industrial and municipal water accompanying rapid economic growth. In the Specified Multipurpose Dam Law enacted in 1957, the construction and administration of dams were centralized under the control of river administrators. During the period between 1955 and 1964, the legal system concerning water utilization was improved with the enactment of the Industrial Water Supply Law, the Water Supply Law, the Sewerage Law and the Water Resources Development Promotion Law. The necessity of measures to promote upstream

areas where dams were to be constructed was realized, and the Special Measures Law Concerning Upstream Area Development was enacted in 1972.

In 1964, the River Law was overhauled to meet the changing river administration needs shown below, which resulted from the socioeconomic progress and administrative system reform since the mid-1950s.

- (a) The drastic administrative system reform made in line with the newly established Constitution necessitated reconsideration of divided management of rivers by prefectural governors based on administrative jurisdictions.
- (b) There was a growing need for a switchover from conventional section-by-section river administration to integrated administration consistent throughout river basins in order to respond to the progress of river basin development accompanying socioeconomic developments and to meet the growing demand for water for various purposes.
- (c) The progress of water utilization projects has necessitated the establishment of legal provisions concerning water utilization, such as adjustment between new and existing water uses.
- (d) As the number of large dams increased in keeping pace with the advancement of construction technology, legal provisions for the prevention of disasters associated with dam operations, etc., became necessary.

As a result, river administrators were obligated to formulate a Basic Plan for the Implementation of Construction Works, and river administration underwent a major change from the conventional section-by-section management to integrated management consistent throughout river systems.

(2) River improvement in line with rapid urbanization (1965-)

In the years preceding and following the enactment of the new River Law (1964), cities and industry grew dramatically as Japan entered the period of rapid economic growth. During this period, rapid urbanization brought about various river-related problems, such as water pollution in rivers and lakes; flood damage in urban areas because of inadequate flood control; serious water shortages including the serious water shortage in Tokyo in 1964, the year of the Tokyo Olympic Games; and a sharp increase in the occurrence of sediment disasters.

Various measures were taken, therefore, to address the problem of river pollution. On the basis of the River Council's 1977 report titled "Interim Report on Policies for Comprehensive Flood Control Measures," various comprehensive flood control measures and water shortage prevention measures were taken, including stormwater retention and infiltration coupled with river improvement, the improvement of warning and evacuation systems coupled with debris flow control, and dam construction.

New approaches such as the concept of high-standard levees were also introduced, on the basis of the River Council's 1987 report titled, "Recommendations on Policies for Protection from Extreme Floods," to protect urban areas where property and important business functions are concentrated from extreme floods that exceed the design level.

Today, a wide variety of projects design to create sound river environments, such as the

construction of streamflow maintenance channels and the creation of close-to-nature rivers, are under way for various purposes including the improvement of river water quality, protection of habits, and closer contact between water and humankind.

4. Present state of river and water management and problems

4.1 Lack of integrity in water management

Although water in river is managed by river administrators under the River Law, once withdrawn from the river channel, water is managed differently under different laws. Consequently, some of the water management problems that are caused by complex factors and that have far-reaching impact, such as the prevention of ground subsidence due to overpumping of groundwater, flexible and efficient application of water rights, and the protection of the quality of river water and groundwater, cannot be addressed by individual laws or administrators alone.

4.2 Increasing damage potential of floods and sediment disasters

(1) Present state of flood control

The history of Japan is practically synonymous with the history of struggles with floods and sediment disasters. Destructive floods and sediment disasters occurred even in recent years. Flood control projects have decreased the number of flood victims over the years, but the level of safety remains low. In the 10 years from 1986 to 1995, about 90 percent of all municipalities in Japan have suffered a flood or sediment disaster.

Various measures are being taken to cope with this situation. For major rivers, the goal has been set to improve each river so as to be capable of safely carrying a flood that is likely to occur once in 100 to 200 years. The short-term goal is to improve the channels of major rivers so as to be capable of safely passing a 30- to 40-year flood by the beginning years of the 21st century. The goal for smaller rivers is to safely carrying a 30- to 100-year flood, and the immediate goal is to cope with a 5- or 10-year flood. As for measures to prevent sediment disasters, the long-term goal of coping with a 100-year rainfall has been set. The short-term goal is to guard against a 5- to 10-year rainfall.

Accomplishment so far are falling far behind the goals, however. Even in comparison with the short-term goal, the area of flood-prone land that is now protected from flooding is less than half the total area.

(2) Growing risks of floods and sediment disasters

Urbanization in Japan has taken place mainly on alluvial plains prone to river floods. With the progress of urbanization, the retention and detention functions of river basins were gradually lost, while at the same time flood discharges in river channels have increased, thereby increasing the risks of flood damage. As hills and mountains have been developed, damage potential of sediment flows including debris flows, landslides and steep slope failures has increased rapidly.

Ironically, increased safety from floods has led to further concentration of city functions and housing on floodplains, resulting in higher damage potential. Economic damage due to floods, therefore, remains.

(3) Risk of catastrophe

The economy and society of Japan rely on intensive urban and industrial activities. If high-tech equipment that supports a key portion of these activities goes under water or if urban infrastructure such as transportation, telecommunications and lifelines are rendered unusable for an extended time period, obviously the impact on people's lives and the economy will be immeasurable. As society ages, the number of people particularly vulnerable to disaster is expected to grow. A catastrophic flood or sediment disaster, therefore, must not be allowed to occur in urban areas.

These circumstances require that the short-term target level of safety, particularly in urban areas, be achieved as soon as possible. It is also necessary to minimize damage due to floods or debris flows that are beyond the control by facilities and to take safeguard measures so that flood control facilities, if damaged, can be restored quickly.

4.3 Increasing frequency of droughts

(1) A country inadequate in water resources

The average annual precipitation in Japan is about 1,750 mm, nearly twice the world average. Per-capita annual precipitation, however, is about 5,500 m³, which is merely one-fifth of the world average. In addition, a considerable portion of precipitation occurs during the rainy season and the typhoon season. About 70 percent of the total land area of Japan is steep mountains, and rivers are so short and steep that water in rivers reaches the sea in a short time period. It is difficult, therefore, to use water resources in a stable manner.

Under these circumstances, water resources have been developed by constructing dams and other structures, in order to meet the rapidly growing demand for water due to the rapid economic growth and urbanization. The conventional approach to water resources development, however, is expected to become increasingly difficult primarily because of the scarcity of suitable dam sites, considerable cost and time required for relocation, the declining economic efficiency of water resources development projects, and, in particular, growing public concern for the natural environment.

(2) Recurrent droughts

Use of agricultural water, which accounts for two-thirds of all water intake, is has remained more or less stable despite the decreasing area of paddy fields. Industrial water use has also remained unchanged thus far because of the changes of industrial structure and the improvement in the recycling rate. Domestic water use, in contrast, is still growing owing to changes in lifestyle.

Precipitation has been on the decrease in recent years, causing frequent droughts in the Tokyo metropolitan area, the Chubu region and western Japan. The drought of 1994, for example, had a far-reaching and serious impact, affecting almost the entire country.

(3) Present state of water resources development

Water resources development today is planned on the basis of a design drought having a return period of 10 years. By the standards of the international community, this factor of safety is low. The recent tendency toward decreasing precipitation makes the planning standard even more inadequate.

In the Tokyo metropolitan area, the supply of water remains to be unable to keep up with the demand, upsetting the region's stable water supply. There is a pressing need, therefore, for a reliable source of water that can be used to solve this problem of chronic water shortage.

(4) Social structure vulnerable to drought

As water use has increased, Japan's social and economic activities have become increasingly vulnerable to water shortage. The establishment of lifestyles dependent on intensive use of water and the growing number of elderly people who are vulnerable to water shortage have made cities particularly susceptible to drought. As the droughts in Tokyo in 1964 and in Fukuoka in 1978 demonstrated, a major drought may have a serious impact on Japan's social and economic activities and people's lives.

4.4 Deteriorating river environment

Rapidly changing social and economic conditions have reduced water and greenery in river basins. It is also an undeniable fact that past flood control and water development projects, which gave priority to early completion with economic efficiency, failed to give adequate consideration to the environment. These factors have given rise to a number of environmental problems:

(1) Decreasing biodiversity and shrinking habitat

Past channel improvement projects relied on the use of channel cross sections and concrete revetments consisting of straight lines so as to safely pass flood flows downstream within a limited space available. In some projects, a dam or weir interrupted the continuity of the environment upstream and downstream of the project site. Urbanization has also reduced water and greenery in river basins, destroyed the continuity between the river and its basin, and eroding diverse habitat for wildlife.

(2) Deteriorating water environment

Changes in land use, impervious paving and the construction of sewerage facilities have impaired the retention, detention and infiltration functions of river basins and changed the paths of water circulation in the hydrological cycle. These changes have brought about such adverse effects as depletion of springs and decreases in streamflow.

Domestic, livestock and other wastewater entering rivers have severely polluted some closed waters, such as lakes and reservoirs, and some sections of urban rivers. There is a strong demand for safe and tasteful water.

(3) Growing concern for possible changes in hydrological cycle

Depopulation and aging of population in rural regions may lead to inadequate forest management. Urbanization may reduce agricultural lands and have adverse effects on the stormwater retention and detention functions of river basins and changes in flooding and sediment runoff patterns.

There is also growing concern for sea level rise and the expansion of areas below sea levels due to global warming, and adverse effects of acid rain on water quality and ecosystems.

(4) Emerging sediment-related problems

Problems associated with sediments are occurring in various forms at different places, such as mountains, plains, estuaries and coastal zones. In past projects, different measures were taken on a case-by-case basis according to the purpose of the project. This approach, however, will not provide fundamental solutions.

4.5 Weakening relationship between communities and rivers

(1) Rivers becoming less familiar

As urbanization progresses, rivers have become far removed from people's lives. As river improvement reduces flood and sediment disasters, the traditional feeling of awe and fear diminishes, and invaluable lessons learned from past disasters and wisdom handed down from the past are being lost.

These phenomena are making people less and less aware of rivers.

(2) Rebuilding the relationship between the river and local community

People are rediscovering rivers as natural networks of water and greenery that connect the mountains and the sea or natural space in their own right. Public interest in rivers is now growing again. Because a river is an important element that helps to form regional characteristics and culture, efforts to create rivers that reflect the personality of local community are being called for.

Activities of local governments and citizens, such as the conservation of river water quality, replenishment of water source areas and clean up of rivers have become increasingly active in recent years. River administrators must support these local activities.

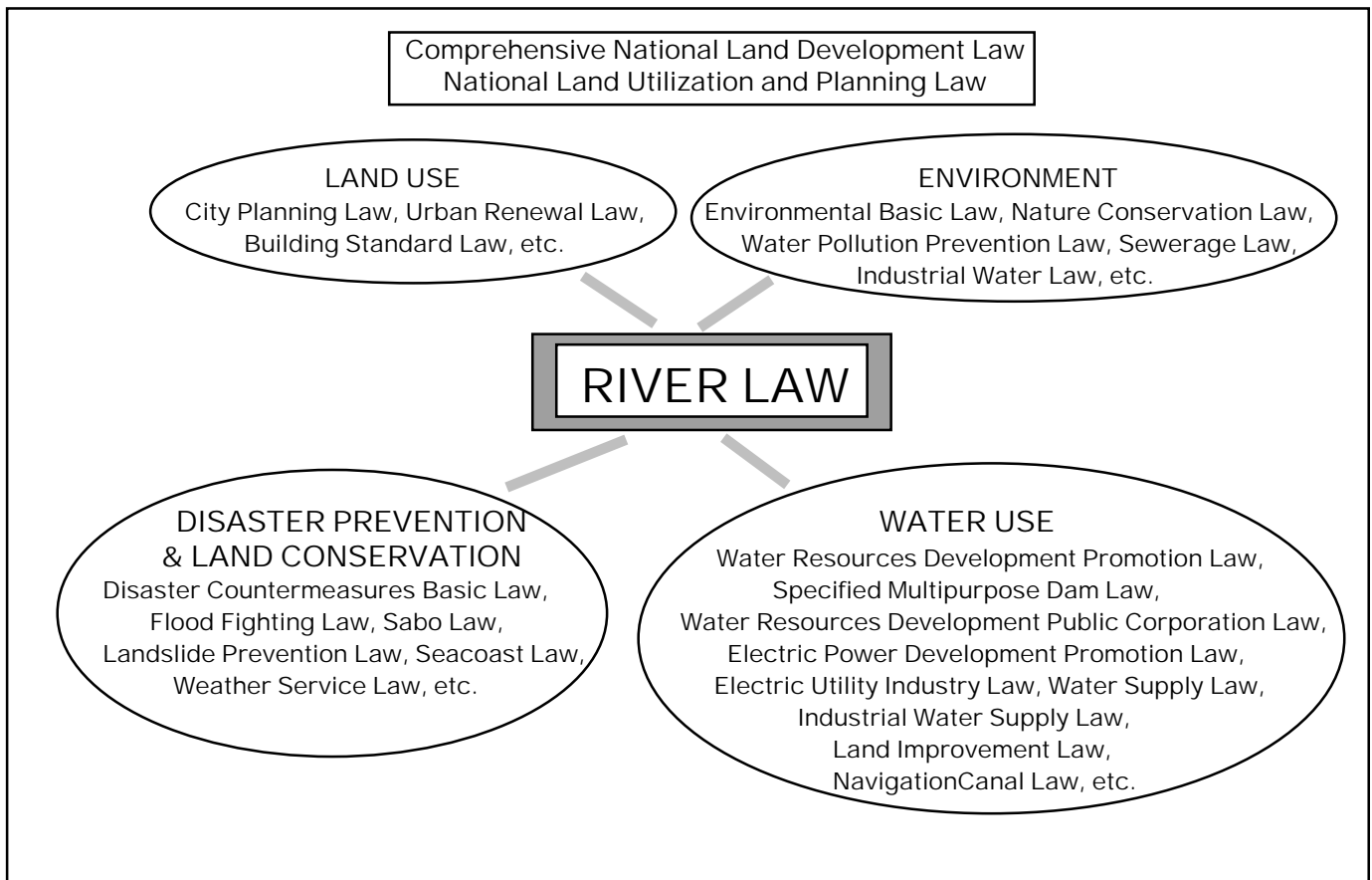
Spaces provided by rivers are precious in urban areas with limited open space. River spaces can be used not only during ordinary times but also in an emergency such as in case of an earthquake for purposes such as disaster relief activities, emergency water supply and transportation. The relationship between community and river must be reviewed from these viewpoints.

(Excerpted and summarized from *Basic Policies of Water Resources Management for the 21st Century*, River Council)

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LEGAL FRAMEWORK SURROUNDING THE RIVER LAW



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THE RIVER LAW

WITH COMMENTARY BY ARTICLE

-Legal Framework for River and Water Management in Japan-

Chapter I. General Provisions

(Purposes of the River Law)

Article 1.

The purpose of this Law is to contribute to land conservation and the development of the country, and thereby maintain public security and promote public welfare, by administering rivers comprehensively to prevent occurrence of damage due to floods, high tides, etc.,¹⁻¹⁾ utilize rivers properly,¹⁻²⁾ maintain the *normal functions of the river water*¹⁻³⁾ by maintaining and conserving the fluvial environment¹⁻⁷⁾.

(This article amended by Law No.69 of 4 June 1997)

[Note 1-1] Surrounded completely by seas, Japan is blessed with natural resources, but the country has been prone to disaster due to floods and high tides caused by steep topography, abundance of water vapor supplied by the oceans, frontal action and typhoons¹⁻⁸⁾. The River Law, therefore, authorizes and obligates the *river administrator* to carry out *river works* including the construction of dams, levees and revetments, excavating floodways and cut-off channels and dredging river beds, and to regulate activities that might jeopardize the safety of *river administration facilities*. The law also requires the *river administrator* to take necessary measures to prevent and mitigate disasters. To this end, the law authorizes the *river administrator* to mobilize material and human resources in an emergency.

[Note 1-2] Since the density of industry and population in Japan is very high, river water is an important source of water for irrigation, hydroelectric power generation, and industrial and domestic uses. Although the implementing bodies of these projects are not *river administrators*, adjusting and rationalizing river water uses on these projects is one of the *river administrator's* important duties. *River administrators*, therefore, are authorized to perform duties such as granting a permit for water uses and coordinating water uses in times of drought.

[Note 1-3] The functions of river water include functions whose purpose and beneficiaries are clearly defined, such as power generation and water supply, and other functions whose purpose and beneficiaries are less obvious, such as water quality protection (dilution and purification of wastewater, prevention of salinization), maintenance of water level for water supply and navigation, prevention of river mouth clogging, preservation and enhancement of aquatic life, and landscape preservation. Fulfillment of these functions requires not only water whose purpose and quantity requirements are clearly known, such as domestic, industrial and irrigation water, but also the

amount of water necessary for comprehensive fulfillment of those functions (the amount of water required for maintaining the *normal functions of the river water*, or "maintenance flow"). The River Law specifies execution and management of *river works* needed to secure the amount of water required for fulfilling these functions as another responsibility of the *river administrator*.

Improvement and conservation of river water quality is an important element in the maintenance of the normal functions of river water. In this connection, the Basic Environment Law¹⁻⁴⁾ requires that a basic plan be formulated for the environment including the atmosphere, water and soils, and that basic requirements associated with the environment such as environmental quality standards be stipulated. The Water Pollution Control Law¹⁻⁵⁾ stipulates that measures be taken to improve and conserve the quality of public waters, such as regulating the discharge of industrial and other wastewater, dealing with domestic wastewater and monitoring water quality. For improvement of river and lake water quality, therefore, dischargers of industrial wastewater are obligated to treat wastewater before discharge, and local governments are required to improve sewerage systems to deal with domestic wastewater.¹⁻⁶⁾ If the environmental quality standards cannot be met by sewerage system improvement alone, river administrators themselves implement such measures as the introduction of diluting water or direct purification of feeder streams as part of river works.

[Note 1-4] Basic Environment Law

(Purpose)

The purpose of this Law is to comprehensively and systematically promote policies for environmental conservation to ensure healthy and cultured living for both the present and future generations of the nation as well as to contribute to the welfare of mankind, through articulating the basic principles, clarifying the responsibilities of the State, local governments, corporations and citizens, and prescribing the basic policy considerations for environmental conservation.

(Contents)

Chapter 1 General Provisions

Chapter 2 Basic Policies for Environmental Conservation

Section 1 Guidelines for Policy Formulation , Section 2 Basic Environment Plan , Section 3 Environmental Quality Standards , Section 4 Environmental Pollution Control in Specific Areas , Section 5 Implementation of Policies for Environmental Conservation by the State , Section 6 International Cooperation for Global Environmental Conservation etc. , Section 7 Implementation of Policies by Local Governments , Section 8 Bearing of Costs and Financial Measures

Chapter 3 Environment Council etc.

Section 1 Environment Council , Section 2 Conference on Environmental Pollution Control

[Note 1-5] Water Pollution Control Law

(Purpose)

The purpose of this Law is to protect human health and preserve the living environment of the nation by controlling the discharge of effluent into public waters from factories and workplaces and the infiltration of water into the ground and promoting the implementation of measures to cope with household effluent for prevention of public waters and groundwater (including deterioration of the state of water other than the water quality: the same shall apply hereinafter) and protect sufferers by providing for enterprisers' liability to compensate for damages due to injury to human health caused in connection with wastewater or waste liquids discharged from factories or workplaces.

(Contents)

Chapter 1 General Provisions , Chapter 2 Control, etc., of Discharge of Effluent (Effluent Standards, Total Pollutant Load Reduction Plan) , Chapter 2-2 Promotion of Measures to Cope with Household Effluent , Chapter 3 Monitoring, etc., of Water Pollution Situation (Measurement Plan) , Chapter 4 Compensation for Damages , Chapter 5 Miscellaneous Provisions , Chapter 6 Penal Provisions

[Note 1-6] Sewerage Law

(Purpose)

The purpose of this Law is to improve sewerage systems in the nation by setting forth matters related to the formulation of comprehensive river-basin sewerage plans and standards for the construction and management of public sewerage systems, river-basin sewerage systems and urban storm sewers and thereby contribute to sound growth of cities, improvement of public health and preservation of the quality of public waters.

(Contents)

Chapter 1 General Provisions , Chapter 1-2 Comprehensive Basinwide Sewerage Plans , Chapter 2 Public Sewerage Systems , Chapter 2-2 River-Basin Sewerage Systems , Chapter 3 Urban Storm Sewers , Chapter 4 Miscellaneous Provisions , Chapter 5 Penal Provisions

[Note 1-7] Public interest in the roles river space is to play, such as improvement and preservation of landscapes and ecosystems, is growing. In response to such public demands and in order to manage rivers appropriately, the Ministry of Construction, in view of the River Council's report on recommendations for river environment management submitted in December 1981, issued a notification from the Director-General of the River Bureau concerning the formulation of Master Plans for River Environment Management for rivers whose environment was playing a particularly important role in the formation of the living environment. In June 1997, environmental improvement and conservation was added to the list of the fundamental tasks to be carried out in river administration. A specific measure adopted along these lines is to pursue conservation and/or creation of fluvial woods zones along the levees and reservoirs. Although trees in river channels have been believed to hinder flood control, the "fluvial woods zone" approach opened up a new way of making effective use of trees in trees in riparian lands to the extent that there are no adverse effects on the discharge of flood waters.

[Note 1-8] Flood disasters in Japan

Average annual typhoon count and number of landfalls during 1946-1993

Average annual typhoon count: 27.4 Average annual number of landfalls in Japan: 3.2

Major damaging typhoons during 1946-1993

Date	Typhoon No.	Name	Affected area	No. of persons killed or missing	Remarks
Sept. 1959	Ise Bay Typhoon	5915	Whole country	5,098	Storm surge and flood in Ise Bay area
Sept. 1947	Typhoon Kathleen	4709	East & North Japan	1,910	Passed near Boso Peninsula.
Sept. 1954	Toyamaru Typhoon	5415	Whole country	1,761	Ferry Toyamaru sank.
Sept. 1958	Kano River Typhoon	5822	Chubu, East & North Japan	1,269	
Oct. 1951	Typhoon Ruth	5115	Whole country	943	
Sept. 1948	Typhoon Ione	4821	Whole country	868	
Sept. 1950	Typhoon Jane	5028	Whole country	509	Storm surge + flood
Sept. 1953	Typhoon Tess	5313	Whole country	478	
June 1949	Typhoon Della	4902	Whole country	419	Typhoon + front
Sept. 1966		6626	Chubu & East Japan	318	

Breakdown of flood-induced losses by type of property (1993)

General property: 32.6%, agricultural crops: 1.2%, business interruption loss: 2.0%, river facilities and other civil engineering works: 63%

Breakdown of property losses (general property, agricultural crops, business interruption loss) by cause of flood damage (1993)

Levee break: 2.4%; overtopping in leveed sections: 21.0%; flooding in unleveed sections: 5.9%; water on land side of levees: 28.6%; debris flow: 1.0%; landslides: 18.3%; Slope failure: 0.2%; high tide, tsunami, surges: 14.5%; others: 8.2%

(Principles of River Administration)²⁻¹⁾

Article 2.

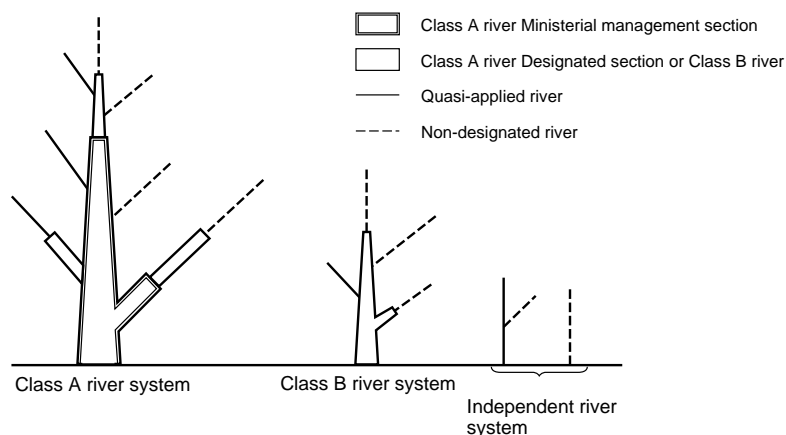
A river is public property²⁻²⁾ and its conservation, utilization, and other forms of administration shall be properly performed so as to attain the purposes stated in the preceding article.

2 The water of a river cannot be made the subject of private rights.²⁻³⁾

[Note 2-1] For the purposes of river administration, rivers in Japan have been classified, according to the degree of importance from the viewpoint of land conservation and national economy, into three groups: *class A river systems*, *class B river systems* and *independent river systems*. Placed under the River Law are sections of the *class A river systems* and *class B river systems* specified by the River Law.

Classification and Administration of Rivers

		Administrator	Planner/Implementer
Class A river systems	Class A rivers	Ministerial management sections	Minister of Construction
		Designated sections	Prefectural governor (or, in some cases, head of municipality)
	Locally designated rivers	Head of municipality	Head of municipality
	Non-designated rivers	Not placed under the River Law; managed by cities, towns or villages as common property	
Class B river systems	Class B rivers	Prefectural governor	Prefectural governor
	Locally designated rivers	Head of municipality	Head of municipality
	Non-designated rivers	Not placed under the River Law; managed by cities, towns or villages as common property	
Independent river systems	Locally designated rivers	Head of municipality	Head of municipality
	Non-designated rivers	Not placed under the River Law; managed by cities, towns or villages as common property	



Designated rivers (as of 30 April 1996)

Category	No. of river systems	No. of rivers	Total length (km)	Catchment area (km ²)	Occupancy within total territory
Class A rivers	109	13,910	87,388.4*	240,216	63.5%
			*Total length of designated sections: 76,867.4km		
Class B rivers	2,707	7,007	35,843.4	111,256	29.4%
Locally designated rivers	--	13,942	19,794.7		

[Note 2-2] This article establishes the principles of river administration, declares that rivers are common property and denies private rights to the running water of rivers (including stagnant waters at the surface of lakes and other types of water body and underflow water).

[Note 2-3] The running water of a river may be used exclusively for a specific purpose for a specified period in a specified river section by a specified quantity but its ownership belongs to the people of Japan as a whole. Exclusive users of river water, therefore, are merely users who have been permitted to use it. Authorized users of river water have been merely permitted to use the required amount of water for their specific purposes.

Consequently, rights to use river vanish if the purpose of use has vanished or the usage of water has decreased. Water that is stored temporarily in reservoirs or behind weirs is treated in the same manner as river water because such temporarily stored water originates from river water. There is no provision denying private rights to riparian land because it is thought that existence of private rights in riparian land is not necessarily incompatible with river administration and that limiting the exercise of private rights to the extent deemed necessary for proper river administration suffices.

(The River and the River Administration Facilities)

Article 3.

The term "river" as used in this Law means either a *class A river* or a *class B river*³⁻¹⁾ and includes the *river administration facilities* of the river.³⁻²⁾

2 The term *river administration facility* as used in this Law means a dam, weir, sluice, levee, revetment, ground sill, *fluvial woods* (trees planted along levees or reservoirs in a long, narrow strip for flood mitigation and/or water conservation purposes designated by the Ministry of Construction Ordinance³⁻³⁾) or any other facility which has the function of increasing public benefits from the water of a river or of eliminating or decreasing public losses which may be caused by the water of a river. However, with regard to a facility built by a person other than the *river administrator*, the term applies only when the *river administrator* has obtained the consent of the person who, on the basis of his title, administers the facility concerned to making it a *river administration facility*.³⁻⁴⁾

(Paragraph 2 amended by Law No.69 of 4 June 1997)

[Note 3-1] The classification and administrators of rivers are stipulated in Article 4 (*class A rivers*) and Article 5 (*class B rivers*) of this law.

[Note 3-2] The term "river" in this law includes such facilities as dams, weirs, and pumps installed behind (i.e., inside) levees.

[Moc 3-3] MOC Ordinance Article 1 (*Fluvial woods zone*)

Strips of trees as stipulated in Article 3 (The river and the *river administration facilities*) Paragraph 2 of the River Law include, in addition to trees on the land outside the levee (on the river side) as stipulated in Article 6 (The *river zone*) Paragraph 1 Item (3) of the River Law, trees on any of the following lands:

- (1) in the case of a strip of trees located along a levee, land within approximately 20m from the toe of the back slope of the levee;
- (2) in the case of a strip of trees along a reservoir, land within approximately 50m from the water surface-land boundary at the highest level of river water stored in the reservoir.

[Note 3-4] As a rule, *river administration facilities* do not include facilities intended for power generation or irrigation (e.g., dams, weirs) that are not intended for flood control and maintenance of the *normal functions of*

*the river water*¹⁻³⁾.

(Class A Rivers)

Article 4

The term a *class A river* as used in this Law means a river (involving public stream and water area; hereinafter the same) designated by the Minister of Construction, which belongs to such a water system especially important from the view of land conservation and/or national economy as is designated by Government Ordinance.⁴⁻¹⁾

2 When the Minister of Construction intends to establish, revise or abolish the Government Ordinance⁴⁻²⁾ designating a *class A river system* mentioned in the preceding paragraph, he shall first hear the opinions of the *River council*⁴⁻³⁾ and the prefectural governors concerned.

3 When the Minister of Construction intends to designate a river in accordance with the provision of Paragraph 1, he shall first consult with the heads of the administrative agencies concerned⁴⁻⁴⁾ and hear the opinions of the *River council* and the prefectural governors concerned.

4 When any of the prefectural governors concerned intends to state his opinion in accordance with the provisions of the preceding two paragraphs, he shall ask for the decision of the general assembly of the prefecture concerned.

5 When the Minister of Construction designates a river in accordance with the provision of Paragraph 1, he shall make public its name and section for each *river system* to which it belongs, as may be provided for in detail by Ministry of Construction Ordinance.⁴⁻²⁾

6 For change or abolition of the designation of a *class A river* the procedure for the designation of a river made under the provision of Paragraph 1 shall be followed.

[Note 4-1] All rivers whose basins extend over two or more prefectures and rivers whose basins do not extend over two or more prefectures but that are important for land conservation and the national economy are designated as *class A rivers*. As of the end of 1997, 109 *river systems* shown in Appendix III have been designated as *class A rivers*.

[Moc 4-2] MOC Ordinance Article 1 (Public notification of the designation of *class A rivers*)

Public notification under Article 4 (*Class A rivers*) Paragraph 5 of the River Law shall be made via the Official Gazette by indicating the start and end points of the river section concerned and one or more of the following:

- (1) Name of city, town or village; name of subdivision of city, town or village; and lot number
- (2) Certain types of natural features of land, facilities or structures
- (3) Plan view

[**Note 4-3**] The functions and organization of the *River Council* are set forth in Chapter V (*River Council*) Articles 80 to 86 of this law.

[**Note 4-4**] Administrative agencies concerned include the Ministry of International Trade and Industry, the Ministry of Agriculture, Forestry and Fisheries and the Ministry of Health and Welfare.

(Class B Rivers)

Article 5.

The term a *class B river* as used in this Law means a river designated by the prefectural governor concerned, which belongs to such a water system other than those designated by Government Ordinance⁵⁻¹⁾ under Paragraph 1 of the preceding article as has an important bearing on public interests.

2 When the prefectural governor intends to designate a river in accordance with the provision of the preceding paragraph, if the river concerned forms or crosses the boundary between the prefecture and another prefecture, he shall consult with the governor of the other prefecture.

3 When the prefectural governor designates a river in accordance with the provision of Paragraph 1, he shall make public its name and section for each *river system* to which it belongs, as may be provided for in detail by Ministry of Construction Ordinance⁵⁻²⁾.

4 When the prefectural governor intends to designate a river in accordance with the provision of Paragraph 1, he shall first hear the opinions of the heads of the cities, towns and villages concerned.

5 When the head of any of the cities, towns or villages concerned intends to state his opinion in accordance with the provision of the preceding paragraph, he shall ask for the decision of the general assembly of the city, town or village concerned.

6 For change or abolition of the designation of a *class B river* the procedure for the designation made under the provision of Paragraph 1 shall be followed.

7 When a *class B river* is designated as a *class A river* falling under Paragraph 1 of the preceding article, the designation under Paragraph 1 concerning the *class B river* becomes null and void.

[**Note 5-1**] As of the end of 1997, a total of 2,691 *river systems* have been designated as *class B river systems*.

[**Moc 5-2**] MOC Ordinance Article 1-2 (Public notification of the designation of *class B rivers*)

Public notification as stipulated in Article 5 (*Class B rivers*) Paragraph 3 of the River Law shall be made via a prefectural gazette by indicating the start and end points of the river section concerned and one or more of the matters listed in the preceding article [i.e., (1) name of city, town or village; name of subdivision of city, town or village; and lot number, (2) certain types of natural features of land, facilities or structures; and (3) plan view].

(The River zone)

Article 6

The term *river zone*⁶⁻¹⁾ as used in this Law means an area given in one of the following items:

(1) The area of land where the water of a river flows continuously and of the land where the topography, conditions of growth of vegetation and other conditions are similar to the conditions of the land where the water of a river flows continuously (including the land of the river-bank but excluding the land where such conditions exist temporarily owing to floods or other abnormal natural phenomena);

(2) The area of land which is the site of a *river administration facility*;

(3) Of the area of the land on the waterside of the bank (including such land similar to it as may be designated by Government Ordinance⁶⁻²⁾ and such retarding basin as may be designated by Government Ordinance; the same shall apply for Paragraph 3 of this article), the area designated by the *river administrator* as an area whose administration must be performed unifiedly with the area mentioned in Item (1).

2 With regard to land containing levees which are *river administration facilities* under the jurisdiction of *river administrators*, when the levee can withstand floods in which the flow exceeds the *design flood discharge* (hereinafter referred to as "*high standard levees*"⁶⁻³⁾) even if the majority of land within the area of those levee is made available for normal use, *river administrators* shall designate those areas as *high standard levee special zones* where normal use of land is permitted.

3 In the area as defined in Paragraph 1-(2) above, the *river administrator* shall designate a land area (excluding the land on the waterside of the bank) of fluvial woods⁶⁻⁴⁾ which he administrates.

4 When designating a zone under Paragraph 1-(3) or designating a *high standard levee special zone* and/or *fluvial woods zone*, *river administrators* must give public notice to this effect in accordance with provisions in Ministry of Construction Ordinances.⁶⁻⁵⁾ The same shall apply in cases where the said designation is altered or canceled.

5 When the *river administrator* intends to make or change the designation referred to in Item (3) of Paragraph 1 with regard to a harbour area provided in the Harbour Law (Law No.218 of 1950) or a fishing port area provided for in the Fishing Port Law (Law No.137 of 1950)⁶⁻⁶⁾, he shall consult with the Harbour Administrator or the Minister of Agriculture, Forestry and Fishery as the case may be.

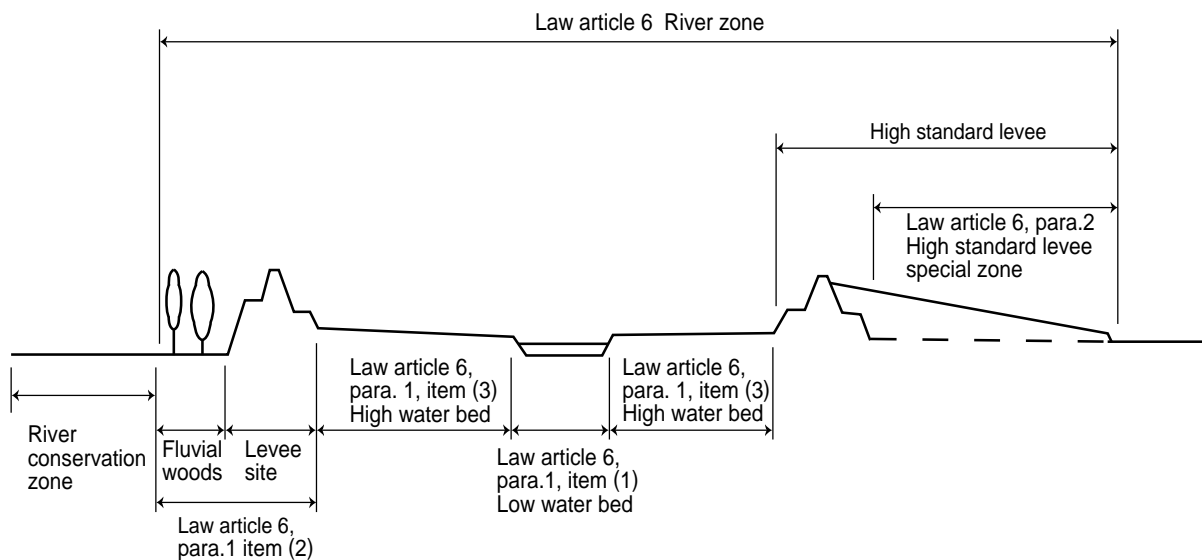
6 When the *river administrator* intends to create or change the designation of the *fluvial woods zone* with regard to an area designated as a forest preserve or a planned forest

preserve in accordance with article 25 or article 30 of the Forest Law (Law 249 of 1951)^{6-7) 6-8)} respectively, and land designated as a preservation facility area by article 41 or land proclaimed as a planned preservation facility area by article 30, he/she shall consult with the Minister of Agriculture, Forestry and Fishery (or the governor of the prefecture concerned in cases when a forest preserve and/or planned forest preserve is designated or proclaimed in accordance of the article 25 or 29 of the Forest Law by the prefectural governor who is entrusted by the article 40 Paragraph 1 of the same Law).

(Paragraphs 3 & 6 added by Law No.69 of 4 June 1997)

(Paragraph 4 amended by Law No.69 of 4 June 1997)

[Note 6-1] *river zone*, etc.



[Gor 6-2] Government Ordinance Article 1 (Land similar to the land on the waterside of the levee)

"Land similar to the land on the waterside of the levee" provided for in Government Ordinance referred to in Article 6 (The *river zone*) Paragraph 1 Item (3) of the River Law shall be the following:

(1) Of land whose topography resembles a leveed land, that part of the land adjoining a levee or land across from such land or a levee

(2) Land between the land as stipulated in the preceding item and the land as stipulated in Article 6 (The *river zone*) Paragraph 1 Item (1) of the River Law

(3) Land encircled by the line of contact between the water surface at the highest level of river water stored behind a dam and the land

2 Retarding basins as stipulated in Article 6 (The *river zone*) Paragraph 1 Item (3) of the River Law shall be retarding basins specified in a *river improvement plan* as a means of reducing the *design flood discharge*.

[Note 6-3] Flood control in Japan has been dependent primarily on the construction of dams on the upper reaches of rivers to reduce flood peaks and on the construction of levees and floodways, channel widening and dredging on the lower reaches to discharge the design flood safely and quickly. No amount of precaution, however, in the form of planning criteria (degree of safety) cannot prevent a flood exceeding the design level because a flood is a natural event. Social and economic development of Japan has been such that population and property have been heavily concentrated on downstream delta areas which are vulnerable to floods. Therefore, in the event of a flood exceeding the design level of a major river such as the Tone and the Yodo, the central functions of Japan, which are so heavily concentrated in Tokyo and Osaka, might be paralyzed. In order to prevent such a situation, it has been decided to build levees that do not fail even if they are overtopped by floodwater along particularly important sections of 6 rivers, that are the Yodo, Yamato, Tone, Edo, Ara and the Tama rivers. These levees, whose cross section is by far larger than that of conventional levees, are called *High standard levees* (or Super Levees).

[Note 6-4] As explained in Note 6-3, the conventional approach to flood protection in Japan has been to make channel cross sections as large as possible by protecting river channels with concrete revetments or other protective works and remove trees and other obstructions to water flow in river channels, in order to quickly discharge floodwater which has reached the river channel. However, as flood protection efforts have attained their goals to some degree, the role that rivers play in ecosystem and riverscape preservation has been recognized anew. The decision has been made, therefore, to pursue the preservation of trees along rivers to the extent that the discharge of flood flows and strength of levees are not hindered.

[Moc 6-5] MOC Ordinance Article 2 (Public notification of the designation of *river zone* etc.)

Public notification as stipulated in Article 6 (The *river zone*) Paragraph 4 of the River Law shall be made via the Official Gazette if by the Minister of Construction or a gazette of the prefecture concerned if by a prefectural governor by identifying the *river zone* or *high standard levee special zone* concerned by one or more of the items listed in Article 1.

[Note 6-6] The goals of the Port and Harbor Law are orderly development and proper management of ports and harbors and development and protection of navigable waterways to contribute to development of transportation and proper use and well-balanced development of land. The goal of the Fisheries Law is development and proper management of fishing ports to promote growth of fisheries and thereby contribute to stabilization of the people's lives and growth of national economy. Many of these ports and harbors and fishing ports are located at river mouths, and port and harbor zones as stipulated by the Port and Harbor Law and fishing ports as stipulated by the Fisheries Law have considerable overlaps. Designation of *river zones*, etc., and alteration of such designations, therefore, are to be made through consultation with the administrators of the facilities concerned.

[Note 6-7] The goal of the Forest Law is to sustain and grow forests and increase the productivity of forests and thereby contribute to land conservation and national economic growth by stipulating fundamental requirements concerning forest planning, preservation forests and other forest-related matters. The objectives of preservation forests are water resource replenishment, protection from sediment runoff, protection from slope failure,

protection from blown sand, prevention of wind, flood, tide-water, drought, snow and fog-induced damage, prevention of avalanches and rockfalls, fire protection, preservation of fish shelters and navigation markers, maintenance of public health, and preservation of places of interests and historic sites. Preservation forests are designated by the Minister of Agriculture, Forestry and Fisheries.

[Note 6-8] Article 25 (Designation of preservation forest) and Article 30 (Notice on designated or dedesignated preservation forest, etc.) of the Forest Law.

(The River Administrator)

Article 7

The term *river administrator*⁷⁻¹⁾ as used in this Law means a person who administers rivers in accordance with the provision of Article 9 Paragraph 1 or of Article 10⁷⁻²⁾.

[Note 7-1] As stipulated in Article 9 (Administration of *class A rivers*) and Article 10 (Administration of *class B rivers*) of the River Law, for a *class A river* the term "*river administrator*" refers to the Minister of Construction, and for a *class B river* the governor of the prefecture in which the river is located. The *river administrator* is empowered and obligated as stipulated by the River Law.

[Law 7-2] River Law Article 9 (Administration of *class A rivers*) and Article 10 (Administration of *class B rivers*).

(River Works)

Article 8

The term *river works*⁸⁻¹⁾ as used in this Law means works executed on a river in order to increase public benefits or eliminate or diminish public losses caused by the water of the river.

[Note 8-1] The term "*river works*" in this law refers to works associated with the objectives of the River Law, namely, (1) to prevent occurrence of damage due to floods, high tides, etc., (2) to utilize rivers properly, (3) to maintain the *normal functions of the river water* by maintaining and conserving the fluvial environment. To be more specific, *river works* include works involving (1) levees, revetments, dams, pump stations, channel dredging, (2) management facilities for proper use of rivers, (3) dams, weirs, and *fluvial woods zones* needed to meet the water quantity, water surface and environmental requirements required for maintaining the *normal functions of the river water*. *River works*, however, do not include works intended solely for hydroelectric power generation, irrigation, industrial water supply, domestic water supply, etc.

Chapter II. The Administration of Rivers

Section 1. General Rules

(Administration of Class A Rivers)

Article 9.

The administration of a *class A river* shall be performed by the Minister of Construction⁹⁻¹⁾.

2 With respect to a specific section the Minister of Construction designates within a *class A river* (hereinafter referred to as "*designated section*"), the Minister of Construction shall entrust part of the administration with the prefectural governor governing the prefecture where the *designated section* of the river is located, as may be provided for in detail by Government Ordinance^{9-2) 9-3)}.

3 When the Minister of Construction intends to designate a *designated section*, he shall, in advance, hear the opinion of the prefectural governor concerned. The same shall apply when he intends to change or cancel the designation.

4 When the Minister of Construction designates a *designated section*, he shall make public notification to that effect, as may be provided for in detail by Ministry of Construction Ordinance⁹⁻⁴⁾. The same shall apply when he changes or cancels the designation.

[**Note 9-1**] Until the complete revision of the River Law in July 1964, river administration was performed by the governor having jurisdiction over the area in which the river is located (before the governor system, the task was performed by the lord governing the area concerned). Under that system, only major works such as levee construction and new channel excavation were carried out by the central government, and the completed works were placed under the management of the governor concerned. After World War II, because it became increasingly difficult for prefectures alone to cope with a growing number of major floods and coordinate the interests of two or more prefectures involved in flood control for rivers extending over two or more prefectures, it was decided that administration of rivers that are of vital importance to national economy (*class A rivers*) was placed under the direct jurisdiction of the central government.

[**Note 9-2**] In view of the history of river administration mentioned in Note 9-1, the new law stipulates that the river administrator responsible for class A rivers, that is, the Minister of Construction, may delegate part of his or her authority for a *designated section* of a river to the governor of the prefecture concerned. The extent of such delegation of authority is stipulated by Government Ordinance Article 2⁹⁻³⁾.

[Gor 9-3] Government Ordinance Article 2 (Entrusting of part of the administration to the prefectural governor)

Administration of a *designated river* section that the Minister of Construction authorizes a prefectural governor to perform under the provisions of Article 9 (Administration of *class A rivers*) Paragraph 2 of the River Law shall not include the following:

(1) Preparing a *river ledger* in accordance with the provisions of Article 12 (*River ledgers*) Paragraph 1 of the River Law and keeping it in custody

(2) Formulating or modifying a *fundamental river management policy*

(3) Exercising the powers, under the provisions of Article 23 (Permission for river water use), Article 24 (Permission for land occupancy), Article 26 (Permission for construction of structures) Paragraph 1, Article 34 (Transfer of rights) Paragraph 1 and Article (Exceptional arrangement for water use during droughts), for any of the following water uses (hereinafter referred to as "specified water uses"): (a) Water use for power generation, (b) Water use involving a maximum intake rate of 2,500m³/day or for the supply of water to a population of 10,000 or more, (c) Water use for mining or industrial purposes involving a maximum intake rate of 2,500m³ or more, and (d) Water use involving a maximum intake rate of 1.0m³/sec. or for irrigation of 300 hectares or more of land.

(4) Exercising the powers associated with specified water uses under the provisions of Article 27 (Permission for land excavation) Paragraph 1, Articles 30 (Use of *permitted structures*) and 31 (Restoration orders), Article 33 (Succession of status) Paragraph 3 (including *mutatis mutandis* application under Article 55 (Restrictions within the river conservation zone) Paragraph 2, Article 57 (Restrictions within the projected river zone) Paragraph 3, Article 58-4 (Restrictions within the spatial river conservation zone) Paragraph 2 and Article 58-6 (Restrictions within the projected spatial river zone) Paragraph 3 of the River Law), Articles 38 (Notification upon receipt of application for water use) and 39 (Submission of opinion by concerned river users), Article 42 (Consultation on compensation for loss) Paragraph 2, Article 43 (Restriction of storing and taking river water) Paragraphs 1 and 6, Article 44 (Maintenance of the existing functions of a river) Paragraph 1, Article 46 (Report on the dam operation) Paragraph 1, Article 47 (Regulations for dam operation) Paragraphs 1 and 4, Article 49 (Preparation and custody of operation record), Article 50 (Appointment of a chief superintendent for a dam) Paragraph 2, Article 55 (Restrictions within the river conservation zone) Paragraph 1, Article 57 (Restrictions within the projected river zone) Paragraphs 1 and 2, Article 58-4 (Restrictions within the spatial river conservation zone) Paragraph 1, Article 58-6 (Restrictions within the projected spatial river zone) Paragraphs 1 and 2, Articles 75 (Supervisory measures and orders) and 76 (Compensation for loss due to supervisory measures), Article 77 (River guards) Paragraph 1, Article 78 (Reporting from permittees and inspections by river administrators) Paragraph 1 and Article 90 (Conditions for permission) Paragraph 1 of the River Law

(5) Taking measures, in connection with specified water uses, under the provisions of Article 75 of the River Law in connection with specified water uses, including annulment of permission associated with water uses under Articles 23 to 27 of the River Law other than specified water uses, necessary for granting permission as stipulated

in Article 23 (Permission for river water use), Article 24 (Permission for land occupancy) or Article 26 (Permission for construction of structures) Paragraph 1 of the River Law

(6) Exercising the powers under the provisions of Article 52 and Article 53 Paragraph 3 of the River Law

(7) Carrying out *river works* that have been made necessary by improvement works in a *nondesignated section* of a *class A river* and that need to be carried out in conjunction with said improvement works.

[Moc 9-4] MOC Ordinance Article 3 (Public notification of the *designated section*)

Public notification as stipulated in Article 9 (Administration of *class A rivers*) Paragraph 4 of the River Law shall be made via the Official Gazette specifying the start and end points of the *designated section* concerned by one or more of the items listed in Ministry of Construction Ordinance Article 1-2.

(Administration of Class B rivers)

Article 10.

The administration of a *class B river* shall be performed by the prefectural governor governing the prefecture where the river concerned is located.

(Administration of Class B Rivers on the Prefectural Boundaries)¹¹⁻¹⁾

Article 11.

With regard to the part of a *class B river* forming or crossing the boundary between two or more prefectures, the prefectural governors concerned may, by consultation, fix a special method of administration.

2 When an agreement has been reached by consultation under the provision of the preceding paragraph, the prefectural governors concerned shall publish the contents of the agreement reached, as may be provided for in detail by Ministry of Construction Ordinance¹¹⁻²⁾.

3 When the governor of one prefecture performs the administration of the part lying in the area of another prefecture on the basis of the agreement reached by consultation under the provision of Paragraph 1, he shall carry out the functions of the governor of the other prefecture in his place, as may be provided for in detail by Government Ordinance¹¹⁻³⁾.

[Note 11-1] As in the case of international boundaries, rivers often form prefectural boundaries. This article, therefore, provides for administration of such river sections.

[Moc 11-2] MOC Ordinance Article 4 (Public notification of the contents of consultation between the governors concerned)

Public notification under Article 11 (Administration of *class B rivers* on the prefectural boundaries) Paragraph 2 of the River Law shall be made via a gazette of the prefecture concerned indicating the following:

- (1) Name and address of the river and the river section
- (2) Prefectural governor responsible for administration
- (3) Scope of administration
- (4) Administration period

[Gor 11-3] Government Ordinance Article 3 (Exercise of powers by one governor on behalf of another)

The powers to be exercised by one prefectural governor on behalf of another under the provisions of Article 11 (Administration of *class B rivers* on the prefectural boundaries) Paragraph 3 of the River Law shall exclude the powers stipulated in Article 6 (The *river zone*), Article 12 (*River ledgers*) Paragraph 1, Article 16 (Determination of the *fundamental river management policy*) Paragraph 1, the proviso of Article 16-2 (The *river improvement plan*) Paragraph 1, Article 26 (Permission for construction of structures) Paragraph 4, Article 54 (Designation of the *river conservation zone*) Paragraph 1, Article 56 (The projected river zone) Paragraph 1, Article 58-2 (Designation of the *spatial river zone*), Article 58-3 (Designation of the *spatial river conservation zone*) Paragraph 1 and Article 58-5 (Designation of the *projected spatial river zone*) Paragraph 1 of the River Law.

(River ledgers)

Article 12

A *river administrator* shall prepare a set of *river ledgers* he administers, and keep it in custody¹²⁻⁷.

2 The set of *river ledgers* shall comprise a register of present river conditions and a *register of water utilization*.

3 The items to be entered in the *river ledgers* and other necessary matters concerning their preparation and custody shall be provided for by Government Ordinance^{12-1)~12-3}.

4 When the *river administrator* receives a request for permission of perusal of the *river ledgers*, he shall not refuse it unless there is a justifiable reason.

[Gor 12-1] Government Ordinance Article 4 (Contents of the *river ledgers*)

The register of present river conditions and the register of water utilization as stipulated in Article 12 (*River ledgers*) Paragraph 2 of the River Law shall each consist of a set of reports and drawings.

2 The *river administrator* may prepare the reports and drawings as stipulated in the preceding paragraph on magnetic disk (including any medium capable of safely recording certain types of information in a similar manner; hereinafter the same) in accordance with the Ministry of Construction Ordinance^{12-4) 12-5}.

[Gor 12-2] Government Ordinance Article 5 (Register of present river conditions)

Reports of the register of present river conditions shall, on the form stipulated in the Ministry of Construction Ordinance^{12-6) 12-7}, indicate (or "record" if the reports and drawings are prepared on magnetic disk as stipulated in the preceding article; the same shall apply for the next paragraph and the next article) the following (excluding the matters stipulated in Item (3) below in the case of a *class B river*):

- (1) The name of the *river system* and, in the case of a *class A river*, the date of designation of the *river system* concerned
- (2) The name of the river and the river section concerned, and the date of designation of the river concerned
- (3) *Designated section* as stipulated in Article 9 (Administration of *class A rivers*) Paragraph 2 of the River Law and the date of its designation
- (4) Length of the river
- (5) Brief description of the *river zone*
- (6) The *river conservation zone* and the date of its designation
- (7) The *projected river zone* and the date of its designation
- (8) The *spatial river conservation zone* and the date of its designation
- (9) The *projected spatial river zone* and the date of its designation
- (10) Brief description of principal *river administration facilities*
- (11) Brief description of permission, etc., of use of the river
- (12) Other necessary information

2 The drawings of the register of present river conditions shall consist of a plan view (or a plan view, a longitudinal profile and a cross-sectional view in the case of a *spatial river zone*, *spatial river conservation zone* or *projected spatial river zone*) drawn on a scale of 1/2,500 or larger (or 1/5,000 or larger if the scale of 1/2,500 or larger is deemed not necessary in view of the topographical or other conditions) and showing the local topography and compass directions and include the following information:

- (1) Boundary of the *river zone*
- (2) Classification of ownership (national, local or private) of the *river zone*, and brief description of the powers of the *river administrator* with respect to the land in the *river zone*
- (3) Boundary of the *river conservation zone*
- (4) Boundary of the *projected river zone*
- (5) Boundary of the *spatial river conservation zone*
- (6) Boundary of the *projected spatial river conservation zone*
- (7) Principal *river administration facilities*
- (8) Principal structures permitted under Article 26 (Permission for construction of structures) Paragraph 1 of the River Law
- (9) Other necessary information

[Gor 12-3] Government Ordinance Article 6 (Register of water utilization)

The reports of the register of water utilization shall be prepared independently for each water use on the form stipulated in the Ministry of Construction Ordinance¹²⁻⁷⁾, and include the following information:

- (1) Names of the *river system* and river involved in the water use
- (2) Name and address of the person who has been granted a permit for the water use (in the case of a juridical person, the name and place of business of the juridical person and the name of its representative)

- (3) Purpose of the water use
- (4) Permitted amount of water use
- (5) Period of permitted water use
- (6) Place of use including the location of intake or outlet
- (7) Brief description of principal structures permitted under Article 26 (Permission for construction of structures) Paragraph 1 of the River Law
- (8) Other necessary information.

2 The drawings of the *register of water utilization* shall consist of a plan view (or a plan view, a longitudinal profile and a cross-sectional view in the case of a *spatial river zone*, *spatial river conservation zone* or *projected spatial river zone*) drawn on a scale of 1/2,500 or larger (or 1/5,000 or larger if the scale of 1/2,500 or larger is deemed not necessary in view of the water use conditions) and showing the local topography and compass directions and include the information listed in items (3), (4) and (6) of the preceding paragraph and the location and type of the structures stipulated in item (7) of the preceding paragraph.

[Moc 12-4] MOC Ordinance Article 4-2 (Preparation of reports and drawings on magnetic disk)

In the case where the *river administrator* prepares reports and drawings on magnetic disk under the provisions of Government Ordinance Article 4 Paragraph 2, he shall do so by using a computer (including input/output devices).

2 In the case set forth in the preceding paragraph, the *river administrator* shall take necessary measures needed to prevent the reports and drawings from being lost or damaged.

3 Perusal of the *river ledgers* in the case set forth in Paragraph 1 of this article under the provisions of Article 12 (*River ledgers*) Paragraph 4 of the River Law shall be made by printing the information recorded on magnetic disk onto paper or displaying the information on a projector screen of an input/output device.

[Moc 12-5] MOC Ordinance Article 4-3 (Preservation of identical records)

In the case set forth in Paragraph 1 of the preceding article, the *river administrator* shall prepare and preserve separately another set of records consisting of the same information as the one recorded on the magnetic disk.

2 In the case where the *river administrator* stores the records mentioned in the preceding paragraph at a place other than the *river administrator's* office, he shall properly store the records as required by the Minister of Construction.

3 Should all or part of the records on magnetic mentioned in Paragraph 1 above have been lost, the records can be restored by use of the identical records mentioned in the same paragraph.

[Moc 12-6] MOC Ordinance Article 5 (Forms for a register of present river conditions)

The form specified by the Ministry of Construction Ordinance referred to in Article 5 Paragraph 1 of the Government Ordinance is attached hereto as Form No. 1.

[Moc 12-7] MOC Ordinance Article 6 (Forms for a register of water use)

The form specified by the Ministry of Construction Ordinance referred to in Article 6 Paragraph 1 of the Government Ordinance is attached hereto as Form No. 2.

[Gor 12-8] Government Ordinance Article 7 (Custody of the *river ledgers*)

In accordance with the Ministry of Construction Ordinance ¹²⁻⁸⁾, the *river ledgers* for a *class A river* shall be kept in the custody of the office of the regional construction bureau concerned [including the office of the Hokkaido Development Bureau; the same shall apply for Article 39-3 Paragraph 1 item (1)] and those for a *class B river* shall be kept in the custody of the office of the prefecture concerned.

[Moc 12-9] MOC Ordinance Article 7 (Custody of the *river ledgers*)

River ledgers shall be kept in the custody of the offices corresponding to the categories listed below:

- (1) Register of present river conditions for a *class A river*: an office of the regional construction bureau as stipulated in Article 9 of the Ministry of Construction Establishment Law (Law No. 113, 1948) or an office of the Development and Construction Bureau referred to in Article 12 Paragraph 1 of the Hokkaido Development Law (Law No. 126, 1950) (referred to in Article 41 as the “office concerned”);
- (2) Register of river utilization for a *class B river*: a Regional Construction Bureau or Hokkaido Development Bureau; and
- (3) *River ledgers* for a *class B river*: an office as stipulated by prefectural regulations.

(Structural Standards for River Administration Facilities)

Article 13.

River administration facilities, or river structures established with approval as stipulated in Article 26 Paragraph 1 must be structurally safe in consideration of water level, flow, topographical and geological conditions and other river conditions, and the dead load, water pressure and other anticipated loads.

2 Technical standards necessary for river administration and applicable to dams, levees and other major *river administration facilities* as well as river structures established with approval as stipulated in Article 26 Paragraph 1 shall be stipulated in Government Ordinance ¹³⁻¹⁾.

[Note 13-1] Government Ordinance for Structural Standard of *river administration facilities*, which consists of 10 chapters and 77 articles, sets forth technical standards for levees, revetments, groins, weirs, dams, gates, etc. The full text of the Government Ordinance and the relevant MOC rules are attached as Appendix I and II.

(Operation Regulations for River Administration Facilities)

Article 14.

The *river administrator* shall, for such dams, weirs, sluices and other facilities involving operation, out of the *river administration facilities* he administers, as may be specified in Government Ordinance ¹⁴⁻¹⁾, establish respective operation regulations, as may be provided for in detail by Government Ordinance ¹⁴⁻²⁾.

2 When the *river administrator* intends to establish or change operation regulations of the preceding paragraph, he shall, in advance, consult with the heads of the administrative agencies concerned and hear the opinions of the prefectural governors concerned, the opinions of the heads of cities, towns and villages concerned and the opinions of the persons specified in Government Ordinance who bear a part of the expenses necessary for administering *river administration facilities*, as may be provided for in detail by Government Ordinance¹⁴⁻³).

[Gor 14-1] Government Ordinance Article 8 (*River administration facilities* requiring the establishment of operation regulations)

Facilities stipulated in Article 14 (Operation regulations for *river administration facilities*) Paragraph 1 of the River Law shall fall within one of the following categories:

- (1) Facilities for flood control;
- (2) Facilities for diversion of river water;
- (3) Interior drainage facilities that are particularly important for flood control;
- (4) Facilities for prevention of reverse flow of floodwater that are particularly important for flood control or water use;
- (5) Facilities, besides those set forth in the preceding items, for maintaining the *normal functions of the river water* that are particularly important for flood control or water use;
- (6) Facilities for navigation.

[Gor 14-2] Government Ordinance Article 9 (Operation regulations)

Operation regulations stipulated in Article 14 (Operation regulations for *river administration facilities*) Paragraph 1 of the River Law shall cover the following:

- (1) Matters related to water level, streamflow, etc., on which to base facility operations;
- (2) Matters related to methods of facility operations;
- (3) Matters related to the inspection and maintenance of facilities and equipment necessary for facility operations;
- (4) Matters related to meteorological and hydrological observations necessary for facility operations;
- (5) Matters related to measures to be taken in the course of facility operations;
- (6) Other necessary matters related to facility operations.

[Gor 14-3] Government Ordinance Article 9-2 (Procedure to establish operation regulations)

Persons stipulated in the Government Ordinance referred to in Article 14 (Operation regulations for *river administration facilities*) Paragraph 1 of the River Law shall be *special river water users* set forth in Article 7-2 Paragraph 1 of the River Law.

2 In the case where the *river administrator* intends to establish or modify operation regulations stipulated in Article 14 (Operation regulations for *river administration facilities*) Paragraph 1 of the River Law, he shall hear the opinion of the governor of the prefecture concerned with respect to *river administration facilities* for a *class A river* or the head of the municipality concerned with respect to *river administration facilities* for a *class B river*. Should such consultation concerns *river administration facilities* for which a *special river water user* must be made to bear part of the administration expenses under the provisions of Article 70-2 Paragraph 11 of the River Law, the *river administrator* shall consult the head of the administrative organization concerned and hear the opinion of the *special river water user*.

(Consultation Among River Administrators)

Article 15.

If it is feared, when the *river administrator* intends to establish or change the operation regulations mentioned in Paragraph 1 of the preceding Article ¹⁵⁻¹⁾, or execute a *river work*, or take an official action in accordance with any of the provisions of Articles 23 through 29 (including the official action of Article 75 taken in connection with such action) ¹⁵⁻²⁾, that operation based on the operation regulations, or the *river work* concerned, or the work or other act connected with the official action concerned may have a marked effect on a river administered by another *river administrator*, the *river administrator* shall, in advance, consult with the other *river administrator*.

[Law 15-1] River Law Article 14 (Operation regulations for *river administration facilities*)

[Law 15-2] River Law Article 23 (Permission for river water use), Article 24 (Permission for land occupancy), Article 25 (Permission for taking earth, stone, etc.), Article 26 (Permission for construction of structures), Article 27 (Permission for land excavation), Article 28 (Prohibition, restrictions and permission for floating down trees/bamboo and navigation of boats/ships), Article 29 (Prohibition, restriction and permission for acts likely to hinder river administration), Article 75 (Supervisory measures and orders).

Section 2. River Works ¹⁶⁻¹⁾

(The Fundamental River Management Policy)

Article 16.

A *river administrator* shall, for the rivers administered, determine the *design flood discharge* ¹⁶⁻²⁾ and other matters which will be the basis for policy (hereinafter referred to as "*fundamental river management policy*") of *river works* and river maintenance (hereinafter referred to as "*river improvement*")¹⁶⁻³⁾.

2 A *fundamental river management policy* shall be so established, in accordance with provisions made by Government Ordinance ¹⁶⁻⁴⁾, and for each *river system*, as to ensure comprehensive administration of the rivers in the water system, by taking into consideration the conditions of flood damage frequency, present status of water resource utilization, their development and the fluvial environment, and also by effecting coordination with the Comprehensive National Development Plan ¹⁶⁻⁵⁾.

3 When the Minister of Construction intends to establish a *fundamental river management policy*, he shall first hear the opinion of the *River council* ¹⁶⁻⁶⁾.

4 When the prefectural governor intends to establish a *fundamental river management policy* in a prefecture where a *Prefectural river council* ¹⁶⁻⁷⁾ exists, the governor shall first consider the Council's opinion.

5 The *river administrator* shall then establish a *fundamental river management policy* and make a public notification to that effect without delay.

6 The previous three paragraphs (Paragraphs 3 to 5) shall be applied mutatis mutandis for amendment of the *fundamental river management policy*.

(This article amended by Law No.69 of 4 June 1997)

[Note 16-1] For information on *river works*, see Note 8-1 to Article 8 of the River Law.

[Note 16-2] *Design flood discharge* is the design discharge on which to base the design of levees and other river facilities. Standard practice in Japan is to use a recurrence interval of 200 years (safety factor 1/200) for probability of exceedance for particularly important river sections, 150 years (safety factor 1/150) for important river sections, and 100 years (safety factor 1/100) for other river sections. The *design flood discharge* is a streamflow regulated by dams or other means of flow regulation; the unregulated flood discharge is termed the "*basic flood discharge*".

[Gor 16-3] Government Ordinance Article 10 (Rules for formulation of the *fundamental river management policy* and the *river improvement plan*)

The *fundamental river management policy* and the *river improvement plan* shall be formulated in accordance with the following rules:

- (1) Matters related to prevention or mitigation of disasters caused by floods, high tides, etc., must be determined after comprehensive consideration of major historical events of floods, high tides, etc., and the meteorological, topographical, geological, development, and other conditions in the area where occurrence of disasters is to be prevented;
- (2) Matters related to proper river use and the *normal functions of the river water* must be determined after comprehensive consideration of factors such as exclusive use of river water, navigation, fisheries, tourism, maintenance of cleanness of river water, prevention of salt damage, prevention of river mouth clogging, protection of *river administration facilities*, and maintenance of groundwater level;

- (3) Matters related to improvement and conservation of the river environment must be determined after comprehensive consideration of factors such as maintenance of cleanness of river water, landscape, conditions of plant and animal habitats and creation of opportunities for intimate human-river contact.

[Gor 16-4] Government Ordinance Article 10-2 (Matters to be set forth in the *fundamental river management policy*)

The *fundamental river management policy* shall set forth the following:

- (1) Basic policy for comprehensive river conservation and utilization for the *river system* concerned;
- (2) Basic requirements for river improvement:
 - a) Matters related to the *basic flood discharge* (the flood used as a basis of flood protection planning) and its allocation to river channels and flood control dams;
 - b) Matters related to *design flood discharges* at principal locations;
 - c) Matters related to river width associated with design high water level and design cross section at principal locations;
 - d) Matters related to streamflow required for maintaining the *normal functions of the river water* at principal locations.

[Note 16-5] The Comprehensive National Development Plan, stipulated in Article 2 of the Comprehensive National Land Development Law, is a comprehensive and basic plan of the central government or a local public body. This plan sets forth matters related to (1) use of land, water and other natural resources; (2) prevention of flood damage, wind damage and other types of disasters; (3) adjustment of the size and arrangement of urban and rural areas; (4) proper industrial siting; and (5) the size and arrangement of electric power, transportation, telecommunications and other important public facilities, and the protection, facility size and arrangement of resources associated with culture, public welfare and tourism. The objectives of the Comprehensive National Land Development Law are to utilize, develop and conserve land from the viewpoint of comprehensive measures associated with economy, society, culture, etc., in consideration of the conditions of the natural environment of the country; promote proper industrial siting; and contribute to social welfare improvement.

[Note 16-6] For information on the *River Council*, see Articles 80 to 85 of the River Law.

[Note 16-7] For information on the *Prefectural river council*, see Article 86 of the River Law.

(The River Improvement Plan)

Article 16-2.

River administrators shall establish a plan to improve the river concerned hereinafter referred to as the *river improvement plan* ¹⁶⁻²⁻¹⁾ for the section for which river improvement shall be implemented deliberately in accordance with the *fundamental river management policy*.

2 The *river improvement plan* shall comply with the *fundamental river management policy* and as provided for in the Government Ordinance ¹⁶⁻²⁻²⁾, enabling an integrated

administration of the river concerned. In such cases, the *river administrator* shall give special consideration to take necessary measures to prevent the occurrence of disasters and/or mitigate damages for those areas where disasters frequently occur due to precipitation, topography, geology and other conditions.

3 When *river administrators* intends to draft a *river improvement plan* , he shall consider opinions from persons with experience or an academic background when necessary ¹⁶⁻²⁻⁴ .

4 In connection with the previous paragraph (Paragraph 3), *river administrators* shall take necessary measured, such as public hearings etc., to reflect the opinion of the people concerned whenever necessary ¹⁶⁻²⁻⁵ .

5 When *river administrators* intend to establish a *river improvement plan* , he shall consider opinions from concerned prefectural governors and mayors in advance as provided in Government Ordinance ¹⁶⁻²⁻⁶ .

6 When *river administrators* establishes a *river improvement plan* , he shall make a public notification to that effect without delay.

7 Paragraphs 3 to 6 shall be applied mutatis mutandis for amendments to the *river improvement plan* .

(This article added by Law No.69 of 4 June 1997)

[Note 16-2-1] The *river improvement plan* is a plan setting forth concrete measures to be taken in accordance with the *fundamental river management policy* . If the *river improvement plan* involving *high standard levees*, the *river administrator* must promptly provide notice to the governor of the prefecture concerned as provided for in the Ministry of Construction Ordinance, Article 7-2 ¹⁶⁻²⁻² .

[Moc 16-2-2] MOC Ordinance Article 7-2 (Notice to the prefectural governor concerned)

[Gor 16-2-3] Government Ordinance Article 10-3 (Matters shall be set in the *river improvement plan*)

The *river improvement plan* shall set forth the following:

- (1) Matters related to the objective of the *river improvement plan* ;
- (2) Matters related to the execution of the *river improvement plan* :
 - (a) Purpose, type and location of the *river works* and a brief description of the functions of the *river administration facilities* to be provided as the result of the execution of the *river works*;
 - (b) Purpose, type and location of river maintenance.

[Note 16-2-4] The reason it is required that the opinion of the *River council* be sought in formulating a *fundamental river management policy* as a basis of river improvement, while the opinion of persons of experience or academic standing, instead of the *River council*, be sought in formulating a *river improvement plan* setting forth specifics for the implementation of the policy is that such arrangement will make it possible to hear a wider range of more truly representative opinions of the local community.

[Note 16-2-5] The system for hearing public opinion has been adopted against the background of the realization that the government-led river administration and *river works* in the past which centered on flood control/mitigation and water management/utilization. Growing public interest in river space utilization and environmental conservation is another background of the new system.

[Gor 16-2-6] Government Ordinance Article 10-4 (Hearing of the opinion of the prefectural governor concerned, etc.)

In the case where the *river administrator* intends to formulate or modify a *river improvement plan*, he shall in advance hear the opinion of either the governor of the prefecture concerned if he is the Minister of Construction or the head of the municipality concerned if he is a prefectural governor.

2 In the case set forth in the preceding paragraph, a prefectural governor who intends to submit his opinion shall in advance hear the opinion of the head of the municipality concerned.

(River Works by Municipalities)

Article 16-3.

Notwithstanding the provisions of Articles 9 and 10 16-3-1), a municipal head may carry out *river works* or river maintenance on *designated section* of the class A and/or B rivers after consultation with the responsible *river administrator* ^{16-3-2) 16-3-3) 16-3-4)}. This does not apply in cases stipulated by Government Ordinance 16-3-5) as being inappropriate for river administration on such grounds as the purpose of the works, the degree of impact on the river, or the size of the population of the municipality.

2 When carrying out *river works* or river maintenance on the basis of the consultation stipulated in the preceding paragraph, and when the said *river works* or river maintenance has been completed, the municipal head must give public notice to this effect in accordance with the provisions in the Ministry of Construction Ordinances ¹⁶⁻³⁻⁶⁾.

3 When carrying out *river works* or river maintenance on the basis of the consultation as prescribed in Paragraph 1, the municipal head shall exercise the powers of the *river administrator* on behalf of the *river administrator* in accordance with the provisions in Government Ordinance ¹⁶⁻³⁻⁷⁾.

[Law 16-3-1] River Law Article 9 (Administration of *class A rivers*), Article 10 (Administration of *class B rivers*)

[Moc 16-3-2] MOC Ordinance Article 7-3 (*River works* that may be executed by the head of a municipality)

River works that may be executed by the head of a municipal government as stipulated in Article 10 Paragraph 5 Item (6) of the River Law shall be following:

- (1) Construction or modification of revetments;
- (2) Improvement of flood channels;

- (3) Construction or modification of small weirs;
- (4) Construction or modification of groundsills;
- (5) Construction or modification of groins;
- (6) Construction or modification of river water purification facilities;
- (7) Construction or modification of passageways for river administration;
- (8) Installation of berms or marginal strips along levees;
- (9) Other *river works* associated with channel improvement or water quality conservation.

[Moc 16-3-3] MOC Ordinance Article 7-4 (Area in which part or whole of a city with a population of 50,000 or more is located)

Areas provided for in the Ministry of Construction Ordinance referred to in the proviso of the Government Ordinance Article 10-5 Item (6) shall be as follows:

- (1) Built-up areas provided for in Article 2 Paragraph 3 of the Metropolitan Region Development Law (Law No. 83, 1956), suburban improvement zones provided for in Paragraph 4 of the same article and urban development areas provided for in Paragraph 5 of the same article
- (2) Built-up areas provided for in Article 2 Paragraph 3 of the Kinki Region Development Law (Law No. 129, 1963), suburban improvement zones provided for in Paragraph 4 of the same article and urban development areas provided for in Paragraph 5 of the same article
- (3) Urban improvement areas provided for in Article 2 Paragraph 3 of the Chubu Region Development Law and urban development areas defined in Paragraph 4 of the same article
- (4) Regional core cities designated under the provisions of Article 4 Paragraph 1 of the Law concerning the Improvement of Regional Core Cities and the Promotion of Rearrangement of Industrial Facilities (Law No. 76, 1992)
- (5) Special districts, capital cities or cities designated under Article 252-19 Paragraph 1 of the Local Autonomy Law (Law No. 67, 1947) and adjoining areas that are closely connected to said areas in terms of the natural environment, society or economy.

[Moc 16-3-4] MOC Ordinance Article 7-5 (Degree of urbanization of cities with a population of 50,000 or more)

The degree of urbanization provided for in the Ministry of Construction Ordinance mentioned in the proviso of Article 10-5 Item (6) of the Government Ordinance is such that a use district defined in Article 8 Paragraph 1 Item (1) of the Urban Planning Law (Law No. 100, 1968) in an urbanization district defined in Article 7 Paragraph 1 of the same law or in an urban planning district not covered by a city plan involving an urbanization district or urbanization control district defined in the same paragraph accounts for a substantial part of the city concerned.

[Gor 16-3-5] Government Ordinance Article 10-5 (*River works* and maintenance which shall not be implemented by municipalities)

River works or river maintenance provided for in the Government Ordinance referred to in Article 16-3 (*River*

works by municipalities) Paragraph 1 of the River Law shall be one of the following:

- (1) *river works* stipulated in Article 2 Item (7) on a *designated section* of a class A or *class B river* or river improvement works in a *special designated section* provided for in Article 40 Paragraph 1;
- (2) *river works* or river maintenance on a *designated river* provided for in Article 41 Paragraph 1 or a section provided for in Article 7 Paragraph 1 of the Special Measures Law for Development of Okinawa (Law No. 131, 1971);
- (3) *river works* for any of the following projects: (a) disaster rehabilitation project to which the Law concerning National Treasury Share of Expenses for Rehabilitation of Damage to Public Works Facilities (Law No. 97, 1951) applies; (b) project for improvement that needs to be implemented in conjunction with a project of category (a) above because said category (a) project is not enough to prevent recurrence of a disaster; and other non-category-(a) emergency river project designed to deal with levee break or other dangers;
- (4) *river works* associated with a dam or maintenance or operation of a dam;
- (5) *river works* provided for in Article 70-2 (Sharing of cost by special river users) Paragraph 1;
- (6) *river works* other than those provided for in the Ministry of Construction Ordinance that are designed primarily for proper use of river water, maintenance of the *normal functions of the river water* and improvement and conservation of the river environment such as including construction of revetments and flood channel improvement (excluding river improvement works to be executed systematically in accordance with a basic policy for comprehensive river conservation and utilization set forth in the *fundamental river management policy*), excluding *river works* (limited to river works the catchment area upstream from which is not larger than the limit specified by the Ministry of Construction Ordinance¹⁶⁻³⁻⁸ or river works that need to be coordinated with improvement of an adjacent urban area) to be executed within a special district, a prefectural capital or a city with a population of 200,000 or more; or in a city with a population of 50,000 or more part or all of which lies within a large city and its environs or a regional core city and its environs which are located in an area provided for in the Ministry of Construction Ordinance¹⁶⁻³⁻³ or whose degree of urbanization has reached the level defined in the Ministry of Construction Ordinance¹⁶⁻³⁻⁴).

[Moc 16-3-6] MOC Ordinance Article 7-7 (Public notification of *river works*, etc., by the head of a municipality)

Public notification provided for in Article 16-3 (The *river improvement plan*) Paragraph 2 of the River Law shall be made by indicating the matters listed below in a gazette of the city, town or village concerned.

- (1) The name of the river and the river section.
- (2) The contents of the *river works* or river maintenance.
- (3) The period of the *river works* or river maintenance (or, in the case where *river works* or river maintenance has been completed, the date of completion).

[Gor 16-3-7] Government Ordinance Article 10-6 (Exercise of powers of the *river administrator* by the head of a municipality)

In the case where the head of a municipality performs *river works* or river maintenance under the provisions of Article 16-3 (*River works* by municipalities) Paragraph 1 of the River Law, he shall exercise the powers of the *river administrator* in connection with the *river works* or river maintenance concerned provided for in Article 17 (*Joint use structures*), Article 18 (Works by person who has necessitated such works), Article 19 (*Apprutenant works*), Article 21 (Compensation for loss caused by *river works*), Article 37 (Entrusting of construction of permitted works to *river administrators*), Article 66 (Sharing of cost for *joint use structures*), Article 67 (Sharing of cost of works carried out by a person necessitating *river works*), Article 68 (Sharing of cost of *apprutenant works*), Article 70 (Sharing of cost by beneficiaries) Paragraph 1, Article 74 (Compulsory collection of shares and charges) and Article 89 (Entry into third party land for river administration) on behalf of the *river administrator*.

2 The range of beneficiaries whom the head of a municipality makes, under the provisions of the preceding paragraph, bear a part of the expenses for *river works* under the provisions of Article 70 Paragraph 1 of the River Law and the method of collection shall be stipulated by the ordinance of the city, town or village under the jurisdiction of the head of the municipality concerned.

3 The payment under the provisions of Article 67, Article 68 Paragraph 2 or Article 70 Paragraph 1 of the River Law that is imposed by the head of a municipality under the provisions of Paragraph 1 of this article shall be made a revenue of the city, town or village concerned. In the case provided for in the Article 74 Paragraph 3 of the River Law, the head of the municipality concerned may effect a disposition for the recovery of the payment following the examples of recovering local taxes in arrears.

[Moc 16-3-8] MOC Ordinance Article 7-6 (Upper limit of a catchment area upstream from the site of river works that a municipal head is allowed to carry out)

The area of land stipulated by the MOC Ordinance referred to in the proviso of Article 10-5 Item 6 of the MOC Ordinance is in most cases 30 km².

(Joint Use Structures)

Article 17.

In case a *river administration facility* and a facility or structure intended for a purpose other than river administration (hereinafter referred to as "*non-river administration facility*") are built as one structure (hereinafter referred to as "*joint use structure*¹⁷⁻¹⁾*"), the *river administrator* and the administrator of the *non-river administration facility* may, upon consultation, fix a specific administration method and perform the works, maintenance and operation of the *joint use structure* which serves both as the *river administration facility* and the *non-river administration facility* according to the fixed method.

2 In case the administrator of the *non-river administration facility* performs works, maintenance or operation of the *river administration facility* in accordance with consultation

prescribed in the preceding paragraph, the *river administrator* shall make public notification to that effect as may be provided for in detail by Ministry of Construction Ordinance ¹⁷⁻²⁾.

[Note 17-1] A *joint use structure* is a facility or structure that perform the functions of both a *river administration facility* and those of a *non-river administration facility*. Examples of *joint use structures* include a levee and a road and a ground sill and an weir for agricultural diversion that also perform each others' functions. A *joint use structure* refers to the entirety of the facility or structure concerned.

[Moc 17-2] MOC Ordinance Article 8 (Public notification of administration of *river administration facilities* by the administrator of *non-river administration facilities*)

Public notification provided for in Article 17 (*Joint use structures*) Paragraph 2 of the River Law shall be made by including the information listed below via the Official Gazette if by the Minister of Construction or a gazette of the prefecture concerned if by a prefectural governor:

- (1) Name of river;
- (2) Name or type of *river administration facility*;
- (3) Location of the *river administration facility*;
- (4) Name and address of the person who is to perform administration (in the case of a juridical person, the name and place of business of the juridical person);
- (5) Scope of administration;
- (6) Administration period.

2 The provisions of the preceding paragraph shall apply *mutatis mutandis* to public notification provided for in Article 17 (*Joint use structures*) Paragraph 2 of the River Law that is to be made by the head of the municipality concerned on behalf of the *river administrator* under the provisions of Article 10-6 Paragraph 1 of the Government Ordinance. In this case, "the Official Gazette if by the Minister of Construction or a gazette of the prefecture concerned if by a prefectural governor" shall read "a municipal gazette".

(Work by Person Who Has Necessitated Such Work)

Article 18.

With regard to a work other than a *river work* (hereinafter referred to as "other work") and such *river work* as may be necessitated by the act of damaging and/or polluting a river or an act causing necessity of changing the present condition of a river (hereinafter referred to as "other act"), the *river administrator* may have such works and/or maintenance executed by the executor of the other work concerned or by the person who performed the other act concerned as the case may be ¹⁸⁻¹⁾.

(This article amended by Law No.69 of 4 June 1997)

[Note 18-1] Works that fall within the categories defined here include strengthening or construction of river bank revetments necessitated by the construction of an irrigation weir or a bridge, rechannelization of rivers necessitated by the construction of large-scale facilities such as an airport, and repairs of revetments damaged by heavy vehicles or ships. If making the person who has made such works necessary carry them out is not deemed appropriate, the *river administrator* may carry out the works himself and make the person who has necessitated such works bear the cost of the works as stipulated in Article 67 (Sharing of cost of works carried out by a person other than *river administrator*) of the River Law.

(Appurtenant Works)

Article 19.

With regard to such other work as has been necessitated by a *river work* or such other work as has become necessary in order to execute a *river work*, the *river administrator* may execute such work (hereinafter referred to as *appurtenant work*) together with the *river work* concerned ¹⁹⁻¹).

[Note 19-1] Basically, the powers of the *river administrator* with regard to *river works* are limited to *river works* themselves. There are many cases, however, where it is appropriate or even necessary to carry out other works, or *appurtenant works*, that have been necessitated by the *river works* in conjunction with the *river works* by such reasons as the need to prevent a flood or other disaster during construction or ensure successful completion of the *river works*. For this reason, this article empowers the *river administrator* to carry out *appurtenant works* in conjunction with the *river works*. Examples of *appurtenant works* include extension of a diversion weir or conveyance channel necessitated by channel widening; modification of a gate necessitated by the strengthening of levees; relocation of a diversion weir, gate, etc., necessitated by channel excavation; and the widening of a woodland path and the strengthening of its base course necessitated by the need for transportation of materials for dam construction. The reason *river administrators* are empowered to carry out most of such *appurtenant works* without obtaining the consent of the administrators of diversion weirs, conveyance channels, gates, etc., is that *river works*, which are designed for disaster prevention, greatly contribute to the public good. In the case, however, where "other works" that have been necessitated by *river works* are road works, the works are to be carried out by the person who has made such works necessary as stipulated in Article 22 (Order to execute road works to the person who has necessitated such work) Paragraph 1 of the Road Law. Unless otherwise stipulated, part or all of the cost of *appurtenant works* is to be borne, under the provisions of Article 68 (Sharing of cost of *appurtenant works*) Paragraph 1, by the person who bears the cost of *river works* to the extent of the necessity caused.

(River Works by Persons Other Than the River Administrator)²⁰⁻¹⁾

Article 20.

In addition to the cases stipulated in Article 11, Article 16-3 Paragraph 1, Article 17 Paragraph 1 and Article 18²⁰⁻²⁾, persons other than *river administrators* may carry out *river works* or river maintenance with the approval of the responsible *river administrator* in accordance with the provisions in Government Ordinance²⁰⁻³⁾. However, approval of the responsible *river administrator* is not required for minor or light *river works* or maintenance stipulated in Government Ordinance²⁰⁻⁴⁾.

[Note 20-1] *River works* and river maintenance fall within the powers of the *river administrator*. *river administrators*, however, may allow other persons to carry out *river works* or river maintenance if those persons wish to carry out *river works* or river maintenance because of their own needs or in the hope of cooperating in river administration and if such arrangement does not pose any problem in connection with river administration. Examples include channel excavation by commercial navigators and construction or reconstruction of revetments by local residents.

[Law 20-2] River Law Article 11 (Administration of *class B rivers* on the prefectural boundaries), Article 16-3 (*River works* by municipalities), Article 17 (*Joint use structures*), Article 18 (Works by person who has necessitated such works)

[Gor 20-3] Governmental Ordinance Article 11 (Application for approval of works, etc., carried out by persons other than *river administrators*)

Any person who wishes to obtain approval provided for in Article 20 (*River works* by persons other than the *river administrator*) of the River Law shall submit to the responsible *river administrator* an application for approval that describes the design and execution plan of the works or an execution plan for the river maintenance.

[Gor 20-4] Government Ordinance Article 10-6 (Exercise of powers of the *river administrator* by the head of a municipality)

In the case where the head of a municipality performs *river works* or river maintenance under the provisions of Article 16-3 (*River works* by municipalities) Paragraph 1 of the River Law, he shall exercise the powers of the *river administrator* in connection with the *river works* or river maintenance concerned provided for in Article 17 (*Joint use structures*), Article 18 (Works by person who has necessitated such works), Article 19 (*Appurtenant works*), Article 21 (Compensation for loss caused by *river works*), Article 37 (Entrusting of construction of permitted works to *river administrators*), Article 66 (Sharing of cost for *joint use structures*), Article 67 (Sharing of cost of works carried out by a person necessitating *river works*), Article 68 (Sharing of cost of *appurtenant works*), Article 70 (Sharing of cost by beneficiaries) Paragraph 1, Article 74 (Compulsory collection of shares and charges) and Article 89 (Entry into third party land for river administration) on behalf of the *river administrator*.

2 The range of beneficiaries whom the head of a municipality makes, under the provisions of the preceding paragraph, bear a part of the expenses for *river works* under the provisions of Article 70 Paragraph 1 of

the River Law and the method of collection shall be stipulated by the ordinance of the city, town or village under the jurisdiction of the head of the municipality concerned.

3 The payment under the provisions of Article 67, Article 68 Paragraph 2 or Article 70 Paragraph 1 of the River Law that is imposed by the head of a municipality under the provisions of Paragraph 1 of this article shall be made a revenue of the city, town or village concerned. In the case provided for in the Article 74 Paragraph 3 of the River Law, the head of the municipality concerned may effect a disposition for the recovery of the payment following the examples of recovering local taxes in arrears.

[Gor 20-5] Government Ordinance Article 12 (Works, etc., carried out by a person other than *river administrator* for which approval is not necessary)

Minor or light *river works* or river maintenance provided for in the proviso of Article 20 (*River works* by persons other than the *river administrator*) of the River Law shall be small-scale maintenance work, such as mowing, disposing of obstructions, or the like.

(Compensation for Loss Caused by River Works)

Article 21.

Except in a case to which the provisions of Article 93 ²¹⁻¹⁾ Paragraph 1 of the Land Expropriation Law (Law No.219 of 1951)²¹⁻²⁾ applies, when it is deemed unavoidably necessary, as the result of execution of a *river work*, to build, extend, repair or move a pathway, ditch, fence, palisade or some other facility or structure or to execute banking or cutting on the land bordering on the river concerned, the *river administrator* (in case the *river work* concerned is one executed by a person other than the *river administrator*, that person; hereinafter the same in this article) shall pay in compensation a part or the whole of the expenses for such work on the request of the person to whom execution of the work is necessary (hereinafter in this article referred to as "person who has incurred loss"). In such case, the *river administrator* or the person who has incurred loss may request that the *river administrator* execute the work concerned as a substitute for the whole or a part of the compensation money.

2 The compensation for loss under the provision of the preceding paragraph cannot be demanded after one year has elapsed from the day on which the *river work* was completed.

3 With regard to the compensation under the provision of Paragraph 1, it is necessary that the *river administrator* and the person who has incurred loss should hold a consultation on it.

4 If no agreement can be reached by consultation under the provision of the preceding paragraph, the *river administrator* or the person who has incurred loss may apply to the Expropriation Committee ²¹⁻³⁾ for a decision under the provision of Article 94 of the Land Expropriation Law as may be provided for in detail by Government Ordinance ²¹⁻⁴⁾²¹⁻⁵⁾.

[Note 21-1] Land Expropriation Law Article 93 (Compensation for loss associated with land other than the expropriated or used land) Paragraph 1, Article 94 (Procedures for ruling concerning compensation for loss associated with land surveying, investigation, project cancellation or alteration, or land other than expropriated or used land)

[Note 21-2] In Japan, compensation for expropriation of land, relocation of houses, etc., required for construction of public facilities is as a rule to be determined by voluntary consultation between the owner and the user of the land or house concerned and the implementing entity. With regard to the transfer of land, etc., for the construction of public facilities, measures such granting a certain degree of tax exemption for transfer income have been implemented. In the event of failure to reach agreement as a result of voluntary consultation, however, the land, buildings, etc., required for the construction of facilities that are important for the public good may be expropriated under the Land Expropriation Law. The purpose of the Land Expropriation Law is to make adjustment between public interest promotion and private property and thereby contribute to proper and rational use of land by providing for the requirements, procedures and effects of expropriation or use of land, etc., required for projects for promoting the public interest.

[Note 21-3] In order to realize the power to rule, etc., provided for in the Land Expropriation Law, Article 51 of the same law stipulates that an Expropriation Committee be established under the jurisdiction of the prefectural governor concerned. The Expropriation Committee exercises its powers independently.

[Gor 21-4] Government Ordinance Article 13 (Procedures for applying for a ruling by the expropriation committee)

Any person who wishes to apply for a ruling provided for in Article 94 (Procedures for applying for compensation for loss) of the Land Expropriation Law (Law No. 219, 1951) under the provisions of Article 21 (Compensation for loss caused by river works) Paragraph 4 or Article 22 (Emergency measures to be taken during floods, Etc.) Paragraph 5 of the River Law (including the cases of mutatis mutandis application under Article 22-2 Paragraph 6, Article 57 Paragraph 3, Article 58-6 Paragraph 3, Article 76 Paragraph 2 and Article 89 Paragraph 9 of the River Law) shall submit to the Land Expropriation Committee an application for a ruling describing the information listed in Paragraph 3 of the same article [excluding Item (c), i.e., (a) the name and address of the applicant, (b) the name and address of the other party, (c) not applicable, (d) fact of loss, (e) estimate and breakdown of compensation for loss, and (f) chronological account of consultation] conforming to the form specified in the Ministry of Construction Ordinance⁶⁸⁻¹⁾.

[Moc 21-5] MOC Ordinance Article 9 (Ruling application form, etc.)

The form provided for in the Ministry of Ordinance mentioned in Article 13 of the Government Ordinance shall be Form 3 attached hereto.

2 One original and one copy of the application for a ruling shall be submitted.

Form 3 (omitted)

(Emergency Measures to be Taken During Floods, etc.)²²⁻¹⁾

Article 22.

In case danger from floods, high tides, etc. impends, if it is of urgent necessity to take steps to prevent a flood disaster or minimize damage which may be caused by it, the *river administrator* may, at the site, use the required land, use or compulsorily purchase earth and stone, trees and bamboo or other materials, use rolling stock and other vehicles or tools, and dispose of structures or other obstacles.

2 In case it is urgently necessary in taking any of the steps provided for in the preceding paragraph, the *river administrator* may make persons living in the neighborhood or persons at the site engage in the work which the step involves.

3 In case any person incurs a loss caused by compulsory purchase, use or disposal provided for in Paragraph 1, the *river administrator* shall compensate him for such loss as would ordinarily be incurred.

4 With regard to the compensation for loss provided for in the preceding paragraph, it is necessary that the *river administrator* and the person who has incurred the loss should hold a consultation on it.

5 In case no agreement can be reached by consultation under the provision of the preceding paragraph, the *river administrator* shall pay the person who has incurred the loss an amount of money fixed according to his own estimation. In such case, if the person is dissatisfied with the amount, he may, within thirty days from the day he receives payment of the compensation money, apply to the Expropriation Committee for a decision under the provision of Article 94 of the Land Expropriation Law ²²⁻²⁾ as may be provided for in detail by Government Ordinance ²²⁻³⁾.

6 In the event that a person engaged in the work stipulated in Paragraph 2 dies as a result of the said work, or dies or becomes disabled owing to an injury sustained or an illness contracted as a result of the said work, the *river administrator* must pay compensation to the person or the person's bereaved family or dependents for the loss or injury as stipulated in Government Ordinances ²²⁻⁴⁾.

[Note 22-1] In the event that danger from a flood, high tide, etc., impends, it is necessary to take emergency measures to prevent or mitigate damage, and therefore there is a need to secure the land, materials and labor required for attaining that goal. Rivers in Japan are generally steep and short. This means that damage prevention or mitigation measures must be taken quickly. For this reason, the River Law empowers *river administrators* to use the land, materials and labor required for responding to such emergencies as mentioned above without obtaining the consent in advance of the persons concerned and stipulates that losses resulting from such use of land and materials be compensated for later. As for service rendered in an emergency, however, the

law has no provision concerning compensation except for death or injury resulting from having engaged in such service. This is based on the notion that the local residents are persons who are saved by such emergency work, and that those present at the site are obligated to cooperate in the first place.

The Flood Fighting Law has similar provisions. Reflecting the history and practices of the country where flood fighting has traditionally been practiced primarily as self-defence activities of local residents, the Flood Fighting Law was enacted to provide for the organization and activities of flood defence cooperatives, municipal cooperatives and municipalities on the ground that these organizations are primarily responsible for flood defence. Hence, the activities of *river administrators* responsible for administration of rivers as public property are consistent with the activities under the Flood Fighting Law of people consisting primarily of local residents; the two are expected to work together to attain the goal of flood protection.

The goal of the Flood Fighting Law is to take precautions against and provide protection from floods and high tides, mitigate damage due to floods and high tides and thereby ensure public safety.

[Note 22-2] See Note 21-1 to Article 21 (Compensation for loss caused by *river works*) of the River Law.

[Note 22-3] For information on the Government Ordinance Article 13 (Procedures for applying for a ruling by the expropriation committee), see Note 21-3 to Article 21 (Compensation for loss caused by *river works*) of the River Law.

[Gor 22-4] Government Ordinance Article 14 (The amount of compensation for loss resulting from emergency measures against floods, etc.)

Compensation for losses provided for in Article 22 (Emergency measures to be taken during floods, etc.) Paragraph 6 of the River Law shall be made by following the examples given in the provisions governing compensation for losses incurred by persons having engaged in flood fighting under the provisions of Article 17 (Obligation of local residents, etc., to participate in flood fighting) of the Flood Fighting Law (Law No. 193, 1949) referred to in the government ordinance (Government Ordinance No. 335, 1956) stipulating the criteria for compensation for losses incurred by part-time flood fighters, etc. The procedures to be followed in this case and other requirements shall be stipulated by the Ministry of Construction Ordinance.

Related provisions of the Ministry of Construction Ordinance (omitted)

(Restoration of High Standard Levees on Third Party Land) ²²⁻²⁻¹⁾

Article 22-2.

In the case where a *high standard levee* within a *high standard levee special zone* is damaged or there is a risk of the levee's being damaged, and the damage or potential damage is judged to cause significant hindrance to river administration, the *river administrator* or a person directed or authorized by the *river administrator* may adopt measures to restore the *high standard levee* on third party land to the extent necessary to remove the hindrance, or other measures such as ground repair necessary to restore or preserve the *high standard levee* and removal of any objects that are causing or have the potential to cause hindrance

(hereinafter referred to as "restoration measures").

2 In the case where a *river administrator* or appointed proxy intends to adopt restoration measures on third party land under the provisions of the preceding paragraph, the *river administrator* or appointed proxy must notify and consult with the owner and occupant of the said land beforehand.

3 When the *river administrator* or appointed proxy acting under Paragraph 1 enters land occupied by a third party, the *river administrator* or appointed proxy must act in accordance with the provisions of Article 89 Paragraphs 2-5 in addition to the provisions of the preceding paragraph.

4 The owner or occupant of the land may not reject or obstruct restoration measures carried out under the provisions of Paragraph 1 without justifiable reason.

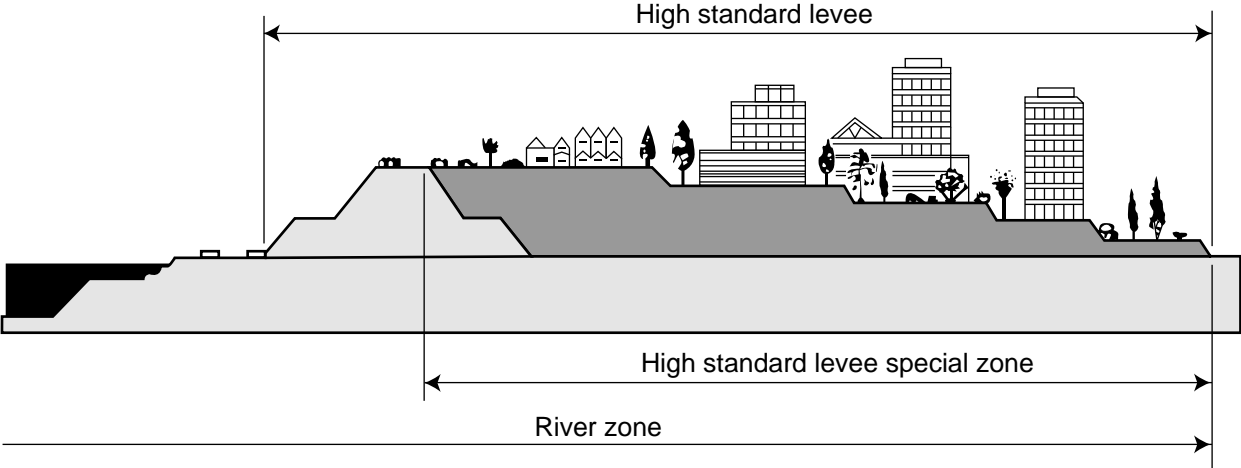
5 In the event that a person suffers a loss as a result of restoration measures carried out under the provisions of Paragraph 1, the person must be compensated for such losses as would ordinarily arise²²⁻²⁻².

6 The provisions of Paragraphs 4 and 5 of the preceding article shall apply mutatis mutandis to compensation for loss under the provisions of the preceding paragraph.

[Note 22-2-1] Unlike conventional levees, *high standard levees* lie on land that for the most part belongs to private owners (including juridical persons). Consequently, in the case where the *river administrator* need to take restoration measures, if the consent of the landowner concerned cannot be obtained, necessary measures cannot be taken unless expropriation under the Land Expropriation Law is enforced, except in the case where emergency measures under Article 22 of the River Law are taken. *High standard levees* are *river administration facilities* constructed to guard against floods exceeding the design flood in areas along important river sections where there are dense concentrations of population and property. Therefore, if *high standard levee* has been damaged, appropriate restoration measures must be taken promptly. To this end, this article establishes the *river administrator's* authority to take such measures. The article stipulates that landowners cannot reject such measures without justifiable reason.

[Note 22-2-2] See Note 21-1 to Article 21 (Compensation for loss caused by *river works*) of the River Law.

Figure: *high standard levee special zone*



Section 3. Regulation and Restrictions for the River and River Use
Subsection 1. General Provisions

(Permission for River Water Use)

Article 23.

Any person who intends to use the water of a river shall obtain the permission of the *river administrator* as may be provided for in detail by Ministry of Construction Ordinance ^{23-1)~ 23-5)}

[Moc 23-1] MOC Ordinance Article 11 (Application for permission to use river water)

Application for permission to use river water under Article 23 (Permission for river water use), Article 24 (Permission for land occupancy), Article 26 (Permission for construction of structures) Paragraph 1 or Article 27 (Permission for land excavation) Paragraph 1 of the River Law shall be made by submitting one original each of application forms on Form 8 (A) and (B-1) attached hereto and their copies in the numbers of specified in Table 1.

2 The application mentioned in the preceding paragraph shall be accompanied by the following documents:

(1) Documents describing the following information:

- (a) Outline of the plan for the project involving the water use
- (b) Basis of calculation of water usage
- (c) Calculation clarifying the relationships of discharge, the rate of intake corresponding to the application and the rates of intake by the river users concerned
- (d) Effects of the water use concerning the items listed below and measures to be taken in connection with those effects.
 - (i) Flood control
 - (ii) Use of rivers by the river users concerned (excluding persons who have been granted permission under the provisions of Article 28 of the River Law, common-of-piscary holders and fishery right holders)
 - (iii) Floating down of logs and bamboos or traffic of boats and rafts
 - (iv) Fishery
 - (v) Places of historic interests, scenic spots and natural monuments
- (e) In the case where a dam defined in Article 44 (Maintenance of the existing functions of a river) Paragraph 1 of the River Law is constructed, outline of the present condition of the site of the planned reservoir and measures taken in connection with persons who suffer losses due to the impoundment of river water by the dam

(2) In the case of application for permission to use water involving construction, modification or removal of a structure or structures, the construction-plan-related documents listed in the table below (in the case where application for permission provided for in Article 26 (Permission for construction of structures) Paragraph 1 of the River Law is not included, documents outlining the construction plans) [See the table below.]

Construction plan for construction or reconstruction of a dam defined in Article 44 (Maintenance of the existing functions of a river) Paragraph 1 of the River Law

Table of construction plans on Form 9 attached hereto

Calculation statements

Plan concerning *design flood discharge*

Calculations concerning dam stability

Hydraulic calculations for facilities or structures

Structural calculations for facilities or structures

Calculations for backwater

Calculations of reservoir capacity

Calculations of the area of occupancy

Tables

Precipitation table: a table showing daily precipitation, monthly precipitation, and annual precipitation

Maximum and minimum temperature table: a table showing monthly maximum and minimum temperatures

Water level and discharge table

Excavated material disposal schedule

Work schedule

Drawings

General plan: a 1/50,000-scale topographic map showing the following information:

- (a) Reservoir area
- (b) Locations of the dam, waterways, and observation facilities stipulated in Article 45 of the River Law, and other principal facilities or structures related to water use
- (c) The locations of, out of the facilities and structures that will be affected by the water use concerned, facilities or structures for other water uses and of roads, bridges and other major facilities and structures
- (d) Other relevant information

Surveyed plan of the reservoir: a 1/50,000-or-larger-scale map showing the following information:

- (a) Reservoir area
- (b) Locations of the dam and appurtenant facilities or structures
- (c) Spoil banks and other facilities or structures constructed in conjunction with dam-related works
- (d) Survey point numbers and locations

(e) Other relevant information

Surveyed longitudinal section of the reservoir: a longitudinal profile drawn on a vertical scale of not smaller than 1/200 and a horizontal scale of not smaller than 1/5,000 showing the following information:

- (a) Lowest riverbed level
- (b) Location of the dam
- (c) Design flood level before construction or reconstruction of the dam and design flood level, retention water level and lowest water level
- (d) Estimated sediment level
- (e) Survey point numbers and locations
- (f) Distances between survey points and cumulative distance
- (g) Other relevant information

Surveyed cross section of the reservoir: a cross section drawn on a scale of not smaller than 1/500 showing the following information:

- (a) Ground surface up to the height of 20 m from the highest water level
- (b) Items (c) to (e) above
- (c) Other relevant information

Geological drawings

Design drawings of the dam: design drawings including drawings concerning the treatment of the dam foundation

Drawings concerning equipment required for execution of dam-related works

Design drawings of non-dam facilities or structures

Flow duration curve diagram

Discharge mass curve diagram

Reservoir area curve diagram

Survey plat of the occupied land

Photographs of the site of dam construction or reconstruction taken from upstream and downstream showing the outline of the dam

Rough estimate of construction cost

Written statement outlining the fund plan

Other documents describing information relevant to the construction plan

Construction plan for construction or reconstruction of facilities or structures other than a dam defined in Article 44 Paragraph 1 of the River Law

Calculation statements

Hydraulic calculations for structures

Structural calculations for structures

Calculations for *design flood discharge* and backwater: not necessary for structures other than dams

and weirs

Calculations of the area of occupancy

Tables

Stage and discharge tables

Work schedule

Drawings

Location map: a 1/50,000-scale topographical map

Surveyed plan

Surveyed longitudinal section, surveyed cross section: not necessary for structures other than dams and weirs

Design drawings of structures

Survey plat of the occupied land

Approximate estimate of construction cost

Documents describing other information relevant to the construction plan

- (3) In the case where there is any person who has assented to the water use stipulated in the proviso of Article 38 of the River Law, a copy of that person's letter of assent, or in the case where there is any person who does not assent to the water use, a writing that indicates the name and address of that person (or, in the case of a juridical person, the name, place of business and representative of the juridical person) and an explanation of the reason that person does not assent to the water use
- (4) In the case of water use involving the use of land, facility or structure that a person other than the *river administrator* manages on the basis of his title or in the case of water use involving reconstruction or removal of a structure that a person other than the *river administrator* manages on the basis of his title, a writing indicating that the applicant holds or can be reasonably expected to acquire the title to use the river water or reconstruct or remove the structure
- (5) In the case where an act or project involving water use requires obtaining permission or approval or other disposition by other administrative agencies, a writing indicating that such disposition has been received or describing the likelihood of receiving such disposition
- (6) In the case provided for in Article 39 of the Ministry of Construction Ordinance, a writing indicating the reason as stipulated in the same article and explaining the steps that have been or will be followed in connection with the other application for permission to be made concurrently as provided for in the same article
- (7) Documents describing other relevant information

[Moc 23-2] MOC Ordinance Article 39 (Simultaneous application for permission)

In the case where any person wishes to perform an act with permission provided for in Articles 23 (Permission for river water use) to 27 (Permission for land excavation), Article 55 (Restrictions within the *river conservation zone*) Paragraph 1, Article 57 (Restrictions within the *projected river zone*) Paragraph 1, Article 58-4

(Restrictions within the *spatial river conservation zone*) Paragraph 1 or Article 58-6 (Restrictions within the *projected spatial river zone*) Paragraph 1 of the River Law or Article 16-3 Paragraph 1 or Article 16-8 Paragraph 1 of the Government Ordinance, if said act or other related act requires obtaining permission under those provisions, permission applications for such act shall be made simultaneously unless for compelling reason it is not possible to do so.

[Moc 23-3] MOC Ordinance Article 40 (Omission of appendices to application, etc.)

In the case where two or more applications provided for in Articles 23 (Permission for river water use) to 27 (Permission for land excavation), Article 55 (Restrictions within the *river conservation zone*) Paragraph 1, Article 57 (Restrictions within the *projected river zone*) Paragraph 1, Article 58-4 (Restrictions within the *spatial river conservation zone*) Paragraph 1 or Article 58-6 (Restrictions within the *projected spatial river zone*) Paragraph 1 of the River Law or Article 16-3 Paragraph 1 or Article 16-8 Paragraph 1 of the Government Ordinance are made simultaneously under the provisions of the preceding article, if one or more of the documents to be attached to one application under the provisions of Articles 11 to 13, Articles 15 and 16 (including the cases of *mutatis mutandis* application under Article 30, Article 33, Article 33-4 and Article 33-7), Article 18-3 Paragraph 2 or Article 18-10 Paragraph 2 are also included in the attachments to another application, those overlapping documents need not be attached to the former.

2 In the case where application is made for permission for a change in the matters for which permission provided for in Articles 23 (Permission for river water use) to 27 (Permission for land excavation)), Article 55 Paragraph 1, Article 57 Paragraph 1, Article 58-4 Paragraph 1 or Article 58-6 Paragraph 1 of the River Law or Article 16-3 Paragraph 1 or Article 16-8 Paragraph 1 of the Government Ordinance has been granted, only the documents describing said change need to be attached.

3 In the case of application for permission for a change provided for in the preceding paragraph, a writing describing the change and the reason for that change shall be attached to the application.

4 Besides in the cases stipulated in Paragraphs 1 and 2, in the case where attaching all attachments is deemed not necessary because the act for which permission under Articles 23 to 27, Article 55 Paragraph 1, Article 57 Paragraph 1, Article 58-4 Paragraph 1 or Article 58-6 Paragraph 1 of the River Law or Article 16-3 Paragraph 1 or Article 16-8 Paragraph 1 of the Government Ordinance needs to be obtained is minor or for other reasons, the corresponding part of said attachments may be excluded from the attachments.

[Moc 23-4] MOC Ordinance Article 41 (Routing of application for permission, etc.)

All applications for permission, approval, acceptance inspection or ruling and notice or submission of opinion (including notice or submission of opinion to the Minister of Construction acting on behalf of the Governor of Okinawa under the provisions of Article 7 Paragraph 3 of the Special Measures Law for Development of Okinawa) to the Minister of Construction or the director-general of a regional construction bureau or the Director-General of the Hokkaido Development Bureau shall be routed through the office concerned or the head of the office concerned of the Okinawa General Bureau provided for in Article 10 Paragraph 1 of the Okinawa Development Bureau Establishment Law (Law No. 29, 1972).

[Note 23-5] Use of river water, occupancy of land (Article 24 of the River Law) and the taking of earth, stones, etc., from riparian land [Article 25 (Permission for taking earth, stone, etc.) of the River Law] are permitted only after the *river administrator* has assessed environmental impact on the river concerned and has granted permission for such acts because those acts may have adverse effects on the administration of the river concerned and the conservation of the river functions. River water, earth, stones, etc., and riparian land owned by the *river administrator* and logs and bamboos produced from such land are all common property of the public. All persons who wish to use, occupy or take any part of the property, therefore, must pay to the prefectural governor concerned charges for use of river water, occupancy of land or taking of earth, stones or other river products as stipulated in Article 32 (Charges for the use of river water, etc.) of the River Law. These charges for occupancy, use or taking are to be paid to the prefectural governor concerned instead of the *river administrator*. This system was adopted in view of the traditional practice in Japan until the complete revision of the River Law in 1965 where prefectural governors governing areas in which rivers are located served as *river administrators*.

[Note 23-6] Decisions as to the granting of permission for water use must be made after giving consideration to various factors including the following: (1) whether or not the proposed water use will have adverse effects in connection with the prevention of disasters due to floods, storm surges, etc. (basic consideration); (2) whether or not existing water uses will be affected adversely (basic consideration); (3) contribution to public welfare and reliability; (4) whether or not the planned quantity of river water can be withdrawn in a stable manner in view of the river regime; (5) whether or not the influences of the planned water use on river uses other than water quantity are within allowable limits; and (6) whether or not the influence of structures to be constructed, such as diversion weirs, or construction works themselves on flood control, etc., are small.

[Note 23-7] As mentioned earlier, the periods during which customary water rights are valid are not stipulated, but for other water rights the periods during which they remain valid are usually stipulated by the water use regulations applied at the time of permitting. The period during which a water use is permitted is in most cases 30 years. Other water rights are usually valid for 10 years.

[Note 23-8] Water rights are extinguished in the event of any of the following:

- (1) Cancellation of permission in the case where permission has been applied for unlawfully
- (2) Cancellation of permission because of violation of permitting conditions
- (3) Expiration of the permitted period
- (4) Abolishment or disappearance of river
- (5) Cancellation of permission for a reason associated with public welfare
- (6) Expropriation of right
- (7) Abandonment of right

[Note 23-9] Water rights are rights that can be acquired by obtaining permission as stipulated in Article 23 of the River Law. Under the provision of Article 87 (Transitory measures) of the River Law or Article 20 Paragraph 1 of the Law for Enforcement of the River Law, it is deemed that permission under Article 23 of the River Law has been obtained in the following cases:

(1) It can be deemed, under Article 87 (Transitory measures) of the River Law, that permission under Article 23 of the River Law has been obtained for a preexisting water use for a river to which the River Law is newly applied.

(2) Permission under the provision of Article 1823-10) of the old River Law had been obtained and it can be deemed, under the provision of Article 2023-11) Paragraph 1 of the Law for Enforcement of the River Law, that permission under Article 23 of the River Law has been obtained.

(3) It is deemed, under Article 1123-12) Paragraph 1 of the old Law for Enforcement of the River Law, that a person who was already using river water when the old River Law was enacted in 1896 obtained permission under Article 18 of the old River Law and it is deemed, under Article 20 Paragraph 1 of the Law for Enforcement of the River Law, that the same person has obtained permission under Article 23 of the River Law. (So-called customary water right ²³⁻¹³⁾)

[Note 23-10] Old River Law Article 18 (Use of river area or river water)

Any person who is desirous of using a river area or river water shall obtain permission from the competent local administrative agency.

[Note 23-11] Law for Enforcement of the River Law Article 20 (Transitory measures associated with disposition, proceedings, etc.)

Except in the cases provided for in Article 3 (Transitory measures associated with the river area) and Articles 12 (Transitory measures associated with operating rules) to 16 (Transitory measures associated with compensation for losses due to disposition under the old River Law), all dispositions (including dispositions that are deemed, under the provision of Article 11 Paragraph 1 of the Regulations for Enforcement of the River Law, to have been permitted under the old River Law or orders thereunder), proceedings and other acts carried out under the old River Law or orders thereunder before the enforcement of the new River Law shall be deemed to have been carried out under the new law. That part of a measure or measures, however, that was permitted under the conditions imposed by the old River Law and that violates the provision of Article 90 Paragraph 2 of the new River Law shall lose effect.

2 Under the provision of the foregoing paragraph, the provision of Article 88 (Notification by de facto permittees) of the new River Law shall apply mutatis mutandis to any de facto permittee under any of Article 23 (Permission for river water use) to Article 27 (Permission for land excavation) of the new River Law who is specified in the Government Ordinance.

[Note 23-12] Regulations for Enforcement of the old River Law Article 11

All matters to be permitted under the River Law or orders thereunder that predates the enforcement of said law or orders, except those matters for which the governor of the prefecture concerned has required that permission be obtained within three months from the date of enforcement, shall be deemed to have been permitted under said law or orders thereunder.

[Note 23-13] Customary water rights, which predate the modern river administration, have a number of problems:

- (1) Water quantity is often stipulated in terms of maximum water usage, and in most cases that water quantity is the maximum intake capacity of the facilities concerned. The quantity of water actually needed and the time of intake are unclear.
- (2) Since the permitted period of use for customary water rights, unlike that for water rights under Article 23 of the River Law, is not stipulated clearly, customary water rights cannot be reviewed at the time of permit renewal.
- (3) Since the conditions imposed on the permission for water rights under Article 23 of the River Law, such as reporting of the quantity of water intake, do not apply to customary water rights, records that are needed to check if a more than necessary quantity of water is being taken are not available.

(Permission for Land Occupancy)²⁴⁻¹⁾

Article 24.

Any person who intends to occupy land within a *river zone* (excluding land administered by a person other than the *river administrator* on the basis of his title; hereinafter the same in the following article) shall obtain the permission of the *river administrator* as may be provided for in detail by Ministry of Construction Ordinance²⁴⁻²⁾.

[Note 24-1] Land within a *river zone*, except portions of it that are owned privately, is state-owned land, no one is allowed to use that land without obtaining permission from the *river administrator*. Needless to say, use of land within a *river zone* must be made in accordance with the provisions of the River Law. In addition, use of land that is common property of the public is limited to certain categories of use for purposes that contribute greatly to the public welfare and interest. As a consequence of the effort during the post-war food-shortage years to make utmost use of land in river areas as rice paddies and upland fields, there still remain considerable areas of land which are still in use as farmland. Article 32 (Charges for the use of river water, etc.) of the River Law requires that any person who wishes to occupy land in a river zone pay to the prefectural governor concerned charges for the use of the land.

[Moc 24-2] MOC Ordinance Article 12 (Application for permission for occupancy of land)

Application for permission provided for in Article 24 (Permission for land occupancy) of the River Law (excluding permission for water use and permission for construction or reconstruction of structures for which permission under Article 26 (Permission for construction of structures) Paragraph 1 of the River Law must be obtained) shall be made by submitting one original of an application on Form 8 (A) and (B-2) attached hereto and its copies in the number specified in Table 2 attached hereto.

2 Attachments to the application stipulated in the preceding paragraph shall consist of the following:

- (1) Document outlining the plan for the project involving the occupancy of land;
- (2) 1/50,000-scale location map;
- (3) Surveyed plan;

- (4) Area calculations and survey plat;
- (5) In the case where permission, approval or other disposition by other administrative agencies must be received, a writing indicating that said permission, approval or other disposition has been received or a writing concerning the likelihood of receiving said permission, approval or other disposition;
- (6) Documents describing other relevant information.

[Moc 24-3] MOC Ordinance Article 15 (Application for permission for construction of structures, etc.)

Application for permission under Article 24 (Permission for land occupancy) or Article 26 (Permission for construction of structures) Paragraph 1 of the River Law (excluding permission for water use and permission under Article 24 (Permission for land occupancy) of the River Law for construction or reconstruction of a structure for which obtaining permission under Article 26 (Permission for construction of structures) Paragraph 1 of the River Law is not necessary) shall be made by submitting one original of an application on Form 8 (A) and (B-4) and its copies in the number specified in Table 2 attached hereto.

2 Attachments to the application stipulated in the preceding paragraph shall consist of the following:

- (1) Document outlining the plan for the project involving construction, etc.;
- (2) 1/50,000-scale location map;
- (3) Surveyed plan of the land concerned with the construction or reconstruction of the structure;
- (4) Design drawing of the structure (or, in the case of removal of a structure, structural drawing of the structure);
- (5) Documents describing the method of executing the works;
- (6) Area calculations and survey plat of the land to be occupied;
- (7) In the case of construction, etc., on land that a person other than the *river administrator* administers on the basis of his title or reconstruction or removal of a structure that a person other than the *river administrator* administers on the basis of his title, a writing indicating that the applicant holds or can be reasonably expected to acquire the title to carry out said construction, etc.;
- (8) In the case where it is necessary to receive permission, approval or other disposition by other administrative agencies in connection with an act or project involving construction, etc., a writing indicating that the applicant has received such disposition or explaining the likelihood of receiving such disposition;
- (9) Documents describing other relevant information.

[Note 24-4] For information concerning permission under Article 11 (Application for permission for water use), Article 39 (Simultaneous application for permission), Article 40 (Omission of appendices to application, Etc.) and Article 41 (Routing of application for permission, etc.) of the Ministry of Construction Ordinance, see Note 21-3 to Article 21 of the River Law.

(Permission for Taking Earth, Stone, etc.)

Article 25.

Any person who intends to take earth and stone (including sand; hereinafter the same) from the land within a *river zone* shall obtain the permission of the *river administrator* as may be provided for in detail by Ministry of Construction Ordinance²⁵⁻¹⁾. The same shall apply to any person who intends to take such products of a river other than earth and stone as may be designated by Government Ordinance^{25-2) 25-3)} from the land within a *river zone*.

[Moc 25-1] MOC Ordinance Article 13 (Application for permission for the taking of river products)

Application for permission under Article 25 or Article 27 (Permission for land excavation) Paragraph 1 of the River Law concerning the taking of earth, stone or other river products (excluding permission associated with land administered by a person other than the *river administrator* on the basis of his title) shall be made by submitting one original of an application on Form 8 (A) and (B-3) attached hereto and its copies in the number specified in Table 2 attached hereto.

2 Attachments to the application stipulated in the preceding paragraph shall consist of the following:

- (1) Document outlining the plan for the project involving the taking of river products;
- (2) 1/50,000-scale location map of the land concerned with the taking of river products;
- (3) Surveyed plan of the land concerned with the taking of river products;
- (4) In the case of the taking of earth and stone, a surveyed longitudinal section and a surveyed cross section of the land concerned with said taking that show the planned ground surface associated with said taking;
- (5) Document outlining the influence of the taking of river products on other projects and measures to be taken in connection with such influence;
- (6) In the case where it is necessary to receive permission, approval or other disposition by other administrative agencies with respect to an act or project associated with the taking of river products, a writing indicating that the applicant has received such disposition or explaining the likelihood of receiving such disposition;
- (7) Documents describing other relevant information.

[Note 25-2] For information on Article 39 (Simultaneous application for permission), Article 40 (Omission of appendices to application, etc.) and Article 41 (Routing of application for permission, etc.) of the Ministry of Construction Ordinance, see Note 21-3 to Article 21 (Compensation for loss caused by *river works*) of the River Law.

[Gor 25-3] Government Ordinance Article 15 (River products)

River products specified by the Government Ordinance mentioned in Article 25 (Permission for taking earth, stone, etc.) of the River Law shall be logs, bamboo, reeds and the like specified in the Ministry of Construction Ordinance⁷⁹⁻³⁾.

[Moc 25-4] MOC Ordinance Article 14 (River products)

River products stipulated in the Ministry of Construction Ordinance mentioned in Article 15 of the Government Ordinance shall be buried trees, bamboo grass, water shield and others designated by the *river administrator*.

2 In the case where the river administrator designates river products as stipulated in the preceding paragraph, he shall make public notification on said designation via the Official Gazette if by the Minister of Construction or a gazette of the prefecture concerned if by a prefectural governor. A comparable rule shall apply to alteration or cancellation of such designation.

(Permission for Construction of Structures)

Article 26.

Any person who intends to construct, reconstruct or remove a structure on the land within a *river zone* shall obtain the permission of the *river administrator* as may be provided for in detail by Ministry of Construction Ordinance ²⁶⁻¹⁾. The same shall apply to any person who intends to construct, reconstruct or remove a structure for storing or making stagnate the water of a river in the sea near the estuary .

2 Notwithstanding the provisions of the preceding paragraph, the following acts on land in *high standard levee special zones* do not require approval as stipulated in the preceding paragraph.

(1) Construction or reconstruction of structures, including foundation piles etc., stipulated in Government Ordinances ²⁶⁻²⁾ that pose no risk of diminishing the functions of *high standard levees* against water permeation.

(2) Construction or reconstruction of above-ground structures or underground structures to a depth stipulated in Government Ordinances ²⁶⁻³⁾ other than those stipulated in the preceding item, spillways, drainage and other water channel, and ponds and other water storage facilities that pose a risk of water seepage.

(3) Removal of above-ground structures or underground structures to depth stipulated in Government Ordinances ²⁶⁻³⁾ and immediate filling in of the land where the structures were established.

3 In the case where an application for approval has been lodged as stipulated in Paragraph 1 or consultation have been made as stipulated in Article 95 regarding the construction, reconstruction or removal of a structure on land in a *high standard levee special zone*, the *river administrator* must approve the application or settle the discussions provided the construction, reconstruction or removal of the structure does not pose a risk of impeding the effectiveness of the area as a *high standard levee*.

4 The first part of Paragraph 1 of this article is not applicable to the construction, reconstruction or removal of structures on land within a *fluvial woods zone*, excluding such

acts on land that is designated by the *river administrator* as a zone needed for the preservation of *river administration facilities* (hereinafter, *specified fluvial woods zone* as referred in the next paragraph and Article 27-3²⁶⁻⁴) .

5 When *river administrators* intends to designate a *specified fluvial woods zone*, he shall make a public notification to that effect as stipulated by the Ministry Construction Ordinance²⁶⁻⁵. The same shall apply for change or abolition of the *specified fluvial woods zone*.

(Paragraphs 4 & 5 added by Law No.69 of 4 June 1997)

[Note 26-1] For information on Article 11 (Application for permission for water use), Article 39 (Simultaneous application for permission), Article 40 (Omission of appendices to application, etc.) and Article 41 (Routing of application for permission, etc.) of the Ministry of Construction Ordinance, see Moc 23-1 to Article 23 (Permission for river water use) of the River Law, and for information on Article 15 (Application for permission for construction of structures, etc.), see Moc 24-3 to Article 24 (Permission for land occupancy) of the River Law.

[Gor 26-2] Government Ordinance Article 15-2 (Structures in *high standard levee special zones* whose construction, etc., does not require permission)

Structures stipulated in Article 26 (Permission for construction of structures) Paragraph 2 Item (1) of the River Law shall be foundation piles, utility poles or other pole-shaped upright structures that do not require excavation except in the areas where their belowground parts are buried.

[Gor 26-3] Government Ordinance Article 15-3 (Maximum depth that does not require permission for construction, etc., of underground structures in *high standard levee special zones*)

The depth stipulated in the Government Ordinance mentioned in Article 26 (Permission for construction of structures) Paragraph 2 Item (2) of the River Law shall be 1m.

[Law 26-4] River Law Article 27 (Permission for land excavation)

[Moc 26-5] MOC Ordinance Article 15-2 (Public notification of designation, etc., of *specified fluvial woods zones*)

The provisions of Article 2 of the Ministry of Construction Ordinance shall apply mutatis mutandis to the public notification stipulated in Article 26 (Permission for construction of structures) Paragraph 5 of the River Law.

(Permission for Land Excavation)

Article 27.

A person who seeks to excavate, bank or cut or carry out any other act that alters the shape of land in *river zones* (excluding acts approved under Paragraph 1 of the preceding article) or seeks to plant or cut trees on land in *river zones* must obtain permission from the

river administrator in accordance with provisions in Ministry of Construction Ordinances^{27-1)~27-3)}. This does not apply in the case of minor or simple acts stipulated in Government Ordinances²⁷⁻⁴⁾.

2 Notwithstanding the provisions of the preceding paragraph, permission as stipulated in the preceding paragraph is not required for the following acts on land in *high standard levee special zones*²⁷⁻⁶⁾.

(1) Land excavation for the purpose of the work stipulated in Paragraph 2 Item (1) of the preceding article, or land excavation to a depth stipulated in Government Ordinances²⁷⁻⁷⁾ where the land is to be filled in immediately after excavation.

(2) Banking

(3) Acts which will change the shape of the land other than excavation, banking and cutting.

(4) Planting or cutting trees and bamboo.

3 Notwithstanding the provision of the Paragraph 1 (concerning the *specified fluvial woods zone*, Paragraphs 2 and 3 shall be applied) of this article, the following acts within the *fluvial woods zone* do not require permission stipulated in the same paragraph.

(1) Excavation of land for construction, reconstruction or removal of structures where the excavation will be refilled immediately after the work.

(2) Planting of trees and bamboo.

(3) Routine maintenance stipulated in Government Ordinances²⁷⁻⁸⁾.

4 In case it is deemed that a *river administration facility* or a structure constructed by obtaining the permission of the preceding article will be damaged by land excavation, banking or cutting on the land within the *river zone* and cause a serious hindrance to river administration, the *river administrator* shall not give the permission of the preceding paragraph or enter into the agreement referred to in Article 95²⁷⁻⁹⁾ with respect to specified land within the *river zone* which includes the site of the *river administration facility* concerned or of the structure concerned.

5 The *river administrator* shall notify the public of the area referred to in the preceding paragraph as provided for in detail by Ministry of Construction Ordinance²⁷⁻¹⁰⁾.

6 The provision of Paragraph 3 of the preceding article shall apply mutatis mutandis in the case where an application for permission has been lodged as stipulated in Paragraph 1 or consultations have been made as stipulated in Article 95²⁷⁻⁹⁾ regarding the excavation or cutting of land in a *high standard levee special zone*.

(Paragraph 3 added by Law No.69 of 4 June 1997)

[Note 27-1] For information on Article 11 (Application for permission for water use) of the Ministry of Construction Ordinance see Moc 23-1 to Article 23 (Permission for river water use) of the River Law. For

information on Article 13 (Application for permission for the taking of river products), see Moc 25-1 to Article 25 of the River Law.

[Moc 27-2] MOC Ordinance Article 16 (Application for permission for excavation of land, etc.)

Application for permission stipulated in Article 27 (Permission for land excavation) Paragraph 1 of the River Law (excluding permission for water use and for the taking of river products from land other than the land administered by a person other than the *river administrator* on the basis of his title) shall be made by submitting one original of an application on Form 8 (A) and (B-5) and its copies in the number specified in Table 2 attached hereto.

2 Attachments to the application stipulated in the preceding paragraph shall consist of the following:

- (1) Document outlining the plan for the project involving the excavation, etc., of land;
- (2) 1/50,000-scale location map;
- (3) Surveyed plan of the land involved in the excavation, etc., of land;
- (4) In the case of an act that alters the shape of land, a surveyed longitudinal section and a surveyed cross section of the land concerned with the act involved that show the planned ground surface associated with said act
- (5) Document outlining the influence of the excavation, etc., of land on other projects and measures to be taken in connection with such influence;
- (6) In the case of excavation, etc., of land on land that a person other than the *river administrator* administers on the basis of his title, a writing indicating that the applicant holds or can be reasonably expected to acquire the title to carry out said excavation, etc., of land;
- (7) In the case where it is necessary to receive permission, approval or other disposition by other administrative agencies in connection with an act or project involving excavation, etc., of land, a writing indicating that the applicant has received such disposition or explaining the likelihood of receiving such disposition;
- (8) Documents describing other relevant information.

[Note 27-3] For information on Article 39 (Simultaneous application for permission), Article 40 (Omission of appendices to application, etc.) and Article 41 (Routing of application for permission, Etc.) of the Ministry of Construction Ordinance, see Moc 23-2 to 23-4 concerning Article 23 (Permission for river water use) of the River Law.

[Gor 27-4] Government Ordinance Article 15-4 (Excavation, etc., of land in a *river zone* that does not require permission)

Minor or simple acts stipulated in the proviso of Article 27 (Permission for land excavation) Paragraph 1 of the River Law shall be the following:

- (1) Tilling on land 10m or more (in the case of a diversion facility or drainage facility for which a different distance has been specified by the *river administrator* in view of the structure of the *river administration facility*, topography, geology or other conditions, the distance specified by the *river administrator*) away

from the site of a *river administration facility*;

- (2) Removal of sediment, etc., accumulated at intakes or drain holes to maintain the functions of intake facilities or drainage facilities constructed with permission stipulated in Article 26 (Permission for construction of structures) Paragraph 1 of the River Law (including facilities that can be deemed, under the provisions of Article 87 (Transitory measures) or 95 (Special arrangement for use of rivers by the national government) of the River Law, Article 20 Paragraph 1 of the Law for Enforcement of the River Law or Article 27 (Permission for land excavation) Paragraph 1 of the Gravel Gathering Law, to have been granted permission stipulated in Article 26 (Permission for construction of structures) Paragraph 1 of the River Law);
- (3) Cutting of trees or bamboos on land outside areas that have been designated by the *river administrator* as areas where protection of the existing functions of trees and bamboos for flood control or water utilization is deemed necessary in view of the topography, geology, the conditions of existing *river administration facilities* or other facilities or other conditions (limited to areas on the waterside of the levee stipulated in Article 6 (The *river zone*) Paragraph 1 Item (3) of the River Law) or outside *fluvial woods zones*;
- (4) In addition to the acts listed in the preceding paragraph, acts that the administrator designates as having only minor influence on flood control and water utilization.

2 In the case where the *river administrator* make designations under the provisions of the preceding paragraph, he shall make public notification in accordance with the provisions of the Ministry of Construction Ordinance. A comparable rule shall apply to alteration or cancellation of such designation.

[Moc 27-5] MOC Ordinance Article 17 (Public notification of excavation of land, etc., that does not require permission)

Public notification of designation as stipulated in Article 15-4 Paragraph 1 Item (1) or Item (2) shall be made via the Official Gazette if by the Minister of Construction or a gazette of the prefecture concerned if by a prefectural governor.

2 The provisions of Article 2 of the Ministry of Construction Ordinance shall apply *mutatis mutandis* to public notification of designation provided for in Article 15-4 Paragraph 1 Item (3) of the Government Ordinance.

[Note 27-6] For information on *high standard levee special zones*, see Note 6-1 concerning Article 6 of the River Law.

[Gor 27-7] Government Ordinance Article 15-5 (Maximum depth of excavation on land within *high standard levee special zones*)

The maximum depth under the Government Ordinance mentioned in Article 27 (Permission for land excavation) Paragraph 2 Item (1) of the River Law shall be 1.5m.

[Gor 27-8] Government Ordinance Article 16 (Routine maintenance in *fluvial woods zones* that does not require permission)

Routine maintenance under the Government Ordinance referred to in Article 27 (Permission for land

excavation) Paragraph 3 Item (3) of the River Law shall be the cutting of trees and bamboo listed below.

(1) Routine cutting of trees or bamboo for tending, such as improvement cutting, thinning, trimming, etc.

(2) Cutting of dead standing or fallen trees or bamboo or dangerous trees or bamboo

[Law 27-9] River Law Article 95 (Special arrangement for use of rivers by the national government)

[Moc 27-10] MOC Ordinance Article 18 (Public notification of areas where excavation, etc., of land is not permitted)

The provisions of Article 2 (Public notification of designation of *river zones*) shall apply mutatis mutandis to public notification provided for in Article 27 (Permission for land excavation) Paragraph 5 of the River Law.

(Prohibition, Restrictions and Permission for Floating Down Trees/Bamboo and Navigation of Boat/Ships)

Article 28.

Floating trees and bamboo down a river and the passage of boats and rafts on a river may be prohibited or restricted, or obtaining permission of the *river administrator* for such acts may be made obligatory, to the extent necessary for river administration, by Government Ordinance^{28-1)~28-8)} in case of a *class A river* and by prefectural regulations in case of a *class B river*.^{28-9)~28-11)}

[Gor 28-1] Government Ordinance Article 16-2 (Restriction on navigation of boats/ships or rafts on *class A rivers*)

The *river administrator* shall specify the maximum limits of the length, width and height above water surface or draft of boats/ships and rafts that are allowed to pass through each lock that is a *river administration facility* for a *class A river* (including gates that are *river administration facilities* for *class A rivers* designated²⁸⁻²⁾ by the *river administrator*; hereafter referred to as a "lock" in this article).

2 Any boat/ship or raft whose length, width and height above water surface or draft exceeds the maximum limits specified by the *river administrator* for each lock as provided for in the preceding paragraph shall not be allowed to pass the lock concerned.

3 Any boat/ship or raft navigating through a water area or a lock in a *river zone* of a *class A river* that the *river administrator* designates because he deems it necessary for the purpose of preventing damage to the river, a hindrance to *river works* or the operation of *river administration facilities*, or a serious hindrance to other river uses shall be made to navigate by a method specified by the *river administrator*.

4 When the *river administrator* specifies a navigation method as stipulated in the preceding paragraph, he shall take care so as not to cause a hindrance to fishery or other operations that involve the use of a boat/ship or raft.

5 The provisions of Article 15-4 Paragraph 2 shall apply mutatis mutandis to specification under Paragraph 1 or Paragraph 3.

[Moc 28-2] MOC Ordinance Article 18-2 (Public notification of specification of gates, etc.)

Public notification of specification under Article 16-2 Paragraph 1 of the Government Ordinance shall be made via the Official Gazette if by the Minister of Construction or a gazette of the prefecture concerned if by a prefectural governor and by posting the notification at a conspicuous place at or near the gate concerned.

2 The provisions of the preceding paragraph shall apply *mutatis mutandis* to public notification of specifications for the maximum limits of the length, width and height above water surface or draft of boats/ships or rafts provided for in Article 16-2 Paragraph 1 of the Government Ordinance.

3 Public notification of the designation of water bodies provided for in Article 16-2 Paragraph 3 of the Government Ordinance shall be made both via the Official Gazette if by the Minister of Construction or a gazette of the prefecture concerned if by a prefectural governor and by posting the information on the designation in a place at or near the water body concerned.

4 The provisions of Paragraph 1 shall apply *mutatis mutandis* to public notification of the specification of the method of navigation on the water body designated by the *river administrator* provided for in Article 16-2 Paragraph 2 of the Government Ordinance.

5 Public notification of the specification of the method of navigation through locks provided for in Article 16-2 Paragraph 2 of the Government Ordinance shall be made by posting the information on the specification in a conspicuous place at or near the lock concerned, using a form similar to Form 8, (2), attached hereto.

6 Public notification provided for in the preceding paragraph shall be made at least ten days before the designation concerned takes effect unless a serious hindrance to river administration is expected if designation is not put into effect urgently.

[Moc 28-3] MOC Ordinance Article 18-4 (Hearing of the opinion of the prefectural public safety commission)

In the case where the *river administrator* intends to designate a body of water or specify a method of navigation on a designated body of water under the provisions of Article 16-2 Paragraph 3 of the Government Ordinance from the realization of the need for such measures to prevent a serious hindrance to uses of other rivers such as swimming, fishing or other similar uses or in the case where under the provisions of Article 16-3 Paragraph 1 of the Government Ordinance the *river administrator* intends to permit the floating down of logs or bamboos on a body of water where uses of the river such as swimming, fishing or other similar uses are practiced, he shall hear the opinion of the public safety commission of the prefecture concerned.

[Gor 28-4] Government Ordinance Article 16-3 (Permission for the floating down of trees/bamboos on *class A rivers*)

Any person who intends to float down logs or bamboos on a *class A river* shall obtain the permission of the *river administrator* in accordance with the Ministry of Construction Ordinance²⁸⁻⁵⁾ except in the case of the floating down of logs or bamboos by a method specified by the *river administrator* on a body of water specified by the *river administrator*.

2 The provisions of Article 15-4 Paragraph 2 of the Government Ordinance shall apply *mutatis mutandis* to designation under the provisions of the preceding paragraph.

[Moc 28-5] MOC Ordinance Article 18-3 (Application for permission for the floating down of trees/bamboos)

Application for permission for the floating down of trees or bamboos provided for in Article 16-3 Paragraph 1 of the Government Ordinance shall be made by submitting one original of an application on Form 8 (A) and (B-6) attached hereto and its copies in the number specified in Table 2 attached hereto.

2 Attachments to the application stipulated in the preceding paragraph shall consist of the following:

- (1) Document outlining the plan for the floating down of trees or timbers;
- (2) 1/50,000-scale map showing the river section concerned with the floating down;
- (3) Document outlining the influence of the floating down of trees or bamboos on other projects and measures to be taken in connection with such influence;
- (4) Documents describing other relevant information.

[Moc 28-6] MOC Ordinance Article 18-5 (Public notification of the floating down of trees/bamboos that does not require permission)

The provisions of Article 17 Paragraph 1 of the Ministry of Construction Ordinance shall apply *mutatis mutandis* to public notification of designation provided for in Article 16-3 Paragraph 1 of the Government Ordinance.

[Note 28-7] For information on Article 39 (Simultaneous application for permission), Article 40 (Omission of appendices to application, etc.) and Article 41 (Routing of application for permission, etc.) of the Ministry of Construction Ordinance, see Moc 23-2, 23-3, 23-4 to Article 23 (Permission for river water use) of the River Law.

[Note 28-8] For information on Article 42 (Procedure for consultation on use of rivers, etc.) of the Ministry of Construction Ordinance, see Moc 29-19 to Article 29 of the River Law.

[Gor 28-9] Government Ordinance Article 16-9 (Succession to status based on permission)

Any general successor, such as an heir, a juridical person established by merger or any other general successor to a person who has obtained permission provided for in Article 16-3 Paragraph 1 or Paragraph 1 of the preceding article shall succeed to the status of the successee granted under these provisions.

2 Any person who has obtained land by transfer from a person who has obtained permission provided for in Paragraph 1 Item (2) of the preceding article for any of the acts listed in Paragraph 1 Item (2) of the preceding article shall succeed to the status based on the permission obtained by the successee. With respect to use of said land, a comparable rule shall apply also to any person who has acquired a right to use the land covered by said permission from the person who obtained said permission by lease or any other means.

3 Any person who has succeeded to a status under the provisions of the preceding paragraph shall notify the *river administrator* to that effect within thirty days from the day of succession.

[Moc 28-10] MOC Ordinance Article 21 (Notification of succession to status based on permission)

Notification provided for in Article 33 (Succession of status) Paragraph 3 of the River Law [including the case of *mutatis mutandis* application under Article 55 (Restrictions within the *projected river zone*) Paragraph 2 and Article 57 55 (Restrictions within the *river conservation zone*) Paragraph 3, Article 58-4 (Restrictions within the

spatial river conservation zone) Paragraph 2 and Article 58-6 (Restrictions within *the projected spatial river zone*) Paragraph 3 of the River Law] or Article 16-9 Paragraph 3 of the Government Ordinance shall be made by submitting one original of a notification on Form 11 attached hereto and its copies in the number specified in Table 3 attached hereto.

2 The notification provided for in the preceding paragraph shall be accompanied by a writing indicating that the status based on the permission concerned has been taken over and documents describing other relevant information.

[**Note 28-11**] For information on Article 16-11 (Special arrangement for the national government) of the Government Ordinance, see Gor 29-18 to Article 29 (Prohibition, restriction and permission for act likely to hinder river administration) of the River Law.

(Prohibition, Restrictions and Permission for Act Likely to Hinder River Administration)

Article 29.

Unless provided for in any of the articles from 23 through the preceding article ²⁹⁻¹⁾, acts which are likely to hinder river administration by affecting the course, cleanliness, discharge, width, depth, etc., of the water of a river may be prohibited or restricted, or obtaining permission of the *river administrator* for such acts may be made obligatory, by Government Ordinance ^{29-2)~ 29-19)}.

2 Concerning *class B rivers*, such act stipulated in the preceding paragraph as may be fixed by Government Ordinance may be prohibited or restricted or obtaining permission of the *river administrator* for such acts may be made obligatory, by prefectural regulations.

[**Law 29-1**] River Law Article 23 (Permission for river water use), Article 24 (Permission for land occupancy), Article 25 (Permission for taking earth, stone, etc.), Article 26 (Permission for construction of structures), Article 27 (Permission for land excavation), Article 28 (Prohibition, restriction and permission for floating down trees/bamboo and navigation of boats/ships)

[**Gor 29-2**] Government Ordinance Article 16-4 (Prohibition of acts likely to hinder river administration)

No person may not do any of the following acts without good reason:

- (1) Causing damage to a river;
- (2) Dumping earth and stone (including sand; hereafter the same), or trash, excremental matter, bird and animal corpses or any other filth or wastes on land within a *river zone* (excluding land within a *high standard levee special zone*; the same in the next item and in the items of Article 16-8 Paragraph 1), excluding acts done in the normal conduct of agriculture, forestry or fishery practiced in a *river zone*;
- (3) Bringing into the following areas automobiles or other things specified by the *river administrator*:
 - (a) Land in a *river zone* that the *river administrator* specifically designates in order to protect *river*

administration facilities;

(b) Land in a *river zone* that the *river administrator* specifically designates in order to conserve plant and animal habitats.

2 The provisions of Article 15-4 Paragraph of the Government Ordinance shall apply mutatis mutandis to designation provided for in Item (3) of the preceding paragraph.

[Moc 29-3] MOC Ordinance Article 18-6 (Public notification of land off-limits to vehicles, etc.)

The provisions of Ministry of Construction Ordinance Article 18-2²⁸⁻²) Paragraphs 3 and 6 shall apply mutatis mutandis to public notification of areas of land provided for in Article 16-4 Paragraph 1 Item (3) of the Government Ordinance, and the provisions of Ministry of Construction Ordinance Article 18-2²⁸⁻²) Paragraphs 1 and 6 shall apply mutatis mutandis to public notification of vehicles, etc., provided for in Article 16-4 Paragraph 1 Item (3) of the Government Ordinance.

[Gor 29-4] Government Ordinance Article 16-5 (Notification on discharge of sewage)

Any person who intends to discharge 50m³/day or more per river (if the *river administrator* has specified a different rate of discharge in consideration of streamflow, usage, etc., then that rate of discharge) of sewage [which refers to wastewater resulting from or associated with daily living or a project (other than farming and fish-rearing projects); hereafter the same] shall notify the *river administrator* in advance of the matters listed below in accordance with the Ministry of Construction Ordinance unless permitting or other disposition provided for in the upper half of the table attached hereto has been received or notification provided for in the upper half of said table has been made in connection with the project concerned, construction, etc., of sewage-discharging facilities or discharge of sewage.

- (1) Name and address.
- (2) Classification and name of the river into which sewage is to be discharged.
- (3) Point of discharge.
- (4) Method and period of discharge of sewage.
- (5) Quantity of sewage to be discharge.
- (6) Quality of sewage to be discharged.
- (7) Method of treatment of sewage to be discharged.

2 Should any of the matters stipulated in Item (1) of the preceding paragraph or any of the matters stipulated in Items 3 through 7 has been changed or should the discharge of sewage concerned have been terminated, the person who has made notification provided for in the preceding paragraph shall notify the *river administrator* to that effect without delay. The provisions of the proviso in the preceding paragraph shall apply mutatis mutandis in this case.

3 An administrative agency that has executed permitting or other dispositions listed in the upper half of the table attached hereto, accepted notification stipulated in the upper half of said table or executed ordering or other dispositions (limited to dispositions related to the discharge of sewage) listed in the lower half of said table in connection with any of the matters stipulated in the proviso of Paragraph 1, the agency shall notify of the *river*

administrator to that effect without delay.

4 The provisions of Government Ordinance Article 15-4 Paragraph 2 shall apply *mutatis mutandis* to specification under the provisions of Paragraph 1.

[Moc 29-5] MOC Ordinance Article 18-7 (Notification on discharge of sewage)

Notification provided for in Article 16-5 Paragraph 1 of the Government Ordinance shall be made by submitting one original of a notification on Form 8-3 attached hereto and its copies in the number specified in Table 2 attached hereto.

2 The notification provided for in the preceding paragraph shall be accompanied by a 1/50,000-scale location map and an outline map showing the sewage discharge route (including sewage treatment system).

[Moc 29-6] MOC Ordinance Article 18-8 (Public notification of specification of the quantity of sewage requiring discharge notification)

The provisions of Article 17²⁷⁻⁵⁾ Paragraph 1 of the Ministry of Construction Ordinance shall apply *mutatis mutandis* to public notification of specification provided for in Article 16-5 Paragraph 1 of the Government Ordinance.

[Moc 29-7] MOC Ordinance Article 18-9 (Disposition, etc., categorized as disposition, etc., listed in Items (1) through (9) in the table attached to the Government Ordinance)

Disposition or notification provided for in the Ministry of Construction Ordinance mentioned in the upper half of Item (11) in the table attached to the Government Ordinance shall be the following:

(1) Notification under the provisions of Article 6 Paragraph 3 or Article 18 Paragraph 3 (including Article 87 Paragraph 1 applied *mutatis mutandis*) of the Building Standard Law (Government Ordinance No. 326, 1948);

(2) Permission under the provisions of Article 7 Paragraph 1 of the Medical Service Law (Law No. 205, 1948) or notification under the provisions of Article 9 Paragraph 1 of said law or Article 4 Paragraph 1 of the Medical Service Law Enforcement Ordinance (Government Ordinance No. 326, 1948) regarding hospitals (including approval or notification regarding national hospitals as provided for by replacing words and phrases under the provisions of Article 1 or Article 4-4 of the Medical Service Law Enforcement Ordinance).

2 Dispositions provided for in the Ministry of Construction Ordinance referred to in the lower half of Item (11) of in the table attached hereto shall be the following:

(1) Order under the provisions of Article 9 Paragraph 1 or Article 10 Paragraph 1 of the Building Standard Law or request under the provisions of Article 18 Paragraph 9 of said law regarding septic tanks;

(2) Order under Article 24 Paragraph 1 of the Medical Service Law (including suggestions regarding national hospitals as read *mutatis mutandis* under the provisions of Article 1 of the Medical Service Law Enforcement Ordinance) or revocation or order under the provisions of Article 29 Paragraph 1 of said law.

[Gor 29-8] Government Ordinance Article 16-6 (Emergency measures)

In the case where *unusual drought*, etc., has caused river pollution to the extent of threatening to cause serious hindrance to river administration, the *river administrator* shall notify the administrative agencies concerned, the local public bodies concerned and the river users concerned whose interests are thought to be affected (river users concerned provided for in Article 38 of the River Law) to that effect.

2 In the case provided for in the preceding paragraph, the *river administrator* may, to the extent necessary to remove such hindrance, order any person who discharges sewage into the river to reduce sewage discharges, suspend the discharge of sewage temporarily or take other necessary measures.

[Gor 29-9] Government Ordinance Article 16-7 (Measures concerning boats/ships or rafts in time of flood, etc.)

In the case where it is deemed that a flood or high tide may occur, the owners, managers or possessors of all boats/ships, rafts, logs and bamboos, and the like he shall within the *river zone* shall take necessary measures, including but not limited to mooring the objects concerned, to prevent such objects from being washed away by the flood or high tide.

[Gor 29-10] Government Ordinance Article 16-8 (Permission for acts likely to hinder river administration)

Any person who intends to do any of the acts listed below, excluding acts necessary for daily living, acts generally practiced for agriculture or fishery and acts designated by the *river administrator* as being acts necessary for business, etc., shall obtain the permission of the *river administrator* in accordance with the Ministry of Construction Ordinance.

- (1) Washing objects to which soil, filth, dyes or other matter that may contaminate the flowing water of a river is attached on land within a *river zone*;
- (2) Accumulating or installing earth, stone, logs, bamboos or other objects on land within a *river zone*.

2 The provisions of Article 15-4 Paragraph 2 shall apply *mutatis mutandis* to designation under the provisions of the preceding paragraph.

[Moc 29-11] MOC Ordinance Article 18-10 (Application for permission for acts likely to hinder river administration)

Application for permission provided for in Article 16-8 Paragraph 1 of the Government Ordinance shall be made by submitting one original of an application on Form 8 (A) and (B-7) for an act falling within a category provided for in Item (1) of said paragraph or Form 8, (A) and (B-8), for an act falling within a category provided for in Item (2) of said paragraph and its copies in the number specified in Table 2 attached hereto.

2 The application provided for in the preceding paragraph shall be accompanied by the following documents:

- (1) Document outlining the plan for the project concerning the washing or deposition of objects, etc.;
- (2) 1/50,000-scale location map;
- (3) In the case of an act involving accumulation or installation of objects, surveyed plan of the land concerned with the act concerned;
- (4) In the case where a person other than the *river administrator* accumulates or installs objects on land administered on the basis of his title, a writing indicating that the applicant holds or can be reasonably

expected to acquire the title to carry out said excavation, etc., of land;

(5) Document outlining the influence of the washing or deposition of objects, etc., on other projects and measures to be taken in connection with such influence;

(6) Documents describing other relevant information.

[Moc 29-12] MOC Ordinance Article 18-11 (Public notification on the washing or deposition of objects, etc., that does not require permission)

The provisions of MOC Ordinance Article 17²⁷⁻⁵⁾ Paragraph 1 shall apply mutatis mutandis to public notification of designation of acts provided for in Article 16-8 Paragraph 1 of the Government Ordinance.

[Moc 29-13] MOC Ordinance Article 18-12 (Notification on sewage discharge occurring at the time of designation of a *class A river*, etc.)

The provisions of MOC Ordinance Article 18-7²⁹⁻⁵⁾ shall apply mutatis mutandis to notification provided for in Article 16-10 Paragraph 2 of the Government Ordinance.

[Moc 29-14] MOC Ordinance Article 21 (Notification of succession to status based on permission)

Notification provided for in Article 33 (Succession of status) Paragraph 3 of the River Law [including the case of mutatis mutandis application under Article 55 (Restrictions within the *river conservation zone*) Paragraph 2, Article 57 (Restrictions within the *projected river zone*) Paragraph 3, Article 58-4 (Restrictions within the *spatial river zone*) Paragraph 2 and Article 58-6 (Restrictions within the *projected spatial river zone*) Paragraph 3 of the River Law] or Article 16-9 Paragraph 3 of the Government Ordinance shall be made by submitting one original of a notification on Form 11 attached hereto and its copies in the number specified in Table 3 attached hereto.

2 The notification provided for in the preceding paragraph shall be accompanied by a writing indicating that the status based on the permission concerned has been taken over and documents describing other relevant information.

[Note 29-15] For information on Articles 39, 40 and 41 of the Ministry of Construction Ordinance, see Moc 23-2, 23-3, 23-4 to Article 23 (Permission for river water use) of the River Law.

[Gor 29-16] Government Ordinance Article 16-9 (Succession to status based on permission)

Any general successor, such as an heir, a juridical person established by merger or any other general successor to a person who has obtained permission provided for in Article 16-3 Paragraph 1 or Paragraph 1 of the preceding article shall succeed to the status of the successee granted under these provisions.

2 Any person who has obtained land by transfer from a person who has obtained permission provided for in Paragraph 1 Item (2) of the preceding article for any of the acts listed in Paragraph 1 Item (2) of the preceding article shall succeed to the status under the permission obtained by the successee. With respect to use of said land, a comparable rule shall apply also to any person who has acquired a right to use the land covered by said permission from the person who obtained said permission by lease or any other means.

3 Any person who has succeeded to a status under the provisions of the preceding paragraph shall notify the *river administrator* to that effect within thirty days from the day of succession.

[Gor 29-17] Government Ordinance Article 16-10 (Interim measures)

Any person who is actually doing an act that requires permission under the provisions of Article 16-3 Paragraph 1 and Article 16-8 Paragraph 1 on the basis of his title at the time of designation of a *class A river*, a *class B river* or a *river zone* shall be deemed to have been granted permission under such provisions under the conditions same as heretofore.

2 Any person who is actually doing an act that requires notification under the provisions of Article 16-5 Paragraph 1 at the time of designation of a *class A river* or a *class B river* shall notify the *river administrator* of the matters listed in said paragraph in accordance with the Ministry of Construction Ordinance within two months from the date of designation. The provisions of the proviso of said paragraph shall apply *mutatis mutandis* in this case.

[Gor 29-18] Government Ordinance Article 16-11 (Special arrangement for the national government)

With respect to application of the provisions of Article 16-3 Paragraph 1 and Article 16-8 Paragraph 1 of the Government Ordinance to national projects, permission under these provisions shall be deemed to have been obtained when agreement is reached as a result of consultation between the national government and the *river administrator*.

[Moc 29-19] MOC Ordinance Article 42 (Procedure for consultation on river use, etc.)

Consultation provided for in Article 95 (Special arrangement for use of rivers by the national government) of the River Law or Article 16-11 of the Government Ordinance shall be made by following a procedure similar to the procedure for permission or approval.

(Use of Permitted Structures)

Article 30.

A person who constructs or reconstructs a dam or other structure stipulated in Government Ordinances³⁰⁻¹⁾ with permission as stipulated in Article 26³⁰⁻²⁾ Paragraph 1 may use the said structure only after it has been subject to and passed a completion check by the *river administrator*.

2 Notwithstanding the provisions of the preceding paragraph, under special circumstances and needs, the person stipulated in the preceding paragraph may use part of the said structure, before completion, with approval from the *river administrator*^{30-3)~30-5)}.

[Gor 30-1] Government Ordinance Article 17 (Structures subject to acceptance inspection)

Structures provided for in Article 30 (Use of *permitted structures*) Paragraph 1 of the River Law shall be one of the following:

- (1) Dams defined in Article 44 (Maintenance of the existing functions of a river) Paragraph 1 of the River Law;
- (2) Structure (*joint use structure*) that also serves as a *river administration facility*;

(3) Structure whose construction involves the cutting of a levee(s).

[Law 30-2] River Law Article 26 (Permission for construction of structures)

[Moc 30-3] MOC Ordinance Article 19 (Application for acceptance inspection)

Application provided for in Article 30 (Use of *permitted structures*) Paragraph 1 of the River Law shall be made by submitting one original of an application and its copies in the number specified in Table 3 attached hereto.

2 The application provided in the preceding paragraph shall be accompanied by documents indicating the following information:

- (1) Planned date of commencement of use of the structure;
- (2) Present condition of other works related to the works for structure;
- (3) Present condition of implementation of measures provided for in Article 11 Paragraph 2 Item (1) (b);
- (4) In the case of a dam provided for in Article 44 (Maintenance of the existing functions of a river) Paragraph 1 of the River Law, the present condition of implementation of measures provided for in Article 11 Paragraph 2 Item (1) (e);
- (5) Other relevant information.

[Moc 30-4] MOC Ordinance Article 41 (Routing of application for permission, etc.)

See Note 23-4 to Article 23 (Permission for river water use) of the River Law.

[Moc 30-5] MOC Ordinance Article 20 (Application for use of part of a *permitted structure*)

Application for approval provided for in Article 30 (Use of *permitted structures*) Paragraph 2 of the River Law shall be made by submitting one original of an application on Form 10 attached hereto and its copies in the number specified in Table 3 attached hereto.

2 The application provided for in the preceding paragraph shall be accompanied by the following:

- (1) Design drawing of the structure on which the part to be used is shown in red;
- (2) Documents describing the following:
 - (a) Present condition of implementation of the works for the structure;
 - (b) Special circumstances as stipulated in Article 30 (Use of *permitted structures*) Paragraph 2 of the River Law;
 - (c) Planned date of commencement of use of the part of the structure;
 - (d) Plan for use of part of other structures;

In the case of a dam as stipulated in Article 44 (Maintenance of the existing functions of a river) Paragraph 1 of the River Law, at least the maximum water level, reservoir area, maximum water depth and effective water depth, total storage and effective storage and maximum intake (and, in the case of a dam for power generation, normal intake rate, gross head and effective head, maximum theoretical water power and firm theoretical water power, and maximum capacity, firm capacity and firm peak capacity) shall be indicated. Other conditions such as obligatory discharge, if any, shall also be indicated.

- (e) Information listed in Paragraph 2 Items 2 to 4 of the preceding article;
- (f) Other relevant information.

(Restoration Orders)³¹⁻¹⁾

Article 31.

In the event that a person who has established a structure with approval as stipulated in Article 26³¹⁻²⁾ Paragraph 1 discontinues the use of the said structure, the person must immediately give notice to that effect to the *river administrator*.

2 When the *river administrator* who has received the notification of the preceding paragraph deems it necessary for river administration, he may order removal of the structure built with the permission concerned, restoration of the river to the original state and taking of other measures necessary for river administration.

[**Note 31-1**] Structures constructed in a *river zone* may obstruct river flow. Construction of such structures is strictly restricted and is permitted on condition that appropriate maintenance is carried out. As a rule, therefore, persons who constructed facilities that have fallen into disuse are required to remove them on their own responsibility.

[**Law 31-2**] River Law Article 26 (Permission for construction of structures)

(Charges for the Use of River Water etc.)³²⁻¹⁾

Article 32.

The prefectural governor may collect charges for use of river water, charges for occupancy of land, charges for taking earth and stone and charges for taking other river products (hereinafter referred to as charges for use of river water etc.) from the persons who have received the permission of Article 23, Article 24 or Article 25³²⁻²⁾ with respect to the rivers located in the area of the prefecture concerned.

2 The standards for the amounts of the charges for use of river water etc. and the necessary matters concerning their collection shall be fixed by Government Ordinance³²⁻³⁾.

3 The charges for use of river water etc. shall be made a revenue of the prefecture concerned.

4 When the Minister of Construction has given the permission of Article 23, Article 24 or Article 25, he shall without delay make notification of the permission concerned and the matters involved to the prefectural governor who governs the prefecture where the river which the permission concerns is located. The same shall apply to the case where an official action under the provision of Article 75 has been made with respect to the permission concerned.

[Note 32-1] As mentioned in Note 9-1 to Article 9 of the River Law, until the July 1964 revision of the River Law, river administration had been under the jurisdiction of the governor of the prefecture concerned. Revenue from rivers, therefore, had been regarded as a revenue of the prefecture concerned. When the River Law was reviewed for revision, some people were of the opinion that revenue from *class A rivers* should be made a revenue of the national government. Because of strong opposition from prefectures, however, the traditional practice of making revenue from *class A rivers* a national revenue was retained. With regard to the complete revision of the River Law in 1964, a March 1965 Vice-Minister of Construction notification stated that (1) no charges were to be collected for use of river water in connection with national projects (e.g., national irrigation projects) and (2) charges for use of river water, etc. (including use of land), for road projects, public projects for power generation, domestic and industrial water supply projects, irrigation, and construction of local railways and railway tracks were to be written off or reduced. As a result, charges for most of the uses of river water in agriculture, which account for a considerable percentage of river water and river land uses are now exempted or reduced. As shown below, large portion of the revenue from charges for use of river water, etc. consist of charges to the hydropower generation. In determining unit prices of charges for use of river water for the purpose of hydroelectric power generation, all prefectures apply the upper limits announced by the Ministry of Construction.

Charges collected for use of river water (fiscal year 1994)

Power generation	¥26,031,827,057
Drinking water supply	¥13,757,838
Mining and industrial water supply	¥884,937,845
Others	¥58,039,678
Total	¥26,988,562,427

[Law 32-2] River Law Article 23 (Permission for river water use), Article 24 (Permission for land occupancy), Article 25 (Permission for taking earth, stone, etc.)

[Gor 32-3] Government Ordinance Article 18 (Standards for the amounts of the charges for use of river water, etc.)

The standards for the amounts of the charges for use of river water, etc., provided for in Article 32 Paragraph 1 of the River Law must be as follows:

- (1) The amounts of the charges for use of river water, etc., shall be fair and reasonable for the purpose and manner of use or occupancy of river water or land or the taking of earth, stone, etc., (hereinafter referred to as "use of river water, etc.");
- (2) The amounts of the charges for use of river water, etc., shall be such that proper and rational operation and management of public utilities associated with use of river water, etc., are not hindered;
- (3) In the case of use of river water, etc., for power generation, the amounts of the charges for use of river water, etc., shall be within the limits that the Minister of Construction determines in consideration of the expenses for river administration, the influence of use of river water, etc., on river administration, the

manner of river use, etc.

2 Collection of charges for use of river water, etc., provided for in Article 32 Paragraph 1 of the River Law shall be made as follows:

- (1) In the case where the period of use of river water, etc., extends into the fiscal year or years following the fiscal year in which the day on which permission for use of river water, etc., provided for in Articles 23 to 25 is granted belongs, charges for use of river water, etc., for the following year or years shall be collected in such a manner that the charges for use of river water, etc., for one fiscal year is collected within that fiscal year.
- (2) With respect to permission provided for in Articles 23 to 25 of the River Law, in the event of any change of the period during which use of river water, etc., is permitted or other matters on which the calculation of the charge for use of river water, etc., was based either as a result of an application from the person who has been granted permission or as a result of disposition provided for in Article 75 Paragraph 2 of the River Law, the charge for use of river water, etc., shall be altered accordingly. Should the amount of the charge for use of river water, etc., that has already been paid exceeds the altered amount of the charge for use of river water, etc., the excess amount shall be returned.
- (3) In the case of water use in areas extending over two or more prefectures, the amount of charges for use of river water, etc., to be collected in each prefecture shall be determined by the governors of the prefectures concerned after mutual consultation.

[Note 32-4] As in the case of charges for use of river water, the power to set unit prices of charges for use of land rests with the prefectural government. Different unit prices have been set for agricultural lands such as rice paddies, upland fields and meadows and for other types of land such as the lands on which to build dams, weirs, railways or other structures and lands for uses such as golf courses and driving schools. Unit prices vary widely among prefectures. The charges collected for use of river water in fiscal year 1994 amounted to ¥5,714,722,345.

[Note 32-5] Major types of earth materials taken from rivers include sand, gravel and boulders for use as construction materials. Non-earth materials taken from rivers include common reeds, Chinese silver grass, bamboos and timber. The total amounts of charges collected for use of earth and non-earth materials taken from rivers in fiscal year 1992 were as follows:

Charges for use of earth materials	¥2,530,512,626
Charges for use of non-earth materials	¥60,232,954
Total	¥2,590,745,580

(Succession to Status)

Article 33.

The heir, juridical person established by merger or other general business successor succeeding to the business of a person who obtained the permission of Article 23, Article 24, Article 25, Article 26 or Article 27³³⁻¹⁾ shall succeed to the status under the permission of any

of the said articles held by the person succeeded to.

2 A person whom a structure, land or trees that have received approval under Article 26 Paragraph 1 or Article 27 Paragraph 1, or land on which a structure is to be constructed or trees are to be planted with the said approval (hereinafter referred to as approved structure etc.) is transferred from the person who obtained the said approval shall succeed to the rights and privileges afforded by the said approval that were held by the person who obtained the said approval. This shall also apply with respect to a person who obtains the right to use an approved structure etc. through lease or other means from the person who obtained the said approval.

3 Any person who has succeeded to a status in accordance with the provisions of the preceding two paragraphs shall notify the *river administrator* to that effect within thirty days from the day of succession.³³⁻²⁾

[Law 33-1] River Law Article 23 (Permission for river water use), Article 24 (Permission for land occupancy), Article 25 (Permission for taking earth, stone, etc.), Article 26 (Permission for construction of structures), Article 27 (Permission for land excavation)

[Moc 33-2] MOC Ordinance Article 21 (Notification of succession to status based on permission)

Notification provided for in Article 33 (Succession of status) Paragraph 3 of the River Law (including the case of mutatis mutandis application under Article 55 (Restrictions within the *river conservation zone*) Paragraph 2, Article 57 (Restrictions within the *projected river zone*) Paragraph 3, Article 58-4 (Restrictions within the *spatial river conservation zone*) Paragraph 2 and Article 58-6 (Restrictions within the *projected spatial river zone*) Paragraph 3 of the River Law) or Article 16-9 Paragraph 3 of the Government Ordinance shall be made by submitting one original of a notification on Form 11 attached hereto and its copies in the number specified in Table 3 attached hereto.

2 The notification provided for in the preceding paragraph shall be accompanied by a writing indicating that the status based on the permission concerned has been taken over and documents describing other relevant information.

(Transfer of Rights)

Article 34.

No right based on the permission of Article 23, Article 24 or Article 25³⁴⁻¹⁾ shall be transferred without obtaining the approval of the *river administrator*.^{34-2) 34-3)}

2 A person who has obtained by transfer a right based on the permission referred to in the preceding paragraph shall succeed to such status based on the permission as was held by the transferor.

[Law 34-1] River Law Article 23 (Permission for river water use), Article 24 (Permission for land occupancy), Article 25 (Permission for taking earth, stone, etc.)

[Moc 34-2] MOC Ordinance Article 22 (Application for approval for transfer of rights)

Application for approval provided for in Article 34 (Transfer of rights) Paragraph 1 of the River Law shall be made by submitting one original of an application on Form 12 attached hereto and its copies in the number specified in Table 3 attached hereto.

2 The application provided for in the preceding paragraph shall be accompanied by the following:

- (1) Writing indicating the intention of the person concerned regarding the transfer;
- (2) Writing indicating the reason for the transfer and the planned date of transfer;
- (3) Document outlining the plan for the project of the transferee;
- (4) Documents describing other relevant information.

[Moc 34-3] MOC Ordinance Article 41 (Routing of application for approval, etc.)

See Note 23-4 to Article 23 (Permission for river water use) of the River Law.

(Consultation with the Concerned Administrative Organizations)³⁵⁻¹⁾

Article 35.

In the case where there is an application for approval as stipulated in Article 23, Article 24 or Article 26³⁵⁻²⁾ Paragraph 1, or authorization as stipulated in Paragraph 1 of the preceding article with regard to water use (exclusive use of river water, or construction or reconstruction of a structure stipulated in Article 26 Paragraph 1 for the exclusive use of river water; hereinafter the same), the Minister of Construction must consult with the heads of concerned administrative organizations³⁵⁻¹⁾ when dealing with the application with the exception of the case where the application is in regard to the exclusive use of river water stipulated in Government Ordinances³⁵⁻⁴⁾. This shall also apply when the Minister of Construction deals with applications for approval under these provisions in accordance with the provisions of Article 75³⁵⁻⁵⁾, or deals with an application lodged by a prefectural governor under Article 79³⁵⁻⁶⁾ Paragraph 2 Item (4).

2 When the Minister of Construction intends to give the permission of Article 27³⁵⁻⁷⁾ Paragraph 1, if there is an enterprise which will be markedly affected by the act for which the permission is given, he shall consult with the head of the administrative organ having supervision over the enterprise concerned.

[Note 35-1] Water use provided for in Article 35 (Consultation with concerned administrative organizations) Paragraph 1 of the River Law is closely connected with electric power services, industrial water supply services (both under the jurisdiction of the Ministry of International Trade and Industry), water supply services (Ministry of Health and Welfare) and irrigation water services (Ministry of Agriculture, Forestry and Fisheries). In

implementing its projects involving water use, which is under the jurisdiction of more than one ministry, the Ministry of Construction is placed under the supervision of the competent ministry. When taking actions such as granting permission for a large-scale water use project, therefore, the Minister of Construction is required to consult with the head of the administrative organization responsible for the project.

[Law 35-2] River Law Article 23 (Permission for river water use), Article 24 (Permission for land occupancy), Article 25 (Permission for taking earth, stone, etc.), Article 26 (Permission for construction of structures)

[Gor 35-3] Government Ordinance Article 19 (Water uses that do not require consultation with the administrative organization heads concerned)

Use of river water provided for in the Government Ordinance mentioned in Article 35 Paragraph 1 of the River Law shall be water uses other than specified water uses.

[Note 35-4] For information on specified water uses, see Note 29-1 to Article 9 of the River Law.

[Law 35-5] River Law Article 75 (Supervisory measures and orders)

[Law 35-6] River Law Article 79 (Approval by the Minister of Construction)

[Law 35-7] River Law Article 27 (Permission for land excavation)

(Consultation with the Prefectures and Municipalities)³⁶⁻¹⁾

Article 36.

When dealing with an application for approval as stipulated in Article 23, Article 24 or Article 26³⁶⁻²⁾ Paragraph 1, or authorization as stipulated in Article 34³⁶⁻³⁾ Paragraph 1 with regard to water use, the Minister of Construction must first consult with the concerned prefectural governor with the exception of the case where the application is in regard to the exclusive use of river water stipulated in Government Ordinances³⁶⁻⁴⁾ in accordance with the provisions in the preceding article paragraph 1. This shall also apply when the Minister of Construction deals with applications for approval under these provisions in accordance with the provisions of Article 75³⁶⁻⁵⁾.

2 When giving approval under Article 23 or Article 26³⁶⁻²⁾ Paragraph 1 for water use regarding *class B rivers* stipulated in Government Ordinances³⁶⁻⁶⁾, prefectural governors must first consult with heads of concerned municipalities.

3 When the Minister of Construction intends to give the permission of Article 27³⁶⁻⁷⁾ Paragraph 1, if the permission is concerned with an act fixed by Government Ordinance³⁶⁻⁸⁾, he shall hear the opinion of the prefectural governor concerned in advance.

[Law 36-1] River Law Article 23 (Permission for river water use), Article 24 (Permission for land occupancy), Article 26 (Permission for construction of structures)

[Law 36-2] River Law Article 34 (Transfer of rights)

[**Note 36-3**] See Note 35-3 to Article 35 (Consultation with the concerned administrative organizations) of the River Law.

[**Law 36-4**] River Law Article 75 (Supervisory measures and orders)

[**Gor 36-5**] Government Ordinance Article 20 (Water uses about which the opinion of the municipality concerned must be heard)

Water uses provided for in Article 36 (Consultation with the prefectures and municipalities) Paragraph 2 of the River Law and specified by the Government Ordinance shall be referred to as specified water uses.

[**Law 36-6**] River Law Article 27 (Permission for land excavation)

[**Note 36-7**] There is as yet no Government Ordinance provision regarding this paragraph.

(Entrusting of Construction of Permitted Works to River Administrators)³⁷⁻¹⁾

Article 37.

River administrators may undertake work on an approved structure personally when entrusted with the work by a person who has obtained approval under the provisions of Article 26³⁷⁻²⁾ Paragraph 1.

[**Note 37-1**] Works for structures to be constructed on rivers after obtaining the permission of the *river administrator* under the provisions of Article 26 (Permission for construction of structures) Paragraph 1 of the River Law must be properly executed in accordance with the structural standards established by such standards as the Government Ordinance for Structural Standard for *River Administration Facilities*, etc. Generally, disasters can be prevented and coordination with *river works* secured by imposing conditions on permission and supervising the execution of the acts concerned. The reason the River Law stipulates that the *river administrator* may be entrusted with the task of executing such works for structures is that there are cases where it is appropriate for the *river administrator* himself to execute such works on behalf of the person who has been granted permission in order to prevent a disaster from being induced or for reasons associated with *river works*.

[**Law 37-2**] River Law Article 26 (Permission for construction of structures)

Subsection 2. Water Use Conciliation

(Notification Upon Receipt of Application for Water Use)³⁸⁻¹⁾

Article 38.

In the case where there is an application for approval as stipulated in Article 23 or Article 26³⁸⁻²⁾ Paragraph 1 with regard to water use, the *river administrator* must, in accordance with the provisions in Ministry of Construction Ordinances³⁸⁻³⁾, give notification to persons who have obtained approval under the provisions of Article 23 through to Article 29³⁸⁻²⁾ and persons who hold rights with regard to the river as stipulated in Government Ordinances³⁸⁻⁴⁾ (hereinafter referred to as *concerned river user*) of the name of the applicant, the purpose of water use and other items stipulated in Ministry of Construction Ordinances³⁸⁻³⁾, except in the case where the application is to be rejected. This does not apply in respect of persons who will clearly not suffer any loss as a result of the said water use and persons who assent to the said water use.

[Note 38-1] Articles 38 (Notification upon receipt of application for water use) to 43 (Restriction of storing and taking river water) of the River Law provide for adjustment between existing river users, who have been using rivers over the years, and persons who are applying for permission for water use with the aim of protecting existing river users and at the same time ensuring effective and appropriate use of rivers as property for public use.

[Law 38-2] River Law Article 23 (Permission for river water use), Article 26 (Permission for construction of structures), Article 27 (Permission for land excavation), Article 28 (Prohibition, restrictions and permission for floating down trees/bamboo and navigation of boat/ships), Article 29 (Prohibition, restrictions and permission for act likely to hinder river administration)

[Moc 38-3] MOC Ordinance Article 23 (Notification procedure, etc., upon receipt of application for permission for water use)

Notification provided for in Article 38 (Notification upon receipt of application for water use) of the River Law shall be made by delivering a notification to the river users concerned provided that in the case where a person who is to receive such notification cannot be located or said notification cannot be sent for other reasons, the obligation to give notice shall be deemed to have been fulfilled if the notifier has put the contents of the notification either in an Official Gazette if the notifier is the Minister of Construction or in a prefectural gazette if the notifier is a prefectural governor.

2 The matters to be stipulated by the Ministry of Construction Ordinance mentioned in Article 38 (Notification upon receipt of application for water use) of the River Law shall be the following:

- (1) Place of water use;
- (2) Quantity of intake;
- (3) In the case of water use involving construction, reconstruction or removal of a structure, an outline of the plan;
- (4) Brief description of the influence on use of the river by the river users concerned and measures to be taken described in the application;
- (5) A statement that an opinion may be submitted under Article 39 of the River Law and the period during which such opinion may be submitted;
- (6) Other relevant information.

[Gor 38-4] Government Ordinance Article 21 (Persons who hold rights to rivers)

Persons who hold rights to rivers as stipulated in Article 28 of the River Law shall be fishery-right and common-of-piscary holders.

(Submission of Opinion by Concerned River Users)

Article 39.

When an *concerned river user* has received the notification of the preceding article, he may submit to the *river administrator* his opinion concerning the water utilization by making clear the loss he would incur owing to the water utilization, as may be provided for in detail by Ministry of Construction Ordinance ^{39-1) 39-2)}.

[Moc 39-1] MOC Ordinance Article 24 (Procedure for submission of opinion by river users concerned)

Submission of opinion provided for in Article 38 (Notification upon receipt of application for water use) of the River Law shall be made by submitting an application describing the following information:

- (1) Name and Location (in the case of a juridical person, its name and place of business and the name of the representative);
- (2) Brief description of the project involving use of the river concerned by the person who is submitting his opinion;
- (3) Facts of loss;
- (4) Estimates of compensation for loss and its contents;
- (5) Reason for not consenting to the water use concerned;
- (6) Date on which a notice provided for in Article 38 of the River Law was received;
- (7) Date on which the opinion is submitted and, in the case of submission of an opinion under the circumstance described in the parentheses in the next paragraph, the reason as stipulated in the parentheses;
- (8) Other relevant information.

2 Submission of opinion provided for in the preceding paragraph shall be made within thirty days (or sixty days if there is a compelling reason, such as a natural disaster, for having failed to make submission of opinion) from the date on which a notice as stipulated in Article 38 (Notification upon receipt of application for water use) of the River Law is received.

3 In the case where an application as stipulated in Paragraph 1 is mailed, the number of days required for mailing shall not be counted in calculating the period as stipulated in the preceding paragraph.

[**Note 39-2**] For information on Article 41 of the Ministry of Construction Ordinance, see Moc 23-4 concerning Article 23 (Permission for river water use) of the River Law.

(Criteria for the Permission of Water Use)⁴⁰⁻¹⁾

Article 40.

In the case where a *river administrator* seeks to grant permission as stipulated in Article 23 or Article 26⁴⁰⁻²⁾ Paragraph 1 with regard to water use and in the event that *concerned river users* who will suffer loss as a result of the water use related to the said permission lodge an objection as stipulated in the preceding article, the *river administrator* must not grant permission unless one of the following items is applicable, except in the case where all *concerned river users* assent to the said water use.

(1) When the public benefit from the undertaking related to the said water use is significantly greater than the benefit from the undertaking related to the river use by the *concerned river users*.

(2) When it is judged that there will be no hindrance to the undertaking related to the river use by the *concerned river users* if the necessary facilities to prevent loss (hereinafter referred to loss prevention facilities) are established.

2 In the case where a *river administrator* judges that Item (1) of the preceding paragraph is applicable and seeks to grant permission as stipulated in Article 23 or Article 26⁴⁰⁻²⁾ Paragraph 1 with regard to water use, the Minister of Construction must first consult with the *River council*.

[**Note 40-1**] Permission for new water uses requires the consent of existing river users concerned. This provision stipulates that permission for new water uses may be granted under certain circumstances.

[**Law 40-2**] River Law Article 23 (Permission for river water use), Article 26 (Permission for construction of structures)

(Compensation for Loss Related to Water Use) ⁴¹⁻¹⁾

Article 41.

In the event that a person suffers loss as a result of permission as stipulated in Article 23 or Article 26 ⁴¹⁻²⁾ Paragraph 1 with regard to water use, the person who received the said permission for water use must pay compensation for the loss.

[**Note 41-1**] Loss as stipulated in this article refers to loss resulting from permitted and lawful water use and does not include loss to other water users resulting from intake in excess of the permitted intake rate.

[**Law 41-2**] River Law Article 23 (Permission for river water use), Article 26 (Permission for construction of structures)

(Consultation on Compensation for Loss)

Article 42.

With regard to such compensation for loss under the provision of the preceding article as concerns an *concerned river user*, it is necessary that the person who obtained the permission for water utilization and the *concerned river user* should hold a consultation on it.

2 In case no agreement can be reached by consultation under the provision of the preceding paragraph, the parties concerned may ask for a ruling by the *river administrator* as may be provided for in detail by Government Ordinance ^{42-1)~ 42-3)}.

3 In the case of giving the ruling of the preceding paragraph, the *river administrator* may, if a request is made by the *concerned river user* that a loss preventive facility be set up to compensate for the loss and he, hearing the opinion of the person who obtained the permission for water utilization, deems that the request if reasonable, give the ruling that the person who obtained the permission for water utilization set up the loss preventive facility, by fixing the function, scale, structure, place of setting up, etc. of the loss preventive facility.

4 When the *river administrator* intends to give the ruling of Paragraph 2, he shall first hear the opinion of the Expropriation Committee of the prefecture in which is located the land where the *concerned river user* is to use the river.

5 Any person who is dissatisfied with the ruling of Paragraph 2 may, within sixty days computed from the day the ruling is given, require its alteration by means of a lawsuit.

6 In the lawsuit of the preceding paragraph, the other party concerned shall be made the defendant.

7 Institution of a lawsuit under the provision of Paragraph 5 shall not prevent water utilization or execution of the water utilization project.

[Gor 42-1] Government Ordinance Article 22 (Ruling by the *river administrator* concerning compensation for loss)

Any person who wishes to apply for a ruling by the *river administrator* as stipulated in Article 42 (Consultation on compensation for loss) Paragraph 2 Item (2) of the River Law shall submit the *river administrator* one original of an application for ruling indicating the information listed below and its duplicates in the number equal to the number of the other parties plus two following the format specified by the Ministry of Construction Ordinance ⁴²⁻².

- (1) The name and address of the applicant (in the case of a juridical person, the name and place of business and the name of the representative).
- (2) The name(s) and address(es) of the other party (parties) (in the case of a juridical person, the name and place of business and the name of the representative).
- (3) Facts of loss.
- (4) Estimates of compensation for loss and its contents.
- (5) Description of the consultation process.
- (6) Date of application for ruling.
- (7) Other relevant information.

2 Upon receipt of an application for a ruling, the *river administrator* shall send a duplicate of the application for ruling to the other party (parties) and give the party (parties) the opportunity to submit a statement of opinion within a reasonable period of time.

3 Every ruling shall be given in written form, describe the reason for the ruling and be signed and sealed by the *river administrator*.

4 Upon making a ruling, the *river administrator* shall without delay send a duly certified copy of the written ruling to the applicant and the other party (parties). If a person to whom said copy of the written ruling is to be sent cannot be located or if said copy of the written ruling cannot be sent for other reasons, the obligation to send a duly certified copy of the writing ruling shall be deemed to have been fulfilled when the contents of the written ruling have been put either in an Official Gazette if by the Minister of Construction or in a gazette of the prefecture concerned if by a prefectural governor.

[Moc 42-2] MOC Ordinance Article 25 (Ruling application Form)

The form specified by the Ministry of Construction Ordinance mentioned in Article 22 Paragraph 1 of the Government Ordinance shall be Form 13 attached hereto.

Form 13 (omitted)

[Note 42-3] For information on Article 41 (Routing of application for permission, etc.) of the Ministry of Construction Ordinance, see Moc 23-4 concerning Article 23 (Permission for river water use) of the River Law.

(Restriction of Storing and Taking River Water) ⁴³⁻¹⁾

Article 43.

No person who has obtained the permission for water utilization shall store or take river water until after he compensates the person who has submitted his opinion under the provision of Article 39 ⁴³⁻²⁾ for the loss for which the agreement has been reached by consultation under the provision of Paragraph 1 of the preceding article or for which the ruling of Paragraph 2 of the same article has been made (in case the loss compensation is to be made by establishing a loss prevention facility, until after he establishes it and obtains the approval of the *river administrator*). However, the same shall not apply to a loss of an *concerned river user* who submitted his opinion under the provision of Article 39 ⁴³⁻²⁾ concerning which the *river administrator* has given a ruling that amount of loss cannot be fixed before storing or taking river water or concerning which he has decided that the loss prevention facility may be established after the storing or taking of river water for which the water utilization permission has been given because the loss prevention facility cannot be built until after the structure covered by the water utilization permission has been built or because special circumstances involving the kind, structure, etc. of the loss preventive facility make it inevitable, or to a loss incurred by an *concerned river user* who has consented to the storing or taking of river water for which the water utilization permission has been given.

2 With respect to the case of the preceding paragraph, the person who has obtained the water utilization permission may deposit the compensation money in any one of the following cases:

- (1) When the person who is to receive the compensation money has refused to receive it or cannot receive it.
- (2) When it is not known to the person who has obtained the water utilization permission through no fault of his own who is the person to receive the compensation money;
- (3) When the person who has obtained the water utilization permission is dissatisfied with the ruling made by the *river administrator*;
- (4) When the person who has obtained the water utilization permission has been prohibited from paying the compensation money in consequence of attachment or provisional attachment.

3 With reference to the case of item (3) of the preceding paragraph, if demanded by the person who is to receive the compensation money, the person who has obtained the water utilization permission shall pay the amount of money fixed according to his own estimation and deposit the difference between the amount of compensation money according to the ruling and its amount.

4 The deposit under the provision of Paragraph 2 shall be made in a deposit office near the place of water use.

5 When the person permitted to use water has made the deposit under the provision of Paragraph 2, he shall without delay notify the person who is to receive the compensation money to that effect.

6 When the person permitted to use water has made the deposit under the provision of Paragraph 2, he shall without delay submit a report to that effect to the *river administrator* with a copy of the deposit paper stating the receipt of the deposit attached thereto.

[Note 43-1] This article aims to protect the river users concerned by limiting the storage or withdrawal of river water by persons who have been granted water utilization permission as a means of ensuring payment of compensation.

[Law 43-2] River Law Article 39 (Submission of opinion by *concerned river users*)

Subsection 3. Provisions Related to Dams⁴⁴⁻¹⁾

(Maintenance of the Existing Function of a River)

Article 44.

In the case where the condition of a river changes as a result of the construction of a dam and the former functions of the river⁴⁴⁻²⁾ are diminished during a flood, the person who constructed the dam (dam which is constructed with approval as stipulated in Article 26⁴⁴⁻³⁾ Paragraph 1 in order to store or intake the flowing water of the river and which has a height from the foundation to the crest of at least 15 meters^{44-4) ~44-6)}; hereinafter referred to as *water utilization dam*) must establish facilities necessary to maintain the said functions in accordance with the directions of the *river administrator*, or adopt alternative measures.

2 The standards for the instructions of the *river administrator* referred to in the preceding paragraph shall be fixed by Government Ordinance⁴⁴⁻⁷⁾.

[Note 44-1] The objective of the provisions of Article 44 (Maintenance of the existing functions of a river) to 51 (Exception for *water utilization dams* used as *river administration facilities*)) of the River Law regarding the "special rules concerning dams" is to prevent human-made disasters due to construction or operation of dams by persons other than *river administrators* who have obtained permission or approval under the River Law.

[Note 44-2] It is generally believed that when a reservoir is formed by damming a river, flood flow is reduced because part of flood flow is stored in a reservoir. Adverse effects might result, however, because of increases in flood propagation velocity, decreases in channel storage capacity, sedimentation at the upstream end of the reservoir, and the influence of backwater.

[Law 44-3] River Law Article 26 (Permission for construction of structures)

[Gor 44-4] Government Ordinance Article 23 (Dams requiring measures to retain river functions)

Dams as stipulated in Article 44 (Maintenance of the existing functions of a river) Paragraph 1 of the River Law shall be one of the following:

- (1) A dam that has spillway gates and has an impoundment section or sections whose total length (sum total of the lengths of river sections before impoundment within the reservoir area⁴⁴⁻⁵⁾; the same shall apply hereafter in this article) is 10km or more
- (2) In the case where there are two or more dams spaced not more than 30km apart along the same river and where the total length of impoundment sections associated with those two or more dams is 15km or more, one of those dams that has spillway gates
- (3) A dam other than those listed in the two preceding items whose height from foundation ground to overflow crest is 15m or more⁴⁴⁻⁶⁾.

[Note 44-5] The sum total of the lengths of river sections before impoundment is the sum total of the lengths of main stream and tributary sections at flood pool level before impoundment.

[Note 44-6] "Foundation" refers to bedrock that serves as the foundation for a dam. "Crest" refers to the top of a nonoverflow section (or the top of an overflow section in the case of a dam without a nonoverflow section).

[Gor 44-7] Government Ordinance Article 24 (Criteria for *river administrator's* instructions)

Criteria for the *river administrator's* instructions as stipulated in Article 44 44 (Maintenance of the existing functions of a river) Paragraph 2 of the River Law shall be as follows:

- (1) In the case where there is a risk of a disaster resulting from a rise of water level or river bed upstream from a planned dam, the *river administrator* may give instructions, if necessary, to take measures such as construction or reconstruction of levees, embankment on lowlands, dredging of river beds, preliminary release for natural removal of sediment from the lower-end zone of the reservoir and the like;
- (2) In the case where there is a risk of a disaster due to a considerable increase in flood discharge downstream of a dam of Item (1) or (2) of the preceding article, the *river administrator* may give instructions to the person who constructs the dam to secure a capacity that is deemed necessary to regulate the increase in flood discharge by one or more of three methods: the surcharge method, the limited water level method and the flood control release method.

(Monitoring of Hydrological Situation)

Article 45.

A person who owns a *water utilization dam* fixed by Government Ordinance ⁴⁵⁻¹⁾ shall construct observation facilities and observe the water stage, discharge and precipitation in accordance with the standards which may be fixed by Government Ordinance ⁴⁵⁻²⁾.

[Gor 45-1] Government Ordinance Article 25 (Dams requiring observation of water level, etc.)

Dams to be specified by the Government Ordinance mentioned in Article 45 of the River Law shall be dams that have spillway gates.

[Gor 45-2] Government Ordinance Article 26 (Criteria for provision of observation facilities)

Criteria to be stipulated in the Government Ordinance mentioned in Article 45 (Monitoring of hydrological situation) of the River Law shall be as follows:

- (1) In consideration of the river conditions and meteorological and other conditions, one or more rain gauges in the case of a dam having a catchment area of less than 200km², two or more rain gauges in the case of a dam having a catchment area of 200km² or more and less than 600km², and three or more rain gauges in the case of a dam having a catchment area of 600km² or more shall be installed within the catchment concerned.

(2) In the case where all or part of the catchment of the dam concerned lies in a snowy region, one or more rain gauges shall be installed, as appropriate, within the catchment in consideration of the river conditions and meteorological and other conditions.

(3) A water level gauge shall be installed directly downstream from the dam, and if it is necessary to know the fluctuations of inflow into the reservoir in advance, a water level gauge shall be installed directly upstream from the reservoir and directly downstream from the dam.

(4) All rain gauges and water level gauges shall be of automatic recording type.

2 With respect to the application of the provisions of the preceding paragraph, in the case where there is a rain gauge, snow gauge or water level gauge that has been installed by a person other than the owner of the dam concerned and that enables the owner of the dam to obtain observation results quickly, said rain gauge, snow gauge or water level gauge shall be deemed to have been installed by the dam owner.

(Report on the Dam Operation)

Article 46.

When a flood occurs or when it is apprehended that a flood may occur, the owner of a *water utilization dam* referred to in the preceding article shall report the results of observation under the provision of the same article and the condition of operating the dam to the *river administrator* and the prefectural governor, as may be provided for in detail by Government Ordinance⁴⁶⁻¹.

2 The owner of a *water utilization dam* referred to in the preceding article shall have reporting facilities necessary for making the report of the preceding paragraph promptly and correctly in accordance with the standards which may be fixed by Government Ordinance⁴⁶⁻².

[Gor 46-1] Government Ordinance Article 27 (Reporting of observation results, etc.)

Information to be reported under the provisions of Article 46 Paragraph 1 of the River Law shall include information on observation results including, but not limited to, hourly rainfall and cumulative rainfall at observation points and reservoir inflow and cumulative reservoir inflow and information on operations including, but not limited to, release schedule, the amount of release, gate opening and reservoir level.

[Gor 46-2] Government Ordinance Article 28 (Standards for reporting facilities)

Standards stipulated in the Government Ordinance mentioned in Article 46 (Report on the dam operation) Paragraph 2 of the River Law shall be as follows:

- (1) Reporting facilities shall be capable of making reporting possible even in case of a flood;
- (2) Reporting in important sections where quick and accurate reporting is necessary shall be made by means of radiotelephone or other dedicated reporting facilities.

(Regulations for Dam Operation)

Article 47.

When the owner of a *water utilization dam*⁴⁷⁻¹⁾ intends to use the dam for the purpose of storing or taking river water, he shall establish regulations for operating it and obtain the approval of the *river administrator* concerning the regulations, as may be provided for in detail by Government Ordinance⁴⁷⁻²⁾. The same shall apply in case he intends to revise the regulations.

2 When the *river administrator* intends to give approval to regulations referred to in the preceding paragraph for a *water utilization dam* fixed by Government Ordinance⁴⁷⁻³⁾, he shall first hear the opinion of the prefectural governor concerned.

3 Operation of a *water utilization dam* shall be conducted in accordance with the regulations for operating it approved under Paragraph 1.

4 In case the *river administrator* deems that, owing to works connected with a *water utilization dam* or a change of river condition or under a special circumstance involving the river, the regulations for operating it may hinder the administration of the river, he may order a change of the regulations.

[Note 47-1] Dams to which Article 47 (Regulations for dam operation) of the River Law applies are all dams defined in Note 44-4 to Article 44 (Maintenance of the existing functions of a river).

[Gor 47-2] Government Ordinance Article 29 (Regulations for dam operation)

The operation regulations provided for in Article 47 (Regulations for dam operation) Paragraph 1 of the River Law shall stipulate the following:

- (1) Matters concerning storage and release methods;
- (2) Matters concerning inspection and maintenance of machinery, instruments, etc., necessary for dams and dam operation;
- (3) Matters concerning meteorological and hydrological observations necessary for dam operation
- (4) Matters concerning measures to be taken at the time of release;
- (5) Other necessary matters concerning the method of dam operation.

[Gor 47-3] Government Ordinance Article 30 (Dams designated by Government Ordinance)

Dams designated by the Government Ordinance referred to in Article 47 (Regulations for dam operation) Paragraph 2 of the River Law shall be those defined in Article 23 Items 1 and 2 of the Government Ordinance.

(Preventive Measures for Damage)

Article 48.

Whenever the owner of a *water utilization dam* ⁴⁸⁻¹⁾ deems that the operation of the dam will cause a considerable change in the condition of the river water and so it is necessary for prevention of the resulting harm, he shall in advance report the fact to the prefectural governor concerned, the heads of the cities, towns and villages concerned and the heads of the police stations concerned and take necessary steps to make it known to the public, as may be provided for in detail by Government Ordinance ^{48-2) 48-3)}.

[Note 48-1] Dams to which Article 48 (Preventive measures for damage) of the River Law applies are all dams defined in Note 44-4 to Article 44.

[Gor 48-2] Government Ordinance Article 31 (Safety measures)

In the case where the owner of a dam intends to report to the prefectural governor concerned, the head of the municipality concerned or the head of the police station concerned under the provisions of Article 48 (Preventive measures for damage) of the River Law, the owner shall indicate the date of the dam operation concerned and the quantity of river water to be released or an estimated water level rise downstream resulting from the dam operation. In the case where the owner of a dam intends to inform the entire public, the owner shall alert the public by means of not only bulletin boards as stipulated in the Ministry of Construction Ordinance ⁴⁸⁻³⁾ but also sirens, warning bells, public address systems, or the like.

[Moc 48-3] MOC Ordinance Article 26 (Form of bulletin boards, etc.)

Posting by means of bulletin boards under Article 31 of the Government Ordinance shall be made using a form similar to Form 14 attached hereto. In the case where it is deemed necessary to use a special form of posting because of the date of release, the condition of the river and its surroundings, etc., posting using a form similar to Form 15 shall be made on an as-needed basis.

2 Methods of warning by means of sirens or alarm bells referred to in Article 31 of the Government Ordinance shall be as shown in the table below.

Siren		Alarm bell	
Approx. 1 min.	Approx. 1 min.	Approx. 10 sec.	Approx. 10 sec.
● ^	● ^	● ^	● ^
Pause			

- Notes: (1) Continue warnings for an appropriate time period.
 (2) Use sirens and alarm bells in combination, if necessary.

(Preparation and Custody of Operation Record)

Article 49.

The owner of a *water utilization dam* shall prepare a record of the operation of the dam whenever a flood occurs, keep it, and, when demanded to submit it by the *river administrator*, submit it without delay to the *river administrator*, as may be provided for in detail by Ministry of Construction Ordinance ⁴⁹⁻¹).

[Moc 49-1] MOC Ordinance Article 27 (Keeping of records at time of flood)

Records provided for in Article 49 (Preparation and custody of operation record) of the River Law shall include the following information:

- (1) Hourly rainfall and cumulative rainfall;
- (2) In the case where a water level gauge is installed upstream from the reservoir and downstream from the dam, water level and discharge at those locations;
- (3) Reservoir level, gate opening, the amount of release and reservoir inflow;
- (4) Matters concerning measures for reporting and public notification stipulated in Article 48 of the River Law;
- (5) Other relevant information.

2 Information items (1) and (2) in the preceding paragraph shall be recorded at one hour intervals, and item (3) in the preceding paragraph shall be at thirty-minute intervals each time gate operation is performed.

(Appointment of a Chief Superintendent for a Dam)

Article 50.

In case the owner of a *water utilization dam* uses the dam for the purpose of storing or taking river water, he shall appoint as chief superintendent for a dam ⁵⁰⁻¹, an engineer possessing the qualifications fixed by Government Ordinance ^{50-2) 50-3)} for proper execution of the maintenance, operation and other administration of the dam.

2 When the owner of a *water utilization dam* has appointed the chief superintendent for the dam in accordance with the provision of the preceding paragraph, he shall make a report to the *river administrator* on the matters fixed by Ministry of Construction Ordinance ⁵⁰⁻⁴⁾ concerning the chief superintendent for the dam.

[Note 50-1] Safety and operation of a dam and reservoir is closely connected to the safety of the areas along the river downstream from the dam. In order to manage and operate dams safely and reliably and clarify where the responsibility lies, the owners or users of dams are required to appoint a chief superintendent for each dam.

[Gor 50-2] Government Ordinance Article 32 (Qualifications for chief superintendent)

Qualifications stipulated in the Government Ordinance referred to in Article 50 (Appointment of a chief superintendent for a dam) Paragraph 1 of the River Law shall be as follows:

- (1) A person who has completed a regular course in civil engineering at a college or a technical college defined in the School Education Law (Law No. 26, 1947), a college defined in the College Ordinance (abolished; Imperial Ordinance No. 388, 1918) or a secondary school defined in the Technical School Ordinance (abolished; Imperial Ordinance No. 61, 1903) and has five-year-or-more experience with river administration;
- (2) A person whose knowledge and experience are deemed by the Minister of Construction to be equal to or greater than those of a person defined in the preceding item⁵⁰⁻³⁾

[Gor 50-3] Government Ordinance Article 53 (Delegation of powers)

2 Of the Minister of Construction's powers stipulated in the River Law, the following shall be transferred to the directors-general of the regional construction bureaus:

Powers under the provision of Article 32 Item (3) of the Government Ordinance

[Moc 50-4] MOC Ordinance Article 28 (Notification of chief superintendent)

Matters to be stipulated in the Ministry of Construction Ordinance referred to in Article 50 (Appointment of a chief superintendent for a dam) Paragraph 2 of the River Law shall be the items listed below. Notification on those matters shall be made by submitting a notification on Form 16 attached hereto.

- (1) Name and location of the dam to be administered.
- (2) Name and address.
- (3) Education and professional experience.
- (4) Other relevant matters.

For information on the Ministry of Ordinance Article 41 (Routing of application for permission, etc.), see Note 23-4 to Article 23 (Permission for river water use) of the River Law.

(Exception for Water Utilization Dams Used as River Administration Facilities)

Article 51.

In the case where a facility is used as a *water utilization dam* and as a *river administration facility* concurrently, when the *river administrator* undertakes the charge of the maintenance and operation of the facility on the basis of the agreement reached by the consultation of Article 17⁵¹⁻¹⁾ Paragraph 1, special provisions may be made by Government Ordinance⁵¹⁻²⁾ concerning the application of the provisions of this subsection.

[Note 51-1] When a dam and a *river administration facility* are built as one structure, the dam owner and the *river administrator* may, by mutual consultation, determine the method of administration as stipulated in Article 17 (*Joint use structures*) Paragraph 2 of the River Law. If, as a result of this consultation, it is concluded that the *river administrator* should maintain and operate the facility, the dam owner may be exempted from some of his obligations.

[Gor 51-2] Government Ordinance Article 33 (Exceptions concerning dams as *joint use structures*)

In the case stipulated in Article 51 (Exception for *water utilization dams* used as *river administration facilities*) of the River Law, the provisions of Article 45 (Monitoring of hydrological situation) through Article 50 (Appointment of a chief superintendent for a dam) of the River Law shall not apply.

Subsection 4. Steps to Be Taken During Emergencies

(Instructions for Flood Control) ⁵²⁻¹⁾

Article 52.

In case a disaster has been caused or there is a strong probability that a disaster will be caused by floods, if the *river administrator* deems it of urgent necessity for preventing or minimizing the disaster, he may instruct the owner of the *water utilization dam* that he should, on the basis of overall consideration of the conditions of the rivers belonging to the water system, take necessary steps ⁵²⁻²⁾ in connection with the operation of the dam to prevent or minimize the disaster.

[**Note 52-1**] Flood is one of the most damaging of natural disasters. In a country with steep topography and located in a typhoon-prone region like Japan, every effort must be made to prevent occurrence of flood disasters. This provision therefore makes it possible to make effective use of the flood control capacity of dams and reservoirs in an emergency even if they are *water utilization dams* and reservoirs owned by the private sector.

[**Note 52-2**] Examples of "necessary steps" include storage limiting and release of water in advance aimed at securing the storage capacity required for controlling anticipated flood flows.

[**Note 52-3**] The River Law empowers and obligates river administrators to formulate and implement basic policies and plans associated with rivers and take actions in connection with the use of river water. As for flood defence activities, such as the monitoring, reinforcement and emergency repairs of levees, in the event of an imminent danger (e.g., flood, storm surge), it has traditionally been common practice for the locality faced with the danger and its residents to take care of themselves. In view of this history, the Flood Fighting Law requires that the municipality as the representative of the local residents or the local flood-fighting cooperative undertake flood defence activities. The Flood Fighting Law,⁵²⁻⁴⁾ which does not use the term "river administrator" partly because the law was enacted in 1949, that is, before the complete revision of the River Law in 1964, stipulates the roles of the Minister of Construction and the governor of the prefecture concerned, which are actually the river administrators as provided for in the River Law, as follows:

[Flood Fighting Law Article 3-6 (Responsibility of prefectural governments for flood fighting)]

Each prefectural government is responsible for ensuring that appropriate flood fighting activities are carried out in its jurisdiction by local flood-fighting administration bodies (municipal governments or flood-fighting cooperatives).

[Flood Fighting Law Article 7 (Flood-fighting plans of prefectural governments)]

The governor of each prefecture shall formulate its own flood-fighting plan, after consultation with the prefecture's flood-fighting council, for coordination and successful implementation of flood-fighting procedures.

2 (Omitted)

[Flood Fighting Law Article 10 (Flood forecasting)]

1 (Omitted)

2 Should the Minister of Construction has judged that a river which extends over two or more prefectures or which has a large basin is likely to flood to cause a serious loss to the national economy, he shall, in cooperation with the Director-General of the Meteorological Agency, notify the prefectural governor or governors concerned of the imminence of a flood, along with information on water level and discharge, and inform the public of the imminence of a flood by obtaining the cooperation of the media.

3 (Omitted)

[Flood Fighting Law Article 10-2 (Notice on flood forecast)]

Should a prefectural governor have been notified as stipulated in Paragraph 1 or Paragraph 2 of the foregoing article (Article 10), he shall immediately notify the flood-fighting managers (managers of water gauges and other facilities; the same shall apply hereinafter) and water gauge managers stipulated in the prefecture's flood fighting plan of the notice he has received.

[Flood Fighting Law Article 10-4 (Flood fighting warning)]

The Minister of Construction shall issue a flood fighting warning for designated rivers, lakes or seacoasts that could cause a serious loss to the national economy due to a flood or high tide, and the governor of each prefecture shall issue the same for designated rivers, lakes and coasts other than those designated by the Minister of Construction and which could cause a considerable loss due to a flood or high tide.

2, 3 and 4 (Omitted)

[Flood Fighting Law Article 23 (Prefectural governor's directions)]

Should there be an urgent need in an emergency, a prefectural governor may give directions to flood-fighting administrators, heads of flood-fighting units and heads of fire-fighting organizations.

[Flood Fighting Law Article 24 (Minister of Construction's directions in connection with an important river)]

In the event of an emergency requiring an urgent action in connection with a river that extends over two or more prefectures and that is particularly important for the maintenance of public safety, the Minister of Construction may give directions to prefectural governors, flood-fighting administrators, heads of flood-fighting units and heads of fire-fighting organizations.

[Flood Fighting Law Article 35-2 (Recommendations and advice)]

The Minister of Construction may give prefectural governments and flood-fighting administration bodies recommendations and advice necessary for flood fighting, and prefectural governors may give similar recommendations and advice to flood-fighting administration bodies within their jurisdictions.

[Note 52-4] Flood-Fighting Law

(Purpose)

The purpose of this Law is to maintain public safety by giving warnings of and guarding against floods and high tides and reducing damage due to floods and high tides.

(Contents)

Chapter 1 General Provisions , Chapter 2 Flood-Fighting Organizations , Chapter 3 Flood-Fighting Activities , Chapter 4 Organization and Activities of Designated Flood-Fighting Administration Bodies , Chapter 5 Expenses and Subsidies , Chapter 6 Miscellaneous Provisions , Chapter 7 Penal Provisions

(Water Uses Conciliation During Droughts) ⁵³⁻¹⁾

Article 53.

In case an *unusual drought* ⁵³⁻²⁾ makes it difficult to adequately use the river water for the permitted utilization purposes or when such a situation is expected, the persons who have obtained permissions to use the water (hereinafter, permitted water users in this subsection) shall make efforts to consult with one another ⁵³⁻³⁾. In this case, *river administrators* shall exert himself/herself to provide necessary information for water use conciliation to achieve a smooth consultation.

2 In making consultation according to the preceding paragraph, permitted water users shall respect the uses of the others.

3 In case no agreement is reached in consultation according to Paragraph 1, the *river administrator* may, when it is requested by permitted water users or when he deems it would seriously harm the public benefit unless an urgent coordination of the uses of water is effected, he may make necessary intermediation or arbitration with respect to the coordination among the water uses.

(This article amended by Law No.69 of 4 June 1997)

[Note 53-1] Eighty-five percent of water use in Japan depends on river water, and the remaining 15 percent on groundwater. In the event of low precipitation and a drought severer than the design drought, therefore, it is necessary to conciliate between water uses in different areas and for different purposes. In Japan, older *water rights* have traditionally been deemed superior to recent *water rights*. As water utilization associated with drinking water supply which is closely connected to everyday life has increased, giving priority to older *water rights*, which consist primarily of irrigation *water rights*, over drinking *water rights* can not necessarily be deemed rational. The River Law stipulates that in the event of a drought, which is usually not so urgent as a flood, the river users concerned first try voluntarily to adjust their water uses. However, in view of the present conditions of river basins, where two-dimensional expansion of water utilization is in progress and facilities for water resource development such as dams, reservoirs and headraces are becoming increasingly complex, the law seeks to make *river administrators* to be essentially involved in water use adjustment from the early stages of a drought by requiring *river administrators* to provide necessary information.

[Note 53-2] "*Unusual drought*" refers to a drought that is severer than a drought whose recurrence interval is used as a basis of water resources development planning and the granting of water rights. In Japan, a recurrence

interval of drought of about 10 years is often used as a basis of water resources development planning.

[**Note 53-3**] The Ministry of Construction has been working to establish a "*Drought conciliation Council*" composed of the *river administrator*, water users, local government, and administrative agencies concerned for each river as a forum for mutual consultation among the water users concerned. As of the end of June 1996, a total of 86 *Drought conciliation Councils* have been established for *class A river* areas.

(Exceptional Arrangements for Water Utilization During Droughts)⁵³⁻²⁻¹⁾

Article 53 - 2

Permitted water users may, after obtaining the approval of the *river administrator*, let other permitted water users whose water use has been made difficult by an *unusual drought*, for the duration of the said *unusual drought*, use all or part of the water that the water user himself has been permitted to use under Article 23 or Article 24⁵³⁻²⁻²⁾.

2 Should a permitted water user decide to forgo water use approved under the provision of the preceding paragraph, he /she shall notify the *river administrator* to that effect without delay.

3 After the *river administrator* receives a notice stipulated in the preceding paragraph or when the approved water use by other permitted water users as stipulated in Paragraph 1 is no longer difficult, the *river administrator* must cancel the approval grant in Paragraph 1 .

(This article added by Law No.69 of 4 June 1997)

[**Note 53-2-1**] Under the River Law, water uses at times of *unusual drought* are as a rule to be conciliated through voluntary efforts among the water users concerned, and the law encourages mutual transfer of water in case of an *unusual drought*. However, because of the understanding that river water is the property of the people of Japan and use of river water can affect the quality and quantity of river water available to the areas downstream, the quantity of water, the purpose of use and the point of diversion are strictly stipulated as the conditions for granting *water rights*, and it is not easy to alter those conditions. This article gives flexibility to water use adjustment at times of drought by stipulating that in the event of an *unusual drought* the point of diversion may be temporarily changed, after obtaining the approval of the *river administrator*, without altering the conditions for granting the *water rights* concerned. For information on drought conciliation practices in Japan, see *Drought Conciliation and Water Rights (IDI Water Series No.1)* published by the Infrastructure Development Institute - Japan.

[**Law 53-2-2**] River Law Article 23 (Permission for river water use), Article 24 (Permission for land occupancy)

Section 4. The River Conservation Zone⁵⁴⁻¹⁾

(Designation of the River Conservation Zone)

Article 54.

When the *river administrator* deems it necessary for the conservation of the river-banks or *river administration facilities* (excluding the *fluvial woods zone*, the same shall apply to Paragraph 3), he may designate an area adjacent to the *river zone* (excluding areas designated under the provision of Article 58-2⁵⁴⁻²⁾ Paragraph 1; the same shall apply to Paragraph 3) as a river conservancy zone.

2 When the Minister of Construction intends to designate a *river conservation zone*, he shall in advance hear the opinion of the prefectural governor concerned. The same shall apply in case he intends to change or abolish it.

3 The designation of a *river conservation zone* shall be made only for the minimum area necessary for conservancy of the river-bank or *river administration facility*, and shall not be made beyond 50 meters from the boundary of the *river zone* (excluding the *fluvial woods zone*). In case, however, it is absolutely necessary according to the conditions of the topography, geology, etc., the designation may be made beyond 50 meters.

4 When the *river administrator* designates a *river conservation zone*, he shall notify the public to that effect as may be provided for in detail by Ministry of Construction Ordinance⁵⁴⁻³⁾. The same shall apply in case of changing or abolishing a *river conservation zone*.

(Paragraphs 1 & 3 amended by Law No.69 of 4 June 1997)

[Note 54-1] Levees, the most important component of *river administration facilities*, are composed primarily of earth. Therefore, a change in configuration of land adjoining a levee, particularly excavation of adjoining land, might cause adverse effects such as causing collapse to the extent of altering the configuration and functionality of the land, thereby causing a serious hindrance to river administration. For this reason, areas of land that do not need to be regulated for the purpose of construction of *river administration facilities*, but need to be regulated for the purpose of conservation are designated as *river conservation zones*, and acts that hinder river administration in those areas are regulated.

[Law 54-2] River Law Article 58-2 (The *spatial river zone*)

[Moc 54-3] MOC Ordinance Article 29 (Public notification of *river conservation zones*)

The provisions of Article 2 6-5) of the Ministry of Construction Ordinance shall apply mutatis mutandis to public notification as stipulated in Article 54 (Designation of the *river conservation zone*) Paragraph 3 of the River Law.

(Restrictions within the River Conservation Zone)

Article 55.

Any person who intends to do an act falling under any one of the following items shall obtain the permission of the *river administrator* as may be provided for in detail by Ministry of Construction Ordinance ^{55-1) 55-2)}. However, the same shall not apply to the case involving an act fixed by Government Ordinance ^{55-3) 55-4)}.

- (1) Excavation of land, banking, cutting or other act which changes the configuration of land;
- (2) Construction or reconstruction of a structure.

2 The provision of Article 33 ⁵⁵⁻⁵⁾ shall apply *mutatis mutandis* to the heir, juridical person established by merger or other general business successor succeeding to the business of a person who obtained the permission of the preceding paragraph, to the person who takes over from a person who obtained the permission of the preceding paragraph the land or structure regarding which the permission was obtained or the land on which the structure regarding which the permission was obtained is to be built (hereinafter in this paragraph referred to as land etc. regarding which the permission was obtained) and to the person who, by lease or any other means, obtains the right to use the land etc. regarding which the permission was obtained from a person who obtained the permission concerned.

[Moc 55-1] MOC Ordinance Article 30 (Application for permission for certain acts within the *river conservation zone*)

The provisions of Article 15 ²⁴⁻³⁾ of the Ministry of Construction Ordinance shall apply *mutatis mutandis* to application for permission as provided for in Article 55 Paragraph 1 Item (1) or Item (2) of the River Law concerning construction or reconstruction of structures. The provisions of Article 16 ²⁷⁻²⁾ of the Ministry of Construction Ordinance shall apply *mutatis mutandis* to application for permission as provided for in Article 55 (Restrictions within the *river conservation zone*) Paragraph 1 Item (1) of the River Law.

[Note 55-2] For information on Articles 39, 40 and 41 of the Ministry of Construction Ordinance, see Notes 23-2, 23-3 and 23-4 to Article 23 (Permission for river water use) of the River Law.

[Gor 55-3] Government Ordinance Article 34 (Acts within the *river conservation zone* that do not require permission)

Acts as stipulated in the proviso of Article 55 (Restrictions within the *river conservation zone*) Paragraph 1 of the River Law [excluding acts that are defined in Items (2) through (5) and that are done on land within 5m from the site of a *river administration facility* (if the *river administrator* specifies a different distance in consideration of the structure of the *river administration facility* or topographical, geological or other conditions, the distance specified by the *river administrator*)] shall be the following:

- (1) Tilling;
 - (2) Banking within 3m in height (excluding banking along a levee to form an embankment whose length along the levee is 20m or more);
 - (3) Excavation or cutting on land on the land side of the levee to a depth of 1m or less from ground surface;
 - (4) Construction or reconstruction of a structure (excluding strong structures such as concrete structures, stone structures and brick structures, and structures such as reservoirs, water tanks, wells and water channels which are subject to water seepage);
 - (5) Acts other than those listed above that the *river administrator* designates as being of small consequence to conservation of river banks or river administrations.
- 2 The provisions of Article 15-4 27-4) Paragraph 2 shall apply mutatis mutandis to specification as stipulated in the preceding paragraph.

[Moc 55-4] MOC Ordinance Article 31 (Public notification of acts within the *river conservation zone* that do not require permission)

The provisions of Article 17 Paragraph 1 of the Ministry of Construction Ordinance shall apply mutatis mutandis to public notification as stipulated in Article 34 Paragraph 1 of the Government Ordinance.

[Law 55-5] River Law Article 33 (Succession to status)

Section 5. The Projected River Zone⁵⁶⁻¹⁾

(The Projected River Zone)

Article 56.

In case the *river administrator* deems it necessary for execution of any *river works*, he may designate as a *projected river zone* any stretch of land which is to be included in the *river zone* (excluding areas designated under the provision of Article 58-2 Paragraph 1)⁵⁶⁻²⁾ by execution of the *river works*.

2 The designation of a *projected river zone* shall not be made until after the date when the execution of the *river works* has become definite in view of the work execution plan.

3 When the *river administrator* designates a *projected river zone*, he shall notify the public to that effect, as may be provided for in detail by Ministry of Construction Ordinance⁵⁶⁻³⁾. The same shall apply in case he changes or cancels a designation made.

[Note 56-1] Construction of large structures such as dams and floodways require acquisition of large expanses of land, and obtaining the consent of the landowners concerned in the land acquisition process usually takes a very long time. Construction or reconstruction of houses and other structures which will have to be removed in the near future would increase the cost of land acquisition and would put an unnecessary burden on the national economy. In the past, in addition, there were cases, although rare, where some people expanded or rebuilt their houses with the aim of obtaining as much compensation as possible. In order to prevent such wastefulness and contradictions, it has been decided to impose certain restrictions on land use within planned project sites by designating them as *projected river zones*.

[Law 56-2] River Law Article 58-2 (The *spatial river zone*)

[Moc 56-3] MOC Ordinance Article 32 (Public notification of the *projected river zone*)

The provisions of Article 2 of the Ministry of Construction Ordinance shall apply *mutatis mutandis* to public notification as stipulated in Article 56 (The *projected river zone*) Paragraph 3 of the River Law.

(Restrictions within the Projected River Zone)

Article 57.

A person who intends to do any of the acts mentioned in the following items shall obtain the permission of the *river administrator* as may be provided for in detail by Ministry of Construction Ordinance^{57-1) 57-2)}. However, the same shall not apply to the case of an act fixed by Government Ordinance⁵⁷⁻³⁾.

- (1) Excavation of land, banking, cutting or other act which changes the configuration of land;
- (2) Construction or reconstruction of a structure.

2 In case a person suffers a loss caused by the restriction of his act according to the provision of the preceding paragraph, the *river administrator* shall compensate him for such loss as would ordinarily be incurred.

3 The provisions of Article 22 Paragraph 4 and 5 ⁵⁷⁻⁴⁾ shall apply mutatis mutandis to the compensation of losses according to the provision of the preceding paragraph, and that of Article 33 ⁵⁷⁻⁵⁾ shall apply mutatis mutandis to the heir, juridical person established by merger or other general business successor succeeding to the business of a person who obtained the permission of Paragraph 1, to the person who takes over from the person who obtained the permission referred to in Paragraph 1 the land or structure regarding which the permission was obtained or the land on which the structure regarding which the permission was obtained is to be build (hereinafter referred to in this paragraph as land etc. regarding which the permission was obtained) and to the person who, by lease or any other means, obtains the right to use the land etc. regarding which the permission was obtained from a person who obtained the permission of Paragraph 1.

[Moc 57-1] MOC Ordinance Article 33 (Application for permission for acts within the *projected river zone*)

The provisions of Article 15 of the Ministry of Construction Ordinance shall apply mutatis mutandis to application for permission concerning construction or reconstruction of structures as stipulated in Article 57 (Restrictions within the *projected river zone*) Paragraph 1 Items (1) or (2) of the River Law. The provisions of Article 16 of the Ministry of Construction Ordinance shall apply mutatis mutandis to application for permission (excluding permission concerning construction or reconstruction of structures) as stipulated in Article 57 (Restrictions within the *projected river zone*) Paragraph 1 Item (1) of the River Law.

[Note 57-2] For information on Articles 39, 40 and 41 of the Ministry of Construction Ordinance, see Moc 23-2, 23-3 and 23-4 concerning Article 23 (Permission for river water use) of the River Law.

[Gor 57-3] Government Ordinance Article 35 (Acts in the *projected river zone* that do not require permission)

Acts stipulated in the proviso of Article 57 (Restrictions within the *projected river zone*) Paragraph 1 of the River Law shall be the following:

- (1) Tilling;
- (2) Excavation or cutting of land within 1.5m from ground surface.

[Law 57-4] River Law Article 22 (Emergency measures to be taken during floods, etc.)

[Law 57-5] River Law Article 33 (Succession to status)

(Projected River Zone Land Whose Land Title is Acquired by the River Administrator)

Article 58.

After the *river administrator* obtains the title to land in the *projected river zone*, the land shall be regarded as land within the *river zone* even before the land becomes part of a *river zone* as far as the application of this Law is concerned ⁵⁸⁻¹. However, the penal provisions shall apply only in cases where there is provision to that effect.

[Note 58-1] A *river zone* is an area of land in which there is a functioning river, dam or floodway. Strictly speaking, therefore, an area of land that is not yet functional cannot be called a *river zone* even after the *river administrator* has acquired rights to the land. This article stipulates that such land can also be treated as part of a *river zone*.

Chapter II-2. The Spatial River ⁵⁸⁻²⁻¹⁾

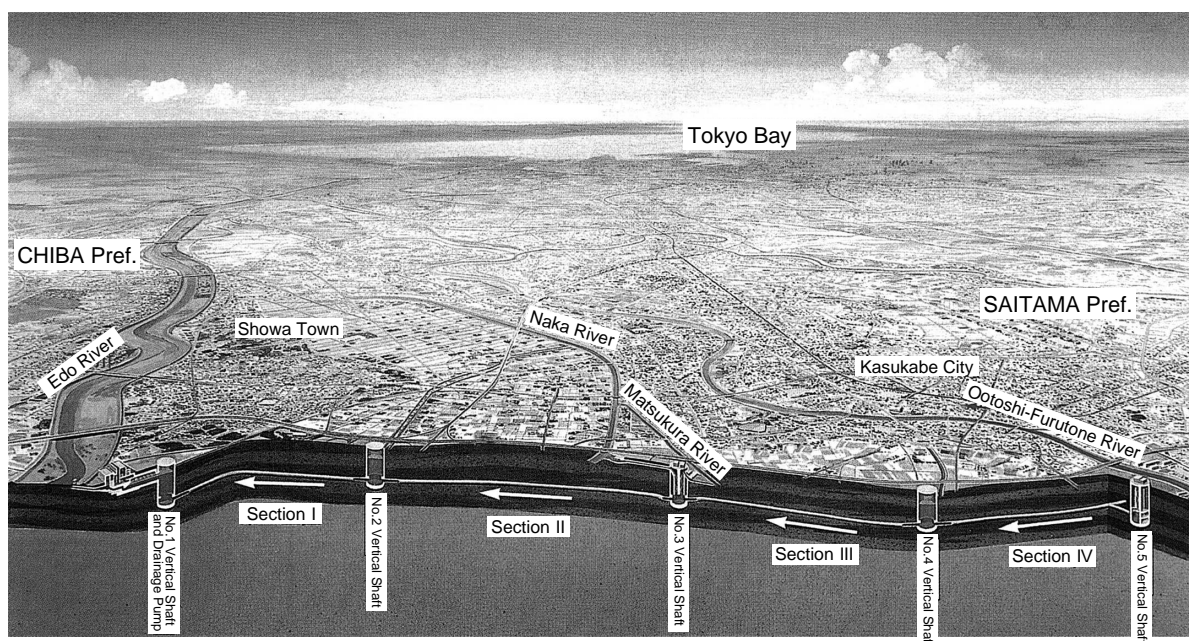
(The Spatial River Zone)

Article 58-2.

Notwithstanding the provision of Article 61 ⁵⁸⁻²⁻²⁾ Paragraph 1, when the *river administrator* deems it necessary for proper and rational land use under existing conditions of a *river zone* including *river administration facilities* that are constructed underground, contained in other structures, or designed as a space to store flood water and that are made up of columns or walls and artificial ground supported by them, the *river administrator* may designate that *river zone* including a clearly defined aboveground and underground space as a *spatial river zone* ⁵⁸⁻²⁻³⁾.

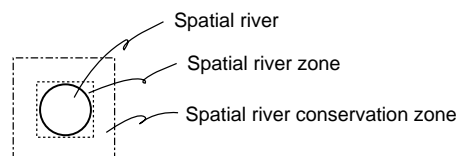
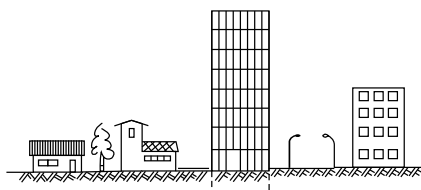
2 When the *river administrator* designates a *river zone* as defined in the preceding paragraph (hereafter in this chapter and in item (3) of Article 106 referred to as a *spatial river zone*), he shall notify the public to that effect as may be provided for in Government Ordinance ⁵⁸⁻²⁻⁴⁾. The same shall apply in case he changes or cancels a designation made.

[Note 58-2-1] In Japan, in keeping pace with the progress of urbanization, there are growing calls for systematic flood control in urban areas, but acquisition of land for use as project sites is become increasingly difficult. A "spatial river" (often an underground river) temporarily stores flood water by use of an underground aboveground space and safely discharge it downstream. An example is the Metropolitan Area External Floodway Project, in which rivers are interconnected by 6.3km underground tunnels 10m in diameter and flood waters are stored temporarily and bypassed.



[Law 58-2-2] River Law Article 6 (The *river zone*)

[Note 58-2-3] "*River zone*" and "*river conservation zone*" have been defined so as to include underground and aboveground space of the land concerned, and land regulations in these zones cover not only the surface of the land but also underground and aboveground space. Consequently, in the case where a new river such as a floodway is constructed,



as rule all rights to the land concerned are to be acquired. Since, however, a *spatial river* is planned and constructed in the case where acquiring all rights to the land concerned including underground and aboveground space is difficult or doing so is likely to hinder rational land use, it is not possible to directly apply the regulations concerning the *river zone* and the *river conservation zone*. This article, therefore, stipulates that regulations apply not only to a plane but space.

[Moc 58-2-4] MOC Ordinance Article 33-2 (Public notification of designation of *spatial river zone*, etc.)

Public notification provided for in Article 58-2 Paragraph 2 of the River Law shall be made via the Official Gazette if by the Minister of Construction or a gazette of the prefecture concerned if by a prefectural governor by indicating the *spatial river zone* concerned by one or more of the following items:

- (1) Name of city, town or village, lot number and elevation
- (2) Certain types of natural features of land, facilities or structures
- (3) Plan, longitudinal section, cross section

(The Spatial River Conservation Zone)

Article 58-3.

When the *river administrator* deems it necessary for the conservation *river administration facilities* in an area to be designated as a *spatial river zone*, he may designate a clearly defined aboveground and underground space adjoining the *spatial river zone* as a *spatial river conservation zone* ⁵⁸⁻³⁻¹⁾.

2 When the Ministry of Construction intends to designate a *spatial river conservation zone*, he shall in advance hear the opinion of the prefectural governor concerned. The same shall apply when he intends to change or cancel a designation made.

3 The extent of any *spatial river conservation zone* shall be a minimal space required for conserving the *river administration facilities* involved.

4 When the *river administrator* designates a *spatial river conservation zone*, he shall notify the public to that effect as may be provided for in Government Ordinance ⁵⁸⁻³⁻²⁾. The same shall apply in case he changes or cancels a designation made.

5 Designation of a *spatial river conservation zone* including *river administration facilities* of Paragraph 1 of the preceding article in a *designated river conservation zone* shall nullify the designation of said *river conservation zone*.

[**Note 58-3-1**] For information on the *spatial river conservation zone*, see Note 58-2-3 to Article 58-2 of the River Law.

[**Moc 58-3-2**] MOC Ordinance Article 33-3 (Public notification of designation of the *spatial river conservation zone*, etc.)

The provisions of Article 33-2 of the Ministry of Construction Ordinance shall apply *mutatis mutandis* to public notification stipulated in Article 58-3 Paragraph 4 of the River Law.

(Restrictions within the Spatial River Conservation Zone)

Article 58-4.

A person who intends to do any of the acts listed below in a *spatial river conservation zone*, excluding those stipulated by Government Ordinance ^{58-4-1) 58-4-2)}, shall obtain the permission of the *river administrator* as may be provided for by Ministry of Construction Ordinance ^{58-4-3) 58-4-4)}.

- (1) Excavation of land, banking, cutting or any other act which changes the configuration of land;
- (2) Construction, reconstruction, or removal of a structure.
- (3) The piling of earth, stone or other materials above the load per square meter as specified by Government Ordinance ⁵⁸⁻⁴⁻⁵⁾

2 The provision of Article 33 ⁵⁸⁻⁴⁻⁶⁾ shall apply *mutatis mutandis* to an heir, juridical person established by merger or other general business successor succeeding to the business of a person who obtained the permission of the preceding paragraph, to a person who takes over from a person who obtained the permission of the preceding paragraph the land or structure regarding which the permission was obtained or the land on which the structure regarding which the permission was obtained is to be built (hereinafter in this paragraph referred to as land etc. regarding which the permission was obtained) and to a person who, by lease or any other means, obtains the right to use the land etc. regarding which the permission was obtained from a person who obtained the permission concerned.

[**Gor 58-4-1**] Government Ordinance Article 35-2 (Acts within the *spatial river conservation zone* that do not require permission)

Acts as stipulated in the proviso of Article 58-4 Paragraph 1 of the River Law shall be the following:

- (1) Tilling

- (2) Act that is listed below and that does not cause an increase in surcharge load of more than $2t/m^2$
 - (a) Banking within 1m in height from ground surface
 - (b) Construction or reconstruction of a structure on ground surface or within 1m below ground surface
 - (c) Accumulation of earth, stone or other objects
- (3) Excavation or cutting of land within 1.5m below ground surface
- (4) Removal of a structure on ground surface or within 1m below ground surface
- (5) Acts other than the ones listed above that the *river administrator* designates as being of small consequence to conservation of *river administration facilities*

2 The provisions of designation stipulated in Article 15-4 Paragraph 2 of the Government Ordinance shall apply mutatis mutandis to designation stipulated in Item (5) of the preceding article.

[Moc 58-4-2] MOC Ordinance Article 33-5 (Public notification on acts in the *spatial river conservation zone* that do not require permission)

The provisions of Article 17 Paragraph 1 of the Ministry of Construction Ordinance shall apply mutatis mutandis to public notification stipulated in Article 35-2 Paragraph 1 of the Government Ordinance.

[Moc 58-4-3] MOC Ordinance Article 33-4 (Application for permission for acts in the *spatial river conservation zone*)

The provisions of Article 15 of the Ministry of Construction Ordinance shall apply mutatis mutandis to application for permission concerning construction, reconstruction or removal of a structure stipulated in Article 58-4 Paragraph 1 Items (1) through (3) of the River Law. The provisions of Article 16 of the Ministry of Construction Ordinance shall apply mutatis mutandis to permission concerning excavation, cutting or banking of land or other acts that alter the configuration of land stipulated in Article 58-4 Paragraph 1 Items (1) through (3) of the River Law (excluding permission concerning construction, reconstruction or removal of a structure).

2 Application as provided for in Article 58-4 Paragraph 1 Item (3) of the River Law (excluding permission concerning construction, reconstruction or removal of a structure or excavation, cutting or banking of land or other acts that alter the configuration of land) shall be made by submitting one original of an application on Form 8 (A) and (B-9) and its copies in the number specified in Table 2 attached hereto.

3 The application provided for in the preceding paragraph shall be accompanied by the following documents:

- (1) Document outlining the plan for the project involving accumulation of earth, stone or other objects;
- (2) 1/50,000-scale location map;
- (3) Surveyed plan of land concerned with accumulation of earth, stone or other objects;
- (4) Area calculations for the land concerned with accumulation of earth, stone or other objects;
- (5) In the case of accumulation of earth, stone or other objects on land that a person other than the *river administrator* administers on the basis of his title, a writing indicating that the applicant holds or can be reasonably expected to acquire the title to carry out said accumulation of earth, stone or other objects;
- (6) In the case where it is necessary to receive permission, approval or other disposition by other

administrative agencies in connection with an act or project involving accumulation of earth, stone or other objects, a writing indicating that the applicant has received such disposition or explaining the likelihood of receiving such disposition;

(7) Documents describing other relevant information.

[Note 58-4-4] For information on Articles 39 and 40 of the Ministry of Construction Ordinance, see Notes 23-75-1 and 23-75-2 to Article 23 of the River Law.

[Gor 58-4-5] Government Ordinance Article 35-3 (Weights of accumulated objects in the *spatial river conservation zone* that require permission)

The weight to be stipulated in the Government Ordinance referred to in Article 58-4 Paragraph 1 Item (3) of the River Law shall two tons.

[Law 58-4-6] River Law Article 33 (Succession to status)

(The Projected Spatial River Zone) ⁵⁸⁻⁵⁻¹⁾

Article 58-5.

When the *river administrator* deems it necessary for execution of *river works*, he may designate as a *projected spatial river zone* an aboveground or underground space to be designated as a *spatial river zone* in connection with said *river works*.

2 The designation of a *projected spatial river zone* shall not be made until after the date when the execution of the *river works* has become definite in view of the work execution plan.

3 When the *river administrator* designates a *projected spatial river zone*, he shall notify the public to that effect as may be provided for by Ministry of Construction Ordinance ⁵⁸⁻⁵⁻²⁾. The same shall apply in case he changes or cancels a designation made.

4 Designation of a *projected spatial river zone* including *river administration facilities* of Article 2 ⁵⁸⁻⁵⁻³⁾ Paragraph 1 in a designated *projected river zone* shall nullify the designation of said *projected river zone*.

[Note 58-5-1] This article includes provisions for construction works for *spatial rivers*, which are equivalent to the provisions of Section 5 (The *projected river zone*) Articles 56 through 58 of the River Law concerning the planned sites of ordinary *river administration facilities* such as levees.

[Moc 58-5-2] MOC Ordinance Article 33-6 (Public notification of designation of the *projected spatial river zone*, etc.)

The provisions of Article 33-2 of the Ministry of Construction Ordinance shall apply *mutatis mutandis* to public notification under Article 58-5 Paragraph 3 of the River Law.

[Law 58-5-3] River Law Article 58-2 (The *spatial river zone*)

(Restrictions within the Projected Spatial River Zone)

Article 58-6.

A person who intends to do any of the acts listed below in a *projected spatial river zone*, excluding those stipulated by Government Ordinance ⁵⁸⁻⁶⁻¹⁾, shall obtain the permission of the *river administrator* as may be provided for by Ministry of Construction Ordinance ⁵⁸⁻⁶⁻²⁾.

- (1) Excavation of land, banking, cutting or any other act which changes the configuration of land;
- (2) Construction or reconstruction of a structure.

2 In the event that a person suffers loss as a result of the restriction of his act as stipulated in the preceding paragraph, the *river administrator* shall compensate him for such loss as would ordinarily be incurred.

3 The provisions of Article 22 ⁵⁸⁻⁶⁻³⁾ Paragraphs 4 and 5 shall apply mutatis mutandis to the compensation of losses in accordance with the provision of the preceding paragraph, and the provision of Article 33 ⁵⁸⁻⁶⁻⁴⁾ shall apply mutatis mutandis to an heir, juridical person established by merger or other general business successor succeeding to the business of a person who obtained the permission of Paragraph 1, to a person who takes over from the person who obtained the permission referred to in Paragraph 1 the land or structure regarding which the permission was obtained or the land on which the structure regarding which the permission was obtained is to be build (hereinafter referred to in this paragraph as land etc. regarding which the permission was obtained) and to a person who, by lease or any other means, obtains the right to use the land etc. regarding which the permission was obtained from a person who obtained the permission of Paragraph 1.

[Gor 58-6-1] Government Ordinance Article 35-4 (Acts in the *projected spatial river zone* that do not require permission)

Acts as stipulated in the proviso of Article 58-6 of the River Law shall be the acts listed in the items of Article 35 of the Government Ordinance.

[Moc 58-6-2] MOC Ordinance Article 33-7 (Application for permission for acts in the *projected spatial river zone*)

The provisions of Article 15 of the Ministry of Construction Ordinance shall apply mutatis mutandis to application for permission concerning construction or reconstruction of a structure stipulated in Article 58-6 Paragraph 1 Item (1) or (2) of the River Law. The provisions of Article 16 of the Ministry of Construction Ordinance shall apply mutatis mutandis to application for permission stipulated in Article 58-6 Paragraph 1 Item (1) of the River Law (excluding permission concerning construction or reconstruction of a structure).

[Note 58-6-3] For information on Articles 39 and 40 of the Ministry of Construction Ordinance, see Notes 23-75-1 and 23-75-2 to Article 23 of the River Law.

[Law 58-6-4] River Law Article 22 (Emergency measures to be taken during floods, etc.)

[Law 58-6-5] River Law Article 33 (Succession to status)

(Spatial River Zone Whose Land Title is Acquired by the River Administrator)⁵⁸⁻⁷⁻¹⁾

Article 58-7.

After the *river administrator* obtains the title to the aboveground or underground space in the *projected spatial river zone*, the space shall be regarded, even before the zone becomes a *spatial river zone*, as one within the *spatial river zone* for purposes of application of this Law. However, the penal provisions shall apply only in cases where there is a provision to that effect.

[Note 58-7-1] This article includes provisions for the *spatial river zone*, which are equivalent to the provisions of Article 58 (*Projected river zone* whose land title is acquired by the *river administrator*) of the River Law concerning the planned sites of ordinary *river administration facilities* such as levees.

Chapter III. Financial Responsibility for River Administration

(Principles)

Article 59.

Unless otherwise provided for in this Law ⁵⁹⁻¹⁾ or any other law ⁵⁹⁻²⁾, the expenses necessary for administering a *class A river* is borne by the national government and those necessary for administering a *class B river* is borne by the prefecture where the *class B river* is located. ⁵⁹⁻³⁾

[Note 59-1] The special provisions in the River Law are as follows: Article 60 (Prefectural share for cost for *class A rivers*), Article 61 (Subsidy for cost for *designated section* of *class A rivers*), Article 62 (Subsidy for cost for *class B rivers*), Article 63 (Sharing of cost for class A and B rivers for the benefited prefectures), Article 65 (Sharing of cost for *class B rivers* on prefectural boundaries), Article 66 (Sharing of cost for *joint use structures*), Article 67 (Sharing of cost of works carried out by the person necessitating *river works*), Article 68 (Sharing of cost of *appurtenant works*), Article 69 (Sharing of cost of works carried out by a person other than *river administrator*), Article 70 (Sharing of cost by beneficiaries), Article 70-2 (Sharing of cost by *special river water users*), Article 73 (Sharing of cost to perform obligations) and Article 96 (Special arrangements for Hokkaido region).

[Note 59-2] "Other law" refers to the Specified Multi-Purpose Dams Law, the Water Resources Development Public Corporation Law, the Law concerning National Treasury Share of Expenses for Rehabilitation of Damage to Public Works Facilities, the Law concerning Special Financial Aid etc. in Case of Severe Disaster and the Special Measures Law concerning Upstream Area Development.

[Note 59-3] This article stipulates with regard to the cost of river administration that (1) the cost of administration of *class A rivers*, as a rule, be borne by the national government because *class A rivers* are of vital importance to land conservation and national economy and can affect the safety and interests of the people of Japan and (2) the cost of administration of *class B rivers*, as a rule, be borne by the prefecture concerned because the benefits directly arising out of the administration of *class B rivers* remain in the prefecture concerned. In reality, however, it is more common to share the cost of river administration at the ratios shown below under the exception provisions of Article 60 (Prefectural share for cost for *class A rivers*) and Article 62 (Subsidy for cost for *class B rivers*) of the River Law:

- Cost of administration of *class A rivers*: national government 1/2, prefecture concerned 1/2

The cost of river improvement works, however, is shared as follows: national government 2/3, prefecture concerned 1/3

- Cost of administration of *class B rivers*: national government 0/1, prefecture concerned 1/1
The cost of river improvement works, however, is to be shared as follows: national government 1/2 or less, prefecture concerned 1/2 or more

(Prefectural Share for Cost for Class A Rivers)

Article 60.

Half (three tenth for large scale improvement works; one-third for other improvement works; nine-twentieth for maintenance and repairs) of the expenses necessary for administering a *class A river* in a prefecture (excluding the expenses for the administration of a *designated section* conducted by the prefectural governor in accordance with the provisions of Article 9⁶⁰⁻¹⁾ Paragraph 2) shall be borne by the prefecture as provided by Government Ordinance^{60-2) 60-3)}.

2 The expenses necessary for the administration of a *designated section* of a *class A river*, conducted by a prefectural governor according to the provision of Article 9⁶⁰⁻²⁰⁹⁾ Paragraph 2, shall be borne by the prefecture governed by that prefectural governor. However, two-thirds of the expenses for improvement works, as part of emergency *river works* to deal with dangerous situations such as collapse of levee etc., eleven-twentieth of the expenses for improvement works to prevent the repetition of disasters or for large scale improvement works and half of the expenses for the other improvement works shall be borne by the national government, as provided by Government Ordinance⁶⁰⁻⁴⁾.

(This article amended by Law No.69 of 4 June 1997)

[Law 60-1] River Law Article 9 (Administration of *Class A rivers*)

[Gor 60-2] Government Ordinance Article 36 (Sharing of cost of administration of *class A rivers* to be borne by prefectures)

The amount of cost to be borne by the prefecture under the provisions of Article 60 Paragraph 1 of the River Law shall be calculated as the cost of river administration [in the case where the cost is shared under the provisions of Article 67, Article 68 Paragraph 2 or Article 70-2 Paragraph 1 of the River Law or Article 14 Paragraph 1 of the Law on the Execution of Preservation Project of Water Resource Quality for Water Supply (Law No. 8, 1994), said cost minus the amount of cost to be borne by a person or persons other than the prefecture; hereinafter referred to as the "basic amount of share"] times the ratio to be borne by the prefecture stipulated in Article 60 Paragraph 1 of the River Law.

[Gor 60-3] Government Ordinance Article 36-2 (Large-scale works to which the special share ratio for administration cost for *class A rivers*)

Large-scale works stipulated in Article 60 Paragraph 1 of the River Law shall be works that concern any of the following facilities and whose cost exceeds one hundred twenty million yen (hereinafter referred to as "large-scale improvement works"):

- (1) Dam with a storage capacity of 8,000,000m³;
- (2) Facilities for lake water level regulation;
- (3) Conveyance channel, floodway or cut-off channel that is 750m or more in length;
- (4) Retarding basin that has an area of 150 hectares or more;
- (5) Weir or ground sill that is 150m or more in length;
- (6) Other facilities that are similar to those listed in the preceding items that are designated by the Minister of Construction

[Gor 60-4] Government Ordinance Article 37 (Cost of improvement works carried out by a prefectural governor that is borne by the national government)

The amount of cost of river improvement works in a *designated section* of a *class A river* to be borne by the national government under the provisions of Article 60 Paragraph 2 of the River Law and the amount of cost of river improvement works for a *class B river* to be borne by the national government under the provision of Article 62 of the River Law shall be their respective basic amounts of share.

2 The ratio of the amount of cost of river improvement works to be executed systematically according to the basic policy for comprehensive conservation and utilization of rivers set forth in the *fundamental river management policy* to be borne by the national government under the provision of Article 62 of the River Law to the total cost of said river improvement works is one half.

(Subsidy for Cost for Designated Section of Class A Rivers)

Article 61.

The national government may grant a subsidy covering a part of the expenses for repairing ⁶¹⁻¹⁾ such a part of a *class A river* as has been designated according to the provision of Article 9 ⁶¹⁻²⁾ Paragraph 2 as the part whose repair works should be executed by the prefectural governor concerned, up to one-third of the expenses within the limit of the budgetary appropriation ⁶¹⁻³⁾.

[Note 61-1] Repair of a river, which refers to works to restore a river or *river administration facility* that has been damaged for some reason, includes the repair of levees, revetments, jetties, etc., and also excavation and dredging to clear river channels of obstructions.

[Law 61-2] River Law Article 9 (Administration of *class A rivers*)

[**Note 61-3**] Article 60 of the River Law stipulates that the cost of administration of a *designated section* of a *class A river* excluding river improvement works be borne by the prefecture concerned. Since the maintenance and repair of rivers ranks second only to river improvement works in importance, this article stipulates that the national government may bear up to one third of repair cost within the limit of the national budgetary appropriation.

(Subsidy for Cost for Class B Rivers)⁶²⁻¹⁾

Article 62.

Under the provisions of Government Ordinances⁶²⁻²⁾, the national government shall meet up to but not exceeding one half of the cost of improving *class B rivers* (excluding work carried out by municipal heads after consultation under the provisions of Article 16-3⁶²⁻³⁾ Paragraph 1).

[**Note 62-1**] Article 59 of the River Law stipulates that, as a rule, all costs for *class B rivers* be borne by the prefectures concerned. There are many cases, however, where the cost of river improvement is so high as to greatly affect prefectural finances. This article therefore requires the national government to shoulder part of such cost.

[**Note 62-2**] For information on Article 37 (Cost of improvement works carried out by a prefectural governor that is borne by the national government) of the Government Ordinance, see Note 211 to Article 60 of the River Law.

[**Law 62-3**] River Law Article 16-3 (*River works* by municipalities)

(Sharing of Cost for Class A and B Rivers for the Benefited Prefectures)⁶³⁻¹⁾

Article 63.

In case a prefecture other than the prefecture which, in accordance with the provision of Article 60⁶³⁻²⁾ Paragraph 1, bears a part of the expenses for river administration conducted by the Minister of Construction is benefited greatly by the river administration, the Minister of Construction may make the former prefecture bear a part of the expenses to be borne by the latter prefecture according to the provision of the said paragraph, within the limit of the benefit gained.⁶³⁻³⁾

2 When the Minister of Construction intends to make the benefited prefecture bear a part of the expenses for river administration in accordance with the provision of the preceding paragraph, he shall bear beforehand the opinion of the prefectural governor governing the prefecture.

3 In case a prefecture other than the prefecture whose prefectural governor conducts river administration is benefited greatly by the river administration, the latter prefecture may make the benefited prefecture bear a part of the expenses for the administration borne by the latter prefecture, within the limit of the benefit gained.⁶³⁻²²⁰⁾

4 When the prefectural governor intends to make the benefited prefecture bear a part of the expenses for the river administration in accordance with the provision of the preceding paragraph, he shall consult beforehand with the prefectural governor governing the benefited prefecture.

[**Note 63-1**] Paragraphs 3 and 4 of this article enables a similar arrangement about *class B rivers*.

[**Law 63-2**] River Law Article 60 (Prefectural share for cost for *class A rivers*)

[**Note 63-3**] As a rule, the cost of administration of a *class A river* is to be borne by the government of the prefecture where the river, facility or works concerned are located. This provision makes it possible that if a prefecture other than the prefecture concerned is so benefited as to make this principle seem unreasonable, the benefited prefecture may be made to bear part of the cost within the limit of such benefits. A situation like this may occur, for example, when a downstream prefecture is protected by the flood control function of a dam upstream.

(Payment and Receipt of Share)

Article 64.

The expenses to be borne by the prefecture in accordance with the provision of Article 60 Paragraph 1 and the expenses to be borne by the benefited prefecture in accordance with the provision of Paragraph 1 of the preceding article out of the expenses for administration of a *class A river* conducted by the Minister of Construction shall be paid into the National Treasury, as may be provided for in detail by Government Ordinance⁶⁴⁻¹⁾.

2 The expenses to be borne by the national government in accordance with the provision of the latter half of Article 60 Paragraph 2 or the provision of Article 62⁶⁴⁻¹⁾ and the expenses to be borne by the benefited prefecture in accordance with the provision of Paragraph 3 of the preceding article out of the expenses for river administration conducted by the prefectural governor shall be paid to the prefecture governed by the prefectural governor, as may be provided for in detail by Government Ordinance⁶⁴⁻²⁾.

[**Law 64-1**] River Law Article 60 (Prefectural share for cost for *class A rivers*), Article 62 (Subsidy for cost for *class B rivers*)

[Gor 64-2] Government Ordinance Article 38 (Payment)

In the case where the cost of administration of a *class A river* is shared under the provisions of Article 60 Paragraph 1 or Article 63 (Sharing of cost for class A and B rivers for the benefited prefectures) Paragraph 2 of the River Law, the Minister of Construction shall notify each prefecture concerned of that prefecture's obligation to bear part of the cost and the amount to be borne by that prefecture. In the case, however, where part of the amount of cost to be borne by prefecture A under the provisions of Article 60 (Prefectural share for cost for *class A rivers*) Paragraph 1 of the River Law is to be borne by prefecture B under the provisions of Article 63 Paragraph 1 of the River Law, the Minister of Construction shall notify prefecture A that prefecture A is to pay the amount of cost calculated as the total cost minus the amount of cost to be borne by prefecture B.

2 The amount of cost to be borne by a prefecture other than the prefecture concerned under the provisions of Article 63 Paragraph 3 of the River Law shall be paid by the time the fund of which that payment is made part of is to be expended.

(Sharing of Cost for Class B Rivers on Prefectural Boundaries)

Article 65.

In case a special administration method has been established by the prefectural governors concerned for such part of a *class B river* as forms or crosses the boundary between two or more prefectures on the basis of the consultation according to the provision of Article 11 ⁶⁵⁻¹⁾ Paragraph 1, the prefectural governors concerned may, by agreement, fix the amounts of shares to be borne by the respective prefectures and method of bearing them.

[Law 65-1] River Law Article 11 (Administration of *class B rivers* on the prefectural boundaries)

(Sharing of Cost for River Works Carried Out by Municipalities) ⁶⁵⁻²⁻¹⁾

Article 65-2.

The cost of *river works* or river maintenance carried out by a municipal head after consultation as stipulated in Article 16-3 ⁶⁵⁻²⁻²⁾ Paragraph 1 shall be met by the municipality which is under the jurisdiction of the said municipal head. In this case, of the said cost, the national government or the prefectural government shall meet a part of the cost of river improvement work in accordance with the provisions of Government Ordinances ⁶⁵⁻²⁻³⁾.

2 In the case where a prefecture other than the prefecture that meets a part of the cost of river improvement work stipulated in the latter part of the preceding paragraph receives considerable benefit from the said river improvement work, the prefecture which meets a part of the said improvement cost may request the prefecture that receives the said benefit to meet a part of the cost commensurate with the benefit received.

3 The provisions of Article 63⁶⁵⁻²⁻⁴ Paragraph 4 shall apply *mutatis mutandis* to the case stipulated in the preceding paragraph.

4 As provided by Government Ordinance⁶⁵⁻²⁻⁵, the cost that the national government and prefectural governments should meet under the provisions of the latter part of Paragraph 1 and the part of the cost which the prefecture that receives benefit from river improvement work should meet under the provisions of Paragraph 2 must be paid to the municipality that is meeting the cost of the work in accordance with the provisions of the first part of Paragraph 1.

[**Note 65-2-1**] This article provides for the sharing of the expenses for *river works* to be carried out by municipalities under Article 16-3 (*River works* by municipalities).

[**Law 65-2-2**] River Law Article 16-3 (*River works* by municipalities)

[**Note 65-2-3**] There is as yet no provision concerning this paragraph in the Government Ordinance.

[**Law 65-2-4**] River Law Article 63 (Sharing of cost for class A and B rivers for the benefited prefectures)

[**Gor 65-2-5**] Government Ordinance Article 38-2 (Payment to municipalities)

In the case where part of the amount of cost to be borne by prefecture A under the provisions of Article 65-2 paragraph 1 of the River Law is to be borne by prefecture B under the provisions of Paragraph 2 of the same article, prefecture A shall pay to the municipality that is to bear the cost of *river works*, etc., under the provision of the first sentence of Paragraph 1 of the same article the amount calculated as the total cost minus the amount to be borne by prefecture B.

2 Any share of cost to be borne by a benefiting prefecture under the provisions of Article 65-2 Paragraph 2 of the River Law shall be paid by the time the fund of which that payment is made part of is to be expended.

(Sharing of Cost for Joint Use Structures)⁶⁶⁻¹

Article 66.

If a *river administration facility* is intended to be used for a purpose other than river administration as well, the bearing or sharing of the expenses for administration is fixed by consultation between the *river administrator* (the Minister of Construction in case the bearer of the expenses is the national government in accordance with the provisions of Article 59 and the first part of Article 60⁶⁶⁻²) Paragraph 2, and the prefectural governor governing the prefecture in case the bearer is a prefecture; the same shall apply in the next article, Article 68, Article 70 and Article 70-2⁶⁶⁻² and the administrator of the non-*river administration facility*.

[**Note 66-1**] This article provides for the sharing of cost for *joint use structures* as stipulated in Article 17 (*Joint use structure*) of the River Law.

[Law 66-2] River Law Article 59 (Principles of financial responsibility), Article 60 (Prefectural share for cost for *class A rivers*), Article 68 (Sharing of cost of *appurtenant works*), Article 70 (Sharing of cost by beneficiaries), Article 70-2 (Sharing of cost by *special river water users*)

(Sharing of Cost of Works Carried Out by a Person Necessitating River Works)⁶⁷⁻¹⁾

Article 67.

The *river administrator* shall make the whole or a part of the expenses for *river works* and/or river maintenance necessitated by some other works or other act be borne by the person who has necessitated the *river works* and/or river maintenance within the limit of the expenses for the amount of works necessitated.

(This article amended by Law No.69 of 4 June 1997)

[Note 67-1] This article provides for the sharing of cost for works as stipulated in Article 18 (Works by person who has necessitated such works) of the River Law.

(Sharing of Cost of Appurtenant Works)⁶⁸⁻¹⁾

Article 68.

The person who is to meet the cost of *river works* must meet all or part of the cost of *appurtenant work* that has become necessary as a result of the *river works* or *appurtenant work* that is necessary for the implementation of the *river works* under the provisions of Article 59, Article 60 first part of Paragraph 2 and Article 65-2⁶⁸⁻²⁾ first part of Paragraph 1 to the extent to which it is necessary, except in the case where it is otherwise specified in the provisos to the approval stipulated in Article 26⁶⁸⁻³⁾ Paragraph 1 and in the case where it is otherwise specified in consultations held under the provisions of Article 95⁶⁸⁻⁴⁾.

2 In case the *river works* referred to in the preceding paragraph have been necessitated by works other than *river works* or by some other set, the *river administrator* may make the person who is to bear the expenses for the other works or act which has necessitated the other works referred to in the said paragraph bear the whole or a part of the expenses, within the limit of the expenses for the amount of works necessitated.

[Note 68-1] This article provides for the sharing of cost for *appurtenant works* stipulated in Article 19 (*Appurtenant works*) of the River Law.

[Law 68-2] River Law Articles 59 (Principles of financial responsibility), 60 (Prefectural share for cost for *class A rivers*), 65-2 (Sharing of cost for *river works* carried out by municipalities)

[Law 68-3] River Law Article 26 (Permission for construction of structures)

[Law 68-4] River Law Article 95 (Special arrangement for use of rivers by the national government)

(Sharing of Cost of Works Carried Out Executed by a Person Other than River Administrator)⁶⁹⁻¹⁾

Article 69.

The expenses for *river works* or river maintenance executed by a person other than the *river administrator* in accordance with the provision of Article 20⁶⁹⁻²⁾ shall be borne by the person who is the executor of the *river works* or river maintenance.

[**Note 69-1**] This article provides for the sharing of cost for *river works* stipulated in Article 20 (*River works* by persons other than the *river administrator*) of the River Law.

[**Law 69-2**] River Law Article 20 (*River works* by persons other than the *river administrator*)

(Sharing of Cost by Beneficiaries)

Article 70.

In case any persons are greatly benefited by *river works*, the *river administrator* may make them bear a part of the expenses for the *river works*, within the limit of the benefit accruing to them from the *river works*.

2 The scope of the persons from whom the shares according to the preceding paragraph are to be collected and the method of collecting the shares shall be fixed either by Government Ordinance⁷⁰⁻¹⁾ (in case the shares are imposed by the Minister of Construction), or by bylaw of the prefecture which the prefectural governor concerned governs (in case they are imposed by a prefectural governor).

[**Gor 70-1**] Government Ordinance does has as yet no provision concerning this article.

(Sharing of Cost by Special River Water Users)⁷⁰⁻²⁻¹⁾

Article 70-2.

The *river administrator* may make the persons who use river water by constructing or expanding their own facilities (hereinafter in this article to be called *special river water users*) bear a part of the expenses necessary for the *river works* connecting two or more rivers (hereinafter referred to as *interlinking rivers*) in order to improve the state of river water, which eliminate and diminish public losses caused by the water of river, and which provide water to *special river water users* (excluding the *river works* which also constructs the *river administration facilities* to store the water of a river) and bear a part of the expenses necessary for administering *river administration facilities* set by the *river works*, within the limit of the benefit accruing to them from the *river works*.

2 When the *river administrator* intends to execute the *river works* of the preceding paragraph, he shall, in advance, consult with the heads of the administrative agencies concerned and hear the opinions of the prefectural governors concerned in case of a *class A river* and the opinions of the heads of the cities, towns and villages concerned in case of a *class B river* and obtain consent of the *special river water users* concerned to bearing the expenses necessary for the *river works* and for administering *river administration facilities* set by the *river works*, as may be provided for in detail by Government Ordinance⁷⁰⁻²⁻²⁾.

3 In case of Paragraph 1, the method of calculating and returning shares shall be fixed by Government Ordinance^{70-2-3) 70-2-4)}. The method of collecting shares shall be fixed by Government Ordinance^{70-2-5) 70-2-6)} (in case the shares are imposed by the Minister of Construction), or by bylaw of the prefecture which the prefectural governor concerned governs (in case they are imposed by a prefectural governor).

4 The *river works* of Paragraph 1 shall be executed so that it might not damage the *normal functions of the river water* concerned.

[**Note 70-2-1**] This article require persons who can become new users of river water (special river water users) as a result of a so-called interlinking river project to bear a just amount of cost. Interlinking rivers help to meet growing water demand in urban areas. By interconnecting two or more rivers, interlinking rivers contribute to flood protection, interior drainage and maintenance of minimum acceptable flow and to efficient use of water resources.

PLAN OF NORTH-CHIBA WATER CONVEYANCE PROJECT

[**Gor 70-2-2**] Government Ordinance Article 38-3 (Contents of consultation under Article 70-2 Paragraph 2 of the River Law)

In the case where the *river administrator* hold a consultation, hear opinion and seek to obtain consent under the provisions of Article 70-2 Paragraph 2 of the River Law, he shall clarify the purpose of the *river works* concerned, an outline of the plan, matters concerning improvement of river water conditions, matters concerning

the *special river water user* and matters concerning the cost of the *river works* concerned and the sharing of cost.

2 In the case where the *river administrator* intends to alter any of the matters listed in the preceding paragraph, he shall consult with the heads of the administrative organizations concerned, hear the opinion of the head of the municipality concerned and obtain the consent of the *special river water user*.

[Gor 70-2-3] Government Ordinance Article 38-4 (Method of calculation of the share to be borne by the *special river water user*)

The amount of a share that the *river administrator* makes a *special river water user* bear under the Article 70-2 Paragraph 1 of the River Law as part of the cost of *river works* as stipulated in said paragraph of the same law (excluding *river works* whose purposes include securing a source of water supply to a *special river water user* who uses river water for irrigation or power generation) or the cost of administration of a *river administration facility* constructed as a result of said *river works* shall be calculated as the sum of the amount of the cost of the *river works* or the cost of administration of the *river administration facility* constructed as a result of the *river works* (excluding the amount corresponding to consumption taxes and local consumption taxes) times the share ratio for a *special river water user*, the amount corresponding to consumption taxes to be imposed in connection with allowing the *special river water user* to use the *river administration facility* concerned or performing administration of the *river administration facility* concerned for the *special river water user* and the amount of the local consumption taxes levied on the basis of the amount of said consumption taxes. The share ratio in this calculation shall be calculated by the alternative expenditure method. Should the application of the alternative expenditure method, however, is deemed inappropriate because of unreasonably large differences in the degree of importance between the uses for which the *river works* concerned are to be carried out or for other reasons, the Minister of Construction may consult with the heads of the administrative organizations concerned as to the method of calculation to be used and calculate the share ratio by the method thus adopted.

[Gor 70-2-4] Government Ordinance Article 38-5 (Alternative expenditure method)

The alternative expenditure method referred to in the preceding article shall be a method of calculation in which an alternative construction cost is calculated for each of the uses for which *river works* as stipulated in Article 70-2 Paragraph 1 of the River Law are carried out, and the cost of the *river works* concerned or the cost of administration of the *river administration facility* constructed as a result of the *river works* is allocated to each use according to the ratio of the amount of said alternative construction cost of each use to the total cost.

2 The alternative construction cost referred to in the preceding paragraph shall be an estimated cost, calculated for each use of *river works* as stipulated in Article 70-2 Paragraph 1 of the River Law, of construction of a facility or structure whose utility is comparable to that created as a result of the *river works* concerned.

[Gor 70-2-5] Government Ordinance Article 38-6 (Collection of the share to be borne by the *special river water user*)

Shares of cost that the Minister of Construction obligates *special river water users* to bear shall be collected in the amount he determines according to the project plan for each fiscal year by the date he specifies on the basis of the funds program for each fiscal year.

[Gor 70-2-6] Government Ordinance Article 38-7 (Returning of shares collected from *special river water users*)

In the event that *river works* as stipulated in Article 70-2 Paragraph 1 of the River Law have been cancelled, the national government or the prefecture concerned shall return all shares that have been received.

(Notification of Amounts of Shares and Payment Procedure)

Article 71.

Necessary matters concerning the shares according to the provision of Article 67, Article 68 Paragraph 2, Article 70 Paragraph 1 or Paragraph 1 of the preceding article including the notification of the amounts of shares and the procedure for their payment shall be fixed by Government Ordinance⁷¹⁻¹⁾.

(This article amended by Law No.69 of 4 June 1997)

[Note 71-1] The Government Ordinance has as yet no provision concerning this article, but shares under this article are collected by means of a notice of payment due issued by the national government or the prefectural government concerned.

(Vesting of Shares Collected)

Article 72.

The shares collected in accordance with the provision of Article 67. Article 68 Paragraph 2, Article 70 Paragraph 1, Article 70-2 Paragraph 1 or Article 75 Paragraph 9 shall be vested either in the national government (in case they are imposed by the Minister of Construction) or in the prefecture which the prefectural governor governs (in case they are imposed by a prefectural governor).

(This article amended by Law No.69 of 4 June 1997)

(Sharing of Cost to Perform Obligations)

Article 73.

The expenses necessary for performing a duty imposed in accordance with the provisions of this Law or of Government Ordinance or prefectural bylaw based on this Law or a duty imposed by an official action based on such provisions shall be borne by the person bound by the duty unless otherwise provided for in this Law.

(Compulsory Collection of Shares and Charges)

Article 74.

In case a person fails to pay within the time-limit of payment the share, charge for use of river water, etc. (hereinafter referred to as share etc.) to be paid in accordance with any

of the provision of this Law, Government Ordinance or prefectural bylaw based on this Law or in accordance with an official action based on any of such provisions, the *river administrator* (the Minister of Construction in case the share etc. are to be included in the national revenues, or in case they are to be included in the revenues of a prefecture, the prefectural governor governing the prefecture; the same hereinafter in this article) shall urge the payment by designating a time limit.

2 In urging the payment in accordance with the provision of the preceding paragraph, the *river administrator* shall send a letter of reminder to the person under duty to make payment. The date of time limit to be designated in the letter of reminder shall be a day 20 days or more after the day when the letter of reminder is sent.

3 In case a person bound by the duty to make payment who has received a letter of reminder according to the provision of Paragraph 1 fails to pay the share etc. and the fee on arrears according to the provision of Paragraph 5 by the date of time limit, the *river administrator* may effect a disposition for the recovery of the share etc. in arrears following either the examples of recovering national taxes in arrears (in case the share etc. are to be included in the national revenues) or those of recovering local taxes in arrears (in case the share etc. are to be included in the revenues of a prefectures).

4 The order of priority of the recovery of the money to be collected according to the preceding paragraph shall be next to national taxes and local taxes; and the prescription shall follow the examples of that of national taxes.

5 In case the *river administrator* urged the payment in accordance with the provision of Paragraph 1, he may collect a fee on arrears calculated on the basis of the number of days counted from the day following the date of time limit for payment to the day preceding the day when the whole amount of the share etc. is paid or the person's property is attached and at 14.5 per cent per year of the amount of the share etc. referred to in the said paragraph, as may be provided for in detail by Government Ordinance⁷⁴⁻¹ .

[Gor 74-1] Government Ordinance Article 39 (Arrearage charge)

In the case where part of the share etc. as stipulated in Article 74 Paragraph 1 of the River Law has been paid on or before the due date of payment, the amount of share etc. used as the basis of calculation of an arrearage charge under Article 74 of the River Law shall be calculated as the full amount of share etc. minus the amount paid on or before the due date of payment.

[Gor 74-2] Government Ordinance Article 39-2 (Public notification in case structures have been taken into custody)

The matters of which the public is to be notified are the following:

(1) Name or type, shape and number of the structure(s) taken into custody (including any boat/ship to be removed

under an order; the same shall apply hereafter in this chapter)

(2) Place where the structure taken into custody had been found and the date of removal of the structure from its site of origin

(3) Date on which the structure was taken into custody and the place where the structure is kept

(4) Any other information deemed necessary for returning the structure

[Gor 74-3] Government Ordinance Article 39-3 (Method of public notification in case structures have been taken into custody)

Public notification under the provision of Article 75 Paragraph 5 of the River Law shall be made by the following methods:

(1) Post the information listed in the items of Article 39-2⁷⁴⁻²⁾ of the Government Ordinance at the office of the river administrator concerned (an office of the regional construction bureau concerned or an office of the prefectural government concerned; the same shall apply hereafter in this chapter) for fourteen (14) days after the structure is taken into custody

(2) Should the name and address of the owner, occupant or any other person who holds title to the structure (in Article 39-7⁷⁴⁻⁷⁾ hereof referred to as the "owner or other title holder") cannot be identified even after the public notification period stipulated in the foregoing item has ended, announce a summary of the public notification in the Official Gazette, a gazette of the prefectural government concerned or a newspaper

2 The river administrator shall not only make public notification by the methods stipulated in the foregoing paragraph but also keep a file of all structures in custody at his office and keep the file open to perusal by any person concerned.

[Gor 74-4] Government Ordinance Article 39-4 (Method of valuation of structures)

Valuation of a structure under the provision of Article 75 Paragraph 6 of the River Law shall be made in consideration of factors such as the price of the structure, the cost of its manufacture, age of the structure, degree of wear and any other factors affecting the valuation of the structure. If the river administrator deems it necessary for the purpose of such valuation, he may consult a person or persons who have expert knowledge of the valuation of structures for advice.

[Gor 74-5] Government Ordinance Article 39-5 (Procedures for disposal by sale of structures in custody)

Disposal by sale of a structure in custody under Article 75 Paragraph 6 of the River Law shall be made by competitive bidding, provided, however, that if there is no bidder for the structure to be disposed of by sale or if subjecting the structure to be disposed of by sale to competitive bidding is deemed inappropriate, the structure may be sold by a negotiated contract.

[Gor 74-6] Government Ordinance Article 39-6

If the river administrator intends to subject a structure to open bidding, which falls under the category of competitive bidding as stipulated in Article 39-5 of the Government Ordinance, he shall post at his office, at least five days before the bidding date, the information stipulated in the MOC Ordinance including the name or type, shape, and name of the structure(s) or make public notification by a similar method.

2 If the river administrator intends to subject a structure to selective bidding, which falls under the category of competitive bidding as stipulated in Article 39-5 of the Government Ordinance, he shall nominate three or more bidders wherever possible and inform those bidders in advance of the information on the structure stipulated in the MOC Ordinance including the information stipulated in the MOC Ordinance including the name or type, shape, and number of the structure(s).

3 If the river administrator intends to adopt a negotiated contract under the proviso of Article 39-5 of the Government Ordinance, he shall take price quotations from at least two prospective buyers wherever possible.

[Gor 74-7] Government Ordinance Article 39-7 (Procedures for returning structures)

In cases where the river administrator returns a structure in his custody (including the money received as a result of the sale of a structure as provided for in Article 75 Paragraph 6 of the River Law) to the owner or other title holder, the river administrator shall have the person who is to receive the structure prove that that person is really the owner or other title holder by presenting a document or documents that certify his identity or by other means and shall return the structure in exchange for a receipt duly made out on the form specified in the MOC Ordinance.

[Moc 74-8] MOC Ordinance Article 33-8 (Form for a Listing of Structures in Custody)

The form stipulated in the MOC Ordinance referred to in Article 39-3⁷⁴⁻³⁾ Paragraph 2 of the Government Ordinance shall be Form 16-3 attached hereto. (Form 16-3 omitted)

[Moc 74-9] MOC Ordinance Article 33-9 (Information to Be Posted in Connection with Competitive Bidding)

Information stipulated in the Ministry of Construction Ordinance referred to in Article 39-6⁷⁴⁻⁶⁾ Paragraphs 1 and 2 of the Government Ordinance shall be the following:

- (1) Title and name of the person responsible for execution of the competitive bidding concerned
- (2) Time and place of the competitive bidding concerned
- (3) Outline of the terms and conditions of contract
- (4) Other information deemed necessary by the river administrator

[Moc 74-10] MOC Ordinance Article 33-10 (Form for a receipt for returned structure)

The form stipulated in the MOC Ordinance referred to in Article 39-7⁷⁴⁻⁷⁾ of the Government Ordinance shall be Form 16-4 attached hereto.

Chapter IV. Supervision

(Supervisory Measures and Orders)

Article 75.

In case a person to whom a permission or approval has been given in accordance with the provisions of this Law or of Government Ordinance or prefectural bylaw based on this Law is found to fall under any of the following items, the *river administrator* may annul the permission or approval, make some alteration to it, suspend its effect, change its conditions or attach new conditions to it, or order him to discontinue the works or other act, to reconstruct or remove the structure (including the removal of moored boats and ships that violate the provisions of Article 24), to set up a facility or take a step necessary for eliminating or preventing the harm which has been caused or may be caused by the works or other act or by the structure or to restore the river to its original state:

(1) Person who has violated any of the provisions of this Law or a Government Ordinance or prefectural bylaw issued based on this Law or acted in contravention of a disposition made in accordance with such provisions; his general business successor or person who has taken over from him the structure etc. (included boats and ships ordered to be removed. Otherwise the same applies throughout this article) involved in the violation, or person who has obtained the right to use the structure or the land involved in the violation from the violator by lease or some other means;

(2) Person who does not meet the conditions attached to the permission or approval given in accordance with the provisions of this Law or a Government Ordinance or prefectural bylaw issued based on this Law;

(3) Person who has obtained the permission or approval provided for in this Law or a Government Ordinance or prefectural bylaw issued based on this Law by fraud or some other illegal means.

2 In any of the following cases, the *river administrator* may make any of the dispositions prescribed in the preceding paragraph against a person to whom the permission or approval according to this Law or a Government Ordinance or prefectural bylaw based on this Law was given:

(1) In case the person concerned has failed, in connection with the works or act for which the permission or approval has been given or in connection with the operation of the project connected therewith, to obtain, when it is necessary under some other law or regulations, the permission, approval or some other official action by the administrative agency in charge, or in case the official action has been annulled or has become invalid;

(2) In case the works or other act for which the permission or approval was given or the project involving such works or act has been discontinued either wholly or partly;

(3) In case the works or other act for which the permission was given has come to be a great hindrance to river administration, as a result of a change in the river conditions caused by a flood, high tide or other natural phenomenon;

(4) In case the disposition is unavoidable for execution of *river works*;

(5) Apart from the case mentioned in the preceding item, in case the disposition is unavoidable for the public benefit.

3 In the event that the person to be ordered to take necessary corrective measures under the provisions of Paragraphs 1 and 2 (hereafter referred to as the “violator” in this paragraph) cannot be confirmed without fault on the part of the *river administrator*, the *river administrator* may take said corrective measures himself or order or commission a third party to take said corrective measures. In this case, the *river administrator* shall make a public notification in advance, to the effect that the violator must carry out the said corrective measures within a reasonable period of time specified by the *river administrator* and that if the violator fails to carry out the corrective measures, the *river administrator* will carry out the said corrective measures himself or order or commission a third party to carry out the said measures.

4 The *river administrator* shall keep custody of any structure that has been removed by the *river administrator* or a third party under the provisions of the preceding paragraph ⁷⁵⁻⁷⁾.

5 Should the *river administrator* take custody of any structure under the provision of the preceding paragraph, he shall make a public announcement as stipulated in relevant government ordinances in order to return the said structure to the owner or user of the structure or a person who has the title to the structure (hereafter in this article referred to as “owner etc.”). ^{75-1) 75-2) 75-6) 75-9)}

6 In the event that a structure the *river administrator* takes custody of is in danger of being lost or damaged or in the event that said structure cannot be returned within three months from the date of the public announcement made under the provision of the preceding paragraph and the expenses or fees required for keeping said structure in custody is unreasonably high in comparison with the value of said structure estimated in accordance with relevant government ordinances, the *river administrator* may sell the said structure and keep custody of the proceeds from the sale. ^{75-3) 75-4) 75-5) 75-8)}

7 In the case where the *river administrator* is unable to find a buyer of a structure that the *river administrator* seeks to sell under the provision of Paragraph 6, the *river administrator* may scrap the structure if the value of the structure estimated in accordance with the provision of the preceding paragraph is extremely low.

8 The proceeds from the sale of a structure as stipulated in Paragraph 6 may be used to cover the expenses required for selling the structure.

9 All expenses required for the removal, storage and sale of a structure, public announcement made in connection with the structure and any other measures taken under the provisions of Paragraphs 3 through 6 shall be borne by the owner etc. to whom said structure is to be returned or the person who is ordered to take corrective measures as stipulated in Paragraph 3.

10 In the event that a structure that is being kept in custody under the provision of Paragraph 4 (including the proceeds from the sale of such structure under the provision of Paragraph 6) cannot be returned within six months from the date of the public announcement as stipulated in Paragraph 5, the ownership of the said structure shall pass to the Japanese government if the structure is in the custody of the Minister of Construction or to the prefectural government concerned if the structure is in the custody of a prefectural governor.

(Paragraphs 1 & 3 amended by Law No.69 of 4 June 1997)

(Paragraphs 4 through 10 added by Law No.69 of 4 June 1997)

[Gor 75-1] Government Ordinance Article 39-2 (Information to be included in public notification in case a structure taken into custody)

Information to be included in public notification under Article 75 Paragraph 5 of the River Law shall be the following]:

- (1) Name or type, configuration and quantity of the structure taken into custody (including boats/ships whose removal has been ordered; the same shall apply hereafter in this chapter);
- (2) Place where the structure taken into custody was found and the date of removal of the structure;
- (3) Date on which the structure concerned was taken into custody and place where the structure is kept in custody;
- (4) Matters other than those listed in the preceding three items that are deemed necessary for return of the structure taken into custody.

[Gor 75-2] Government Ordinance Article 39-3 (Method of public notification in case a structure has been taken into custody)

Public notification as stipulated in Article 75 Paragraph 5 of the River Law shall be made by the following method:

- (1) Post the information listed in Article 39-2 of the Government Ordinance at an office of the *river administrator* concerned (which is an office of the regional construction bureau concerned or an office of the prefectural government concerned; the same shall apply hereafter in this chapter) for fourteen days from the day the structure concerned was taken into custody;

(2) In the event that the name and address of the owner or possessor of the structure concerned or the person who holds the title to the structure (referred to as "owners etc." in Article 39-7 of the Government Ordinance) cannot be identified by the time the public notification period stipulated in the preceding item expires, publish a summary of the contents of the public notification on the Official Gazette, a prefectural gazette or a newspaper.

2 The administrator shall make public notification by the method stipulated in the preceding paragraph, keep a listing of structures kept in custody on the form specified in the Ministry of Construction Ordinance, and keep the listing ready for perusal by the persons concerned.

[Gor 75-3] Government Ordinance Article 39-4 (Method of valuation of structures)

Valuation of structures under Article 75 Paragraph 6 of the River Law shall be made in consideration of the cost of the purchase or manufacture of the structure concerned, the age of the structure, degree of wear and tear and other factors relevant for valuation of the structure concerned. In connection with this valuation, the *river administrator* may, if he deems it necessary, hear the opinion of a person who has expert knowledge about the valuation of structures.

[Gor 75-4] Government Ordinance Article 39-5 (Procedures for selling structures in custody)

All structures that have been taken into custody under Article 75 Paragraph 6 of the River Law shall be sold by competitive bidding provided that the *river administrator* may sell by negotiated contract any structure that has not been bidden in response to invitation for bids or that is deemed to be not suitable for competitive bidding.

[Gor 75-5] Government Ordinance Article 39-6

In the case where the *river administrator* intends to subject a structure to open bidding which falls within the category of competitive bidding as stipulated in Article 39-5 of the Government Ordinance ⁷⁵⁻⁴, he shall make public notification by posting at his office the name or type, configuration and quantity of the structure concerned, the degree of wear and tear of the structure and other information as may be stipulated in the Ministry of Construction Ordinance or at least five days before the day before the bidding or by a similar, appropriate method.

2 In the case where the *river administrator* intends to subject a structure to competitive bidding by nominated bidders which falls within the category of competitive bidding as stipulated in Article 39-5 of the Government Ordinance, he shall wherever possible nominate three or more bidders and inform those bidders in advance of the name or type, configuration and quantity of the structure concerned and other information as may be stipulated in the Ministry of Construction Ordinance.

3 In the case where the *river administrator* intends to adopt a negotiated contract as stipulated in the proviso of Article 39-5 of the Government Ordinance, he shall wherever possible quotations from two or more persons.

[Gor 75-6] Government Ordinance Article 39-7 (Procedure for returning structures)

In the event that the *river administrator* returns a structure he has taken into his custody (including any proceeds from the sale of a structure under Article 75 Paragraph 6 of the River Law) to the owner etc., the *river administrator* shall make the person to whom the structure concerned is to be returned prove, by submitting a

document certifying his name and address or by other means, that he is the owner etc. to whom the structure concerned is to be returned, and shall return the structure in return for a receipt on the form specified in the Ministry of Construction Ordinance.

[Moc 75-7] MOC Ordinance Article 33-8 (Form for a listing of structures in custody)

The form stipulated in the Ministry of Construction Ordinance referred to in Article 39-3 Paragraph 2 of the Government Ordinance shall be Form 16-3 attached hereto.

[Moc 75-8] MOC Ordinance Article 33-9 (Information to be posted in connection with competitive bidding)

Information stipulated in the Ministry of Construction Ordinance referred to in Article 39-6 Paragraphs 1 and 2 of the Government Ordinance shall be the following:

- (1) Title and name of the person responsible for execution of the competitive bidding concerned;
- (2) Time and place of the competitive bidding concerned;
- (3) Outline of the terms and conditions of contract;
- (4) Other information deemed necessary by the *river administrator*.

[Moc 75-9] MOC Ordinance Article 33-10 (Form for a receipt for returned structure)

The form stipulated in the Ministry of Construction Ordinance referred to in Article 39-7 of the Government Ordinance shall be Form 16-6 attached hereto.

(Compensation for Loss Due to Supervisory Measures)

Article 76.

In the case where a *river administrator* has taken action in accordance with the provisions of Paragraph 2 of the preceding article under the application of Items 4 and 5 of Paragraph 2 of the preceding article, and in the event that a person suffers a loss as a result of the said action, the *river administrator* must compensate the person for such losses as would ordinarily arise. This does not apply to the case where a person who obtains approval as stipulated in Article 23 or Article 26 Paragraph 1 with regard to water use pays compensation under the provisions of Article 41.

2 The provision of Article 22 Paragraphs 4 and 5 shall apply *mutatis mutandis* to the case of compensating a loss in accordance with the provision of the preceding paragraph.

3 In case the loss to be compensated by the *river administrator* in accordance with the provision of Paragraph 1 has been caused by a disposition according to the provision of Paragraph 2 of the preceding article made on the ground that it fell under Item (5) of the same paragraph, the *river administrator* may make the person who has brought about the cause for compensation pay the compensation money.

(River Guards)

Article 77.

The *river administrator* may appoint *river guards* from among his staff members and authorize them to act for him in ordering persons who have acted in contravention of any of the provisions of Article 20, Article 23 through 27, Article 30, Article 31 Paragraph 2, Article 55 Paragraph 1, Article 57 Paragraph 1, Article 58-4 Paragraph 1 or Article 58-6 Paragraph 1 or any of the provisions of a Government Ordinance or prefectural bylaw based on the provision of Article 28 or Article 29, or in contravention of a disposition made in accordance with any of the said provisions (including violators of a disposition made in accordance with the provisions of Article 75 Paragraph 1 or Paragraph 2 and violators of any condition attached to the permission or approval in accordance with the provision of Article 90 Paragraph 1) to take necessary steps to correct the contravention.

2 A *river guard* shall, in exercising his authority given him in accordance with the provision of the preceding paragraph, carry with him an identification card indicating his status and show it to the parties concerned.

3 The form of the identification card referred to in the preceding paragraph and necessary matters related thereto shall be provided for by Ministry of Construction Ordinance 77-1).

[Moc 77-1] MOC Ordinance Article 35 (Form for certificate)

The form for the certificate as stipulated in Article 77 Paragraph 3 of the River Law shall be Form 17 attached hereto.

[Moc 77-2] Daily management of rivers and *river administration facilities* are performed either by MOC personnel (for *class A rivers*) or by river guards who are employees of the prefectural government concerned (for *class B rivers*).

(Reporting from Permittees and Inspections by River Administrators)

Article 78.

The Minister of Construction or the *river administrator* may, in case it is necessary for enforcing this Law, make a person who has been given permission or approval in accordance with any of the provisions of this Law or of a Government Ordinance or prefectural bylaw based on this Law submit a report which is necessary for river administration, or, within the limit necessary for exercising his powers under this Law, have his official enter the place for the works or other act for which the permission or approval was given or the office or workshop of the person to whom the permission or approval was given and inspect the actual situation of the works or other act, the structures, books, documents and

other articles whose inspection is necessary.

2 An official who makes inspection by entering the office etc. in accordance with the provision of the preceding paragraph shall carry with him an identification card ⁷⁸⁻¹⁾ indicating his status and show it to the parties concerned.

3 The power to make inspection by entering the office etc. provided for in Paragraph 1 shall not be construed as meaning power vested for criminal investigation.

[Moc 78-1] MOC Ordinance Article 35 (Form for certificate)

The form for the certificate as stipulated in Article 78 Paragraph 2 of the River Law shall be Form 18 attached hereto. Form 18 (omitted)

(Approval by the Minister of Construction)⁷⁹⁻¹⁾

Article 79.

When seeking to carry out river administration of *class A rivers* under the provisions of Article 9 Paragraph 2 as stipulated in Government Ordinances ⁷⁹⁻²⁾, prefectural governors must obtain the approval of the Minister of Construction.

2 A prefectural governor must obtain the approval of the Minister of Construction in the case where one of the following items apply in respect of a *class B river* under the jurisdiction of the prefectural governor.

- (1) When the prefectural governor establishes or modify a *fundamental river management policy* or a *river improvement plan* .
- (2) When the prefectural governor carries out *river works* stipulated in Government Ordinances ⁷⁹⁻³⁾.
- (3) When the prefectural governor holds consultations in accordance with the provisions of Article 16-3 Paragraph 1 with respect to *river works* stipulated in Article 16-2 Paragraph 1 and in Government Ordinances⁷⁹⁻⁵⁾.
- (4) When the prefectural governor takes action under the provisions of Article 23, Article 24, Article 26 Paragraph 1, Article 29, and Article 34 Paragraph 1 with regard to water use stipulated in Government Ordinances⁷⁹⁻⁶⁾, or action stipulated in Article 75 in connection with this action.

(Paragraph 2 amended by Law No.69 of 4 June 1997)

[Gor 79-1] A not insignificant portion of the task of river administration is relegated to local governments. Examples are the administration of Class B rivers placed under the jurisdiction of prefectural governments under Article 5 (Class B rivers) of the River Law and part of the administration of *Class A rivers* that may be placed under the jurisdiction of prefectural governors under Article 9 (Administration of *class A rivers*). It is understood,

however, that the power to administer rivers rests with the national government, and that prefectural and municipal governments undertaking river administration are simply performing part of the national government's work on its behalf. This article, therefore, stipulates that certain tasks associated with river administration be performed only after obtaining the approval of the Minister of Construction.

[Gor 79-2] Government Ordinance Article 45 (Approval of the Minister of Construction)

Administration of *class A rivers* as stipulated in the Government Ordinance referred to in Article 79 Paragraph 1 of the River Law shall be the following:

- (1) Formulation or alteration of *river improvement plan* ;
- (2) River improvement works to be executed systematically under the basic policy for comprehensive river conservation and utilization set forth in the *fundamental river management policy*;
- (3) Agreeing to hold consultation as stipulated in Article 16-3 Paragraph 1 concerning *river works* falling with the category of *river works* described in the preceding item and defined in the proviso of Article 10-5 Item (6) of the Government Ordinance;
- (4) Disposition concerning water uses listed below and other than designated water uses under Article 23, Article 24, Article 26 Paragraph 1 or Article 34 Paragraph 1 of the River Law or disposition under Article 75 of the River Law concerning such disposition:
 - (a) Water use for a water supply system that involves a maximum intake rate of 1,200m³ or more per day or that is to serve a population of 5,000 or more;
 - (b) Water use for a mining or industrial water supply system that involves a maximum intake rate of 1,200m³ or more per day;
 - (c) Water use that involves a maximum intake rate of 0.3m³/sec. or more per second or that is to irrigate 100 hectares or more of land.
- (5) Permission under Article 26 Paragraph 1 of the River Law concerning dams, gates, locks, bridges or other structures that are of great consequence to flood control or water utilization (excluding permission concerning water use) and disposition under Article 75 of the River Law concerning such permission;
- (6) Permission under Article 27 Paragraph 1 of the River Law for excavation of land, etc., that is likely to greatly affect the condition of land in the *river zone*.

[Gor 79-3] Government Ordinance Article 46

River works provided for in the Government Ordinance referred to in Article 79 Paragraph 2 Item (2) of the River Law shall be those associated with the following facilities:

- (1) Dams (excluding dams whose height from foundation ground to crest is less than 15m)
- (2) Underground *river administration facilities* specified in the Ministry of Construction Ordinance⁷⁹⁻⁴⁾

[Moc 79-4] MOC Ordinance 35-2 (Underground *river administration facilities* requiring the approval of the Minister of Construction)

Underground *river administration facilities* provided for in the Ministry of Construction Ordinance referred to in Article 46 Paragraph 2 of the Government Ordinance shall be penstocks.

[Gor 79-5] Government Ordinance Article 46-2

River works provided for in the Government Ordinance referred to in Article 79 Paragraph 2 Item (3) of the River Law shall be river improvement works concerning any of the facilities listed in Article 46 Item 2 of the Government Ordinance.

[Gor 79-6] Government Ordinance Article 47

Water uses provided for in the Government Ordinance concerning referred to in Article 79 Paragraph 2 Item (4) of the River Law shall be *specified water uses*.

Chapter V. The River Council and the Prefectural River Council

(Jurisdiction of the River Council)

Article 80.

A *River council* shall be established within the Ministry of Construction (hereinafter referred to as the Council).

2 The Council shall make investigation and deliberation on the matters placed under its jurisdiction by this Law, and, in addition, make investigation and deliberation on other important matters concerning rivers as the request of the Minister of Construction.

3 The Council may express its opinions to the administrative agencies concerned concerning the matters referred to in the preceding paragraph.

[Note 80-1] Recent activities of the River Council

In June 1996, the River Council submitted a report to the Minister of Construction in response to his earlier inquiry. The report dealt with (1) a changeover from river administration focusing on abnormal phenomena such as floods and droughts to administration paying attention to rivers at ordinary times, (2) conservation of a sound hydrologic cycle, maintenance of biological diversity, and creation of attractive river landscapes and waterfront space and (3) the Basic Policies of Water Resources Management for the 21st Century (document section calling for closer cooperation with local community). In December of the same year, the Ministry of Construction submitted a bill to revise the River Law. The bill proposed that (1) the objective of river administration be defined as improvement and conservation of the river environment, (2) the river improvement plan be divided into a basic policy and an implementation plan and (3) the River Law be revised to incorporate measures to ensure smooth coordination of water uses during drought periods. In June 1996, the bill was adopted at a Diet session.

Currently, the River Council is deliberating on "Recommendations for New Comprehensive Administration Focusing on Hydrological Cycle and National Land Management" (inquiry made in June 1997) and "Recommendations on Policies for an Information-Intensive Approach to River Administration" (inquiry made in March 1998).

(Organization)

Article 81.

The Council shall consist of 30 members or less.

2 The members shall be appointed by the Minister of Construction from among persons with experience or an academic background on rivers and the heads of local public bodies.

3 The term of office of the members appointed from among persons with experience

or an academic background on rivers shall be two years. However, the term of office of a member filling a vacancy shall be the remainder of the term of office of his predecessor.

4 The members shall be in part-time service.

[Note 81-1] The organization and members of the River Council as of July 1998 are as follows:

River Council Organization

River Council

Subcommittee for Conciliation of Water Rights (matters concerning water uses)

Chairman: Hiroshi Takahashi, Professor Emeritus, University of Tokyo

(Conciliation of water uses greatly contributing to the interests of the public with the rights of the river users concerned)

Subcommittee for Planning

(matters concerning the fundamental river management policy and other river project planning)

Chairman: Tadashi Kosaka, President, Japan River Association

(Formulation of fundamental river management policy)

- Working Group for Fundamental Policies (June 1994-June 1996)

Subcommittee for Management

(important river-related matters that are not covered by the other subcommittees)

Chairman: Seibi Matsubara, President, City Planning Association of Japan

(Designation, change in designation or cancellation of designation of Class A rivers)

Technical committee: Technical Subcommittee on River Administration System

(June 1996-Dec. 1996)

Technical committee: Technical Committee on Comprehensive Policies (June 1997-)

Chairman: Tadashi Kosaka, President, Japan River Association

- Technical Subcommittee on Urban Rivers
Chairman: Hiyoroshi Shi-igai, Visiting Professor, Kanazawa Institute of Technology
- Technical Subcommittee on Hydrologic Cycle
Chairman: Yutaka Takahashi, Professor Emeritus, University of Tokyo
- Technical Subcommittee for Learning from Rivers
Chairman: Keiichi Sugiyama, Professor, Shizuoka University
- Technical Subcommittee on Comprehensive Sediment Management
Chairman: Tamotu, Professor, Kyoto University
- Technical Subcommittee on Crisis Management
Chairman: Yoshiyuki Sasa, former Head of the Security Affairs Office, Prime Minister's Office
- Technical Subcommittee on River Information

River Council Members

Chairman Tadahiro Sekimoto, Chairman, NEC Corp.

Members Takao Akabane, Economist

Makiko Arima, President, Yokohama Women's Association for Communication and Networking

Mikiko Ishikawa, Professor, Kogakuin University
Kazuaki Itoh, News Commentator, Japan Broadcasting Corporation (NHK)
Mitsuaki Usui, Professor, Law and Political Science, University of Tokyo
Fusyo Ozawa, Deputy President, Agricultural Forestry and Fisheries Credit Foundation
Noboru Kuroyanagi, Vice-President, Chubu Electric Power Co., Inc.
Shigeto Kuwahara, Director, Secretariat, Tokyo Techno Forum, Yomiuri-NTV Culture Center
Tadashi Kosaka, President, Japan River Association
Rieko Zanma, President, Environmental and Space Design, Inc.
Daisaku Sugito, Executive Director, Japan Federation of Waterworks Industry
Yutaka Takahashi, Professor Emeritus, University of Tokyo
Minoru Harada, President, The High Pressure Gas Safety Institute of Japan
Ikuo Hirayama, President, Japan Scholarship Foundation
Mariko Fujiwara, Visiting Researcher, Hakuhodo Institute of Life & Living
Seibi Matsubara, President, City Planning Association of Japan
Takeo Morizane, President, The Tokyo Grain Exchange
Toshio Endo, Governor, Tokushima Prefecture
Shuichi Yoshida, Mayor, Fukushima City, Fukushima Prefecture
Takato Sakaki, Mayor, Erimo-cho, Horoizumi-gun, Hokkaido

(Chairman)

Article 82.

The Council shall have a chairman, who shall be elected by mutual election of the members.

2 The chairman shall exercise general control over the duties of the Council.

3 In case the chairman is unable to attend to his duties, a member designated beforehand by the chairman shall stand proxy for him in doing his duties.

(Special Members)

Article 83.

In case it is necessary for investigation and deliberation on the matters concerning a specific river, the Council may have special members.

2 The special members shall be appointed by the Minister of Construction from among persons who have profound knowledge and experience concerning the matters in question and the heads and members of the assemblies of the local public bodies having connection with the river.

3 The special members shall be released from office upon the completion of the

investigation and deliberation on the matters in question.

4 The special members shall be in part-time service.

(Subcommittees)

Article 84.

The Council shall have necessary subcommittees including the Subcommittee for Conciliation of *Water rights*.

2 Each subcommittee shall have a chief of subcommittee, who shall be appointed by the chairman of the Council from among the members.

3 The members and special members to constitute a subcommittee shall be nominated by the chairman.

4 The Council may, as may be provided for by its regulations, regard a resolution of a subcommittee as such of the Council.

[Note 84-1] For information on the committees and committee members, see Note 81-1.

(Matters Left to Government Ordinance)

Article 85.

The necessary matters concerning the organization and operation of the Council which are not stipulated in this chapter shall be fixed by Government Ordinance.

[Note 85-1] Government Ordinance for the river council (omitted)

(The Prefectural River Council)

Article 86.

A prefecture may have a *Prefectural river council* for investigations and deliberations on important matters relative to *class B rivers* in the prefecture at the request of the prefectural governor, as may be provided for in detail by prefectural law.

2 Necessary matters concerning a *Prefectural river council* shall be fixed by law of the prefecture.

[Note 86-1] As of November 1997, of the 47 prefectures in Japan, only Fukui, Shizuoka and Hyogo have a prefectural river council.

Chapter VI. Miscellaneous Provisions

(Transitory Measures)

Article 87.

A person who, on the basis of the competency and as of the day of the designation of a *class A river*, *class B river*, *river zone*, *river conservancy zone*, *projected river zone*, *spatial river conservancy zone* or *projected spatial river zone* is doing an act for which permission according to the provisions of this Law must be obtained or setting up a structure for which permission according to the provisions of this Law must be obtained shall be deemed to have obtained the permission according to this Law concerning the act or the setting up of the structure on the same condition as before. The same shall apply to a person who, on the basis of the competency and as of the day of the enforcement of a Government Ordinance referred to in Article 25, Article 27 Paragraph 1, Article 55 Paragraph 1, Article 57 Paragraph 1, Article 58-4 Paragraph 1 or Article 58-6 Paragraph 1 or a Government Ordinance to amend or abolish such a Government Ordinance, is doing an act or setting up a structure for which it becomes necessary to obtain new permission as a result of the enforcement of the Government Ordinance.

(Notification by De Facto Permittees)

Article 88.

Upon the designation referred to in the preceding article, those who are designated by Government Ordinance⁸⁸⁻¹⁾ out of the persons who, according to the provision of the article, are deemed to have obtained the permission referred to in Article 23 through 27 shall notify the *river administrator* of the necessary matters as may be provided for in detail by Government Ordinance.

[Gor 88-1] Government Ordinance Article 48 (Notification of the *river administrator*)

Those who are designated by the Government Ordinance referred to in Article 88 of the River Law shall be persons who have obtained permission under Article 23 (Permission for river water use) of the River Law.

2 Notification as provided for in Article 88 of the River Law shall be made within one year from day of designation as a *class A river* or *class B river* by submitting writings describing the matters listed below on the form specified in the Ministry of Construction Ordinance:

- (1) Name of the river concerned with use of river water;
- (2) Name and address of the person who is using river water (in the case of a juridical person, the name and place of business of the juridical person and the name of its representative);

- (3) Purpose of the use of river water;
- (4) Quantity of water being used;
- (5) Conditions for the use of river water;
- (6) Location of intake or outlet and other places of use of river water;
- (7) Facilities for use of river water;
- (8) Brief description of the project involving the use of river water and other relevant information.

[Moc 88-2] MOC Ordinance Article 36 (Form for notification submitted by a de facto permittee)

The form specified in the Ministry of Construction Ordinance referred to in Article 48 Paragraph 2 of the Government Ordinance shall be Form 20 attached hereto.

Form 20 (omitted)

(Entry into Third Party Land for River Administration)

Article 89.

The Minister of Construction, the prefectural governor concerned, or a person who has been given order or authorized by the Minister of Construction or the prefectural governor may, in case it is imperative for making investigation for designation of a *class A river*, *class B river*, *river zone*, *river conservancy zone*, *projected river zone*, *spatial river conservancy zone* or *projected spatial river zone* or for performing river administration including *river works* and river maintenance, enter land occupied by another person or temporarily use as a material yard or workshop land of another person which is not being used for any specific use.

2 In case an official or other person intends to enter land occupied by another person in accordance with the provision of the preceding paragraph, he shall in advance notify the occupant to that effect. However, the same shall not apply in case it is difficult to make previous notification.

3 In case an official or other person intends to enter residential land or land enclosed by a fence, paling or the like in accordance with the provision of Paragraph 1, he shall inform the occupant of the land to that effect before entering it.

4 No entry shall be made into the land referred to in the preceding paragraph before sunrise or after sunset, except in case the consent of the occupant has been obtained.

5 An official or other person who intends to enter land in accordance with the provision of Paragraph 1 shall carry with him an identification card⁸⁹⁻¹⁾ certifying his status and show it to the parties concerned.

6 In case an official or other person intends to temporarily use another person's land which is not being used for any specific use as a material yard or workshop, he shall in advance notify the occupant and owner of the land and hear their opinions.

7 The occupant and the owner of the land shall not refuse or prevent the entry or temporary use of it according to the provision of Paragraph 1 unless he has a justifiable reason.

8 In case a person suffers a loss as a result of an act according to the provision of Paragraph 1, the Minister of Construction or the prefectural governor concerned shall compensate him for the loss which would ordinarily be incurred.

9 The provisions of Article 22 Paragraphs 4 and 5 shall apply *mutatis mutandis* to the compensations of loss according to the provision of the preceding paragraph.

[Moc 89-1] MOC Ordinance Article 35 (Form for certificate)

3 The form for a certificate as provided for in Article 89 Paragraph 5 of the River Law shall be Form 19 attached hereto.

Form 19 (omitted)

(Conditions for Permission)

Article 90.

The *river administrator* may attach necessary conditions to the permission or approval according to any of the provisions of this Law, or of a Government Ordinance or prefectural by law based on this Law.

2 The conditions referred to in the preceding paragraph shall be limited to those of the minimum necessity and shall not impose any undue duty on the person to whom the permission or approval is given.

(Administration of Disused River Site)

Article 91.

In case a *river zone* has been changed or come to be disused, the land of the former *river zone* and the *river administration facilities* in the zone which it has become unnecessary to administer as *river administration facilities* (national land and national facilities only; hereinafter referred to as disused river site etc.) shall be administered by the person who has been administering the river concerned, for a period not exceeding one year fixed by Government Ordinance^{91-1) 91-2)}.

2 Within the period referred in the preceding paragraph, a disused river site etc. shall not be regarded as a disused river side etc. in application of the provision of Article 106 of the Land Expropriation Law.

[Gor 91-1] Government Ordinance Article 49 (Public notification on disused river sites etc.)

In the event that a change or disuse of a *river zone* has given rise to a disused river site etc., the administrator of the river concerned before said change or disuse shall make public notification to that effect as stipulated in the Ministry of Construction Ordinance⁹¹⁻³).

[Gor 91-2] Government Ordinance Article 50 (Period of administration of disused river site etc.)

The period stipulated in the Government Ordinance referred to in Article 91 Paragraph 1 of the River Law shall be ten months.

[Moc 91-3] MOC Ordinance Article 37 (Public notification on disused river site etc.)

Public notification under Article 49 of the Government Ordinance shall be made by indicating on the Official Gazette if by the Minister of Construction or a prefectural gazette of the prefecture concerned if by a prefectural governor the following:

- (1) Name of the river;
- (2) Date of occurrence of the disused river site etc.;
- (3) Location of the disused river site etc.;
- (4) Type and quantity of the disused river site etc.;
- (5) Instructions to make application under Article 7 Paragraph 1 of the Supplementary Provisions of the Government Ordinance within three months from the date of public notification.

(Exchange of Disused River Site)

Article 92.

The person who administers a disused river site etc. in accordance with the provision of Paragraph 1 of the preceding article may, within the period referred to in the said paragraph, exchange the disused river site etc. for land to be a new *river zone*, as may be provided for in detail by Government Ordinance⁹²⁻¹).

[Gor 92-1] Government Ordinance Article 51 (Exchange of disused river site etc.)

A disused river site etc. may be exchanged for land that is to become a new *river zone* only when the difference in value is smaller than one half of the higher of the values of the two.

2 In the event of exchange as stipulated in the preceding paragraph, any difference in value shall be compensated for with money.

(Transfer of Disused River Site of Class B Rivers)

Article 93.

After the elapse of the period referred to in Article 91 Paragraph 1, the Minister of Construction may, upon consultation with the Minister of Finance, transfer the disused river site etc. of a *class B river* which have not been exchanged as provided for in the preceding

article to the prefecture where the disused river site etc. are located, unless it is necessary to keep them as national properties.⁹³⁻¹⁾

2 The party from which the purchase or repurchase may be made according to the provision of Article 106 of the Land Expropriation Law or Article 579 of the Civil Code (Law No.89 of 1896) shall be the prefecture to which the disused river site etc. have been transferred in accordance with the provision of the preceding paragraph.

[Gor 93-1] Government Ordinance Article 52 (Procedure for applying for transfer of a disused river site etc. associated with a *class B river*)

Any prefecture seeking to take over a disused river site etc. under the provisions of Article 93 of the River Law shall submit to the Minister of Construction an application for transfer that indicates the details listed below along with relevant documents:

- (1) Date of occurrence of the disused river site etc.;
- (2) Location of the disused river site etc.;
- (3) Type and quantity of the disused river site etc.;
- (4) Reason a transfer of the disused river site etc. is necessary;
- (5) Other relevant matters.

(Administrative Cost and Revenue of Disused River Site)

Article 94.

The expenses for the administration of a disused river site etc. during the period referred to in Article 91 Paragraph 1 or for the exchange of a disused river site etc. according to the provision of Article 92 shall be borne by either the national government (in the case of *class A river*; except the *designated sections*) or the prefecture (in the case of a *class B river* or a *designated section* of a *class A river*), and the proceeds from the administration of disused river site etc. shall be included in the revenue of the party that bears the expenses for administration.

(Special Arrangement for Use of Rivers by National Government)

Article 95.

With reference to the application of any of the provision of Article 20, Article 23 through 27, Article 30 Paragraph 2, Article 34 Paragraph 1, Article 47 Paragraph 1, Article 53-2 Paragraph 1, Article 55 Paragraph 1, Article 57 Paragraph 1, Article 58-4 Paragraph 1 and Article 58-6 Paragraph 1 to a project executed by the national government and the *river administrator* concerned shall be regarded as obtainment of the permission or approval according to the corresponding provision.^{95-1) 95-2)}

(This article amended by Law No.69 of 4 June 1997)

[Gor 95-1] Government Ordinance Article 16-11 (Special arrangement for the national government)

With respect to the application of any of the provisions of Article 16-3 Paragraph 1 and Article 16-8 Paragraph 1 of the Government Ordinance to a project undertaken by the national government, permission under these provisions shall be regarded as having been obtained when agreement has been reached as a result of consultation between the national government and the *river administrator*.

[Moc 95-2] MOC Ordinance Article 42 (Procedure for consultation on river use, etc.)

Consultation as stipulated in Article 95 of the River Law of Article 16-11 of the Government Ordinance shall be held by following a procedure similar to the procedure for permission or approval.

(Special Arrangements for Hokkaido Region)

Article 96.

With regard to the rivers in Hokkaido, the bearing of expenses for river administration, the powers of the *river administrator*, the vesting of charges for use of river water etc. and other matters may be fixed separately by Government Ordinance regardless of the provision.^{96-1)~96-6)}

[Gor 96-1] Government Ordinance Article 40 (Execution of river improvement works by the Minister of Construction in a *special designated section* of a *class A river*)

Administration of a *designated section* of a *class A river* in Hokkaido the Minister of Construction specially designates (hereinafter referred to as a "*special designated section*") because he deems it necessary for development of Hokkaido that he entrusts to the governor of Hokkaido shall be other than what is listed in Article 2 (excluding Item (7)) and the following:

- (1) Executing river improvement works;
 - (2) Exercising the powers provided for in Articles 17 through 19, Article 21, Article 37, Article 56 Paragraph 1, Article 58-5 Paragraph 1, Articles 66 through 68, Article 70 Paragraph 1, Article 70-2 and Article 74 of the River Law and the powers provided for in Article 20, Article 57 and Article 58-6 of the River Law (including the powers provided for in Article 75, Article 76 and Article 90 Paragraph 1 of the River Law concerning approval or permission under the provisions listed above).
- 2 In the case where the Ministry of Construction intends to designate a *special designated section*, he shall in advance consult with and hear the opinion of the Director-General of the Hokkaido Development Agency. A comparable rule shall apply to any change or cancellation of such designation.
- 3 When the Minister of Construction designates a *special designated section*, he shall make public notification to that effect as stipulated in the Ministry of Construction Ordinance. A comparable rule shall apply to any change or cancellation of such designation.

[Gor 96-2] Government Ordinance Article 41 (Execution of river improvement works by the Minister of Construction in a *designated section*)

Notwithstanding the provisions of Article 10 of the River Law, the Minister of Construction, when he deems it necessary for comprehensive development of Hokkaido, may carry out river improvement works, maintenance or repair of a designated *class B river* section in Hokkaido (hereinafter referred to as a "*designated river*").

2 In the case of the preceding paragraph, the Minister of Construction, on behalf of the governor of Hokkaido, shall exercise the powers provided for in Articles 16 through 19, Article 21, Article 37, Article 56 Paragraph 1, Article 58-5 Paragraph 1, Articles 66 through 68, Article 70 Paragraph 1, Article 70-2 and Article 74 of the River Law and the powers provided for in Article 20, Article 57 and Article 58-6 of the River Law (including the powers provided for in Article 75, Article 76 and Article 90 Paragraph 1 of the River Law concerning approval or permission under the provisions listed above).

3 The provisions of Paragraphs 2 and 3 of the preceding article shall apply mutatis mutandis designation under the provisions of Paragraph 1.

[Gor 96-3] Government Ordinance Article 42 (Special arrangement concerning the bearing of the cost of river administration)

Notwithstanding the provisions of Article 60 Paragraph 1 of the River Law, in the case of the cost of large-scale river improvement works that are river improvement works for a non-*special designated section* of a *class A river* in Hokkaido carried out by the Minister of Construction, the amount calculated as the basic amount of share times 8.5/10 shall be borne by the national government; and, notwithstanding the provisions of said paragraphs, with respect to the cost of other works, the amount calculated as the basic amount of share times 8/10 shall be borne by the national government.

2 Notwithstanding the provisions of Article 60 Paragraph 1 of the River Law, in the case of the cost of river improvement works for a *special designated section* of a *class A river* in Hokkaido carried out by the Minister of Construction, the amount calculated as the basic amount of share times 8.5/10 shall be borne by the national government.

3 Notwithstanding the provisions of Article 60 Paragraph 1 of the River Law, in the case of the cost of maintenance or repair for a *class A river* in Hokkaido carried out by the Minister of Construction, the amount calculated as the basic amount of share times 7/10 shall be borne by the national government.

4 Notwithstanding the provisions of Article 60 Paragraph 2 of the River Law, in the case of the cost of works for an emergency river project carried out to cope with a dangerous situation such as a levee break that are river improvement works for a *designated section* of a *class A river* to be carried out systematically according to the basic policy for comprehensive river conservation and utilization formulated as part of the *fundamental river management policy* to be carried out by the governor of Hokkaido under the provisions of Article 9 Paragraph 2 of the River Law, the amount calculated as the basic amount of share times 8/10 shall be borne by the national government; notwithstanding the provisions of said paragraph, in the case of the cost of works carried out to prevent recurrence of disasters or large-scale river improvement works other than works for an emergency river

project carried out to cope with a dangerous situation such as a levee break, the amount calculated as the basic amount of share times 7/10 shall be borne by the national government; and notwithstanding the provisions of said paragraph, in the case of the cost of other works, the amount calculated as the basic amount of share times 2/3 shall be borne by the national government.

5 Notwithstanding the provisions of Article 62 of the River Law, in the case of the cost of river improvement works carried out by the Minister of Construction as part of administration of a *designated river* under the provisions of Item (1) of the preceding article, the amount calculated as the basic amount of share times 8.5/10 shall be borne by the national government; and, notwithstanding the provisions of Article 59 of the River Law, in the case of maintenance and repair, the amount calculated as the basic amount of share times 7/10 shall be borne by the national government.

6 Notwithstanding the provisions of Article 62 of the River Law, in the case of the cost of works for an emergency river project for coping with a dangerous situation such as a levee break that are river improvement works for a designated *class B river* in Hokkaido to be carried out systematically according to the basic policy for comprehensive river conservation and utilization formulated under the fundamental river management plan (excluding river improvement works to be carried out by the head of the municipality concerned), the amount calculated as the basic amount of share times 3/5 shall be borne by the national government; and, notwithstanding the provisions of said paragraph, in the case of the cost of other works, the amount calculated as the basic amount of share times 5.5/10 shall be borne by the national government.

[Gor 96-4] Government Ordinance Article 43 (Special arrangements concerning the title to charges for use of river water, etc.)

Notwithstanding the provisions of Article 32 Paragraph 1 of the River Law, all charges for use of river water, etc., for non-*designated sections* and *special designated sections* of *class A rivers* and for *designated rivers* shall be collected by the Minister of Construction and, notwithstanding the provisions of Paragraph 2 of said article, shall be made a revenue of the national government.

2 The provisions of Article 32 Paragraph 4 of the River Law shall not apply to permission under Articles 23 to 25 of the River Law and disposition under Article 75 of the River Law concerning said permission made by the Minister of Construction for non-*designated sections* and *special designated sections* of *class A rivers*.

3 In the case where the governor of Hokkaido has granted permission under Article 23, 24 or 25 of the River Law for a non-*designated section* or *special designated section* of a *class A river* or a *designated river*, he shall promptly notify the Minister of Construction of the matters relevant to the permission concerned. A comparable rule shall apply to disposition under the provisions of Article 75 of the River Law concerning such permission.

[Gor 96-5] Government Ordinance Article 44 (Special arrangements concerning disused river site etc.)

The provisions of Article 93 of the River Law shall not apply to disused river sites etc. associated with *designated rivers*.

[Moc 96-6] MOC Ordinance Article 34 (Public notification on *special designated sections* and *designated rivers*)

The provisions of Article 3 of the Ministry of Construction Ordinance shall apply *mutatis mutandis* to public notification under Article 40 Paragraph 3 of the Government Ordinance (including *mutatis mutandis* application under Article 41 Paragraph 3 of the Government Ordinance).

(Filing of Complaints)

Article 97.

No complaint under the Administrative Complaint Reinvestigation Law (Law No.169 of 1952) shall be raised concerning a disposition or other exercise of public power according to the provision of Article 22 Paragraph 1 or 2.

2 Any person who is dissatisfied with a disposition made on behalf of the *river administrator* by the administrator of the *non-river administration facility* on the basis of the agreement reached by consultation under the provision of Article 17 Paragraph 1 may make a request for examination either to the Minister of Construction and the Minister having jurisdiction over the facility (in case the administrator of the *non-river administration facility* is the national government, a national organization, a prefecture or a prefectural governor) or to the prefectural governor concerned (in case he is not any of them). With regard to a disposition made by the administrator of the *non-river administration facility* who is a prefecture, a city, town or village or other public body, he may make an objection as well.

3 A person who is dissatisfied with a disposition mentioned in any one of the following items may, if the reason for complaint is connected with coordination with a mining or stone quarrying enterprise, apply for ruling to the Environmental Disputes Coordination Commission. In this case, no complaint can be filed under the Administrative Complaint Reinvestigation Law.

(1) Permission under any of the provisions of Article 24 through 27, Article 29, Article 55 Paragraph 1, Article 57 Paragraph 1, Article 58-4 Paragraph 1 or Article 58-6 Paragraph 1 or not giving such permission;

(2) Disposition under the provision of Article 75 made in connection with a disposition under the provision of the preceding paragraph.

4 The provision of Article 18 of the Administrative Complaint Reinvestigation Law shall apply *mutatis mutandis* to cases where the disposing agency concerned has erroneously instructed that request for examination or raising of objection may be made, concerning either of the items given in the preceding paragraph.

(Delegation of Powers)

Article 98.

A part of the powers of the Minister of Construction under this Law may be delegated to the Director General of the Regional Construction Bureaus or the Director General of the Hokkaido Development Bureau, as may be provided for in detail by Government Ordinance^{98-1) 98-2) 98-3)}.

[Gor 98-1] Government Ordinance Article 53 (Delegation of powers)

Of the statutory powers of the Minister of Construction as a *river administrator*, all powers other than those listed below shall be delegated to the director-generals of the regional construction bureaus and the Director-General of the Hokkaido Development Agency except for administration of *designated sections of class A rivers* delegated to prefectural governors under the provisions of Article 9 Paragraph 2 of the River Law.

- (1) Powers stipulated in Article 2⁹⁻³⁾ Items (2) and (5);
- (2) Powers stipulated in Article 2⁹⁻³⁾ Items (3) and (4) (limited to powers under the provisions of Article 30, Article 31, Article 33 Paragraph 3 (including the cases of mutatis mutandis application under Article 55 Paragraph 2, Article 57 Paragraph 3, Article 58-4 Paragraph 2 and Article 58-6 Paragraph 3 of the River Law), Article 46 Paragraph 1, Article 49, Article 50 Paragraph 2, Article 53-2, Article 77 Paragraph 1 and Article 78 Paragraph 1; powers under the provisions of Article 90 Paragraph 1 of the River Law excluding powers associated only with the powers listed in (a) through (e); and the powers associated with acts involving acts that require disposition based on the powers of the Minister of Construction as a law-designated river administrator, other than the powers listed in (a) through (e) below):
 - (a) Execution of disposition under the provisions of Article 23 of the River Law associated only with a change of the place of river water use or updating of the period of permitted use (excluding, in the case of the updating of the period of permitted use, disposition concerning a person who is not engaged in the permitted use of river water concerned);
 - (b) Execution of disposition under the provisions of Article 24 of the River Law associated only with the updating of the permitted period of use or any of the acts provided for in (c) below (excluding, in the case of the updating of the period of permitted use, disposition concerning a person who is not engaged in the permitted use of river water concerned);
 - (c) Execution of disposition under the provisions of Article 26 Paragraph 1 of the River Law associated only with the construction of a structure for use of river water or reconstruction of a dam that will increase storage capacity or other structures for use of river water other than those specified in the Ministry of Construction Ordinance;

(d) Execution of disposition under the provisions of Article 47 Paragraph 1 or Paragraph 4 of the River Law associated only with disposition other than disposition concerning dams that fall within the categories provided for in Article 23 Paragraph 1 or Paragraph 2 (limited to disposition provided for in the Ministry of Construction Ordinance);

(e) Powers under the provisions of Article 27 Paragraph 1, Article 55 Paragraph 1, Article 57 Paragraph 1 and Paragraph 2, Article 58-4 Paragraph 1 and Article 58-6 Paragraph 1 and Paragraph 2 of the River Law.

(3) Powers provided for in Article 32 Paragraph 4, Article 35 and Article 36 Paragraph 1 of the River Law concerning specified water uses (excluding the powers listed in (a) through (b) in the preceding item);

(4) Powers under Article 6, Article 14, the proviso of Article 26 Paragraph 4, Article 40 Paragraph 2, Article 54 Paragraph 1, Article 56 Paragraph 1, Article 58-2, Article 58-3 Paragraph 1 and Article 58-5 Paragraph 1 of the River Law.

2 Of the statutory powers of the Minister of Construction, the following shall be delegated to the director-generals of the regional construction bureaus.

(1) Powers under the provisions of Article 32 Paragraph 3;

(2) Powers provided for in Article 79 Paragraph 1 of the River Law concerning disposition provided for in Article 45 Paragraphs 4 through 6.

[Moc 98-2] MOC Ordinance Article 37-2 (Reconstruction of structures for use of river water requiring the permission of the Minister of Construction)

Reconstruction of structures for use of river water provided for in the Ministry of Construction Ordinance referred to in Article 53 Paragraph 1 Item (2) (c) of the Government Ordinance shall be any of the following:

(1) Reconstruction of a dam or weir;

(2) Reconstruction of a dam or weir which will affect the stability of said dam or weir;

(3) Reconstruction of an intake resulting in an increase in the rate of intake.

[Moc 98-3] MOC Ordinance Article 37-3 (Acts concerning operation regulations that require the approval of the Minister of Construction)

Acts provided for in the Ministry of Construction referred to in Article 53 Paragraph 1 Item (2) (d) of the Government Ordinance shall be the following:

(1) Make operation regulations as stipulated in the first sentence of Article 47 Paragraph 1 of the River Law;

(2) Alter the operation regulations as stipulated in the second sentence of Article 47 Paragraph 1 or Paragraph 4 of the River Law (limited to regulations governing matters related to the methods of storage or release of river water).

(Commitment of Business to Local Public Body) ⁹⁹⁻¹⁾

Article 99.

The *river administrator* may, when he deems it especially necessary, commit the maintenance, operation and similar river administrative business of such *river administration facilities* as may be fixed by Government Ordinance ⁹⁹⁻²⁾ to the local public body concerned.

[**Note 99-1**] This provision was made because in cases where river administration facilities are located in mountains or need to be operated quickly according to changing water levels or rainfall conditions, entrusting the government of the municipality in which the facilities concerned are located with the maintenance and operation of the facilities is more human resource and money saving. Expenses required for this arrangement are usually borne by the river administrator because it is he who is responsible for administration.

[**Gor 99-2**] Government Ordinance Article 54 (*River administration facilities* whose administration may be delegated to local public bodies)

River administration facilities provided for in the Government Ordinance referred to in Article 99 of the River Law shall be gates, pump stations, etc., whose maintenance or operation does not create influence beyond the boundary of the area under the jurisdiction of the local public body to which the *river administration facilities* concerned are entrusted.

(Locally designated rivers)

Article 100.

The provisions of this Law concerning *class B rivers* (except the provision which may be designated by Government Ordinance ¹⁰⁰⁻²⁾) shall apply mutatis mutandis to a river designated by the head of a city, town or village, other than any of *class A rivers* and *class B rivers*. In this case, "the prefectural governor" in the provisions shall read "the head of the city, town or village"; "the prefecture" "the city town or village"; and "the Minister of Construction" "the prefectural governor."¹⁰⁰⁻¹⁾

2 Unless provided for in the preceding paragraph, technical modification in reading necessary for mutatis mutandis application of the provisions of this Law shall be fixed by Government Ordinance ^{100-3) 100-4) 100-6)}.

[**Gor 100-1**] Government Ordinance Article 55 (Designation of *locally designated rivers*)

In the case where the head of a municipality intends to designate a river under the provisions of Article 100 (*Locally designated rivers*) Paragraph 1 of the River Law, if the river concerned lies on the boundary with another city, town or village, he shall consult with the head of the municipality concerned.

2 In the case where the head of a municipality designates a river under the provisions of Article 100 (*Locally designated rivers*) Paragraph 1 of the River Law, he shall make public notification on the name of the river and

the section concerned for each *river system* as stipulated in the Ministry of Construction Ordinance¹⁰⁰⁻⁵).

3 Alteration or cancellation of designation of a river (hereinafter referred to as a "*locally designated river*") by the head of a municipality under the provisions of Article 100 Paragraph 1 of the River Law shall be made by following a procedure similar to the procedure for designation stipulated in the two preceding paragraphs.

4 In the event that a *locally designated river* is designated as a *class A river* or a *class B river*, the designation of the *locally designated river* under Article 100 (*Locally designated rivers*) Paragraph 1 of the River Law shall cease to have effect.

[Gor 100-2] Government Ordinance Article 56 (Inapplicable provisions)

The provisions stipulated in the Government Ordinance referred to in Article 100 Paragraph 1 of the River Law shall be Article 6 Paragraph 4, Article 14 Paragraph 2, Article 16, Article 16-2, Article 35 Paragraph 1, Article 36 Paragraph 2, Article 62, Article 65-2, Article 70-2, Article 79 Paragraph 2 Item (3), Article 97 Paragraph 2 and Article 99 of the River Law.

[Gor 100-3] Government Ordinance Article 57 (Provisions concerning replacement of words/phrases for mutatis mutandis application)

Replacement of words/phrases as provided for in Article 100 Paragraph 2 shall be made as shown in the table below:

Article 11 Paragraphs 1 and 3, Article 63 Paragraphs 3 and 4, Article 64 Paragraph 2, Article 65:

“Prefecture” shall be read as “City, town or village”.

Article 11, Article 63 Paragraphs 3 and 4, Article 65:

“Prefectural governor” shall be read as “Head of municipality”.

[Gor 100-4] Government Ordinance Article 57-2 (Mutatis mutandis application of the provisions of the Government Ordinance to *locally designated rivers*)

The provisions of Chapter I (excluding Article 1 Paragraph 2, Article 2, Article 9-2, Articles 10 through 10-6, Article 16-2, Article 16-3, Article 19 and Article 20), Article 38 Paragraph 2, Article 39, Chapter II-2, Articles 47 through 52, Article 58, Article 59 Paragraphs 2 and 3, Article 60 Paragraph 2 and Articles 61 through 63 shall apply mutatis mutandis to the *locally designated rivers*, in which case the words and phrases shown in the middle part of the table below in the provisions shown in the uppermost part of the same table shall be read as shown in the lowermost part of the same table.

Article 3, Article 18 Paragraph 2 Item (3):

“prefectural governor” shall be read as “municipal head”.

Article 5 Paragraph 1:

“excluding the matters stipulated in Item (3) below in the case of a *class B river*” shall be read as

“excluding the matters stipulated in Item (3) below”.

Article 7:

“the *river ledges* for a *class A river* shall be kept in the custody of the office of the regional construction bureau concerned (including the office of the Hokkaido Development Bureau; the same shall apply for Article 39-3

Paragraph 1) and those for a *class B river* shall be kept in the custody of the office of the prefecture concerned”

shall be read as “office of the city, town or village concerned”.

Article 16-9:

“Article 16-3 Paragraph 1 or Paragraph 1 of the preceding article” shall be read as “Paragraph 1 of the preceding article”.

Article 16-10 Paragraph 1:

“class A river, class B river” shall be read as “designation under Article 100 Paragraph 1 of the River Law”.

“Article 16-3 Paragraph 1 or Article 16-8 Paragraph 1” shall be read as “Article 16-8 Paragraph 1”

Article 16-10 Paragraph 2, Article 48 Paragraph 2:

“designation of a class A river or a class B river” shall be read as “designation under Article 100 Paragraph 1 of the River Law”.

Article 16-11:

“Article 16-3 Paragraph 1 and Article 16-8 Paragraph 1” shall be read as “Article 16-8 Paragraph 1”.

Article 18 Paragraph 2 Item (3), Article 38 Paragraph 2:

“prefecture” shall be read as “city, town or village”.

Article 22 Paragraph 4:

“either in an Official Gazette if by the Minister of Construction or in a prefectural gazette if by a prefectural governor” shall be read as “in a gazette of the city, town or village concerned if by the head of a municipality”.

Article 39-3 Paragraph 1 Item (1):

“An office of the regional construction bureau concerned or an office of the prefectural government concerned” shall be read as “an office of the municipal government concerned”.

Article 39-3 Paragraph 1 Item (2):

“A gazette of the prefectural government concerned” shall be read as “gazette of the municipal government concerned”.

Article 52:

“prefecture” shall be read as “city, town or village”.

Article 61 Paragraph 2:

“Article 16-3 Paragraph 1 or Article 16-8 Paragraph 1” shall be read as “Article 16-8 Paragraph 1”:

Article 63:

“Article 58 through the preceding article” shall be read as “Article 58, Article 59 Item (2) or (3),

Article 60 Item (2), Article 61 Item (1) or (2) (excluding the part regarding permission under Article 16-3 Paragraph 1) or the preceding article”.

[Moc 100-5] MOC Ordinance Article 38 (Public notification on the designation of *locally designated rivers*)

Public notification under Article 55 Paragraph 2 of the Government Ordinance shall be made by indicating the start and end points of the river section concerned and one or more of the matters listed in Article 1-2 of the Ministry of Construction Ordinance.

[Moc 100-6] MOC Ordinance Article 38-2 (Mutatis mutandis application of the provisions of the Ministry of Construction Ordinance to *locally designated rivers*)

The provisions of Article 1, Article 2, Articles 4 through 6, Article 7 Item (3), Article 8 Paragraph 1, Articles 9 through Article 18, Articles 18-6 through 33-10, Articles 35 through 37, Article 39, Article 40 and Article 42 shall apply mutatis mutandis to *locally designated rivers*, in which case the words and phrases shown in the middle part of the table below in the provisions shown in the uppermost part of the same table shall be read as shown in the lowermost part of the same table.

Article 2, Article 8 Paragraph 1, Article 14 Paragraph 2, Article 17 Paragraph 1, Article 23 Paragraph 1, Article 33-2, Article 37:

“the Official Gazette if by the Minister of Construction or a gazette of the prefecture concerned if by a prefectural governor” shall be read as “a gazette of the city, town or village”.

Article 4:

“governors concerned” shall be read as “heads of the municipalities concerned”.

“prefecture concerned” shall be read as “city, town or village concerned”.

“prefectural governor” shall be read as “municipal head”

Article 7 Item (3), Table 4:

“*class B river*” shall be read as “*locally designated river*”.

Article 7 Item (3), Table 1, Table 2, Table 3:

“prefectural” shall be read as “municipal”

Article 39, Article 40:

“Article 16-3 Paragraph 1 or Article 16-8 Paragraph 1 of the Government Ordinance” shall be read as

“Article 16-8 Paragraph 1 of the Government Ordinance”.

Table 2, Table 3:

“designated section of class A river and class B river” shall be read as “*locally designated river*”.

(Matters Left to Government Ordinance)

Article 101.

Matters necessary for enforcement of this Law not provided for in this Law shall be fixed by Government Ordinance.

Chapter VII. Penal Provisions

(Acts Subject to Penal Servitude Not More Than 1 Year or a Fine of Not More Than 500,000 Yen)

Article 102.

A person to whom one of the following items applies shall be punished with penal servitude for not more than one year or a fine of not more than five hundred thousand yen.

- (1) A person who used the flowing water of a river exclusively in violation of the provisions of Article 23.
- (2) A person who constructed, reconstructed or removed a structure in violation of the provisions of Article 26 Paragraph 1.
- (3) A person who excavated, banked or cut land or carried out any other act that altered the shape of land or planted or cut trees in violation of the provisions of Article 27 Paragraph 1.

(Acts Subject to Penal Servitude Not More Than 6 Months or a Fine of Not More Than 300,000 Yen)

Article 103.

A person to whom one of the following items applies shall be punished with penal servitude for not more than six months or a fine of not more than three hundred thousand yen.

- (1) A person who rejected or obstructed restoration measures in violation of the provisions of Article 22-2 Paragraph 4.
- (2) A person who used a structure in violation of the provisions of Article 30 Paragraph 1.
- (3) A person who denied or obstructed the entry into or temporary use of land in violation of the provisions of Article 89 Paragraph 7.

(Acts Subject to Penal Servitude Not More Than 3 Months or a Fine of No More Than 200,000 Yen)

Article 104.

A person who falls under any of the following items shall be punished with penal servitude for not more than three months or a fine of not more than two hundred thousand yen.

- (1) A person who violated the provision of Article 55 Paragraph 1 by taking any of the actions stipulated therein in a river conservancy zone.
- (2) A person who violated the provision of Article 58-4 Paragraph 1 by taking any of the actions stipulated therein in a *spatial river* conservancy zone.

(Acts Subject to a Fine of Not More Than 300,000 Yen)

Article 105.

A person to whom one of the following items applies shall be punished with a fine of not more than three hundred thousand yen.

- (1) A person who failed to follow instructions issued under the provisions of Article 44 Paragraph 1.
- (2) A person who used a dam in order to store or intake the flowing water of a river without obtaining authorization under the operation regulations stipulated in Article 47 first part of Paragraph 1.
- (3) A person who operated a dam in violation of the provisions of Article 47 Paragraph 3.
- (4) A person who obtained approval under Article 23, Article 26 Paragraph 1, Article 27 Paragraph 1, Article 55 Paragraph 1 or Article 58-4 Paragraph 1 through fraud or other improper means.
- (5) A person who used a structure which had passed a completion check under the provisions of Article 30 Paragraph 1 on the basis of fraud or other improper means.

(Acts Subject to a Fine of Not More Than 200,000 Yen)

Article 106.

A person to whom one of the following items applies shall be punished with a fine of not more than two hundred thousand yen.

- (1) A person who failed to draw up a record, refused to submit a record or submitted false records in violation of the provisions of Article 49.
- (2) A person who used a dam in order to store or intake the flowing water of a river without the placement of a chief superintendent as stipulated in Article 50 Paragraph 1.
- (3) A person who constructed, reconstructed or removed a structure in violation of the provisions of Article 26 Paragraph 1 on land in a *projected river zone* that is deemed to be in a *river zone* according to the provisions of Article 58 or in aboveground or underground space in a *projected spatial river zone* that is deemed to be in aboveground or underground space in a *spatial river zone* according to the provisions of Article 26 Paragraph 1.
- (4) A person who excavated, banked or cut land or carried out any other act that altered the shape of land or planted or cut trees in violation of the provisions of Article 27 Paragraph 1 on land in a *projected river zone* stipulated in the preceding item or in aboveground or underground space in a *projected spatial river zone* stipulated in the same item.
- (5) A person who, in violation of the provisions of Article 30 Paragraph 1, used a structure that was constructed or reconstructed on land in a *projected river zone* stipulated in Item (3) or in aboveground or underground space in a *projected spatial river zone* stipulated in the same

item.

(6) A person who failed to submit a report or submitted a false report or rejected or obstructed the test stipulated in Article 78 Paragraph 1 in violation of the provisions of the said paragraph.

(Liability of Employer and a Juristic Person)

Article 107.

In case the representative of a juridical person, or an agent or and employee of or any other person working for a juridical or natural person has violated any of the provision of Articles 102 through 106 in connection with the business of the juridical or natural person, not only the offender shall be punished by, the juridical or natural person shall also be punished with a fine prescribed in the corresponding article.

(Acts Subject to a Fine Not More Than 50,000 Yen)

Article 108.

A person who failed to notify or made a false notification in violation of the provisions of Article 33 Paragraph 3 (including the cases where the said paragraph applies to Article 55 Paragraph 2, Article 57 Paragraph 3, Article 58-4 Paragraph 2 and Article 58-6 Paragraph 3) shall be punished with a fine of not more than fifty thousand yen.

(Establishment of Penal Provisions in Government Ordinances or Prefectural Regulations)

Article 109.

Government Ordinances ^{109-1)~ 109-6)} or prefectural regulations established on the basis of the provisions of Article 28 or Article 29 Paragraph 1 or 2 may establish the necessary penalties.

2 The penalties under Government Ordinances stipulated in the preceding paragraph shall be penal servitude for not more than six months, a fine of not more than three hundred thousand yen, detention or a minor fine. The penalties under prefectural regulations shall be penal servitude for not more than three months, a fine of not more than two hundred thousand yen, detention or a minor fine.

[Gor 109-1] Government Ordinance Article 58

Any person who has caused damage to a river in violation of the provisions of Article 16-4 ²⁹⁻²⁾ Paragraph 1 of the Government Ordinance shall be subject to up to six months' imprisonment with labor or a fine of up to 300,000 yen.

[Gor 109-2] Government Ordinance Article 59

Any person who falls within any of the categories listed below shall be subject to up to three months' imprisonment with labor or a fine of up to 200,000 yen.

- (1) Person who has floated down logs or bamboos in violation of the provisions of Article 16-3²⁸⁻⁴⁾ Paragraph 1 of the Government Ordinance;
- (2) Person who has dumped earth or stone, trash, human wastes, corpse of a plant or animal, or other wastes on land within a *river zone* in violation of the provisions of Article 16-4²⁹⁻²⁾ Paragraph 1 of the Government Ordinance;
- (3) Person who has brought into the area of land within a *river zone* specified by the *river administrator* an automobile or other things specified by the *river administrator* in violation of the provisions of Article 16-4²⁹⁻²⁾ Paragraph 1 of the Government Ordinance.

[Gor 109-3] Government Ordinance Article 60

Any person who falls within any of the categories listed below shall be subject to a fine of up to 300,000 yen.

- (1) Person who has navigated a boat/ship or raft in violation of the provisions of Article 16-2²⁸⁻¹⁾ Paragraph 2 or 3 of the Government Ordinance;
- (2) Person who, in violation of Article 16-8²⁹⁻¹⁰⁾ Paragraph 1 of the Government Ordinance, has committed any of the acts listed in the items of said paragraph.

[Gor 109-4] Government Ordinance Article 61

Any person who falls within any of the categories listed below shall be subject to a fine of up to 200,000 yen.

- (1) Person who has failed to make notification or has made false notification in violation of the provisions of Article 16-5²⁹⁻⁴⁾ Paragraph 1 or 2 of the Government Ordinance;
- (2) Person who has obtained permission under Article 16-3²⁸⁻⁴⁾ Paragraph 1 of the Government Ordinance or Article 16-8²⁹⁻¹⁰⁾ Paragraph 1 of the Government Ordinance by fraudulent or otherwise illegal means.

[Gor 109-5] Government Ordinance Article 62

Any person who has failed to make notification or has made false notification in violation of the provisions of Article 16-10²⁹⁻¹⁷⁾ of the Government Ordinance shall be subject to a fine of up to 100,000 yen.

[Gor 109-6] Government Ordinance Article 63

In the event that the representative of a juridical person or an agent, employee or any other worker of a juridical or natural person has committed an act violating any of the provisions of Articles 58 through 62 of the Government Ordinance in connection with said juridical or natural person's business, both the person who has committed said act and said juridical or natural person shall be subject to a fine stipulated in this article.

Supplementary Provisions

1 This Law shall come into force as from 1 April 1965. Provided that, the provisions of Chapter 5 shall come into force as from the day of its promulgation.

2 With regard to the application of the provisions of Article 60 in fiscal 1985, the stipulation of "1/3" in Paragraph 1 of the said article shall be "1/4", and the stipulation of "2/3" in Paragraph 2 of the said article shall be "6/10".

3 With regard to the application of the provisions of Article 60 in fiscal 1986 and fiscal 1991 through to fiscal 1993, the stipulation of "1/3" in Paragraph 1 of the said article shall be "4/10", and the stipulation of "2/3" in Paragraph 2 of the said article shall be "5.5/10". Provided that, the same shall not apply from fiscal 1991 through to fiscal 1993 in the case where the provisions of the said article apply with regard to emergency river improvement works carried out to deal with a collapse of a levee or other hazardous situation.

4 With regard to the application of the provisions of Article 60 from fiscal 1987 through to fiscal 1990, the stipulation of "1/3" in Paragraph 1 of the said article shall be "4.5/10" (4/10 in respect of the cost of improvement works which is carried out to prevent a recurrence of a disaster and which is not emergency river improvement works stipulated in the proviso at Paragraph 4 of the Supplementary Provisions), and the stipulation of "2/3" in Paragraph 2 of the said article shall be "5.25/10" (5.5/10 in respect of the cost of improvement works which is carried out to prevent a recurrence of a disaster and which is not emergency river improvement works stipulated in the proviso at Paragraph 4 of the Supplementary Provisions). Provided that, the same shall not apply in the case where the provisions of the said article apply with regard to emergency river improvement works carried out to deal with a collapse of a levee or other hazardous situation.

5 Until further notice, the national government may extend interest-free loans to local public bodies for river improvement works for which the government is to meet a part of the cost under the provisions of Article 60 latter part of Paragraph 2, Article 62, Article 65-2 latter part of Paragraph 1, or Article 96, and to which Article 2 Paragraph 1 Item 2 of the Special Measures Law Concerning the Promotion of Social Capital Development Utilizing Revenue from the Sale of Nippon Telegraph and Telephone Co. Ltd. Stock (Law No.86 of 1987; hereinafter referred to as "Social Overhead Capital Development Special Measures Law") applies, up to an amount equivalent to the amount which the national government is to meet under the provisions of Article 60 latter part of Paragraph 2, Article 62, Article 65-2 latter part of Paragraph 1, or Article 96 (with regard to the percentage of the national government share of cost under these provisions, in the case where there are legal provisions which set a

different percentage from these provisions, the said provisions which set different percentages are included; hereinafter the same) within the limit of budgetary appropriation.

6 Until further notice, the national government may extend interest-free loans to local public bodies for a part of the cost or *river works* (excluding river improvement work and river repair work) concerning class A or *class B rivers* (rivers to which provisions pertaining to *class B rivers* contained within this Law apply as stipulated in Article 100) to which Article 2 Paragraph 1 Item 2 of the Social Capital Development Special Measures Law applies, within the limit of budgetary appropriation.

7 The redemption period for the loans extended by the national government stipulated in the preceding two paragraphs shall be not more than twenty years (including a deferment period of not more than five years) and stipulated in Government Ordinances.

8 In addition to the provisions of the preceding paragraph, the redemption method, advancing the redemption period and other necessary matters concerning redemption of the loans stipulated in Paragraph 5 and 6 of these Supplementary Provisions shall be stipulated in Government Ordinances.

9 In the case where the national government extended a loan to a local public body under the provisions of Paragraph 5 of these Supplementary Provisions for river improvement works, the share of the cost to be met by the national government as stipulated in Article 60 latter part of Paragraph 2, Article 62, Article 65-2 latter part of Paragraph 1, or Article 96, shall be met by way of a transfer of an amount equivalent to the repayment amount at the time of redemption of the said loan.

10 In the case where the national government extended a loan to a local public body under the provisions of Paragraph 6 of these supplementary provisions for *river works*, the national government shall provide a subsidy of an amount equivalent to the said loan by way of a transfer of an amount equivalent to the repayment amount at the time of redemption of the said loan.

11 With regard to the application of the provisions of the preceding two paragraphs in the case where a local public body received an interest-free loan under the provisions of Paragraph 5 or 6 of these supplementary provisions and advanced the redemption period stipulated in Paragraph 7 and 8 of these Supplementary Provisions (excluding cases stipulated in Government Ordinances), the said redemption shall be deemed to have been carried out at the conclusion of the said redemption period.

THE RIVER LAW

WITH COMMENTARY BY ARTICLE

Appendix I

GOVERNMENT ORDINANCE FOR STRUCTURAL STANDARDS FOR RIVER ADMINISTRATION FACILITIES (STRUCTURAL ORDINANCE)

THE RIVER LAW
WITH COMMENTARY BY ARTICLE

Appendix I

GOVERNMENT ORDINANCE FOR
STRUCTURAL STANDARDS FOR RIVER ADMINISTRATION FACILITIES
(STRUCTURAL ORDINANCE)

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**GOVERNMENT ORDINANCE FOR
STRUCTURAL STANDARDS FOR RIVER ADMINISTRATION FACILITIES
(STRUCTURAL ORDINANCE)**

The Cabinet promulgates this Government Ordinance on the basis of the provisions stated in Article 13* (including the cases of mutatis mutandis application of the River Law in Article 100**) of the River Law (Law No.167 of 1964).

* Article 13 (Structural Standards for River Administration Facilities)

River administration facilities, or river structures established with approval as stipulated in Article 26 Paragraph 1 must be structurally safe in consideration of water level, flow, topographical and geological conditions and other river conditions, and the dead load, water pressure and other anticipated loads.

2 Technical standards necessary for river administration and applicable to dams, levees and other major *river administration facilities* as well as river structures established with approval as stipulated in Article 26 Paragraph 1 shall be stipulated in Government Ordinance.

**Article 100 (Locally designated rivers)

The provisions of this Law concerning *class B rivers* (except the provision which may be designated by Government Ordinance) shall apply mutatis mutandis to a river designated by the head of a city, town or village, other than any of *class A rivers* and *class B rivers*. In this case, "the prefectural governor" in the provisions shall read "the head of the city, town or village"; "the prefecture" "the city town or village"; and "the Minister of Construction" "the prefectural governor."

2 Unless provided for in the preceding paragraph, technical modification in reading necessary for mutatis mutandis application of the provisions of this Law shall be fixed by Government Ordinance.

CHAPTER 1. GENERAL PROVISIONS

(Objectives)

Article 1.

This Government Ordinance provides general technical standards required for executing river administration on major structures such as dam and levee out of the river administration facilities* or the structures to be built with permission of Article 26 Paragraph 1(hereinafter referred to as "permitted structures") of the River Law (hereinafter referred to as "the Law").

The term "river" as used in this Law means either a class A river or a class B river and includes the river administration facilities of the river.

*Article 3 (The River and the River Administration Facilities)

The term "river" as used in this Law means either a *class A river* or a *class B river* and includes the *river administration facilities* of the river.

2 The term *river administration facility* as used in this Law means a dam, weir, sluice, levee, revetment, ground sill, *fluvial woods* (trees planted along levees or reservoirs in a long, narrow strip for flood mitigation and/or water conservation purposes designated by the Ministry of Construction Ordinance³⁻³) or any other facility which has the function of increasing public benefits from the water of a river or of eliminating or decreasing public losses which may be caused by the water of a river. However, with regard to a facility built by a person other than the *river administrator*, the term applies only when the *river administrator* has obtained the consent of the person who, on the basis of his title, administers the facility concerned to making it a *river administration facility*.

(Definitions of terminology)

Article 2.

In this Government Ordinance, the terminology as given in each of the following items shall be defined by the respective item in the following.

(1) Normal top water level:

Normal top water level means the highest water level which is, in a plan of construction or reconstruction of a dam, expected to take place at the upstream face of the non-overflow section of the dam in storing river water at normal time.

(2) Surcharge water level:

Surcharge water level means the highest water level which is, in a plan of construction or reconstruction of a dam, expected to take place at the upstream face of the non-overflow section of the dam in temporarily storing river water at flood time.

(3) Design flood stage:

Design flood stage means the highest water level which is, in a plan of construction or reconstruction of a dam, expected to take place at the upstream face of the non-overflow section of the dam on the assumption that the largest discharge (in case of a fill-type dam, a discharge 1.2 times this discharge; hereinafter referred to as "dam design flood discharge") among such discharges as a flood discharge expected to occur at a rate of once per two hundred years at a site closely upstream of the dam, the largest flood discharge in the past which occurred at this site, and a flood discharge expected to occur at the site in the light of the results of observation of hydrology or meteorology connected with the largest floods which occurred in the basin related to the dam or in another basin similar to the basin in hydrology or meteorology is released from the flood spillway of the dam (in case of a dam whose storage effect is large, a water level to be obtained by deducting a value obtained in consideration of the storage

effect from this water level).

(4) Design flood discharge:

Design flood discharge means the high-water discharge fixed by the river administrator in accordance with the fundamental river management policy in consideration of major floods in the past, the particulars of the occurrence of the damage due to them, and the conditions of meteorology, topography, geology and development of the region where occurrence of damage must be prevented.

(5) Design cross-section:

Design cross-section means the river cross-section fixed by the river administrator, in accordance with the fundamental river management policy, so as to carry the Design flood discharge, prevent the backwater or the high tide at the design high-tide level from flowing out to the outside of the river, utilize the river properly, maintain the normal functions of the river flow and maintain and conserve the fluvial environment.

(6) Flow section:

Flow section means a river cross-section area effective for carrying the river discharge.

(7) Design high-water level:

Design high-water level means the high-water level fixed by the river administrator, in accordance with the fundamental river management policy, based on the design flood discharge and the design cross-section and/or considering storage of river water.

(8) Design high-tide level:

Design high-tide level means the high-tide level fixed by the river administrator, in accordance with the fundamental river management policy, in comprehensive consideration of the major high-tides in the past and the particulars of occurrence of damage due to them, the hydrology and meteorology of the river basin and the sea area where the river is pouring into, and the condition of development of the region where occurrence of damage must be prevented.

(9) High-tide section: High-tide section means a section of the river where the design high-tide level is higher than the design high-water level.

(10) Design water level for high-standard levees:

Design water level for high-standard levees is the maximum water level in a river section in the event of a flood or high tide that is expected in the basin of that river section in view of hydrological or meteorological observations associated with the maximum flood or high tide that has occurred in the basin of a river section designated in the fundamental river management policy for construction of high-standard levees (referred to in Paragraph 2 of Article 2 as a "high-standard levee section") or the basin of a river section with similar hydrological or meteorological conditions.

CHAPTER 2. DAM

(Scopet of application)

Article 3.

The provisions of this chapter shall apply to dams other then those stated below.

- (1) Dam to be built for checking and/or regulating sand efflux.
- (2) Dam whose height from the foundation ground to the crest is less than 15m.

(Principle of structure)

Article 4.

Dam body and its foundation (including the connection part of them; hereinafter the same in this Government Ordinance) shall have necessary watertightness and sufficient strength against expected loads.

2. The body of concrete dam shall be a structure which does not overturn nor slide by expected loads.
3. The body of fill-type dam shall be a structure which is not broken on sliding nor on seepage by expected loads.
4. Dam foundation shall not slide, break sliding, nor break on seepage by expected loads.
5. No discharge facility nor water channel structure shall be built in the body of fill-type dam.

(Height of non-overflow section of a dam)

Article 5.

Height of the non-overflow section of a dam shall, according to with or without flood gates, be larger than the largest value given in the right column of the following table in case of a concrete dam, and shall be larger than a value to be obtained by adding 1m to the largest value given in the same column in case of a fill-type dam.

Item	Classification	Height of non-overflow section of dam (in m)
1	Dam with flood gates	$H_n+h_w+h_e+0.5$ (H_n+2 in case of $h_w+h_e<1.5$) $H_s+h_w+h_e/2+0.5$ (H_s+2 in case of $h_w+h_e/2<1.5$) $H_d+h_w+0.5$ (H_d+1 in case of $h_w<0.5$)
2	Dam without flood gate	$H_n+h_w+h_e$ (H_n+2 in case of $h_w+h_e<2$) $H_s+h_w+h_e/2$ (H_s+2 in case of $h_w+h_e/2<2$) H_d+h_w (H_d+1 in case of $h_w<1$)

Notes:

In this table, H_n , h_w , h_e , H_s and H_d shall be the values given in the following.

H_n : Normal top water level (m).

h_w : Height of wind wave above the water surface of the reservoir (m).

h_e : Height of wave due to earthquake above the water surface of the reservoir (m).

H_s : Surcharge water level (m).

H_d : Design flood stage (m).

2. In applying the provision of the preceding paragraph to a fill-type dam having no flood gates, if the overflow depth is less than 2.5m when the dam design flood discharge overflows the spillway, " H_n+2 in case of $h_w+h_e<2$ " shall be " H_n+1 in case of $h_w+h_e/2<1$ ".

(Kind of load to act on a dam body, etc.)

Article 6.

With regard to loads to act on dam body and foundation, those given in the following table shall be taken according to type of dam and water level of the reservoir.

Type of dam Water level of reservoir	Concrete gravity dam	Concrete arch dam	Fill-type dam
1. In case water level at upstream face of non-overflow section of dam is lower than normal flood water level or lower than water level at surcharge	W, P, P_e , I, P_d , U	W, P, P_e , I, P_d , U, T	W, P, I, P_p
2. In case water level at upstream face of non-overflow section of dam is lower than design flood stage	W, P, P_e , U	W, P, P_e , U, T	W, P, P_e

Notes:

In this table, W, P, P_e , I, P_d , U, P_p and T shall be the loads given below.

W: Weight of dam body.

P : Hydrostatic pressure of stored water.

P_e : Earth pressure of sand deposit in reservoir.

I : Inertia force of dam body during earthquake.

P_d : Hydrodynamic pressure of stored water during earthquake.

U : Uplift of stored water.

P_p : Pore pressure (water pressure due to seepage water in dam body or foundation).

T : Force due to temperature change in dam body.

(Spillway)

Article 7.

Dam shall be equipped with spillway.

2. Spillway (except energy killer) shall be a structure which can release the dam design flood discharge and discharges smaller than it safely.
3. Spillway shall be a structure which give no trouble to dam body, foundation and reservoir.

(Width of overflow section of an overflow spillway)

Article 8.

In case the height of a levee located upstream of a dam with overflow spillway (in case the design cross-section is already fixed, the levee related to the design cross-section (hereinafter referred to as "design levee") is included) is higher than the design flood stage of the dam and lower than the crest height of the non-overflow section, the provisions of Article 38 and Article 39 shall apply mutatis mutandis to the spillway of this dam. In this case, "span (distance between the centerlines of two adjoining piers; the same in this chapter)" mentioned in Article 38 Paragraph 1 and "span" mentioned in Article 38 and Article 39 shall read "width of overflow section (width of each overflow section in case the overflow section of the spillway is divided by gate-piers or bridge-piers)".

(Energy dissipator)

Article 9.

Spillway shall be equipped with proper energy dissipator in case it is necessary to dissipate the energy of water flowing down on the spillway in order to protect the dam body and/or the river bed, the river banks or the river administration structures downstream of the dam.

(Principle of a structure gate, etc.)

Article 10.

Gate of dam (including valve; the same in this chapter) shall be a structure which surely opens or closes and has necessary watertightness and durability.

2. Operating apparatus of dam gate shall be a structure which surely opens or closes the gates.
3. Dam gate shall be a structure which is safe against expected loads.
4. Spillway with gates shall be equipped with spare gates or substitutional facilities for them.

(Kinds of load to act on a gate)

Article 11.

As for the loads to act on gates of dam, such forces shall be taken as weight of gate, hydrostatic pressure of stored water, earth pressure of silt deposited in the reservoir, force due to freezing of stored water, inertia force of gate during earthquake, hydrodynamic pressure of stored water during earthquake and force due to opening and closing of gate.

(Calculation method of load, etc.)

Article 12.

Technical standards required for the calculation of the loads stipulated in Article 6 and the preceding article and the calculation of dam structure shall be fixed by Ministry of Construction Ordinance (Structural Rules).

(Measurement facilities)

Article 13.

Dam shall be equipped with facilities for measuring the matters stated in the right column of the following table in accordance with the classification started in the middle column of the table.

Item	Type of dam	Height of dam	Matters to be measured
1	Concrete gravity	Less than 50m	Rate of seepage, uplift
		50m and over	Rate of seepage, deformation, uplift
2	Concrete arch	Less than 30m	Rate of seepage, deformation
		30m and over	Rate of seepage, deformation, uplift
3	Fill-type	Dam body almost made of homogeneous material	Rate of seepage, deformation, line of seepage
		Others	Rate of seepage, deformation

2. Dam whose crest height from foundation is 100m and over or dam specially designed shall be equipped with facilities for measuring the matters especially deemed to be necessary for administration of the dam.

(Outlet structures)

Article 14.

Dam shall be equipped with outlet structure necessary for maintaining the normal functions of the river flow.

(Prevention works against land sliding and prevention works against leakage)

Article 15.

If it is necessary to prevent land sliding in the reservoir or in land adjacent to the reservoir which may be caused by installation of a dam or storage of river water or to prevent leakage from the reservoir, appropriate prevention works against land sliding or leakage shall be executed.

(Fluvial woods zone formed around a reservoir)

Article 16.

Fluvial woods zones formed around reservoirs shall be designed appropriately from the viewpoint of contamination of reservoir water and inflow of sediments into the reservoir as fixed by Ministry of Construction Ordinance.

CHAPTER 3. LEVEE

(Scope of application)

Article 17.

The provisions of this chapter shall apply to levees and open levees to be built for the purpose of preventing river water to flow out of the river channel.

(Principle of structure)

Article 18.

Levee shall be a structure which is, as one body with revetment, groyne and other similar structures, safe against the normal action of river flow at a water level equal to or lower than the design high-water level (or the design high-tide level in a high-tide section).

(Material and structure)

Article 19.

Levee shall be built with earth embankment. However, in case it is deemed inevitable by reason of the condition of land utilization and other special circumstances, the whole or the major part of the levee may be a structure of concrete, sheet pile or a structure similar thereto or a levee equipped with concrete parapet or a similar structure.

(Height)

Article 20.

Height of levee (excluding levee of lake and swamp whose design flood discharge is not fixed) shall be higher than a value to be obtained by adding the value given in the right column of the following table to the design high-water level in accordance with the design flood discharge. However, this shall not apply to a section where the elevation of the protected land adjacent to the levee (hereinafter referred to as "protected ground height") is higher than the design high-water level and it is deemed that there is no hindrance against flood control from the standpoint of the condition of topography, etc.

Item	Design flood discharge	Value to be added to design high water level
1	Less than 200 m ³ /s	0.6m
2	200 and over, and less than 500 m ³ /s	0.8m
3	500 and over, and less than 2,000 m ³ /s	1.0m
4	2,000 and over, and less than 5,000 m ³ /s	1.2m
5	5,000 and over, and less than 10,000 m ³ /s	1.5m
6	10,000 m ³ /s and over	2.0m

2. Out of the levees mentioned in the preceding paragraph, the height of levee of lake and swamp or high-tide section where the design flood discharge is fixed shall accord with the provision of the preceding paragraph and besides shall take a value not less than a value to be obtained by adding a value deemed necessary considering the effect of wind waves to the design high-water level in case of the levee of the lake and swamp or to the design high-tide level in case of the levee of the high-tide section.
3. The height of levee of lake and swamp where the design flood discharge is not fixed shall be higher than a value to be obtained by adding a value deemed necessary considering the effect of wind waves to the design high-water level (in a high-tide section, the design high-tide level; the same in the following paragraph).
4. Height of the portion except parapet of a levee with parapet shall be higher than the design high-water level.

(Crown width)

Article 21.

The crown width of levee (excluding a levee of lake and swamp where the design flood discharge is not fixed), except for a section where the difference between the height of the levee and the ground height of the protected land is less than 0.6m, shall be larger than values given in the right column of the following table in accordance with design flood discharge. However, in a section where the protected ground height is higher than the design high water level and it is deemed that there is no hindrance

against flood control from the standpoint of the condition of topography, etc., the crown width may take a value larger than 3m also in case the design flood discharge is larger than 500m³/s.

Item	Design flood discharge	Crown width
1	Less than 500m ³ /s	3m
2	500 and over, and less than 2,000m ³ /s	4m
3	2,000 and over, and less than 5,000m ³ /s	5m
4	5,000 and over, and less than 10,000m ³ /s	6m
5	10,000m ³ /s and over	7m

2. The crown width of levee of lake and swamp where the design flood discharge is not fixed shall take an appropriate value larger than 3m in consideration of the height of the levee, the structure and the condition of the protected land.

(Slope gradient, etc. of a levee of earth embankment)

Article 22.

The slope gradient of levee of earth embankment (excluding a portion of parapet and a portion protected by revetment; the same in the following paragraph) shall be less than 50% except for a section where the difference between the height of levee and the ground height of the protected land is less than 0.6m.

2. The surface of slope of levee of earth embankment shall be protected by sodding, etc.

(Types of load acting on high-standard levees)

Article 22-2.

The types of loads assumed to be acting on high-standard levees and their foundation shall be chosen from the load types given in the table below according to the water level in the river channel.

Item	Water level within the river channel	Loads
1	Level equal to or lower than the design high-water level	W,P,I,P _p
2	Level higher than the design high-water level, and lower than the high- standard levees design water level	W,P,P _p , τ

Notes

In this table, W,P,I, P_p and τ shall be the loads given below

W: Dead weight of the high-standard levee

P: Hydrostatic pressure of the flow water

I : Inertia force of body of the high-standard levee and its foundation during earthquake

P_p : Pore pressure (water pressure due to seepage water in the high-standard levee and its foundation)

τ : Shearing force by overtopping flow

(Calculation methods of loads)

Article 22-3.

Technical standards required for the calculation of the loads stipulated in the preceding article and the calculation of high-standard levee structure shall be fixed by Ministry of Construction Ordinance.

(Berm)

Article 23.

If it is necessary for stabilizing a levee, berm shall be built in the mid-slope of the levee.

2. The width of berm of a levee shall be larger than 3m.

(Marginal strip)

Article 24.

If it is necessary for stabilizing a levee, or it is necessary especially for storing sand, etc. for emergency or for the conservancy of environment, marginal strip shall be built at the foot of the land-side slope of the levee as may be provided for in detail by Ministry of Construction Ordinance (Structural Rules).

(Revetment)

Article 25.

If it is necessary for protecting the levee from the action of river flow, revetment shall be built on the river-side face of the levee or on the river-side berm.

(Groyn)

Article 26.

If it is necessary to control the direction of flow or to dissipate the energy of flow in order to protect the levee from the action of flow, groyn shall be built at an appropriate site.

(Fluvial woods zone to be established along levees)

Article 26-2.

Fluvial woods zone established along the levee should be structured in consideration of prevention of dike break, etc. in accordance with the Ministry of Construction Ordinance.

(Inspection passage)

Article 27.

A levee shall be provided with passage for river administration (hereinafter referred to as "inspection passage") as may be provided for in detail by Ministry of Construction Ordinance (Structural Rules).

(Measures to be taken for a levee seriously affected by waves)

Article 28.

The following measures shall be taken at need for such levees subject to serious influence of waves as those of lake and swamp, high-tide section and at confluence of two or more rivers.

- (1) The river-side surface of slope and/or the river-side berm shall be provided with revetment or revetment and parapet.
 - (2) The front of the levee shall be provided with wave dissipation work.
2. If there is a fear of wave overtopping with regard to the levee mentioned in the preceding paragraph, the following measures shall be taken at need besides the provisions in the same paragraph.
- (1) The crown, the land-side surface of slope and the land-side berm shall be protected by concrete or similar material.
 - (2) Drain shall be built along the foot of the land-side slope.

(Special rules for height and crown width of a levee in backwater section)

Article 29.

In case the joining of A river and B river will cause backwater in B river, the height of levee of B river upstream from the confluence shall not be lower than the height of levee of A river at the confluence which is fixed by the provisions of Article 20 Paragraph 1 to 3. However, this shall not apply to a section where the protected ground height is higher than the design high water level and it is deemed that there is no hindrance against flood control from the standpoint of the condition of topography, etc. and a section where occurrence of backwater can be prevented by facilities for preventing back flow.

2. In case the height of levee of B river is determined in accordance with the provision stated in the preceding paragraph, the crown width of levee of B river in the section from the confluence up to a spot where the height of levee of A river at the confluence is equal to the levee height of B river to be obtained by adding a value given in the right column of the table in Article 20 Paragraph 1, according to the design flood discharge for B river, to the assumption that backwater does not take place in B river (excluding a section of the river which is lake or swamp; hereinafter referred to as "backwater section") shall not be less than the crown width of the levee of A river at the confluence which will be determined in accordance with the

provisions stipulated in Article 21 Paragraph 1 or Paragraph 2. However, this shall not apply to a section where the protected ground height is higher than the design high water level and it is deemed that there is no hindrance against flood control from the standpoint of the condition of topography, etc.

(Special rules for crown width of a levee of a lake and swamp or high-tide section)
Article 30.

In case the measures stated in Article 28 Paragraph 1 Item 1 are taken for a levee of lake and swamp or high-tide section where the design flood discharge is fixed, in disregard of the provisions stated in Article 21 Paragraph 1 and Paragraph 2 of the preceding article, the crown width of the levee may take an appropriate value larger than 3m in consideration of the contents of measures to be taken in accordance with the provisions of Article 28 and the crown width of the levee to connect with the levee in question (or the design levee in case the design cross-section has been fixed).

(Exception of application of provisions for crown width, etc.)
Article 31.

The provisions of Article 21, Article 29 Paragraph 2 and the preceding article shall not apply to a levee all or the major part of which is composed of concrete, sheet pile or similar material.

2. In applying the provisions of Article 21, Article 29 Paragraph 2 and the preceding article concerning a levee with parapet, the crown width means that to be obtained by deducting the width of the upright part of the parapet from the width of the crown surface of the levee excepting the parapet.

(Special rules for a levee to be built in stages on discontinuous schedule)
Article 32.

In case a levee is built in stages on discontinuous schedule by reason of the geology of ground of the levee, the condition of the opposite bank, the height of the upstream and downstream bank and levee and under other special circumstances, with regard to a levee in each of the steps, the provisions of this chapter (excepting Article 29 and the preceding article) shall apply mutatis mutandis by regarding a value to be obtained by deducting a value corresponding to the difference between the design levee height and the levee height at the stage concerned from the design high-water level (or the design high-tide level in case of the high tide section; hereinafter the same in this article) as the design high water level.

CHAPTER 4. GROUND SILL

(Principle of structure)

Article 33.

Ground sill shall be a structure which is safe against the action of river flow at a water level equal to or lower than the design high water level (or the design high-tide level in case of a high-tide section).

2. Ground sill shall be a structure which will not seriously hinder the adjacent bank and the structure of river administration facilities.

(Bed-protection work and high water bed protection works)

Article 34.

In building a ground sill, an appropriate bed-protection work or high water bed protection work shall be executed if it is necessary for preventing scour of river bed or high water bed which connects with the ground sill.

(Revetment)

Article 35.

In building a ground sill, revetment for preventing scour at river bank or levee which may occur due to change in flow shall be built as may be provided for by Ministry of Construction Ordinance (Structural Rules).

(Fishway)

Article 35-2.

In building a ground sill, if it is necessary for not hinder fish run, fishway should be built as may be provided for by Ministry of Construction Ordinance.

CHAPTER 5 WEIR

(Principle of structure)

Article 36.

Weir shall be a structure which is safe against the action of flow at a water level equal to or lower than the design high water level (or the design high-tide level in case of the high-tide section).

2. Weir shall be a structure which will not hinder the flow of flood at a water level equal to or lower than the design high-water level and will not seriously hinder the adjacent river bank and the structure of river administration facilities and will be designed by paying proper attention to prevention of scour in river bed and high water

bed which connect with the weir.

(Relation with flow section)

Article 37.

The portion (excluding gate piers) except for movable section (limited to gates for spilling river water and gate piers which support the gates; the same in the following article and Article 39) of a weir with movable section and the fixed weir must not be built within the flow section (including the design cross-section in case the design cross-section is fixed; the same in this article, Article 58 Paragraph 1 and Article 61 Paragraph 1). However, this shall not apply in case it is deemed that there is no hindrance against flood control by reason that the weir is to be built in a ravine or other reasons such as the conditions of river and topography, etc. or provided that a measure deemed appropriate for securing the function for flood control is taken in case it is deemed inevitable according to the condition of river bed to be built within the flow section.

(Span in movable section of a weir)

Article 38.

Span in the movable section of a weir (distance between the center lines of two adjoining gate piers; the same in this chapter) shall, in accordance with the design flood discharge, be larger than a value given in the right column of the following table (or the total length of the movable section (the distance between the center lines of the end gate-piers; the same in the following paragraph) in case it is smaller than a value given in the same column with regard to each magnitude of design flood discharge). However, this shall not apply in case it is deemed that there is no hindrance against flood control by reason that the weir is to be built in a ravine or other reasons such as the conditions of river, topography, etc.

Item	Design high-water discharge	Span
1	less than 500m ³ /s	15m
2	500 up and less than 2,000m ³ /s	20m
3	2,000 up and less than 4,000m ³ /s	30m
4	4,000m ³ /s up	40m

2. In case the total length of the movable section of a weir is less than 30m with regard to a case falling under the middle column of Item 1 of preceding table, the span in the movable section may take a value larger than 12.5m in disregard of the provisions of the preceding paragraph.

3. In case the mean value of the spans exceed 50m in applying the provision of Paragraph 1 with regard to a case falling under the middle column of Item 3 or Item 4

of the preceding table and this is not deemed to be appropriate from the standpoint of the structure of the weir with movable section, the span of the weir with movable section, may, in disregard of the provision, take a value less than that given in the right column of Item 3 or Item 4 of the table as may be provided for by Ministry of Construction Ordinance (Structural Rules).

4. In a case falling under the middle column of Item 4 of the preceding table, the span in the movable section of a weir related to the river portion except for the thalweg may take a value larger than 30m in disregard of the provision of Paragraph 1. In this case, the mean value of the spans in the movable section must take a value larger than 40 m except for in case the provision of the preceding paragraph is applied.

5. In case the movable section of a weir is a shutter-type, it is permissible as may be provided for in detail by Ministry of Construction Ordinance (Structural Rules) not to apply the provision of the preceding paragraph to the span in the movable section.

(Special rules for span of movable section of a weir)

Article 39.

In case a part of the movable section of a weir is planed to double as a sand-flash or a boat-passage, the span of that portion may take a value larger than those given in the third column of the following table in accordance with design flood discharge. In this case, the mean value of the spans in the movable section must take a value larger than those given in the fourth column of the table except for the movable section of a weir falling under Article 38 Paragraph 2.

Item	Design flood discharge	Span of the part of movable section that doubles as a sand-flash section or a boat-passage	Mean value of spans in the movable
1	Less than 500m ³ /s	12.5m	15m
2	500 up and less than 2,000m ³ /s	12.5m	20m
3	2,000 up and less than 4,000m ³ /s	15m	30m
4	4,000m ³ /s up	20m	40m

2. In case the span in the movable section of a weir excluding a part which doubles as a flash-gate or a boat-passage will become too long to be suitable for the structure of the gate in accordance with the provision of the preceding paragraph and it is deemed that there is no hindrance from the standpoint of flood control, it is permissible as may be provided for in detail by Ministry of Construction Ordinance (Structural Rules) not to apply the latter provision of the preceding paragraph to the span in the movable section.

(Structure of gate in movable section of a weir)

Article 40.

The provisions of Article 10 Paragraph 1 to Paragraph 3 and Article 11 and Article 12 shall apply mutatis mutandis to the gate in the movable section of a weir.

2. Besides the provisions of the preceding paragraph, the matters necessary for the standards of structure of gate in the movable section of a weir shall be provided by Ministry of Construction Ordinance (Structural Rules).

(Height of gate in movable section of a weir)

Article 41.

The height of lower fringe of a lift gate in the movable section of a weir at the maximum lift height must, in accordance with the design flood discharge, take a value larger than that obtained by adding a value given in the right column of the table shown in Article 20 Paragraph 1 to the design high water level and must not be lower than the design high tide level in a high tide section, and, in other sections, must not be lower than the height of a line connecting the tops of the river-side slopes of the levees on both sides of the river at the spot in question (or, in case the design cross-section features are fixed, the design levees in case the heights of the design levees are lower than those of the existing levees and it is deemed that there is no hindrance against flood control or in case the heights of the design levees are higher than those of the existing levees).

2. The height of upper fringe of a shutter gate in the movable section of a weir at opening shall be lower than the height of the base (including the floor slab) of the weir with movable section.

(Special rules for height of a lift gate in movable section of a weir)

Article 42.

The height of lower fringe of a lift gate at the maximum opening in movable section of a weir to be built in a backwater section may take a value larger than either larger of the two heights given below in disregard of the provision of the preceding Article Paragraph 1, if it is deemed that there is no hindrance against flood control.

- (1) a height to be obtained by adding a value given, according to the design flood discharge, in the right column of the table in Article 20 Paragraph 1 to the design high water level to be fixed on the assumption that no backwater takes place in the river in question
- (2) the design flood discharge (or the design high tide level in high tide section).

2. The height of lower fringe of a lift gate at the maximum lift height in the movable section of a weir to be built in an area where there is a fear of ground settlement must not be lower than a height deemed necessary in consideration of expected ground settlement and the condition of the river as well as it must accord with the provisions of Paragraph 1 of the preceding article and the preceding paragraph.

(Administration facilities)

Article 43.

A weir with movable section shall be equipped at need with inspection bridge and other facilities suitable for administration.

(Bed protection work, etc.)

Article 44.

The provisions from Article 34 to Article 35 Paragraph 2 shall apply mutatis mutandis to a case of building a weir.

(Special rules concerning a weir for diversion of flood)

Article 45.

The provisions of Article 37 and Article 41 shall not apply to weir for diversion of flood.

CHAPTER 6 SLUICE AND SLUICEWAY

(Principle of structure)

Article 46.

Sluice or sluiceway shall be a structure which is safe against the action of flow at a water level equal to or lower than the design high water level (or the design high tide level in case of a high tide section).

2. Besides the provision of the preceding paragraph, structure of gates and sluiceways in the high standard levee section or in its backwater section should be safe against the action of river flow at a water level equal to or lower than the high-standard levee design water level.

3. Sluice or sluiceway shall be a structure which will not hinder flood flow at a water level equal to or lower than the design high water level and will not seriously hinder river banks and structure of river administration facilities in the proximity and is designed by paying proper attention to prevention of scour in river bet and high water bed which connect with the sluice or the sluiceway.

(Structure)

Article 47.

Sluice or sluiceway (except for gate and administration facilities) shall be a reinforced concrete structure or a structure similar thereto.

2. Sluiceway shall be a structure which will not hinder release of sediment etc.

(Cross section features)

Article 48.

The cross section features of the spillway portion of a sluice or a sluiceway to be built across a river shall be fixed in consideration of the design flood discharge (or the design flood discharge and the size of boats to pass through in the case of a sluice to be used for passage of boats).

2. The provision of the preceding paragraph shall apply mutatis mutandis to a sluice or a sluiceway to be built across a waterway other than any of the rivers* and the rivers** designated by the head of a city, town or village in accordance with the provision of Paragraph 1, Article 100 of the Law (called "locally designated river" in Article 77 of this Government Ordinance) at the confluence with a river.

(Span of a sluice to be built across a river, etc.)

Article 49.

The provisions from Article 37 to Article 39 (excepting Article 38 Paragraph 5) shall apply mutatis mutandis to a sluice to be built across a river. In this case, "the portion (excluding gate piers) except for movable section (limited to gates for spilling river water and gate piers which support the gates; the same in the following article and Article 39) of a weir with movable section and the fixed weir" in Article 37 shall read "the portion of a sluice except for the gates for spilling river water and the gate piers"; "the movable section of a weir" and "the movable section" in Article 38 and Article 39 shall read "the portion of the gates for spilling river water and the gate piers to support them out of a sluice"; and "gate piers" in Article 38 Paragraph 1 shall read "sluice gate piers".

2. With regard to sluiceways to be built across a river, the inner width of a sluiceway which has more than two gates shall be 5m or more. However, this shall not apply to cases where the inner width reaches over two times of the inner height.

(Structure of gate, etc.)

Article 50.

The gates of a sluice or a sluiceway shall be a structure which is sure to open or close and has necessary watertightness.

2. The gates of a sluice or a sluiceway shall be a steel structure or a structure similar thereto.

3. Operating apparatus of the gates of a sluice or a sluiceway shall be a structure which can surely open or close the gates.

(Height of gate of sluice, etc.)

Article 51.

Height of upper fringe of the curtain wall of a sluice or height of upper fringe of the gates at closing of a sluice without curtain wall must not be lower than the height of the levees which connect with the sluice (or the height of the design levees in case the height of the design levees is lower than the height of the existing levees and it is deemed that there is no hindrance against flood control, or in case the height of the design levees is higher than the height of the existing levees, in case that the design cross-section features are fixed). In a high-tide section, however, in case it is deemed in the light of the condition of the hinterland of the sluice and other special circumstances that there is no hindrance against flood control, it is permissible to take an appropriate height higher than the design high tide level in consideration of the structure of the sluice and wave height, etc.

2. The provision of Article 41 Paragraph 1 shall apply mutatis mutandis to the height of curtain wall and gates of a sluice to be built across a river (except a sluice for diversion of river flow); the provision of Article 42 shall apply mutatis mutandis to the height of curtain wall and gates of a sluice to be built across a river. In this case, "the height of lower fringe of lift gate at the maximum lifting in the movable section of a weir" in these provisions shall read "the height of lower fringe of curtain wall of a sluice and the height of lower fringe of lift gate of a sluice at the maximum lifting.

(Administration facilities, etc.)

Article 52.

The provisions of Article 43 shall apply mutatis mutandis to sluice and sluiceway.

2. Sluice shall be a structure which doubles as an inspection passage as may be provided for in detail by Ministry of Construction Ordinance (Structural Rules).

(Bed protection works, etc.)

Article 53.

The provisions of Article 34 and Article 35 shall apply mutatis mutandis to the cases of construction of sluice or sluiceway.

CHAPTER 7 PUMP STATION, DRAINAGE PUMP STATION AND INTAKE TOWER

(Principle of structure)

Article 54.

Pump station or drainage pump station shall be a structure which does not give severe trouble to the river banks or the structures of the administration facilities.

2. Pump room of pump station or drainage pump station (limited to the floor where the pump is equipped and the room thereunder), pump well, outfall well and other pressure regulation part shall be a structure of reinforced concrete or a structure similar thereto.

(Outfall well of a drainage pump station, etc.)

Article 55.

Drainage pump station which possesses a sluiceway shall be equipped with outfall well and other pressure regulation part.

This shall not apply, however, in case there is no fear to hinder the structure of river banks or levees where the sluiceway crosses (excepting marginal strip to be built for storing earth and sand, etc. for emergency or for the conservancy of environment; the same in Article 57 Paragraph 1, Article 65 Paragraph 2, Article 70 Paragraph 1 and Article 72).

2. Top height of outfall well and other pressure regulation part shall be higher than the height of the levee to be crossed by the sluiceway of the drainage pump station (or the height of the design levee in case, when the design cross-section is fixed, the height of the design levee is lower than the existing levee height and it is deemed that there is no hindrance against flood control, or in case the design levee height is higher than the existing levee height).

(Facilities for removal of flowing materials)

Article 56.

Pump station or drainage pump station shall be equipped with sand basin, screen and/or other facilities suitable for removal of flowing materials. This shall not apply, however, in case it is deemed that there is no hindrance against river administration.

(Sluiceway)

Article 57.

Sluiceway of a pump station or a drainage pump station and the portion other than the sluiceway shall be separated in structure. This shall not apply, however, in case there is no fear to hinder the structure of river banks or levees to be crossed by the sluiceway.

2. The provision of Article 49 Paragraph 2 shall not apply to a sluiceway to be used only for pumping up or drainage by pump in a pump station or a drainage pump station.

(Structure of intake tower)

Article 58.

Intake tower (limited to those to be built within flow section; hereinafter the same in this article and the following article) shall be a structure which will not disturb flood flow at a water level equal to or lower than the design high water level and will not seriously hinder the structure of adjacent river banks and river administration facilities, and is designed by paying proper attention to prevention of scour in river bed and high water bed adjoining the intake tower.

2. Intake tower shall be a reinforced concrete structure or a structure similar thereto.

3. Under-river-bed portion of an intake tower must not be equipped with inlets to be used for direct intake. This shall not apply, however, in case it is deemed that there is no hindrance against flood control in consideration of the magnitude of intake and its depth, etc.

(Bed protection works, etc.)

Article 59.

The provisions of Article 34 and Article 35 shall apply mutatis mutandis to the case of construction of intake tower.

CHAPTER 8 BRIDGE

(Principle of structure)

Article 60.

Abutment and pier to be built within the river area shall be a structure which will be safe against the action of river flow at a water level equal to or lower than the design high water level (or the design high tide level in a high tide section).

2. Abutment and pier to be built within the river area shall be a structure which will not disturb flood flow at a water level equal to or lower than the design high water level, will not severely hinder the structure of adjacent river banks and administration facilities and is designed by paying proper attention to prevention of scour in river bed and high water bed adjoining the abutment or the pier.

(Abutment)

Article 61.

Abutment to be built in river bank or on a river whose width is larger than 50m or in a levee related to a back-water section or a high-tide section (or the design levee in case the design cross-section is fixed; hereinafter the same in this article) must not be built within the flow section. However, this shall not apply in case the abutment will be located in a ravine or it is deemed from the standpoint of the conditions of the river, the topography, etc. that there is no hindrance against flood control.

2. No abutment to be built in a levee area (excepting abutments coming provided for in the preceding paragraph) shall be built on the river side of the front slope of the levee.
3. The river-side face of an abutment to be built in a levee must be parallel to the alignment of the levee. However, this shall not apply in case a necessary measure is taken not so as to hinder severely the structure of the levee.
4. The bottom of an abutment to be built in a levee shall be fixed on the foundation of the levee.

(Bridge pier)

Article 62.

The horizontal cross section of a pier to be built in a river channel (excepting the foundation of the pier (including the bottom slab; the same in the following paragraph) and other portion where there is no fear of attack of river flow; the same in this paragraph) shall be as thin an elliptical shape as possible or other shape similar thereto and the direction of the major diameter (including those similar thereto) must be the same as the direction of flood flow. However, the horizontal cross section of pier may be a circular shape or other shape similar thereto in the horizontal cross section of the pier is very small, in case the component of load acting on the pier perpendicular to the direction of the flood flow is very large and it is deemed to be unavoidable from the standpoint of the structures, or in case the pier is built at a site where the direction of flood flow is unstable.

2. The foundation part of bridge pier to be built in a river channel shall be set at a depth deeper than 2m below the surface of the low water bed in the low-water channel (including the low-water channel of the design cross-section when it has been fixed; hereinafter the same in this paragraph) and the high-water channel within 20m from the top of slope of river bank of the low-water channel and shall be set at a depth deeper than 1m below the surface of the high water bed (including the high water bed related to the design cross-section when it has been fixed) in other part of the high-water channel. However, in case change in river bed is deemed to be very small or in case it is deemed unavoidable from the stand point of the condition of the river or other special circumstances, it is permissible to settle the foundation part of the pier at

a depth below the surface of the low water bed or the surface of the high water bed.

(Span)

Article 63.

In case bridge piers are built in a river channel, the distance between the centerlines of two adjoining bridge piers in the river channel when the piers are projected to a vertical plane crossing the channel perpendicular to the direction of flood flow (including the distance between the river-side face of abutment wall and the centerline of the nearest pier in the channel in case the abutment is located in river bank or in levee (or the design levee in case the design cross-section is fixed; hereinafter the same in this article), or including the distance between the upper corner of the flow section on the plane mentioned above (or the flow section related to the design cross-section in case the design cross-section is fixed) and the centerline of the nearest pier in the channel in case the abutment is not located in river bank or in levee; hereinafter referred to as "span" in this article) shall take a value larger than a value obtained by the following formula (this shall be 50m in case it exceeds 50m) except the case that is deemed to have no hindrance against flood control by reason that the site is located in a ravine or other reasons such as the conditions of river and topography, However, in case, if the span takes a value larger than a value to be obtained by the following formula (hereinafter referred to as "standard span" in this paragraph and Paragraph 3), the average value will exceed a value to be obtained by adding 5m to the standard span, the span may take a value larger than a value to be obtained by deducting 5m from the standard span or the span shall be 30m in case this will become less than 30m).

$$L=20+0.005Q$$

In this formula, L and Q shall take respectively the following numerical values.

L: span (m). Q: design flood discharge (m³/s).

2. The span of a bridge which will come under one of the following items [except those related to the principal public facilities regulated by Ministry of Construction Ordinance (Structural Rules)] may, in disregard of the provision of preceding paragraph, take a value larger than a value specified in the respective item in case it is deemed that there is no fear to severely hinder the river administration.

- (1) 12.5m for a bridge to be built across a river has the design flood discharge less than 500m³/s and the width less than 30 m.
- (2) 15m for a bridge to be built across a river which has the design flood discharge less than 500m³/s and the width more than 30m.
- (3) 20m for a bridge to be built across a river whose design flood discharge is more than 50 m³/s and less than 2,000m³/s.

3. In case the standard span will exceed 25m, the span of bridges related to the portion except the low-water channel may take a value larger than 25m in disregard of the provisions of Paragraph 1 and 2. In this case, the average value of the spans of the bridges must be larger than the span to be provided in these provisions.

4. Concerning the span of a bridge to be built in close vicinity to a bridge whose piers are built in river channel, weir or other facilities built across a river, special rules may be provided for by Ministry of Construction Ordinance (Structural Rules) within the limits deemed to be necessary from the standpoint of flood control in consideration of the relation among these facilities.

(Overhead clearance, etc.)

Article 64.

The provisions of Article 41 Paragraph 1 and Article 42 shall apply mutatis mutandis to the overhead clearance of a bridge. In this case, "the height of lower fringe of a lift gate in the movable section of a weir at the maximum lift height" in those provisions shall read "the overhead clearance of a bridge".

2. Height of bridge surface [means road surface and other bridge portion to be provided by Ministry of Construction Ordinance (Structural Rules)], in a back-water section or a high-tide section too, shall be higher than the height of the levee to be crossed by the bridge (or the height of the design levee in case, when the design cross-section is fixed, the height of the design levee is lower than the existing levee height and it is deemed that these is no hindrance against flood control, or in case the design levee height is higher than the existing levee height).

(Revetment etc.)

Article 65.

The provisions of Article 34 and Article 35 shall apply mutatis mutandis to the case of building a bridge.

2. In addition to the cases which come under the provision of the preceding paragraph, if it is necessary to protect the river banks or the levees under the bridge, they shall be protected with concrete or other material similar thereto.

(Inspection passage)

Article 66.

A bridge (including connection part), as may be provided for in detail by Ministry of Construction Ordinance (Structural Rules), shall be a structure which will not hinder the structure of inspection passage.

(Exception of application)

Article 67.

The provisions from Paragraph 1 to Paragraph 3 of Article 61, Article 62, Article 63 and Article 64 shall not apply to a bridge to be built in a lake or swamp, a detention reservoir or other area similar thereto [except area which comes under the requirements to be provided by Ministry of Construction Ordinance (Structural Rules)] and a bridge to be provided by Ministry of Construction Ordinance (Structural Rules) by reason of scarcity of influence on flood control.

2. The provisions of this chapter (except Article 64 and the preceding article) shall not apply to a bridge which doubles as a dam, a weir or a sluice and a bridge to be built attached to a sluiceway or an intake tower.

CHAPTER 9 INVERTED SIPHON

(Scope of application)

Article 68.

The provisions of this chapter shall apply to inverted siphons which serve as irrigation facilities or drainage facilities.

(Principle of structure)

Article 69.

Inverted siphon shall be a structure which will be safe against the action of flow at a water level equal to or lower than the design high water level (or the design high tide level in a high tide section).

2. Inverted siphon shall be a structure which will not disturb flood flow at a water level equal to or lower than the design high water level and will not hinder severely the structure of adjacent river banks and river administration facilities.

(Structure)

Article 70.

With regard to an inverted siphon to be built across a levee (including the design levee in case the design cross-section has been fixed; hereinafter the same in this paragraph), the part to be built under the levee shall be separated structurally from the other part. This shall not apply, however, to the cases where there is no fear to hinder the structure of the levee in view of the geology of foundation of the levee, the depth of the inverted siphon, etc.

2. The provisions of Article 47 shall apply mutatis mutandis to the structure of inverted siphon.

(Gate, etc.)

Article 71.

Inverted siphon shall be equipped with gates (including valves; the same in the following paragraph) at both ends of the part within the river area or at proper places substituting therefor in order to prevent the river water to flow out from the river. T this shall not apply, however, in case it is deemed unnecessary from the viewpoint of the condition of topography.

2. The provisions of Article 10 Paragraph 2 shall apply mutatis mutandis to the operation apparatus of gates, and the provisions of Article 43 shall apply mutatis mutandis to inverted siphons.

(Depth)

Article 72.

Inverted siphon shall be built at a depth more than 2m respectively below the surface of low water bed in the low-water channel (including the low-water channel related to the design cross-section in case it is fixed; hereinafter the same in this article) and in a part of high-water channel within 20m from the top of slope of the river bank of low-water channel, below the surface of high-water channel (including the high-water channel related to the design cross-section in case they are fixed; hereinafter the same in this article) in the other part of high-water channel and below the ground surface of levee with regard to the portion to be built under the levee (including the design levee in case the design cross-section is fixed; hereinafter the same in this article). However, in case changes in river bed are deemed to be very little or in case it is deemed unavoidable under the conditions of the river or other special circumstances, it may be built respectively below the surface of low water bed, the surface of high-water channel or the ground surface of levee.

CHAPTER 10 MISCELLANEOUS PROVISIONS

(Exception of application)

Article 73.

The provisions of this Government Ordinance shall not apply to the following river administration facilities or the permitted structures (hereinafter referred to as "river administration facilities, etc.").

- (1) River administration facilities, etc. to be built as emergency measures on a small stretch of river whose flood control function must be improved urgently.
- (2) River administration facilities, etc. to be built temporarily.
- (3) River administration facilities, etc. to be built temporarily for execution of a work.

(4) River administration facilities etc. of a unique structure which Minister of Construction approved that its structure has equal to or higher effects than the structure provided in Chapters 2 to 9 of this Ordinance.

(Special rules of application in case design flood discharge, etc. has been fixed or charged)

Article 74.

In case the river administration facilities, etc. have become not to be in conformity with the provisions of this Government Ordinance owing to determination of or change in the design flood discharge, the design cross-section, the design high water level or the design high tide level (hereinafter referred to as "design flood discharge, etc." in this article) after the start has been made with the work related to the river administration facilities, etc. (or the permission of Article 26 of the Law in case of the permitted structures; hereinafter the same in this Article), the provisions shall apply to the river administration facilities, etc. on the assumption that there has been no determination of or change in the design flood discharge, etc. However, this shall not apply to the river administration facilities, etc. related to the reconstruction (except those works to be done as disaster restoration or emergency measures) which is started after the design flood discharge, etc. have been fixed or changed.

(Special rule in case temporary improvement work execution plan has been fixed)

Article 75.

In case execution plan of temporary work has been fixed with regard to an improvement work to be executed on schedule in line with the basic principles regarding the synthetic preservation and utilization of river which are fixed in the fundamental river management plan, the high-water discharge, the cross-section and the high-water level or the high-tide level which have been fixed in the temporary improvement work execution plan shall, as may be provided for in detail by Ministry of Construction Ordinance (Structural Rules), respectively be regarded as the design flood discharge, the design cross-section and the design high water level or the design high tide level.

(Special rule for small rivers)

Article 76.

With regard to small rivers whose design flood discharge is less than $100\text{m}^3/\text{s}$, it is permissible, as may be provided for in detail by Ministry of Construction Ordinance (Structural Rules), not to apply the provisions of this Government Ordinance to the river administration facilities to be built in those rivers.

(Mutatis-mutandis application to river administration facilities, etc. to be built in locally designated rivers)

Article 77.

To the river administration facilities, etc. to be built in the locally designated rivers shall apply mutatis mutandis the provisions of this Government Ordinance as may be provided for in detail by Ministry of Construction Ordinance (Structural Rules)

THE RIVER LAW

WITH COMMENTARY BY ARTICLE

Appendix II

MINISTRY OF CONSTRUCTION ORDINANCE FOR
STRUCTURAL STANDARDS FOR RIVER ADMINISTRATION
FACILITIES
(STRUCTURAL RULES)

THE RIVER LAW WITH COMMENTARY BY ARTICLE

Appendix II

MINISTRY OF CONSTRUCTION ORDINANCE FOR STRUCTURAL STANDARDS OF RIVER ADMINISTRATION FACILITIES (STRUCTURAL RULES)

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MINISTRY OF CONSTRUCTION ORDINANCE FOR
STRUCTURAL STANDARDS FOR RIVER ADMINISTRATION FACILITIES
(STRUCTURAL RULES)

On the basis of the Government Ordinance for Structural Standards for River Administration Facilities (hereinafter referred as the “Structural Ordinance”) and in order to enforce the Structural Ordinance, the Ministry of Construction establishes the Ministry of Construction Ordinance for Structural Standards for River Administration Facilities (hereinafter referred as the “Structural Rules”) as provide below.

(Structural calculations of a dam)

Article 1.

The structural calculations concerning dam body and its foundation (including the connection part of them; the same in the next paragraph and Article 8) shall be made by adopting the loads related to water levels at the upstream face of non-overflow section of dam in the cases mentioned in the following items and the case where the dam is presumed to be in danger.

- (1) Normal top water level.
- (2) Water level of surcharge.
- (3) Design flood stage.

2. The structural calculations concerning the dam body and its foundation of a fill-type dam shall be made not only in accordance with the provision of the preceding paragraph but also by adopting those loads which will take place in case the water level at the upstream face of the non-overflow section of the dam is lower then the normal top water level and the water level is lowered rapidly.

(Design seismic coefficients)

Article 2.

The design seismic coefficient to be used for the structural calculations shall be a value larger than those given in the following table in accordance with the kind of dam and the classification of region and to be given in accordance with the actual condition of the dam.

Item	Type of dam		Classification of region		
			Strong-earthquake region	Medium-earthquake region	Weak-earthquake region
1	Concrete gravity		0.12	0.12	0.10
2	Concrete arch		0.24	0.24	0.20
3	Fill-type	Dam body almos made of			
		homogeneous material	0.15	0.15	0.12
		Others	0.15	0.12	0.10

2. In case the water level at the upstream face of the non-overflow section of a dam is the surcharge water level, the seismic coefficient to be used for the structural calculations of the dam may take a value of 1/2 of the values given in the preceding paragraph except for the case of calculation specified in Article 4 Paragraph 2.

3. In case the gate of a concrete arch dam is installed in a place other than the dam body, the design seismic coefficient to be used for the structural calculations of the gate may take a value of 1/2 of the values given in the preceding Paragraph 2.

4. The strong-, medium- and the weak-earthquake regions given in Paragraph 1 shall be specified elsewhere by Minister of Construction.

(Dead weight)

Article 3.

The dead weight of dam body stated in Article 6 of the Government Ordinance for Structural Standards for River Administration Facilities (hereinafter referred as the “Structural Ordinance”) shall be calculated on the basis of the unit weight of material of the dam body.

(Hydrostatic force)

Article 4.

The hydrostatic pressure of stored water stated in the Structural Ordinance Article 6 shall be calculated by the following formula on the assumption that the pressure acts perpendicular to the contact face of the dam body and the stored water.

$$P=W_0h_0 \quad (1)$$

In which :

P : hydrostatic pressure of stored water (unit:ton/m³)

W₀ : weight of unit volume of water (unit: ton/m³)

h₀ : depth from the water level started in the third column of the following table in accordance with the classification stated in the second column up to a point on the contact face of the dam and the stored water at which hydrostatic pressure is wanted (unit: m).

Item	Water level at the upstream face of the non-overflow section of the dam	Water level in consideration of surface wave at the upstream face of the non-overflow section of the dam (unit: m)
1	Normal top water level	Water level to be obtained by adding wind-wave height above the water surface of the reservoir and height of surface wave due to earthquake above the water surface of the reservoir to the normal top water level
2	Surcharge water level	Water level to be obtained by adding 1/2 of wind-wave height above the water surface of the reservoir and height of surface wave due to earthquake above the water surface of the reservoir to the surcharge water level
3	Design flood stage	Water level to be obtained by adding wind-wave height above the water surface of the reservoir to the design flood stage

2. Height of surface wave due to earthquake above the water level of reservoir stated in Paragraph 1, Article 5 of the Structural Ordinance and the preceding paragraph shall be calculated by using the values of seismic coefficients specified by the provision of Article 2 Paragraph 1.

(Earth pressure of sand deposited in the reservoir)

Article 5.

The earth pressure of sand deposit in reservoir stated in the Structural Ordinance Article 6 shall be assumed to act vertically and horizontally on the contact face of the dam body and the sand deposit in the reservoir. The vertical component of the pressure shall be calculated on the basis of the unit weight of sand deposit in water and the horizontal component of the pressure shall be calculated by the following formula.

$$P_e = C_e W_1 d \quad (2)$$

In which :

P_e : horizontal component of the earth pressure of sand deposit (ton/m²)

C_e : earth-pressure coefficient to be determined based on the results of proper mechanical tests or the value used for the structural calculation for a similar dam

W_1 : weight of unit volume of sand deposit in water (unit: ton/m³)

d : depth from the surface of sand assumed to deposit in the reservoir up to a point on the contact face of the dam body and the sand deposit at which the horizontal component of the pressure is wanted (unit: m).

(Inertia force during an earthquake)

Article 6.

Inertia force of dam body during earthquake stipulated in the Structural Ordinance Article 6 shall be calculated by the following formula on the assumption that the force will act horizontally on the dam body.

$$I=WK_d \quad (3)$$

In which :

I : inertia force of dam body during earthquake (ton/m³)

W : own weight of dam body (ton/m³)

K_d : design seismic coefficient specified by the provisions of Article 2 Paragraph 1 or Paragraph 2.

(Dynamic pressure of water during an earthquake)

Article 7.

Dynamic pressure of stored water stipulated in Article 6 of the Structural Ordinance shall be assumed to act perpendicular to the contact face of the dam body and the stored water and shall be calculated by the following formula except in the case where it is determined based on proper mechanical tests or by a method used for structural calculation for a similar dam.

$$P_d=0.875W_oK_d(H_1h_1)^{1/2} \quad (4)$$

In which :

P_d : dynamic pressure of stored water during earthquake (ton/m³)

W_o : weight of unit volume of water (ton/m³)

K_d : design seismic coefficient specified by the provisions of Article 2 Paragraph 1 or Paragraph 2

H₁ : depth from the water level at the upstream face of the non-overflow section of the dam up to the foundation ground (m)

h₁ : depth from the water level at the upstream face of the non-overflow section of the dam up to a point on the contact face of the dam body and the stored water at which the dynamic pressure is wanted (m).

(Uplift pressure)

Article 8.

Uplift of stored water stipulated in Article 6 of the Structural Ordinance shall be assumed to act vertically upward on a cross-section of dam body or foundation on which the value of uplift is wanted and shall be calculated on the basis of the values given in the following table in accordance with the classification of sections.

<p>1. Section affected by drain hole</p> <p>(A) Upper end : Water pressure on the upper side</p> <p>(B) Between upper end and drain hole</p> <p style="padding-left: 40px;">(a) Between upper : Value in linear variation from value of (A) to value of (b) of (B)</p> <p style="padding-left: 40px;">(b) Drain hole : Value obtained by adding value of (C) to a value larger than 1/5 of difference between value of (A) and value of (C)</p> <p style="padding-left: 40px;">(c) Between drain : Value in linear variation from value of (b) of (B) to value of (C)</p> <p>(C) Lower end : Water pressure on the lower side</p>
<p>2. Section not affected by drain hole or section of a dam without drain hole</p> <p>(A) Upper end : Value obtained by adding water pressure on the lower side to a value larger than 1/3 of difference between water pressure on the upper side and that on the lower side</p> <p>(B) Between upper end and drain hole : Value in linear variation from value of (A) to value of (C)</p> <p>(C) Lower end : Value of water pressure on the lower end</p>

(Stability and strength of a concrete dam)

Article 9.

Concrete dam, in the case of the provision of Article 1 Paragraph 1, must have necessary shear-sliding resistance force against sliding due to shearing force in the connection part of dam body and foundation and its adjacent portion.

2. The shear-sliding resistance force of the preceding paragraph shall be calculated by the following formula (5) and must satisfy the condition (6).

$$R_b = fV + \tau_o L_o \quad (5)$$

$$R_o \geq 4 H \quad (6)$$

In which :

R_b : shear-sliding resistance force per unit width (ton/m)

f : coefficient of internal friction to be determined based on the result of proper mechanical tests of the value used for the structural calculation for a similar dam

V : vertical force that will act on the shearing surface per unit width (ton/m)

τ_o : shearing strength to be determined based on the result of field tests with the exception of the case that it can be fixed unquestionably on the basis of data on a similar dam and the features of rock, etc. (ton/m²)

L_o : length of shearing surface on which shearing resistance takes place (m)

H : shearing force per unit width (ton/m).

3. Stress that will take place in the dam body must not exceed the standard allowable stress in the case of the provision of Article 1 Paragraph 1. But comprehensive stress that will take place in the dam body during earthquake must not exceed a value to be obtained by adding a value less than 30% of the standard allowable stress to it.
4. The standard allowable stress mentioned in the preceding paragraph shall be determined so as to have a safety factor of more than 4 on the basis of compressive strength of concrete to be used as the material of dam body.
5. The dam body of concrete gravity dam shall be a structure which will have no tensile stress on its upstream face in the cases stipulated in Article 1 Paragraph 1. This shall not apply, however, to the portion of a dam which is strengthened by reinforcing bars. etc. against local tensile stress.

(Stability and materials of a fill-type dam)

Article 10.

Fill type dam, in the cases stipulated in Article 1 Paragraph 1 and Paragraph 2, shall have necessary sliding-resistance force, in view of features of materials of the dam body and conditions of the foundation, against sliding in the internal portion of dam body, the connection part of dam body and foundation and its proximity.

2. The sliding-resistance force mentioned in the preceding paragraph shall be calculated by the following formula (7) and must satisfy the condition (8).

$$R_s = \sum \{ (N-U) \tan \phi + CL_1 \} \quad (7)$$

$$R_s \geq 1.2 \sum T \quad (8)$$

In which :

R_s : sliding-resistance force per unit width (ton/m)

N : vertical component per unit width of load which will act on each of divided portions on a circular sliding surface (ton/m)

U : pore pressure per unit width of load which will act on each of the divided portions on the circular sliding surface (ton/m)

ϕ : angle of internal friction of material of each divided portion on the circular sliding surface (degree)

C : cohesion of material of each divided portion on the circular sliding surface (ton/m²)

L_1 : length of each divided portion on the circular sliding surface (m)

T : tangential component per unit width of load which will act on each divided portion of the circular sliding surface (ton/m).

3. The dam body of fill-type dam shall be a structure in which seepage line does not intersect with the face of downstream slope of the dam body in the cases stipulated in Article 1 Paragraph 1.

4. Impervious wall of a fill-type dam shall be in conformity with the provisions in the following items.

- (1) Materials of impervious wall including soil materials and others must have impermeability.
- (2) Height of impervious wall must exceed the value stipulated in the Structural Ordinance Article 5.
- (3) Connection part of impervious wall and foundation shall be a structure in which piping does not occur.

5. Fill-type dam whose height from the foundation to the crest is more than 30m and whose body is composed mostly of homogeneous materials shall be not only in conformity with the provisions of Paragraph 1 and Paragraph 3 but also a structure whose safety is confirmed on the basis of proper mechanical tests or calculation, etc. used in similar dams with regard to their materials of the dam body and designs, etc.

6. Fill-type dam shall be equipped with spilling facilities which enable to lower than water level of reservoir in order to inspect or repair the dam body.

(Load acts on dam gates)

Article 11.

The provisions of Article 3 to Article 7 shall apply mutatis mutandis to own weight of gates, hydrostatic pressure of stored water, pressure due to sand sediment deposited in reservoir, inertia force of gates during earthquake and hydrodynamic pressure of stored water during earthquake out of the loads which are stipulated in the Structural Ordinance Article 11 to act on dam gates. In this case, "dam body" in these provisions shall read "dam gates".

2. The loads which act on dam gates shall, in accordance with the classification mentioned in the second column of the following table, take those which are given in the third column of the table.

Item	Classification	Loads to be considered
1	Except during earthquake	W, P, P _e , P _i , P _o
2	During earthquake	W, P, P _e , P _i , I, P _d

In this table :

- W : own weight of gates
- P : hydrostatic pressure of stored water
- P_e : pressure due to sand sediment deposited in the reservoir
- P_i : pressure of stored water at freeze
- I : inertia force of gates during earthquake

P_d : hydrodynamic pressure of stored water during earthquake

P_o : force due to gate operation.

3. Stresses which will occur in dam gates due to the loads adopted in the table of the preceding paragraph must not exceed the allowable stresses to be fixed on the basis of the result proper mechanical tests.

(Structure of gates, etc. of overflow type spillway)

Article 12.

The lower fringe of a lift gate of overflow-type spillway at its maximum lift height and bridges, hoists and other dam-crest structures to be built attached to the overflow-type spillway shall keep a distance of more than 1.5m from the overflow surface of water to be released at the design flood water level.

2. In applying the provision of the preceding paragraph to a dam in which the overflow depth is less than 2.5m in case the water flow at the dam design flood discharge runs through the spillway, "1.5m" in the preceding paragraph shall read "1.0m".

(Special rules for width of overflow section of a overflow type spillway)

Article 12-2.

In case the height of the levee (including the design levee in case the cross-section is fixed) upstream of a dam with overflow-type spillway is between the design flood water level of the dam and the height of the non-overflow section, the provisions of Article 17 to Article 19 shall apply mutais mutandis to the spillway of this dam. In this case, "movable section" and "span" described in these provisions shall read respectively "overflow-type spillway and "width of overflow section (or width of each of divided overflow sections in case the overflow section of the spillway is divided by gate piers or bridge piers. etc.)", "number of spans corresponding to span" described in Article 17 and Article 19 "number of overflow section corresponding to the width of overflow section" and "weir with movable section" described in Article 19 "dam".

(Structure of woods zone for formed around a reservoir)

Article 13.

The structure of a woods zone formed around a reservoir under Article 16 of the Government Ordinance shall be such that the value obtained by dividing the area of a crown cover projection of mature trees by the area of land on which a woods zone is to be formed shall be eight-tenths or more.

(Structural calculation for high-standard levees)

Article 13-2.

All structural calculations for high-standard levees and underlying ground shall be performed using loads occurring in any of the cases listed below and in the case where water level in the river channel is not above the design water level for high-standard levees and the water level falls rapidly.

- (1) Water level is normal.
- (2) Water level is at the design flood level.
- (3) Water level is at the design water level for high-standard levees.

2. Calculation for structure of high-standard levees shall assume that top of the levees excluding those areas stipulated in the Article 21, Paragraphs 1 and 2 of the Structural Ordinance shall be used for ordinary purposes *.

* Ordinary purposes include construction of houses and buildings etc.

(Design seismic coefficient used in structural calculation for high-standard levees)

Article 13-3

Design seismic coefficients to be used for the structural calculation for the safety against slide of the high-standard levee and its foundation shall be 0.15, 0.12 and 0.10 for strong-earthquake region, medium-earthquake region and weak-earthquake region respectively, as provided in Article 2, Paragraph 4 hereof.

(Loads acting on high-standard levees)

Article 13-4

Rules stipulated in Article 3, Article 4 Paragraph 1 and Article 6 shall apply mutatis mutandis to the loads acting to the high-standard levee and its foundation. In this case, “dam body” in Article 3 and Article 4 Paragraph 1 shall read as “high-standard levee”; “stored water” and “water level in following table in accordance with the classification stated in the second column” shall read as “water in river channel” and “water level of the river channel” respectively; and “dam body” and “design seismic coefficient specified by the provision of Article 2 Paragraph 1 or Paragraph 2” shall read as “high-standard levee and its foundation” and “design seismic coefficient specified by the provision of Article 13-3 Paragraph 1 or Paragraph 2” respectively.

2. Shearing force caused by overtopping water shall be calculated by the following formula, assuming that the force acts at the surface of the high-standard levee contacting with overtopping water.

$$\tau = W_0 h_s I_e$$

In which:

τ : shearing force caused by the overtopping water.

W_o : weight of unit volume of water.

H_s : depth of the overtopping water at the surface of high-standard levee.

I_e : Energy gradient of the overtopping water.

(Stability of high-standard levees)

Article 13-5.

In the cases stipulated in Paragraph 1 of Article 13-2, high-standard levees shall have a necessary degree of resistance to scour by flowing water in the river channel, and, in cases where water level in the river channel has reached the design water level for high-standard levees, high-standard levees shall have a necessary degree of shear resistance to scour due to shearing forces exerted by overflow.

2 In the cases stipulated in Paragraph 1 of Article 13-2, high-standard levees shall have a necessary degree of resistance to slipping in the interior of the high-standard levee or near the surface of the ground underlying the high-standard levee.

3 The provision of Paragraph 2 of Article 10 shall apply mutatis mutandis to slip resistance as provided for in the foregoing paragraph.

4 In the cases stipulated in Paragraph 1 of Article 13-2, high-standard levees shall have such structure that the phreatic line does not intersect the back surface of the high-standard levee and shall have a necessary degree of resistance to seepage near the surface of the ground underlying the high-standard levee.

5 In cases where water level in the river channel is below the design flood level, the ground underlying a high-standard levee shall a necessary degree of resistance to liquefaction during an earthquake.

(Marginal strip of levees)

Article 14.

Marginal strip stipulated in the Structural Ordinance Article 24 shall be installed in accordance with the provisions of the following items corresponding to its kind.

(1) Marginal strip of first kind.

This strip shall be installed at places of closing old river channel, places of leakage on levee and other places at which the stability of levee must be contrived, and its width shall be more than 5m outside the designated section of class A river and more than 3m in the designated section of class A river and in class B river.

(2) Marginal strip of second kind.

This strip shall be installed at places required in particular for storing earth and sand, etc. for emergency. The strip shall have a width of more than 5m and less than one half of the width of levee area (excluding marginal strip) (20m in case it becomes more than 20m) and a length required for storing earth and sand, etc. of the volume of levee of approximately 10m (100m³ in case it becomes less than 100m³).

(3) Marginal strip of third kind

This strip shall be installed at places required in particular for conserving the environment. It shall have a width of more than 5m and less than one half of the width of levee area (excluding marginal strip) (20m in case it becomes more than 20m).

(Structure of woods zone formed around levees)

Article 14-2.

The structure of the a woods zone formed along levees as provided for in Article 26-2 of the Government Ordinance shall be such that, in the case of a woods zone located on the land side of a levee, either there are one or more trees per 10 m² whose diameter at breast height as a mature tree is not less than 30 cm or the woods zone is at least as effective in preventing a levee break, etc., as a woods zone consisting of such trees.

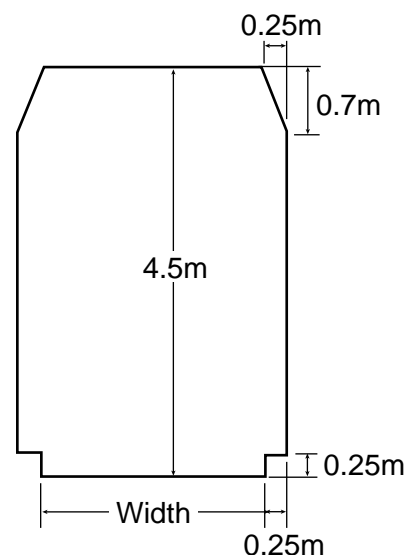
(Inspection passage)

Article 15.

Inspection passage stipulated in Article 27 of the Structural Ordinance shall be built as provided by the following items. This shall not apply, however, in case there is a proper passage substituting for the inspection passage, in case all or major part of the levee are formed by structure of concrete, steel sheet piles or materials similar thereto or in a section in which the difference between the height of levee and the ground height on the landside of levee is less than 0.6m.

(1) The width shall take a proper value more than 3m and less than the crown width of levee.

(2) The construction gage is as shown below.



(Revetment necessitated pursuant to building ground sill)

Article 16.

Revetment stipulated in Article 35 of the Structural Ordinance shall be built as provided by the following items. This shall not apply, however, in case there is no fear of scouring at river banks or levees in view of the conditions of geology, etc. or it is deemed that there is no hindrance against flood control.

- (1) Revetment to be built for protecting river banks or levees connected with a ground sill shall cover a section longer than a distance between either more upstream of two points 10m upstream from the upper end of the ground sill and 5m upstream from the upper end of the bed-protection work and either more downstream of two points 15m downstream from the lower end of the ground sill and 5m downstream from the lower end of the bed-protection work.
- (2) Besides the provision of the preceding paragraph, revetment of river banks or levees shall be built in the section as deemed in particular to be necessary in view of bending of river channel and other conditions.
- (3) Height of revetment of river banks (excluding river banks of low water channel; hereinafter the same in this item) or levees shall exceed the design high water level. However, it shall be the height of river banks or levees in a section in which river flow will be changed severely in consequence of building a ground sill.
- (4) Height of revetment of river banks of low-water channel shall be the height of the river banks of the low-water channel.

(Fishways necessitated by groundsill construction)

Article 16-2.

The structure of a fishway as stipulated in Article 35-2 of the Government Ordinance shall satisfy the following requirements:

- (1) Movement of migratory fishes in the water immediately upstream and downstream of the groundsills under water level fluctuations that are expected under normal conditions is not hampered.
- (2) Factors such as the condition of the river bed to which the groundsills are to be connected, streamflow in the fishway, and fish species for which the fishway is intended are duly taken into consideration.

(Special rules for span in movable section of a weir)

Article 17.

Span of movable section in the case stipulated in Paragraph 3, Article 38 of the Structural

Ordinance may take a value larger than a value to be obtained by dividing the total length of the movable section by a value to be obtained by adding 1 to the number of spans corresponding to the span stipulated in Article 38 Paragraph 1. However, in case the mean value of the spans in the movable section works out at more than 30m, the span in the movable section related to the river portion except for the thalweg may take a value larger than 30m.

(Special rule for span in movable section in case movable section of weir is a shutter-type)

Article 18.

Span in the movable section in the case stipulated in Paragraph 5, Article 38 of the Structural Ordinance, except for the case falling under Paragraph 2 of the same article, in case the vertical height of the gate is less than 2m, may take value larger than a length in which the ratio of vertical length of the gate to its horizontal length is 0.1 (or 15m in case it works out at less than 15m).

(Special rule for span in movable section except for a portion which doubles as sand flash, etc.)

Article 19.

In case the span in the movable section of a weir except for a portion which doubles as sand flash or boat passage (hereinafter referred to as "portion except combined-use portion" in this article) in the case stipulated in Paragraph 2, Article 39 of the Structural Ordinance gets to exceed by more than 10m the value given in the fourth column of the table of Paragraph 1 of the same article in accordance with the design high water level or in case the ratio of vertical length and horizontal length of the gate works out at less than 1/15, the span may take a value larger than that given in the fourth column of the table. However, in case it comes under one of the following items, the span in the movable section may take a value larger than that specified in the corresponding item.

- (1) 12.5m in case the design flood discharge is less than $500\text{m}^3/\text{s}$ and the total length of the movable section of the portion except combined-use portion is less 30 m.
- (2) A value to be obtained by dividing the total length of the movable section of the portion except combined-use portion by a value to be obtained by adding 1 to the number of spans corresponding to the span stipulated in Paragraph 1, Article 39 of the Structural Ordinance in case the design flood discharge is more than $2,000\text{m}^3/\text{s}$ and the span of the portion except combined-use portion is more than 50m.

(Loads which act on gate of movable section of weir)

Article 20.

The provisions of Article 4, Article 6 and Article 7 shall apply mutatis mutandis to the loads

which act on the gates in the movable section of a weir. In this case, "dam body" in these provisions shall read "gate in the movable section of a weir", "design seismic coefficients specified by the provision of Article 2 Paragraph 1" in Article 4 Paragraph 2 and "design seismic coefficient specified by the provisions of Article 2 Paragraph 1 or Paragraph 2" in Article 6 and Article 7 "design seismic coefficient specified in Article 20 Paragraph 2", "the water level states in the third column of the following table in accordance with the classification states in the second column" in Article 4 Paragraph 1 "the water level to be obtained by adding a height deemed to be necessary in view of the influence by wind waves, etc. to the design water level of dam", "Paragraph 1, Article 5 of the Structural Ordinance and the preceding paragraph" in Paragraph 2 of the same article "the preceding paragraph", "dam" in Article 7 "weir with movable section", and "water level at the upstream face of the non-overflow section of the dam" in Article 7 "design water level of dam".

2. Design seismic coefficients to be used for structural calculation of gates in the movable section of a weir shall be 0.12 or 0.10 respectively in accordance with the classification of strong-earthquake region or weak-earthquake region stated in Paragraph 4 of Article 2.

3. With regard to gates in the movable section of a weir, hydrodynamic pressure at flood or at high tide and other loads which will act on the gates shall be calculated at need in addition to those stipulated in Paragraph 1.

(Structure of gates in case movable section of weir is a shutter-type)

Article 21.

The structural standard of gates in case the movable section of a weir is a shutter-type (excluding gates of a weir to be built combined with the objective of stoppage of salt water) shall be in conformity with the provisions in the following items besides those provided by the preceding article.

(1) Height of the upper fringe of a shutter gate at closing shall be lower than an intermediate elevation between the height of the low water bed related to the design cross-section and the design high water level. However, in case a measure deemed to be suitable for securing the function of flood control is taken, the height of the upper fringe of the gate at closing may be taken below either lower height between the land-side ground height and the design high water level.

(2) Vertical height of gate shall be less than 3m.

(Revetment necessitated pursuant to building weir)

Article 22.

The provision of Article 16 and Article 16-2 shall apply mutatis mutandis to revetment and fishway necessitated pursuant to building weir. In this case, "ground sill" in the same articles shall

read "weir".

(Special rule for span of sluice)

Article 23.

The provisions of Article 17 and Article 19 shall apply mutatis mutandis to a sluice to be built across a river. In this case, "movable section" in Article 17 and Article 19 and "the movable section of a weir" in Article 19 shall read "the portion of gates for spilling river water and gate-piers supporting them in a sluice".

(Structure of sluice which doubles as an inspection passage)

Article 24.

The structure of a sluice which doubles as an inspection passage prescribed in Paragraph 2 of Article 52 shall be in conformity with the provisions of the following items. This shall not apply, however, in case there is an appropriate passage which substitutable for the inspection passage.

- (1) Width of inspection bridge shall take a proper value in consideration of the width of inspection passage connected with the sluice.
- (2) Motor-vehicle load for design of inspection bridge shall be 20ton. This shall not apply, however, in case the width of inspection bridge is less than 3m.

(Revetment necessitated pursuant to building sluice or sluiceway)

Article 25.

Revetment to be necessitated pursuant to building sluice or sluiceway to be built across a river or waterway shall be built as provided by the following items. This shall not apply, however, in case there is no fear of scouring at river banks or levees in view of the condition of geology, etc. or in case it is deemed that there is no hindrance against flood control.

- (1) All the provisions of the items of Article 16 shall apply mutatis mutandis to revetment to be built in a river which a sluice will cross. In this case, "ground sill" in Item 1 and Item 3 of the same article shall read "sluice", "upstream" in Item 1 of the same article "upstream of the river which the sluice will cross", and "downstream" in the same item "downstream of the river which the sluice will cross".
- (2) Revetment to be built on river banks or levees which a sluice or a sluiceway will cross shall be built over a section longer than that connecting the two points respectively 10m upstream and downstream from both the ends of the sluice or the sluiceway, and the provisions of Paragraph 3 and Paragraph 4 of Article 16 shall apply mutatis mutandis to height of the revetment. In this case, "ground sill" in Item 3 of the same article shall read "sluice or sluiceway".

(Revetment necessitated pursuant to building intake tower)

Article 26.

Revetment to be necessitated pursuant to building an intake tower shall be built, except in case there is no fear of scouring at river banks or levees in view of geology, etc. or in case it is deemed that there is no hindrance against flood control, over a section longer than that connecting two points at a distance of 1/2 of the distance between the intake and the river bank or the levee (or 1/2 of the standard span in case it works out at more than 1/2 of the standard span stipulated in Paragraph 1, Article 63 of the Structural Ordinance; or 10m in case it works out at less than 10m) respectively upstream from the upper end and downstream from the lower end of the intake, and the provisions of Item 3 and Item 4 of Article 16 shall apply mutatis mutandis to height of the revetment. In this case, "ground sill" in Item 3 of the same article shall read "tower intake".

Article 27.

(Canceled)

(Bridge related to principal public facilities)

Article 28.

In Paragraph 2, Article 63 of the Structural Ordinance, bridge related to the principal public facilities shall be a bridge related to a facility stated in each of the following items.

- (1) The Shinkansen Railway (the New Trunk Line) stipulated in Article 2 of the National Shinkansen Railway Development Law (Law No.71 of 1970).
- (2) The express highway stipulated in Item 1, Article 3 of the Road Law (Law No.180 of 1952).
- (3) Road more than 30m in width excepting the road stipulated in the preceding paragraph.

(Special rule for neighboring bridge)

Article 29.

The span of a bridge, as stipulated in Paragraph 4, Article 63 of the Structural Ordinance, to be built in close vicinity (hereinafter in this Article referred to as "neighboring bridge") to a bridge or a weir whose piers are built in a river channel or other facilities which are built across a river (hereinafter in this paragraph referred to as "existing bridge, etc.") shall be not only a span in conformity with the provisions of Paragraph 1 to Paragraph 3, Article 63 of the Structural Ordinance but also a span in case the piers of the neighboring bridge will be built in conformity with the provision of each of the following items in accordance with the corresponding case. This shall not apply, however, in case the existing bridge, etc. is scheduled to be improved or removed within 5 years.

- (1) In case the distance between the existing bridge, etc. and a neighboring bridge (distance

between the piers of the existing bridge, etc. or weir piers, etc. (hereinafter in this paragraph, referred to as "existing piers, etc." and the piers of the neighboring bridge on the line of sight along the thalweg at flood (hereinafter in this paragraph, referred to as "sight line")) is less than the standard span stipulated in Paragraph 1, Article 63 of the Structural Ordinance, the piers of the neighboring bridge shall be built on the sight line of the existing piers, etc.

(2) In case the distance between the existing bridge, etc. and a neighboring bridge is more than the standard span stipulated in Paragraph 1, Article 63 of the Structural Ordinance and less than the river width (or 200m in case it exceeds 200m), the piers of the neighboring bridge shall be built on the sight line of the existing piers, etc. or on the sight line at the center of the span of the existing bridge, etc.

2. In case the span of a neighboring bridge will exceed 70m when planned in accordance with the provision of the preceding paragraph, the span may, in disregard of the provision of the same paragraph, take a value larger than that to be obtained by subtracting 10m from the standard span stipulated in Paragraph 1, Article 63 of the Structural Ordinance.

3. In case the span at thalweg of a neighboring bridge will exceed 70m when planned in accordance with the provision of Paragraph 1, the average span may, in disregard of the provision of the same paragraph, take a value larger than that to be obtained by subtracting 10m from the standard span stipulated in Paragraph 1, Article 63 of the Structural Ordinance (or 30m in case it works out at less than 30m).

(Bridge surface)

Article 30.

In Paragraph 2, Article 64 of the Structural Ordinance, bridge portion to be provided by the Structural Rules shall be curb or other portion in which measures are taken so as to prevent river water or waves to spill outside the river channel through the bridge.

(Revetment necessitated pursuant to building bridge)

Article 31.

Revetment to be necessitated pursuant to building of a bridge shall be built in conformity with the provision of each of the following items. This shall not apply, however, in case there is no fear of scouring at river banks or levees in view of the condition of geology, etc. or other case that no hindrance against flood control is deemed.

(1) In case bridge piers are built in a river channel, revetment shall be built over a section longer than that connecting the two points at a distance of 1/2 of the standard span stipulated in Paragraph 1, Article 63 of the Structural Ordinance respectively upstream from the upper end and downstream from the lower end of the pier nearest the river bank or the

levee.

- (2) In case an abutment is built in river bank or levee, revetment shall be built over a section longer than that connecting the two points at a distance of 10m respectively upstream from the upper end and downstream from the lower end of the abutment.
- (3) The provision of Item 3 and Item 4 of Article 16 shall apply mutatis mutandis to the height of revetment. In this case, "ground sill" in Item 3 of the same article shall read "bridge".

(Structure of bridge for preservation of inspection passage)

Article 32.

Bridge stated in Article 66 which does not hinder the structure of inspection passage (including the connection part) shall be a structure equipped with connecting passage of suitable structure or other necessary facilities in consideration of the structure of the inspection passage (or inspection passage planned in case it is planned to build). This shall not apply, however, in case there is a suitable passage substituting for the inspection passage.

(Area which is not the object of exception of application)

Article 33.

Area stated in Paragraph 1, Article 67 of the Structural Ordinance which comes under the requirements to be provided by the Structural Rules is an area in which it is deemed that there is hindrance against flood control in view of the slope of the design high water level, the river width and other conditions of the river in a range of section which includes the spanning site of bridge.

(Bridge which has scare influence on flood control)

Article 34.

Bridge states in Paragraph 1, Article 67 of the Structural Ordinance to be provided by the Structural Rules shall be a bridge mentioned in each of the following items.

- (1) Small-scale bridge which will be built on high water bed.
- (2) Bridge which will be built on minor bet and have a special measure such as movable system.

(Special rule in case temporary improvement work execution plan has been fixed)

Article 35.

With regard to the application of the provisions of the Structural Ordinance and this Structural Rule in case the temporary improvement work execution plan stipulated in Article 75 of the Structural Ordinance has been fixed, the provision of each of the following times shall be applied.

- (1) With regard to levee and ground sill, the flood discharge, the cross-section and the high water level or the high-tide level which have been fixed in the temporary improvement work execution plan shall be regarded as respectively the design flood discharge, the design cross-section and the design high water level or the design high-tide level.
- (2) With regard to administration facilities, etc. except levee and ground sill, in case it will become severely difficult to maintain the function of the administration facilities, etc. when the provisions of the Structural Ordinance and this Structural Rules are applied, or in case it is deemed to be severely unsuitable under other particular circumstances, the flood discharge, the cross-section and the high water level or the high-tide level fixed in the temporary improvement work execution plan shall be regarded as respectively the design flood discharge, the design cross-section and the design high water level or the design high tide level.

(Special rule for small rivers)

Article 36.

With regard to the river administration facilities, etc. to be built in small rivers stipulated in Article 76 of the Structural Ordinance, except the case it is deemed that there is a hindrance against river administration, the provision given in the following items may be applied.

- (1) Crown width of a levee shall, according to the design flood discharge, take a value larger than those given in the third column of the following table in a section in which the design high water level is higher than the land-side ground height and the difference is less than 0.6m.

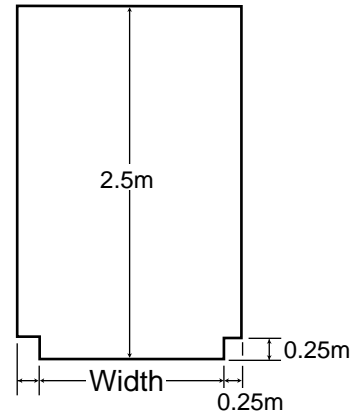
Item	Design flood discharge	Crown width
1	Less than 50m ³ /s	2.0m
2	Over 50 and less than 100m ³ /s	2.5m

- (2) Height of the levee, in a section in which the design high water level is higher than the land-side ground height and the difference is less than 0.6m, shall take a value larger than that to be obtained by adding 0.3m to the design high water level in case the design flood discharge is less than 50m³/s and the crown width of the levee is larger than 2.5m.

(3) Inspection passage to be built on a levee, in a section in which the river width is less than 10m, shall have a width of more than 2.5m and the construction gage shall be as shown in the following figure.

(4) The provision of Paragraph 2, Article 62 of the Structural Ordinance shall apply to bridges by reading "20m" as "10m", "2m" as "1m" and "1m" as "0.5m" respectively in the same paragraph.

(5) The provision of Article 72 of the Structural Ordinance shall apply to inverted siphons by reading "20m" as "10m" and "2m" as "1m".



THE RIVER LAW

WITH COMMENTARY BY ARTICLE

Appendix III

MASTER PLAN FOR MANAGEMENT OF RIVER ENVIRONMENT

- 1. Formulation of Master Plan for Management of River Environment**
- 2. Formulation of Master Plan for Management of River Environment**
- 3. Instructions for Formulation of Master Plan for Management of River Environment**
- 4. Current State of Master Planning for Management of River Environment**

1. Formulation of Master Plan for Management of River Environment

(Notification No. 52, River Planning Division, June 28, 1983)

TO: Director, Construction Departments, Hokkaido Development Bureau

Directors-General, Regional Construction Bureaus

Director, Development and Construction Departments, Okinawa General Bureau

FROM: Director-General, River Bureau

River basins in Japan are undergoing rapid changes primarily due to urbanization and expansion of production activities, and the river environment is also undergoing a dramatic change, increasing and diversifying public needs associated with local river environments. Under these circumstances, appropriate management of the river environment is becoming all the more important.

In March 1981, the Minister of Construction asked the River Council to make "recommendations on river environment management" and, in December 1981, received a report from the council.

Since then, work had been under way to develop specific policies on the basis of the report, and policies for formulation of a Master Plan for Management of River Environment have now been drawn up as shown in the attached document. All administrators are requested to formulate a Master Plan for River Environment Management for all rivers in their respective jurisdictions whose environment is playing a particularly important role in the formation of a living environment, and to properly manage the river environment accordingly.

Policies for formulation of Master Plan for Management of River Environment

1. A Master Plan for River Environment Management (hereafter referred to as a "Master Plan") sets forth basic considerations in implementing policies for management of the river environment while securing the flood control and water utilization functions of a particular river. A Master Plan must be formulated by the river administrator from the viewpoint of proper management of the river environment in terms of the quantity and quality of river water, river space, etc. The Master Plan must be designed to contribute to desirable improvement, transformation, etc., of the river environment.

2. A Master Plan must be formulated for each river system and each of the major rivers. The Master Plan must be based on other plans for flood control and water utilization, such as the

Basic Plan for the Implementation of Construction Works, and be coordinated with plans based on other laws and regulations closely connected to the Master Plan.

3. Because a Master Plan covers projects to be implemented primarily by local public bodies, etc., it is necessary, when formulating a Master Plan, to establish a council consisting of the river administrator, the local public bodies concerned, etc., and hear the opinion of the council.

All Master Plans, upon formulation, must be promptly reported to the Director-General of the River Bureau.

4. A Master Plan must set forth the following:

- (1) Basic considerations concerning management of water environment
 - (a) Basic scheme for comprehensive management of the quantity and quality of water
 - (b) Plan for monitoring the quantity and quality of water
 - (c) Plan for management of river administration facilities
 - (d) Plan for management of permitted structures
 - (e) Plan for implementation of projects for improvement of water environment
 - (f) Policy for coordination with other measures related to water environment
 - (g) Other important matters concerning water environment management
- (2) Basic considerations concerning management of spatial environment of rivers
 - (a) Basic scheme for appropriate conservation and utilization of river space
 - (b) Plan for implementation of projects for river space improvement
 - (c) Considerations in permitting river works, river uses, etc.
 - (d) Policy for coordination with other measures related to river space management
 - (e) Other important matters concerning management of spatial environment of rivers

For the time being, however, a Master Plan may provide for only one of the two categories shown above--that is, (1) basic considerations concerning water environment management and (2) basic considerations concerning management of the river's spatial environment--or only a part of the considerations listed in either category in consideration of all relevant factors including the present and future state of the water environment and spatial environment of the river, the present and future state of the river basin, and how measures concerning river environment management are actually being implemented.

2. Formulation of Master Plan for Management of River Environment

(Notification No. 52-2, River Planning Division, June 28, 1983)

TO: Prefectural Governors

FROM: Director-General, River Bureau

Attached hereto is a copy for your information of a Director-General of River Bureau notification to Directors of Regional Construction Bureaus and other functions concerned regarding the formulation of a Master Plan for Management of River Environment based on the River Council's 18-December-1981 report to the Minister of Construction.

You are requested to formulate plans for your jurisdiction in accordance with the intent of the River Council report and the formulation policy attached hereto.

Attachment (Omitted)

3. Instructions for Formulation of Master Plan for Management of River Environment

(Notification No. 45, River Planning Division, June 13, 1984)

TO: Prefectural Governors

FROM: Director, River Planning Division, River Bureau

With respect to the formulation of a Master Plan for Management of River Environment (hereafter referred to as a "Master Plan"), of which you have been notified by the Director-General of the River Bureau (Notification No. 52, June 28, 1983), you are requested to follow the instructions given below in formulating a Master Plan.

1. As a general rule, a Master Plan for river sections other than the designated sections of class A rivers must be formulated by the Director-General of a Regional Construction Bureau, and Master Plans for designated sections and class B rivers by a prefectural governor. For rivers for which it is appropriate to place a nondesignated section and a designated section under a single master plan, even when a designated section of a class A river is involved, the Director-General of a Regional Construction Bureau may undertake master planning in cooperation with the prefectural governor concerned.

2. When formulating a Master Plan, coordination, reporting, etc., must be carried out following the steps shown in the flowchart attached hereto. The Master Plan must be reviewed and modified, as necessary, according to changing social conditions.

3. When formulating a Master Plan, the river environment management council (hereafter referred to as the "council") must be consulted. Even after a Master Plan has been formulated, the river administrator must consult the council on an as-needed basis concerning the following:

- (1) Matters regarding the water environment, such as standards regarding effluent regulations and coordination with plans for sewerage system improvement
- (2) Matters regarding river space management, such as coordination with policies related to plans for land uses such as conservation of the natural environment outside the river zone which should be conserved and used as a unit with the river zone
- (3) Matters regarding the maintenance of riparian lands
- (4) Matters regarding dissemination of awareness of the need for beautification and protection of rivers
- (5) Other important matters associated with river environment management

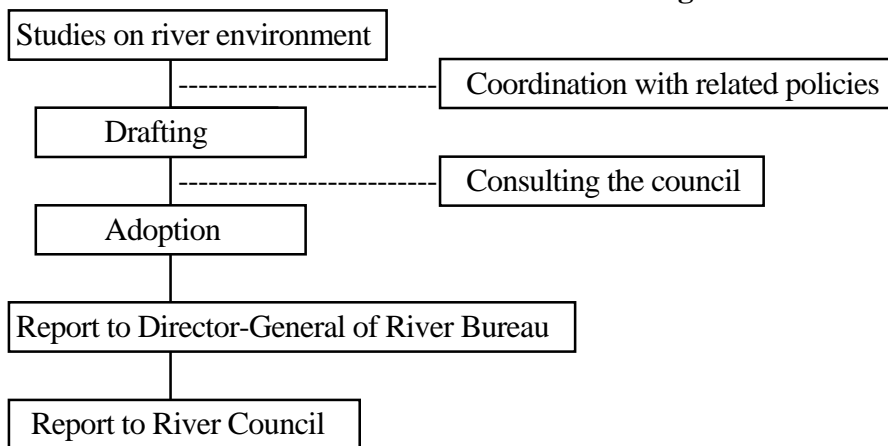
4. The council is to consist of the river administrator, heads of the prefectural bureaus and departments concerned, heads of the municipalities concerned, persons with experience or academic background, etc. It is desirable that the council be chaired by a municipal head concerned, a person with experience or academic background or other equally suitable person.

General affairs for the council are to be handled by the bureau or department responsible for master planning.

5. If necessary, a steering committee is to be formed within the council.

ATTACHMENT

Flowchart for Formulation of a Master Plan for Management of River Environment



4. Current State of Master Planning for Management of River Environment (as of March 1996)

Since the first Master Plan for Management of River Environment was adopted for the Tama River, a Class A river, by the Director-General of the Kanto Regional Construction Bureau in March 1980, master plans have been formulated for a total of 232 river systems, rivers, districts and regions in the country by March 1996.

THE RIVER LAW

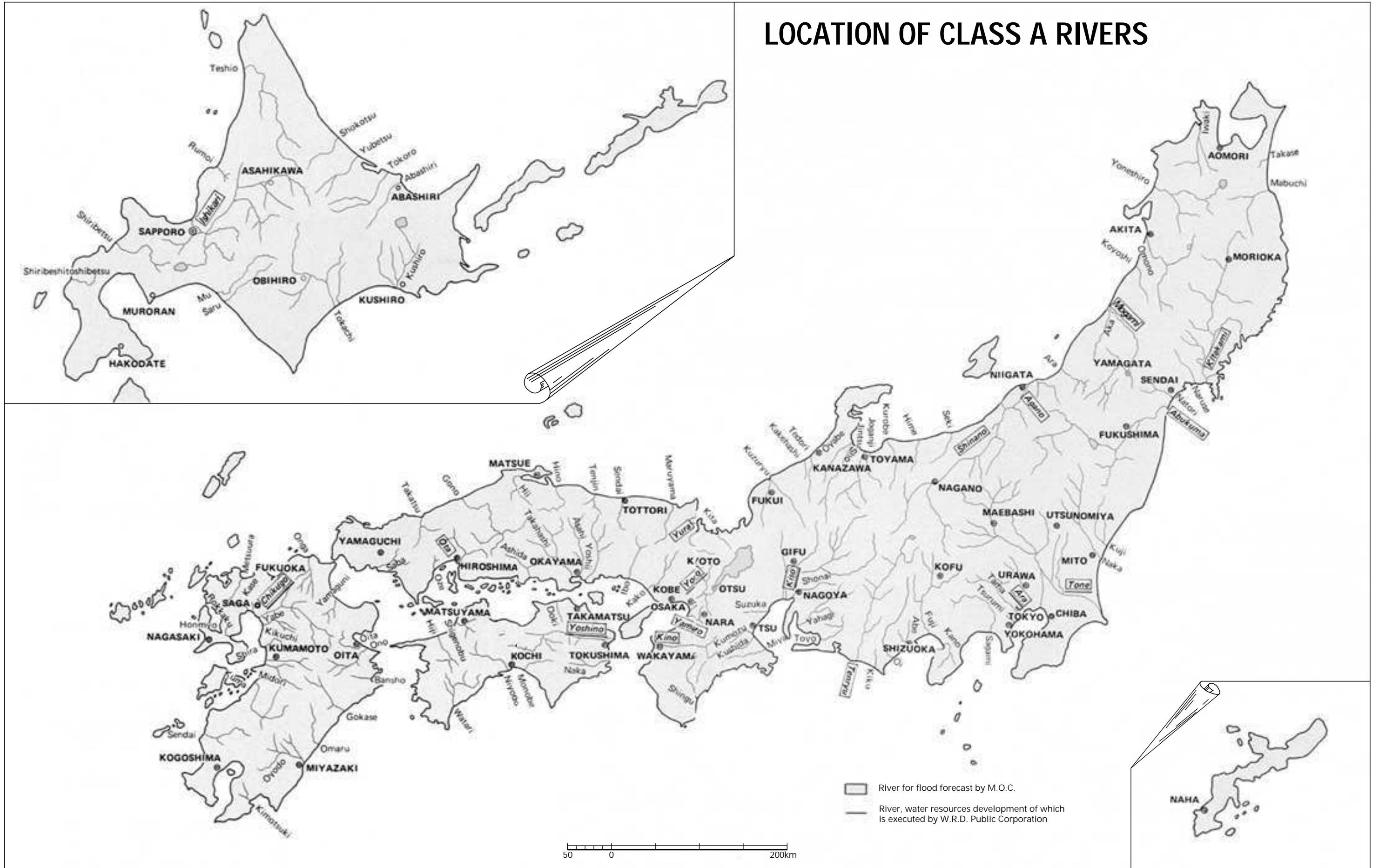
WITH COMMENTARY BY ARTICLE

Appendix IV

PROFILE OF THE JAPANESE RIVER

1. Outline of the class A river systems
2. Outline of the class B and locally designated river systems

LOCATION OF CLASS A RIVERS



1. OUTLINE OF THE CLASS A RIVER SYSTEMS (I-1)

OUTLINE OF RIVER SYSTEM								RIVER ADMINISTRATION			BASIC FLOOD AND DESIGN FLOOD FOR RIVER					RIVER PLANNING		FLOW REGIME								
ADMINISTRATIVE DIVISION	S.Q. No.	Location Index	Name of River System	No. of rivers	Length of main stream (km)	Catchment area (km ²)	Rerevant prefectures	Length of rivers(km)			Reference point	Catchment area (km ²)	Basic flood discharge ³⁾ (m ³ /sec)	Control by dams (m ³ /sec)	Design flood for river ⁴⁾ (m ³ /sec)	Desgin width ⁵⁾ (m)	Desgin gradient ⁵⁾	Name of station	Catchment area (km ²)	Recorded max. flow (m ³ /sec)	95days (25%)flow ⁶⁾ (m ³ /s.)	185days (50%)flow ⁷⁾ (m ³ /s.)	275days (75%)flow ⁸⁾ (m ³ /s.)	355days (97%)flow ⁹⁾ (m ³ /s.)	Mean flow (m ³ /s.)	Annual run-off (Mm ³)
								Non-designated ¹⁾	Designated ²⁾	Total																
Hokkaido D. B.	1		Teshio R.	160	256	5590	Hokkaido	311.5	1047.8	1359.3	Pompira	4,029	6,400	700	5,700	350	1/2418	Pompira	2,899	785.58	145.09	89.41	55.90	36.68	128.48	4,063
	2		Shokotsu R.	25	84	1240	Hokkaido	24.5	164.8	189.3	Kamishokotsu	1,051	1,300	0	1,300	190	1/357	Kamishokotsu	1,051	329.99	27.76	16.94	10.04	7.22	28.23	866
	3		Yubetsu R.	17	87	1480	Hokkaido	31.5	192.2	223.7	Kaisei	1,403	1,800	0	1,800	400	1/756	Kaisei	1,335	231.81	31.00	15.18	11.38	9.00	31.46	995
	4		Tokoro R.	56	120	1930	Hokkaido	99.8	320.7	420.5	Kitami	1,394	1,900	300	1,600	330	1/318	Kitami	1,394	112.73	22.66	13.78	11.17	7.46	20.49	648
	5		Abashiri R.	25	115	1380	Hokkaido	65.7	199.8	265.5	Bihoro	824	1,200	0	1,200	65	1/19200	Bihoro	824	93.17	13.65	8.54	7.40	6.53	13.62	431
	6		Rumoi R.	13	44	270	Hokkaido	44.4	27.3	71.7	Ohwada	234	1,300	500	800	75	1/990	Ohwada	234	146.89	9.85	3.16	1.60	0.71	10.15	321
	7		Ishikari R.	456	268	14330	Hokkaido	988.2	2677.2	3665.4	Ishikari-oh-hashi	12,697	18,000	4,000	14,000	910	1/7092	Ishikari-Oh-hashi	3,379	945.13	162.92	112.24	64.43	47.86	138.10	4,367
	8		Shiribetsu R.	37	126	1640	Hokkaido	24.2	317.3	341.5	Nakoma	1,402	3,300	300	3,000	200	1/2160	Nakoma	1,402	895.14	62.31	43.56	35.21	26.23	69.98	2,213
	9		Shiribeshi-toshibetsu R.	29	80	720	Hokkaido	63.8	144.2	208.0	Imagane	361	1,600	350	1,250	270	1/780	Imagane	361	425.04	26.96	14.35	10.63	7.95	25.13	795
	10		Mu R.	20	135	1270	Hokkaido	42.9	205.1	248.0	Mukawa	1,228	3,600	0	3,600	400	1/1147	Mukawa	1,228	266.01	38.00	24.73	12.61	7.37	35.22	1,114
	11		Saru R.	28	104	1350	Hokkaido	46.3	216.6	262.9	Biratori	1,253	5,400	1,500	3,900	350	1/619	Biratori	1,253	307.17	56.55	32.40	15.52	8.57	45.54	1,440
	12		Kushiro R.	38	154	2510	Hokkaido	102.8	455.8	558.6	Shibecha	895	1,200	0	1,200	205	1/800	Shibecha	895	89.43	30.36	25.22	22.47	20.76	27.44	868
	13		Tokachi R.	208	156	9010	Hokkaido	289.1	2097.2	2386.3	Moiwa	8,208	15,200	1,500	13,700	960	1/3741	Moiwa	2,529	459.66	111.21	69.14	45.90	38.47	85.04	2,689
Tohoku R.C.B.	14		Iwaki R.	97	102	2542	Aomori	105.0	598.8	703.8	Goshogawara	1,740	5,500	1,700	3,800	364	1/4123	Goshogawara	1,740	614.65	79.27	61.80	30.67	16.60	68.16	2,155
	15		Takase R.	23	64	867	Aomori	40.1	152.3	192.4	Takase bashi	805	1,400	0	1,400			Uwano	344	141.57	13.91	7.17	4.79	3.37	11.62	367
	16		Mabechi R.	30	142	2050	Aomori,Iwate	10.0	476.1	486.1	O hashi	2,028	3,500	800	2,700	279	1/2375	Kenyoshi	1,751	359.23	47.76	21.12	17.58	13.55	38.82	1,228
	17		Kitakami R.	302	249	10150	Aomori,Iwate	425.0	2293.6	2718.6	Kozenji	7,060	13,000	4,500	8,500	320	1/1452	Tome	7,869	2,041.12	381.19	190.87	158.53	83.39	288.98	9,138
	18		Naruse R.	61	89	1149	Miyagi	90.0	397.6	487.6	Sanbongi	551	4,100	1,000	3,100	169	1/1460	Sanbongi bashi	551	315.24	26.02	15.17	10.32	3.83	22.65	716
	19		Natori R.	30	55	939	Miyagi	29.4	264.2	293.6	Natori bashi	456	4,700	1,300	3,400	482	1/621	Yokata	424	388.31	13.62	9.55	5.78	2.09	12.64	400
	20		Abukuma R.	196	239	5400	Miyagi, Fukushima	236.6	1710.4	1947.0	Iwanuma	5,265	10,700	1,500	9,200	707	1/3325	Akutsu	1,865	882.04	31.27	23.39	17.43	12.35	29.46	932
	21		Yoneshiro R.	90	136	4100	Iwate,Akita, Aomori	91.8	874.6	966.4	Futatsui	3,750	9,200	1,000	8,200	271	1/1502	Takanosu	2,109	1,716.45	117.77	63.85	41.34	25.39	101.08	3,196
	22		Omono R.	168	133	4711	Akita	170.6	1238.4	1409.0	Tsubakikawa	4,035	9,800	1,100	8,700	470	1/5000	Tsubakikawa	4,035	1,757.18	309.91	167.88	107.84	65.46	247.38	7,823
	23		Koyoshi R.	44	61	1190	Akita	36.2	370.7	406.9	Todoroki bashi	937	3,100	800	2,300	210	1/3000	Todoroki bashi	937	632.08	69.38	44.27	33.84	22.09	63.83	2,018
	24		Mogami R.	429	229	7040	Yamagata	323.9	2154.3	2478.2	Ryoubu bashi	6,520	9,000	1,000	8,000	717	1/3163	Takaya	6,271	2,011.32	505.88	276.09	171.71	83.60	387.08	12,241
	25		Aka R.	44	70	857	Yamagata	48.0	230.3	278.3	Kumaide	552	5,300	2,300	3,000	300	1/550	Kumaide	552							

Note 1) "Non-designated section" is a river section managed by the Minister of Construction (ministerial management section), that is, a river section part of whose administration is not entrusted to the prefectural governor concerned under the provision of Article 9 of the River Law.

Note 2) "Designated section" is a river section part of whose administration is entrusted to the prefectural governor concerned under the provision of Article 9 of the River Law.

Note 3) "Basic flood discharge" is a flood discharge before flood control provided by dams and reservoirs. Basic flood discharge is the flood discharge used as the basis of flood control planning for the river basin.

Note 4) "Design flood for river" is a flood discharge after flood control provided by dams and reservoirs. Design flood discharge is used as the basis for channel improvement planning.

Note 5) The values of design river width and design bed gradient shown un the table are those at the lowest of the reference point designated under a flood control plan.

Note 6) "95-day flow" is the daily natural discharge that is likely to be equaled or exceeded on 95 days in any given year (i.e., a daily natural discharge with a probability of exceedance of about 25%).

Note 7) "185-day flow" is the daily natural discharge that is likely to be equaled or exceeded on 185 days in any given year (i.e., a daily natural discharge with a probability of exceedance of about 50%).

Note 8) "275-day flow" is the daily natural discharge that is likely to be equaled or exceeded on 275 days in any given year (i.e., a daily natural discharge with a probability of exceedance of about 75%).

Note 9) "355-day flow" is the daily natural discharge that is likely to be equaled or exceeded on 355 days in any given year (i.e., a daily natural discharge with a probability of exceedance of about 97%).

1. OUTLINE OF THE CLASS A RIVER SYSTEMS (I-2)

OUTLINE OF RIVER SYSTEM							RIVER ADMINISTRATION			BASIC FLOOD AND DESIGN FLOOD FOR RIVER					RIVER PLANNING		FLOW REGIME										
ADMINISTRATIVE DIVISION	S.Q. No.	Location Index	Name of River System	No. of rivers	Length of main stream (km)	Catchment area (km ²)	Rerevant prefectures	Length of rivers(km)			Reference point	Catchment area (km ²)	Basic flood discharge ³⁾ (m ³ /sec)	Control by dams (m ³ /sec)	Design flood for river ⁴⁾ (m ³ /sec)	Desgin width ⁵⁾ (m)	Desgin gradient ⁵⁾	Name of station	Catchment area (km ²)	Recorded max. flow (m ³ /sec)	95days (25%)flow ⁶⁾ (m ³ /s.)	185days (50%)flow ⁷⁾ (m ³ /s.)	275days (75%)flow ⁸⁾ (m ³ /s.)	355days (97%)flow ⁹⁾ (m ³ /s.)	Mean flow (m ³ /s)	Annual run-off (Mm ³)	
								Non-designated ¹⁾	Designated ²⁾	Total																	
Kanto R.C.B	26		Kuji R.	53	124	1490	Fukushima,Ibaraki, Tochigi	47.8	478.8	526.6	Yamagata	898	4,000	600	3,400	360	1/1810	Yamagata	898	1,192.91	12.87	10.43	6.13	3.18	13.30	421	
	27		Naka R.	193	150	3270	Fukushima,Ibaraki, Tochigi	99.5	1410.6	1510.1	Noguchi	2,181	8,500	1,900	6,600	320	1/770	Noguchi	2,181	1,039.45	44.78	34.57	25.86	12.88	42.71	1,351	
	28		Tone R.	805	322	16840	Tokyo,Saitama,Chiba, Ibaraki,Tochigi,Gunma	965.7	5833.9	6799.6	Yattajima	5,114	22,000	6,000	16,000	1036	1/900	Kurihashi	8,588	2,216.90	141.15	92.56	70.37	54.37	126.47	3,999	
	29		Ara R.	126	173	2940	Tokyo,Saitama	173.1	1051.4	1224.5	Iwabuchi	2,137	14,800	7,800	7,000	620	1/5600	Yorii	927	2,031.97	12.71	6.87	3.87	2.56	15.66	495	
	30		Tama R.	52	138	1240	Tokyo,Kanagawa, Yamanashi	78.9	402.3	481.2	Ishihara	1,040	8,700	2,200	6,500	400	1/420	Ishihara	1,040	892.19	13.04	9.10	7.08	3.07	15.55	492	
	31		Tsurumi R.	11	43	235	Tokyo,Kanagawa	22.7	72.5	95.2	Sueyoshi	230	2,600	800	1,800	120	1/1500	Kamenoko	134	597.78	5.06	4.17	3.81	3.36	6.70	211	
	32		Sagami R.	104	109	1680	Kanagawa,Yamanashi	26.0	566.7	592.7	Atugi	1,385	10,100	2,800	7,300	420	1/520										
	46		Fuji R.	555	128	3990	Shizuoka,Nagano, Yamanashi	122.1	1783.4	1905.5	Kitamatuno	3,540	16,600	0	16,600	160	1/247	Shimizubata	2,121	538.10	45.18	35.37	31.14	18.90	42.49	1,322	
Hokuriku R.C.B.	33		Ara R.	61	73	1150	Niigata,Yamagata	38.6	313.2	351.8	Hanadate	1,050	8,000	1,500	6,500	345	1/493	Tudurayama	1,127	1,039.39	179.58	89.37	45.95	16.66	130.99	4,143	
	34		Agano R.	242	210	7710	Niigata,Gunma, Fukushima	93.1	2106.3	2199.4	Maoroshi	6,997	15,500	2,500	13,000	500	1/762	Maoroshi	6,997	2,919.68	504.52	346.43	169.84	111.62	416.86	13,183	
	35		Shinano R.	880	367	11900	Niigata,Gunma, Nagano	329.4	4684.6	5014.0	Odiya	9,719	13,500	2,500	11,000	424	1/520	Odiya	9,719	2,359.30	555.98	379.00	271.91	197.98	480.34	15,188	
	36		Seki R.	78	64	1140	Niigata,Nagano	12.6	497.1	509.7	Takada	703	3,700	0	3,700	216	1/930	Takada	703	1,046.73	81.06	41.28	24.59	3.18	62.42	1,974	
	37		Hime R.	47	60	722	Niigata,Nagano	11.0	212.9	223.9	Yamamoto	698	5,000	0	5,000	237	1/106	Yamamoto	698	1,922.20							
	38		Kurobe R.	25	85	682	Toyama	27.6	114.2	141.8	Aimoto	667	7,200	1,000	6,200	510	1/95	Unaduki	637	1,380.69	33.40	12.44	4.89	1.75	33.46	1,059	
	39		Joganji R.	49	56	368	Toyama	21.5	123.7	145.2	Kameiwa	344	4,600	0	4,600	450	1/776	Kameiwa	344	1,193.25							
	40		Jinzu R.	105	120	2720	Toyama,Gifu	48.1	776.5	824.6	Jizuoo B.	2,689	9,700	2,000	7,700	425	1/692	Jizuoo B.	2,688	2,405.15	197.27	136.05	101.75	54.62	172.33	5,449	
	41		Shou R.	48	115	1180	Toyama,Gifu	33.0	324.6	357.6	Ogami	1,072	6,500	700	5,800	348	1/158	Daimon	1,120	1,234.06	36.81	20.90	11.05	7.74	33.69	1,066	
	42		Oyabe R.	64	68	667	Toyama,Ishikawa	37.4	327.1	364.5	Tuzawa	280	1,300	0	1,300	135	1/435	Tuzawa	280	514.30	31.45	23.36	14.25	7.80	27.11	857	
	43		Tedoru R.	35	72	809	Ishikawa	37.3	178.2	215.5	Turuki	748	6,000	1,000	5,000	150	1/135	Nakajima	732	1,335.71	112.34	63.30	44.22	22.04	87.92	2,780	
	44		Kakehashi R.	13	42	271	Ishikawa	11.2	90.0	101.2	Komatsu Oohashi	222	1,700	700	1,000	120	1/5680	Haneda	167	404.42	20.45	14.04	7.10	2.29	17.39	550	
Chubu R.C.B.	45		Kano R.	76	46	852	Shizuoka	36.8	333.3	370.1	Ohito	322	4,000	0	4,000	190	1/375	Ohito	322	757.41	14.36	10.80	7.66	6.11	13.92	440	
	47		Abe R.	36	51	567	Shizuoka	31.6	169.1	200.7	Tegoshi	537	5,500	0	5,500	500	1/212	Tegoshi	537	400.57							
	48		Oi R.	39	168	1280	Shizuoka	41.6	277.7	319.3	Kanza	1,160	11,500	2,000	9,500	700	1/255	Kanza	1,160	1,442.38	26.14	16.14	13.38	8.44	38.40	1,214	
	49		Kiku R.	25	28	158	Shizuoka	37.3	85.2	122.5	Kuniyasu	149	1,500	0	1,500	66	1/400	Kamo	34	98.37	1.26	0.79	0.42	0.14	1.28	40	
	50		Tenryu R.	332	213	5090	Sizuoka,Aichi,Nagano	264.4	1811.3	2075.7	Kashima	4,880	19,000	5,000	14,000	200	1/553	Kashima	4,880	1,851.56	203.35	116.48	77.10	47.74	163.71	5,177	
	51		Toyo R.	27	77	724	Aiti	45.9	191.4	237.3	Ishida	545	7,100	3,000	4,100	380	1/1758	Ishida	545	1,060.54	13.34	8.00	5.44	3.38	15.22	481	
	52		Yahagi R.	94	117	1830	Gifu,Aichi,Nagano	62.1	719.6	781.7	Iwazu	1,356	8,100	1,700	6,400	310	1/1100	Iwazu	1,356	806.24	20.27	9.98	5.86	2.02	17.07	540	
	53		Shonai R.	76	96	1010	Gifu,Aichi	79.0	456.9	535.9	Biwajima	705	4,500	300	4,200	187	1/1313	Biwajima	705	598.68	17.88	11.48	8.03	4.98	17.49	553	

1. OUTLINE OF THE CLASS A RIVER SYSTEMS (I-3)

OUTLINE OF RIVER SYSTEM								RIVER ADMINISTRATION			BASIC FLOOD AND DESIGN FLOOD FOR RIVER					RIVER PLANNING		FLOW REGIME								
ADMINISTRATIVE DIVISION	S.Q. No.	Location Index	Name of River System	No. of rivers	Length of main stream (km)	Catchment area (km ²)	Rerevant prefectures	Length of rivers(km)			Reference point	Catchment area (km ²)	Basic flood discharge ³⁾ (m ³ /sec)	Control by dams (m ³ /sec)	Design flood for river ⁴⁾ (m ³ /sec)	Desgin width ⁵⁾ (m)	Desgin gradient ⁵⁾	Name of station	Catchment area (km ²)	Recorded max. flow (m ³ /sec)	95days (25%)flow ⁶⁾ (m ³ /s.)	185days (50%)flow ⁷⁾ (m ³ /s.)	275days (75%)flow ⁸⁾ (m ³ /s.)	355days (97%)flow ⁹⁾ (m ³ /s.)	Mean flow (m ³ /s.)	Annual run-off (Mm ³)
								Non-designated ¹⁾	Designated ²⁾	Total																
Chubu R.C.B.	54		Kiso R.	391	227	9100	Aichi,Nagano, Gifu,Shiga,Mie	372.9	2632.2	3005.1	Inuyama	4,684	16,000	3,500	12,500	590	1/460	Inuyama	4,684	3,840.35	211.05	141.61	111.63	65.96	213.17	6,741
	55		Suzuka R.	46	38	323	Mie	41.2	205.3	246.5	Takaoka	269	3,900	0	3,900	290	1/682	Takaoka	269	166.94	6.55	4.25	1.09	0.07	6.26	198
	56		Kumozu R.	40	55	550	Mie,Nara	28.5	228.2	256.7	Kumozubashi	541	8,000	1,900	6,100	401	1/1190	Onogi	304	131.74	5.64	3.70	2.18	0.41	5.50	174
	57		Kushida R.	68	85	461	Mie	35.6	202.0	237.6	Ryogunbashi	389	4,800	500	4,300	270	1/770	Ryogun	389	73.90	7.90	5.67	3.89	1.66	7.03	222
	58		Miya R.	55	91	920	Mie	22.6	282.7	305.3	Iwade	780	8,400	800	7,600	240	1/1140	Iwade	780	466.51	19.42	11.09	5.39	2.18	18.02	570
Kinki R.C.B.	59		Yura R.	138	146	1880	Kyoto,Hyogo	56.4	747.0	803.4	Fukutiyama	1,344	6,500	900	5,600	580	1/1100	Fukutiyama	1,344	1,247.33	62.04	39.65	26.62	14.48	53.76	1,700
	60		Yodo R.	962	75	8240	Osaka,Kyoto, Shiga, Hyogo,Nara,Mie	382.7	4059.7	4442.4	Hirakata	7,281	17,000	5,000	12,000	700	1/4000	Hirakata	7,281	1,626.89						
	61		Yamato R.	178	68	1070	Osaka,Nara	48.3	703.0	751.3	Kashiwara	965	5,200	0	5,200	200	1/1000	Kashiwara	962	887.81	19.79	12.04	8.12	4.00	19.14	605
	62		Maruyama R.	97	68	1300	Hyogo	40.5	460.1	500.6	Tachino	1,090	6,400	1,000	5,400	300	1/8330	Fuichiba	837	704.31	38.59	23.66	16.09	5.06	38.85	1,229
	63		Kako R.	130	96	1730	Hyogo	41.4	736.8	778.2	Kunikane	1,656	9,000	1,600	7,400	322	1/780	Kunikane	1,656	1,803.48	36.58	17.64	11.75	7.48	41.44	1,310
	64		Ibo R.	47	70	810	Hyogo	66.7	224.2	290.9	Tatuno	607	3,900	600	3,300	218	1/327	Tatuno	622	685.21	33.93	20.09	10.43	2.81	32.56	1,030
	65		Kino R.	181	136	1660	Wakayama,Nara	97.9	706.9	804.8	Funato	1,558	16,000	4,000	12,000	620	1/755	Funato	1,558	357.04	32.82	18.43	10.47	2.41	26.44	836
	66		Shingu R.	103	183	2360	wakayama,Nara,Mie	24.4	707.4	731.8	Ouga	2,251	19,000	0	19,000	406	1/1000	Ouga	2,251	1,575.12	75.26	44.32	26.33	15.27	68.18	2,156
	67		Kuzuryu R.	147	116	2930	Fukui,Gihu	110.0	924.0	1034.0	Nakatuno	1,262	8,600	3,100	5,500	260	1/1130	Nakatuno	1,240	1,124.01	116.38	82.88	42.54	14.89	92.23	2,917
68		Kita R.	12	30	211	Fukui,Shiga	16.5	66.6	83.1	Takatuka	202	1,900	0	1,900	117	1/500	Takatuka	202	191.42	12.26	8.15	4.02	0.24	9.72	307	
Chugoku R.C.B.	69		Sendai R.	86	52	1190	Tottori	45.3	432.5	477.8	Gyotoku	1,054	6,300	800	5,500	340	1/900	Gyotoku	1,053.7	522.52	61.59	39.55	28.80	16.24	59.04	1,867
	70		Tenjin R.	32	32	500	Tottori	41.9	143.6	185.5	Koda	464	3,500	0	3,500	283	1/818	Koda	464	352.19	22.05	15.51	12.09	2.92	19.15	606
	71		Hino R.	56	77	860	Tottori	34.7	310.9	345.6	Kuzumo	857	6,100	1,500	4,600	389	1/318	Kuzumo	850	305.73	24.86	15.52	9.58	1.19	20.91	661
	72		Hii R.	227	153	2070	Tottori,Shimane	127.7	913.4	1041.1	Kamishima	911	5,100	600	4,500	268	1/770	Otsu	911	1,078.60						
	73		Gono R.	293	194	3870	Shimane,Hiroshima	192.7	1472.7	1665.4	Ozekiyama	1,981	10,200	2,600	7,600	245	1/467	Ozekiyama	1,981	643.44	48.83	33.57	23.39	12.93	54.46	1,526
	74		Takatsu R.	92	81	1080	Shimane	20.0	480.4	500.4	Takatsu	1,077	4,200	0	4,200	326	1/864	Takatsuno	1,076	649.44	42.72	28.67	18.25	9.92	42.17	1,333
	75		Yoshii R.	215	133	2060	Okayama	46.1	1012.1	1058.2	Iwato	1,717	11,000	3,500	7,500	448	1/2400	Tsuse	1,675	781.62	62.99	37.79	27.05	19.52	58.47	1,849
	76		Asahi R.	147	142	1800	Okayama	30.4	795.5	825.9	Shimomaki	1,588	8,000	2,000	6,000	520	1/5940	Makiyama	1,587	509.96	49.00	34.05	24.50	18.78	44.75	1,415
	77		Takahashi R.	121	111	2670	Okayama,Hiroshima	35.4	854.0	889.4	Funao	2,606	13,700	1,500	12,200	1331	1/1870	Hiwa	1,986	675.08	44.57	31.13	25.73	19.57	44.96	1,422
	78		Ashida R.	81	86	870	Okayama,Hiroshima	61.2	347.0	408.2	Kashima	817	3,500	700	2,800	140	1/395	Fuchu	489	90.82	8.44	5.99	4.17	2.42	7.65	242
	79		Ota R.	73	103	1700	Hiroshima	129.4	466.6	596.0	Kumura	1,505	12,000	4,500	7,500	306	1/620	Yaguchidaichi	1,527	689.99	63.00	43.75	25.79	13.12	59.31	1,876
	80		Oze R.	23	59	342	Hiroshima,Yamaguti	36.8	93.9	130.7	Ryogokubashi	322	3,400	2,400	1,000	91	1/930	Ryogokubashi	330	258.77	9.12	5.52	4.60	4.17	9.48	300
	81		Saba R.	32	56	446	Yamaguti	34.5	138.1	172.6	Shinbashi	418	3,500	600	2,900	156	1/610	Shinbashi	423	358.50	9.24	5.11	3.01	1.00	14.23	450

1. OUTLINE OF THE CLASS A RIVER SYSTEMS (I-4)

ADMINISTRATIVE DIVISION	OUTLINE OF RIVER SYSTEM							RIVER ADMINISTRATION			BASIC FLOOD AND DESIGN FLOOD FOR RIVER					RIVER PLANNING		FLOW REGIME								
	S.Q. No.	Location Index	Name of River System	No. of rivers	Length of main stream (km)	Catchment area (km ²)	Rerevant prefectures	Length of rivers(km)			Reference point	Catchment area (km ²)	Basic flood discharge ³⁾ (m ³ /sec)	Control by dams (m ³ /sec)	Design flood for river ⁴⁾ (m ³ /sec)	Desgin width ⁵⁾ (m)	Desgin ⁵⁾ gradient	Name of station	Catchment area (km ²)	Recorded max. flow (m ³ /sec)	95days (25%)flow ⁶⁾ (m ³ /s.)	185days (50%)flow ⁷⁾ (m ³ /s.)	275days (75%)flow ⁸⁾ (m ³ /s.)	355days (97%)flow ⁹⁾ (m ³ /s.)	Mean flow (m ³ /s)	Annual run-off (Mm ³)
								Non-designated ¹⁾	Designated ²⁾	Total																
Shikoku R.C.B.	82		Yoshino R.	356	194	3750	Tokushima,Kagawa, Ehime,Kochi	186.5	1416.4	1602.9	Iwazu	2,740	24,000	6,000	18,000	160		Ikeda	2,074	4,509.04	43.97	29.78	19.33	17.39	50.94	1,611
	83		Naka R.	75	125	874	Tokushima	52.5	308.1	360.6	Furusyo	765	11,200	2,200	9,000	340	1/700	Furusyo	765	1,975.38	21.94	11.28	6.74	3.90	25.04	792
	84		Doki R.	11	33	140	Kagawa	21.4	47.6	69.0	Haraikawabashi	107	1,700	350	1,350	220	1/105	Tsunekanebashi	90	77.72	0.97	0.54	0.22	0.03	0.83	26
	85		Shigenobu R.	75	36	445	Ehime	26.1	239.7	265.8	Deai	445	3,300	300	3,000	340	1/407	Yamanouchi	55	115.79	1.19	0.85	0.64	0.00	1.60	50
	86		Hiji R.	475	103	1210	Ehime	42.1	939.1	981.2	Ozu	984	6,300	1,600	4,700	290	1/930	Ozu	984	1,871.79	22.62	12.78	8.98	4.47	30.36	960
	87		Monobe R.	35	71	508	Kochi	10.5	200.2	210.7	Fukabuchi	468	5,400	660	4,740	330	1/290	Fukabuchi	468	919.00	12.57	4.77	2.13	0.76	14.86	470
	88		Niyodo R.	166	124	1560	Kochi,Ehime	36.5	665.0	701.5	Ino	1,463	17,000	3,000	14,000	756	1/2200	Ino	1,463	3,103.17	53.18	30.87	16.93	11.50	58.54	1,851
	89		Watari R.	319	196	2270	Kochi,Ehime	52.3	1230.0	1282.3	Gudo	1,808	17,000	3,000	14,000	510	1/1300	Gudo	1,808	3,880.59	57.15	36.01	26.26	19.18	78.30	2,476
	Kyushu R.C.B.	90		Onga R.	74	61	1026	Fukuoka	133.8	360.6	494.4	hinodebashi	695	4,800	0	4,800	379	1/2600	hinodebashi	695	1,053.70	15.76	9.68	7.00	4.45	20.99
91			Yamakuni R.	39	56	540	Fukuoka,Oita	36.5	173.1	209.6	Shimotoubaru	483	4,800	500	4,300	190	1/380	Shimotoubaru	483	1,348.16	9.84	4.63	2.86	1.18	19.49	616
92			Chikugo R.	233	143	2863	Fukuoka,Saga,Oita, Kumamoto	220.5	1187.2	1407.7	Arase	1,440	10,000	4,000	6,000	390	1/2400	Senosita	2,315	3,596.55	75.05	49.15	42.43	32.62	99.21	3,137
93			Yabe R.	23	61	647	Fukuoka	23.2	193.1	216.3	Hunagoya	460	3,500	500	3,000	200	1/600	Hunagoya	460	1,037.24	10.17	6.09	4.47	2.14	18.35	580
94			Matsuura R.	80	47	446	Saga	63.3	234.1	297.4	Matsuurabashi	434	3,800	400	3,400	480	1/3100	Mutabe	275	604.48	6.12	3.70	2.38	1.68	8.14	257
95			Rokkaku R.	79	47	341	Saga	57.2	179.3	236.5	Suminoebashi	334	2,200	200	2,000	221	level	Myokenbashi	95	407.98	1.66	0.88	0.64	0.44	3.45	109
96			Kase R.	51	57	368	Saga	33.4	169.9	203.3	Kanjinbashi	226	3,400	900	2,500	70	1/670	Kawakami	226	502.38	12.73	5.70	3.78	2.74	9.72	308
97			Honmyo R.	18	21	87	Nagasaki	15.0	53.2	68.2	Urayama	36	1,070	260	810	60	1/160	Urayama	36	77.62	1.33	1.05	0.91	0.63	1.87	59
98			Kikuchi R.	67	71	996	Kumamoto	85.9	302.2	388.1	Tamana	906	4,500	700	3,800	267	1/2300	Tamana	906	1,026.00	22.47	15.28	10.82	3.18	30.83	975
99			Shira R.	16	74	480	Kumamoto	21.7	124.4	146.1	Yotsugibashi	477	3,400	400	3,000	110	1/870	Yotsugibashi	477	509.34	18.26	14.87	12.64	3.66	22.18	702
100			Midori R.	59	76	1100	Kumamoto	70.5	368.4	438.9	Jyonan	681	5,300	1,100	4,200	470	1/910	Jyonan	681	1,276.85	24.24	14.59	10.80	7.63	34.78	1,100
101			Kuma R.	82	115	1880	Kumamoto	118.3	431.0	549.3	Hagiwara	1,875	9,000	2,000	7,000	740	level	Yokoishi	1,856	4,955.80	74.22	33.32	19.92	13.76	114.21	3,612
102			Ooita R.	48	55	650	Oita	32.6	223.5	256.1	Hunaiohashi	601	5,700	700	5,000	278	1/825	Akegawarabashi	494	356.95	13.11	10.09	8.43	6.19	14.73	466
103			Oono R.	138	107	1465	Oita,Miyazaki, Kumamoto	51.4	812.0	863.4	Siratakibashi	1,381	11,000	1,500	9,500	298	1/1400	Inukai	1,239	1,183.93	41.17	29.41	20.73	13.33	51.03	1,614
104			Banjo R.	52	38	464	Oita	33.8	227.5	261.3	Banjobashi	278	3,000	0	3,000	240	1/880	Banjobashi	278	483.98	3.92	1.74	0.83	0.13	6.99	211
105			Gokase R.	102	106	1820	Oita,Miyazaki, Kumamoto	28.5	582.3	610.8	Miwa	1,044	6,000	0	6,000	259	1/700	Miwa	1,044	1,704.44	42.04	24.74	15.91	9.93	49.44	1,564
106			Omaru R.	14	75	474	Miyazaki	12.7	127.5	140.2	Takajou	396	3,600	600	3,000	170	1/600	Takajou	396	2,231.98	27.85	8.93	4.70	2.67	32.73	1,035
107			Ooyodo R.	134	107	2230	Kagoshima,Miyazaki, Kumamoto	86.1	844.6	930.7	Miyazaki	2,175	7,500	500	7,000	390	1/2900	Takaoka	1,564	2,466.81	80.62	52.13	33.13	23.11	89.86	2,842
108			Sendai R.	129	137	1600	Miyazaki,Kagoshima	131.6	571.6	703.2	Sendai	1,425	9,000	2,000	7,000	315	1/5000	Onobuti	1,348	1,674.13	51.79	35.40	27.50	21.11	72.00	2,277
109			Kimotsuki R.	35	34	485	Kagoshima	51.1	128.0	179.1	Matase	450	2,500	200	2,300	230	1/2000	Matase	450	1,065.22	23.57	17.86	15.52	13.60	26.44	836

1. OUTLINE OF THE CLASS A RIVER SYSTEMS (II-1)

ADMINISTRATIVE DIVISION	Name of River System	PRESENT SITUATION OF WATER USE											WATER RESOURCES DEVELOPMENT FACILITIES				WATER QUALITY				
		Hydro Power			Domestic Water Supply		Industrial water		Irrigation ¹²⁾		Others		Completed Facilities			Facilities under construction		Name of station	BOD 75% value ¹³⁾ 1996 (ppm)	DO 75% value ¹³⁾ 1996 (ppm)	
		Case	(Quantity m ³ /s) (Normal) ¹⁰⁾ (Max.) ¹¹⁾		Case	Quantity (m ³ /s)	Population (person)	Case	Quantity (m ³ /s)	Case	Quantity (m ³ /s)	Case	Quantity (m ³ /s)	No. of Dams	Name of Dams	Total effective capacity(Mm ³)	Name of Dams				Total effective capacity(Mm ³)
Hokkaido D. B.	1 Teshio R.	3	5.990	50.130	7	0.341	64.0	6	1.141	91	82.643	17	1.586	2	Iwaonai 96.3	96,300	Sanru	66,000	Nakagawa	0.8	11.3
	2 Shokotsu R.	2	4.390	4.900	1	0.247	31.0	3	0.034	6	2.851	3	0.031						Utsu B.	0.6	12.2
	3 Yubetsu R.	3	14.560	35.270	3	0.182	31.0	1	0.018	7	1.441	5	0.206						Nakayubetsu B.	1.1	12.3
	4 Tokoro R.				8	0.938	167.0	3	0.428	46	20.332	4	0.509	1	Kanoko 35.8	35,800			Chushi B.	2.9	10.9
	5 Abashiri R.	2	3.600	4.730				3	0.428	32	11.482	5	0.204						Chisui B.	1.7	11.5
	6 Rumoi R.									4	1.843	1	0.001	1			Rumoi	21,800	Rumoi B.	1.7	11.5
	7 Ishikari R.	36	247.461	1060.296	58	17.584	3665.0	21	29.850	506	643.819	43	7.106	11	Ashibetsu 0.206, Kanayama 130.42, Hoheikyo 37.1, Taisetsu 54.7, Izarigawa 14.1, Katsurazawa 81.8, Jozankei 78.6	396,926	Takisato, Chubetsu, Shin-katsurazawa, Mikasa-Ponbetsu	243,700	Ishikari-Oh-hashhi	1.3	11.3
	8 Shiribetsu R.	6	97.420	212.090	2	0.089	20.0	6	0.338	49	16.865	14	3.697						Nakoma	0.6	12.1
	9 Shiribeshi-toshibetsu R.	1	3.290	12.600	2	0.023	6.0			71	22.144	2	0.508	1	Pirika 14.5	14,500			Imagane B.	0.7	12.2
	10 Mu R.	1	1.120	15.000				1	0.017	26	19.009	2	0.029						Mukawa B.	0.6	11.8
	11 Saru R.	4	17.450	89.600	3	0.071	15.0	6	0.274	7	13.243	7	0.220	2	Nibutani 26	26,000	Biratori	33,900	Sarugawa B.	0.6	12.3
	12 Kushiro R.				4	1.381	241.0	3	2.582				5	0.071					Semonbira B.	0.9	11.7
	13 Tokachi R.	17	157.090	548.710	12	1.619	525.0	12	2.391	37	34.731	28	1.699	2	Tokachi 88	88,000	Satsunaigawa	42,000	Moiwa B.	1.5	11.5
Tohoku R.C.B.	14 Iwaki R.	5	20.407	54.447	10	1.968	599.2			23	111.550	7	0.149	3	Meya 33, Aseishigawa 43.1	76,100	Tsugaru	128,600	Inui bashi	2.6	10.3
	15 Takase R.				1	0.031	12.0			44	25.179			1			Ogawara L.	153,800	Ogawara L.	1.1	10.2
	16 Mabechi R.	4	25.645	53.546	5	1.107	383.6	4	4.352	63	11.662	5	0.234						Shiriuchi bashi	1.6	10.9
	17 Kitakami R.	30	133.953	437.548	54	7.871	1449.0	33	7.645	792	354.492	29	0.933	7	Ishibuti 11.96, Tase 101.8, Naruko 33.0, Shijushida 35.5, Gosho 45, Yuda 93.71	320,970	Isawa	132,000	Kozenji	1.3	10.9
	18 Naruse R.	3	2.310	7.750	10	1.374	967.0	1	0.433	18	5.817								Ono	1.4	10.6
	19 Natori R.	7	16.470	47.320	11	5.118	2721.0	6	2.540	9	18.544	2	0.357	2	Okura 25, Kamafusa 39.3	64,300			Mitsu hashi	2.0	11.7
	20 Abukuma R.	20	131.471	239.812	31	9.459	3688.7	34	6.688	714	152.736	28	1.414	3	Shichigashuku 99.5, Miharu 36.0	135,500	Surikamigawa	148,000	Iwanuma	2.7	10.5
	21 Yoneshiro R.	23	65.969	152.250	13	0.951	163.7	6	0.362	231	44.490	9	1.633	1			Moriyoshizan	68,600	Futatsui	1.1	11.2
	22 Omono R.	17	104.799	379.170	16	2.908	461.3	10	68.444	257	159.743	31	2.216	3	Yoroibata 3.0, Minase 26.3, Tamagawa 229	298,300			Tsubakigawa	1.5	10.5
	23 Koyoshi R.	7	17.791	43.548	4	0.255	522.0	7	0.04	120	16.100	1	0.018						Honjo ohashi	1.1	10.5
	24 Mogami R.	24	96.811	353.297	21	6.213	1302.8	2	11.448	334	208.905	35	2.563	3	41 Shirakawa, 98 Sagae	139,000	Nagai	48,000	Sunakoshi	1.0	11.0
	25 Aka R.	10	40.210	180.690	2	1.143	171.1	1	0.006	32	55.163			1			Gassan	58,000	Hamanaka	1.0	11.3

Note 10) "Discharge for firm power" is a discharge that is almost in continuous use for hydropower generation throughout the year and is calculated as the 355-day flow minus the discharge used for other purposes.

Note 11) "Maximum discharge for hydropower generation" is discharge for maximum output at a hydropower plant.

Note 12) Existence of "customary water rights" which account for most of irrigation water is affirmed in Article 87 of the River Law. Realities of customary water rights, however, are unknown. The numbers and intakes shown in the above table do not include those customary water rights.

Note 13) "75% value of BOD" is a value that 75% of all observation is greater than this value. "75% value of DO" is a value that 75% of all observation is smaller than this value.

1. OUTLINE OF THE CLASS A RIVER SYSTEMS (II-2)

ADMINISTRATIVE DIVISION	Name of River System	PRESENT SITUATION OF WATER USE											WATER RESOURCES DEVELOPMENT FACILITIES				WATER QUALITY								
		Hydro Power			Domestic Water Supply			Industrial water		Irrigation		Others		No. of Dams	Completed Facilities		Facilities under construction		Name of station	BOD 75% value ⁽¹³⁾ 1996 (ppm)	DO 75% value ⁽¹³⁾ 1996 (ppm)				
		Case	Quantity m ³ /s Normal ⁽¹⁰⁾ Max. ⁽¹¹⁾		Case	Quantity (m ³ /s)	Population (person)	Case	Quantity (m ³ /s)	Case	Quantity (m ³ /s)	Case	Quantity (m ³ /s)		Name of Dams	Total effective capacity(Mm ³)	Name of Dams	Total effective capacity(Mm ³)							
Kanto R.C.B	26 Kuji R.	7	8.495	14.130	15	1.762	370.4	11	1.234	74	14.798	4	0.287					Sakakibashi	2.3	10.0					
	27 Naka R.	12	12.205	527.746	26	4.090	1736.0	5	1.519	129	58.424	16	0.772					Shimokunii	1.6	9.6					
	28 Tone R.	95	680.278	2991.477	127	77.992	6734.0	105	58.914	3190	806.609	181	8.885	23	Ikari 46, Fujiwara 35.89, Yagisawa 175.8, Shimokubo 120, Kusaki 50.5, Sonohara 14.14, Tonekakouzeki 5, Aimata 20, Kawamata 73.1, Kawaji 76, Wataraseyusuchi II 26.4, Sudagai 22, Sinagi 1.273, Naramata 85	751,103	Yanba, Yunishi, Kawako, Kuribaragawa, Wataraseyusuchi II, Tokura, Hirakawa, Nanma, Namekawa	507,000	Kurihahsi	1.7	10.4				
	29 Ara R.	10	16.765	77.150	30	43.110	19224.0	22	4.576	61	6.167	14	0.185	5	Futase 21.8, Arakawa chosetuchi 10.6	32,400	Sinrokuzeki, Takizawa, Urayama	124,600	Sasamebashi	8.8	6.8				
	30 Tama R.	3	18.430	58.700	7	27.538		4	4.462	4	3.092	22	0.479	1					Shiromaru		Denenchofuzeki	5.0	8.4		
	31 Tsurumi R.							2	1.110	2	0.093											Otunabashi	13.4	7.5	
	32 Sagami R.	17	172.340	677.997	21	44.675	58.0	3	6.647	32	5.016	28	2.077	1					Miyagase	183,000	Banyubashi	2.4	6.9		
	46 Fuji R.	70	250.447	669.557	112	6.490	970.4	9	12.108	243	72.597	48	4.885									Fujigawabashi	1.1	10.5	
Hokuriku R.C.B.	33 Ara R.	6	55.960	328.350	4	0.408	53.1	2	0.202	77	25.147	12	2.721	2	Oishi 17.8	17,800	Yokokawa	19,100	Arakawa - syusuizeki	1.0	11.6				
	34 Agano R.	62	1748.076	7616.160	26	6.938	2654.7	12	4.336	412	245.068	34	0.813	1	Okawa 44.5	44,500			Ouun B.	0.8	11.0				
	35 Shinano R.	120	1234.941	5030.065	63	15.253	2592.0	28	18.797	958	578.171	90	25.139	2	Omachi 28.9, Sagurigawa 19.8	48,700			Heiseioo B.	1.4	10.0				
	36 Seki R.	16	49.422	117.612	3	0.582	281.0	8	3.464	154	29.626	27	3.757									Naoetsu B.	2.4	10.0	
	37 Hime R.	19	74.138	252.680	2	0.201	10.9	1	0.897	29	12.255	1	0.002									Yamamoto	0.5	9.5	
	38 Kurobe R.	18	190.330	686.560	1	0.043	7.0			2	78.310	8	0.156	1					Unaduki	12,700	Shimokurobe B.	0.7	10.8		
	39 Joganji R.	27	106.590	584.080	6	1.303	365.9	3	1.403	1	62.210	2	0.023									Joganji B.	1.6	10.3	
	40 Jinzu R.	59	438.760	1434.500	3	0.576	87.0	7	29.099	39	38.505	23	5.468									Jiinzuoo B.	1.3	10.6	
	41 Shou R.	26	457.038	1692.620	3	1.720	312.0	4	4.433	4	86.225	4	2.634	1					Toga	26,400	Daimonoo B.	0.6	10.6		
	42 Oyabe R.	4	3.470	30.500	3	0.790	218.7	4	1.642	47	39.318	14	2.727									Jokoji B.	1.7	8.5	
	43 Tedorii R.	23	190.212	611.150	1	4.830	995.0	4	0.090	8	74.400	8	1.473	1	Tedorigawa 190	190,000						Hakusangoguchi - entei	0.5	10.7	
	44 Kakehashi R.										20	2.835	2	0.080									Tsurugashima B.	1.2	9.3
	Chubu R.C.B.	45 Kano R.	7	8.026	16.661	5	2.338	453.1	1	1.250	17	6.021	10	1.736									Kurose B.	2.6	8.3
		47 Abe R.	2	1.696	2.615	3	0.647	451.0	1	1.110	7	0.894	4	0.050									Abekawa B.	1.2	10.7
48 Ooi R.		14	210.500	727.510	4	2.915	820.0	1	2.000	20	40.531	18	0.340	1					Nagashima	68,000	Kanza B.	0.2	10.3		
49 Kiku R.										4	0.181												Kuniyasu B.	2.7	8.4
50 Tenryu R.		50	802.412	2622.480	19	5.643	1905.1	15	4.317	287	126.574	44	4.450	6	Miwa 20.745, Koshibu 37.1, Shintoyone 40.4	98,245	Mibu River Comprehensive Development Project, Tokusa, Miwa	45,355	Kashima B.	0.6	10.7				
51 Toyo R.		3	10.569	14.817	15	4.961	1208.5	6	3.497	95	28.655	3	0.030	1					Toyo River Flow Improvement Project	100	Ejima B.	0.6	11.4		
52 Yahagi R.		25	79.850	829.478	14	5.880	1358.7	29	9.490	266	78.541	1	0.007	2	Yahagi 65	65,000	Yahagi Estuary Barrage	2,000	Yonezu B.	2.4	10.2				
53 Shonai R.	2	7.400	7.400	3	0.032	0.2	31	4.898	79	25.079	12	0.584	1					Origawa, Kiso River Channel Project	12,900	Biwajima B.	5.9	8.1			

1. OUTLINE OF THE CLASS A RIVER SYSTEMS (II-3)

ADMINISTRATIVE DIVISION	Name of River System	PRESENT SITUATION OF WATER USE											WATER RESOURCES DEVELOPMENT FACILITIES				WATER QUALITY							
		Hydro Power			Domestic Water Supply			Industrial water		Irrigation ¹²⁾		Others		Completed Facilities			Facilities under construction		Name of station	BOD 75% value ¹³⁾ 1996 (ppm)	DO 75% value ¹³⁾ 1996 (ppm)			
		Case	Quantity (m ³ /s)		Case	Quantity (m ³ /s)	Population (person)	Case	Quantity (m ³ /s)	Case	Quantity (m ³ /s)	Case	Quantity (m ³ /s)	No. of Dams	Name of Dams	Total effective capacity(Mm ³)	Name of Dams	Total effective capacity(Mm ³)						
	Normal ¹⁰⁾	Max. ¹¹⁾																						
Chubu R.C.B.	54 Kiso R.	76	843.078	5065.317	52	31.952	9289.4	41	17.422	215	185.691	31	1.258	10	Maruyama38.39,Yokoyama33, Iwaya150,Agigawa44,Nagara Estuary Barrage,Misogawa55	320,390	Sinmaruyama,Yokoyama,Tokuyama, Kiso River Environment Improvement Project	418,730	Noubi B.	0.9	10.4			
	55 Suzuka R.				1	0.003	1.5	3	0.443	64	18.682	2	0.034						Takaoka B.	1.2	11.4			
	56 Kumoju R.	1	0.550	1.110	6	1.191	279.1	6	0.828	66	21.701	3	0.088						Kumoju B.	2.0	10.6			
	57 Kushida R.	5	5.510	22.746	4	1.024	562.3	2	0.353	23	12.655	2	0.008	1	hachisu29.4	29,400				Kushida B.	1.1	9.7		
	58 Miya R.	6	18.640	100.000	5	0.131	52.1	6	0.101	22	10.181	6	0.125							Watarai B.	0.4	10.1		
Kinki R.C.B.	59 Yura R.	6	14.357	102.867	28	1.302	154.3	5	1.015	195	9.701	7	0.610	1	Oono21.32	21,320				Habi	0.8	10.3		
	60 Yodo R.	34	141.795	688.185	110	104.970	21775.7	71	53.078	524	265.314	179	9.278	14	Amagase20,Takayama49.2, Syourenji23.8,Muroo14.3, Hitokura0.93,Biwako1900,Nunome15.4	2,023,630	Yonogawa,Daidogawa,Amagase, Hinachi,Hiyoshi,Niu,Kawakami	295,200	Hirakata	2.6	9.4			
	61 Yamato R.				12	0.939	1107.6	5	0.450	24	2.773	1	0.008							Asaka	13.1	8.0		
	62 Maruyama R.	5	0.457	606.616	6	0.267	41.0	4	0.050	162	10.457	5	0.085							Tachino	0.7	10.4		
	63 Kako R.				22	2.993	2857.0	30	17.829	365	37.477	10	0.288	1	Kakogawa1.64	1,640					Kunikane	2.5	10.9	
	64 Ibo R.	6	10.532	30.954	1	0.021	4.0	3	5.212	193	22.538	1	0.029								Tatuno	1.0	11.0	
	65 Kino R.	4	13.758	56.707	23	5.820	2400.0	7	6.482	11	52.946	8	0.131	2			Ootaki,Kinokawa	79,800		Funato	2.4	9.7		
	66 Shingu R.	18	133.277	1052.108	11	0.427	52.3	4	3.279	4	0.336	28	0.407	1		17,300					Kumano	1.3	10.2	
	67 Kuzuryu R.	25	152.086	771.036	6	1.911	610.2	8	12.840	146	121.636	17	1.284	4	Kuzuryu190,Managawa95	285,000		Naruka,Asuwa	59,932		Nakatuno	1.1	11.6	
68 Kita R.	1	0.278	0.278	1	0.021	7.0	1	0.025	38	12.244	1	0.032								Takatuka	0.7	10.6		
Chugoku R.C.B.	69 Sendai R.	18	18.402	66.928	7	1.419	192.0	2	0.131	222	15.585	2	0.005	1			Tono	11,200		Gyotoku	1.5	10.0		
	70 Tenjin R.	8	4.803	10.323	2	0.112	61.0			49	6.800	1	0.044								Koda	1.3	10.5	
	71 Hino R.	14	22.483	419.834	5	0.289	193.0	2	3.111	57	22.381	3	0.357	1	Sugesawa17.2	17,200					Kuzumo	1.2	10.8	
	72 Hii R.	14	15.525	76.295	19	1.241	379.0	4	0.561	28	3.225	9	0.090	1			Obara	54,200			Otsu	1.0	10.0	
	73 Gono R.	24	81.482	312.806	32	0.613	132.0	3	2.342	278	14.438	21	0.503	2	Haji41.1	41,100		Haizuka	47,700			Mikunibashi	1.0	10.1
	74 Takatsu R.	5	10.923	36.577	1	0.001	0.1			19	1.065	3	0.005									Takatsuohashi	1.2	10.0
	75 Yoshii R.	18	25.240	66.632	19	1.861	1086.0	15	1.157	41	35.237	6	0.435	2	Sakanezeki1.6	1,600		Tomata	79,000			Eianbashi	1.8	8.8
	76 Asahi R.	8	48.941	194.738	24	2.755	721.0	8	3.341	38	20.331	15	0.352									Sakurabashi	0.9	9.1
	77 Takahashi R.	19	66.568	573.849	19	4.018	1058.8	27	58.805	50	33.816	9	0.057	1				Yanaibarazeki	3,400			Kasumibashi	1.8	11.3
	78 Ashida R.	3	1.935	9.145	11	1.996	477.0	6	4.067	46	11.791	1	0.002	2	Ashidagawa Barrage4.96,Hattabara57	61,960						Yamatebashi	5.4	6.7
	79 Ota R.	23	103.885	522.116	8	9.391	1939.0	6	3.781	66	2.394	8	0.045	2	Takasezeki1.78	1,780						Kumura	1.5	11.3
	80 Oze R.	7	8.400	27.000	3	0.898	170.0	8	6.108	8	0.124			1	Yasaka106	106,000						Yamatobashi	3.2	9.1
	81 Saba R.	1	2.350	8.000	2	0.288	135.0	5	4.033	54	17.279	1	0.022	1	Shimajigawa19.6	19,600						Shinbashi	0.9	10.4

1. OUTLINE OF THE CLASS A RIVER SYSTEMS (II-4)

ADMINISTRATIVE DIVISION	Name of River System	PRESENT SITUATION OF WATER USE											WATER RESOURCES DEVELOPMENT FACILITIES				WATER QUALITY					
		Hydro Power			Domestic Water Supply		Industrial water		Irrigation		Others		No. of Dams	Completed Facilities		Facilities under construction		Name of station	BOD 75% value ¹³⁾ 1996 (ppm)	DO 75% value ¹³⁾ 1996 (ppm)		
		Case	Quantity m ³ /s Normal ¹⁰⁾ Max. ¹¹⁾		Case	Quantity (m ³ /s)	Population (person)	Case	Quantity (m ³ /s)	Case	Quantity (m ³ /s)	Case		Quantity (m ³ /s)	Name of Dams	Total effective capacity(Mm ³)	Name of Dams				Total effective capacity(Mm ³)	
Shikoku R.C.B.	Yoshino R.	32	95.904	490.224	42	6.575	1493.0	10	18.264	44	49.222	18	6.432	7	Ikeda4.4,Shingu11.7,Kakozeki, Sameura289,Yanase29.6	334,700	Daijuzeki, Tomisato	49,500	Takasebashi	1.8	8.8	
	Naka R.	5	49.110	210.600	1	0.001	0.3	4	5.969	12	20.876	3	0.020	2	Nagayasuguchi43.5	43,500	Hosogochi	52,600	Nakagawabashi	1.0	9.7	
	Doki R.				2	0.087	82.0			1	8.000								Marugamebashi	8.0	7.4	
	Shigenobu R.	1	0.780	2.500	3	1.390	440.0	1	0.557	24	6.871			1	Ishitegawa10.6	10,600			Deai	7.2	8.4	
	Hiji R.	4	11.424	36.740	27	0.663	201.0	7	0.117	114	6.836	2	0.028	3	Kanogawa29.8,Nomura12.7	42,500		39,100	Hijikawabashi	1.1	9.9	
	Monobe R.	6	42.140	125.000	1	0.013	2.0	4	0.070	5	16.326	2	0.040	1	Nagase41.47	41,470			Yamadazeki	1.0	10.4	
	Niyodo R.	18	64.925	281.190	10	0.808	325.0	9	1.398	36	10.833	6	0.019	1	Oodo52	52,000			Hatazeki	0.9	9.6	
	Watari R.	6	21.800	67.840	19	0.259	52.0	14	0.103	50	2.466	11	0.061	2			Nakasuzigawa, Yokozegawa	19,200	Gudo	0.6	10.2	
Kyushu R.C.B.	Onga R.	1	0.040	0.300	37	9.055	3130.4	16	7.891	110	31.596	5	0.239	1	Ongagawa kakouzeki8.84	8,840			hinodebashi	3.4	9.9	
	Yamakuni R.	1	0.000	5.000	4	1.111	1365.0	1	0.150	34	13.987	13	1.188	2	Yabakei 21,Heiseioozeki0.052	21,052			Shimotoubaru	0.9	9.8	
	Chikugo R.	22	139.846	450.740	11	7.644	4917.4	10	2.875	127	98.364	39	5.357	5	Shimouke52.3,Terauchi16, Matsubara47.1,Matsubara-shimouke	115,400	Ooyama	18,000	Senosita	1.8	10.0	
	Yabe R.	4	6.230	21.170	1	0.010	5.0	10	0.154	11	58.345	2	0.041						Hunagoya	1.2	10.2	
	Matsuura R.	3	129.220	146.540	13	1.375	286.1	1	0.078	33	6.351	2	2.253	1	Kyuragi11.8	11,800			kuribashi	2.2	11.1	
	Rokkaku R.				3	0.201	47.9	1	0.029	7	1.359	3	0.014	1	Rokkakugawa kakouzeki17.3	17,300			Suminoebashi	1.2	7.2	
	Kase R.	8	16.502	71.348	2	1.100	218.4	2	0.588	2	22.760			1			Kasegawa	68,000	Kanjinbashi	1.2	10.8	
	Honmyo R.				1	0.058	82.6			1	1.227			1			Honmyogawa	8,300	Asahimachi	5.0	10.1	
	Kikuchi R.	8	9.882	29.300	3	0.281	207.5	3	1.557	10	20.342	1	0.205	1			Ryumon	41,500	Yamaga	2.0	9.4	
	Shira R.	4	27.350	58.830								1	0.012	1			Tateno	7,800	Oshimabashi	3.5	9.4	
	Midori R.	10	44.540	131.730				1	0.417	13	8.575	5	0.703	2	Midorikawa35.2	35,200	Midorikawa		Uesugiseki	1.7	10.4	
	Kuma R.	20	93.875	552.850	1	0.001	0.4	3	3.040	12	44.043	2	0.124	2	Ichifusa35.1	35,100	Kawabegawa	106,000	Yokoishi	2.1	10.2	
	Ooita R.	14	31.350	86.770	5	2.078	576.0	3	0.238	30	5.918	20	0.665	1			Ooitagawa	25,900	Hunaihashi	1.4	10.7	
	Oono R.	11	42.470	104.880	10	0.966	435.9	8	21.748	197	48.204	37	3.018						Siratakibashi	1.0	10.3	
	Banjo R.				2	0.005	1.7	1	1.113	16	1.880	5	0.041							Banjobashi	0.5	8.8
	Gokase R.	22	85.039	237.499	4	0.261	38.9	6	7.738	16	9.150	2	0.607							Gokasebashi	0.8	8.3
	Omaru R.	4	11.350	142.000	1	0.057	18.7	2	0.087	5	9.335									Takajobashi	0.4	10.2
	Ooyodo R.	11	96.690	439.620	2	2.910	335.4	1	0.011	52	32.265	2	0.034							Aioibashi	1.0	9.7
Sendai R.	5	83.540	366.200	4	0.166	68.1	5	1.498	51	11.604	10	0.083	1	Tsuruta77.5	77,500			Chugo	1.2	9.4		
Kimotsuki R.	2	1.950	5.010				3	0.018	9	7.647	2	0.169							Kawaharadabashi	3.8	7.2	

2. OUTLINE OF THE CLASS B AND LOCALLY DESIGNATED RIVER SYSTEMS

Prefectures	Class B River Systems				Locally Designated River Systems		
	No. of River Systems	No. of Rivers	Total Length of Rivers(km)	Catchment area (km ²)	No. of River River Systems	No. of Rivers	Total Length of Rivers(km)
Hokkaido	219	428	4,214.6	27,436	146	388	889.9
Aomori	77	152	998.0	5,342	24	46	129.3
Iwate	45	104	966.0	5,226	78	540	1,342.0
Miyagi	30	70	347.2	1,276	20	40	77.0
Akita	21	51	451.1	1,489	29	137	363.5
Yamagata	18	60	273.1	746	4	124	165.0
Fukushima	36	159	1,388.5	3,408	18	255	605.7
Ibaraki	17	28	175.7	696	16	97	241.8
Tochigi	0	0	0.0	0	2	41	110.0
Gunma	0	0	0.0	0	1	42	69.9
Saitama	0	0	0.0	0	2	198	371.1
Chiba	59	134	1,077.7	3,818	43	122	218.8
Tokyo	12	15	95.7	120	13	18	30.2
Knagawa	23	84	510.6	1,225	36	106	187.9
Niigata	143	394	1,537.5	3,710	53	193	205.3
Tamanashi	3	9	20.2	114	5	211	209.1
Nagano	0	0	0.0	0	7	1,358	1,974.3
Toyama	30	99	470.7	1,100	39	128	211.9
Ishikawa	60	163	893.5	2,504	58	144	247.1
Gifu	0	0	0.0	0	4	74	113.0
Shizuoka	83	263	1,220.4	2,797	98	824	1,280.8
Aichi	55	147	720.0	2,312	112	695	834.9
Mie	74	193	805.1	1,721	112	868	1,038.1
Fukui	21	39	248.0	1,235	18	63	126.0
Shiga	0	0	0.0	0	1	81	87.3
Kyoto	36	89	409.7	1,278	19	512	505.1
Osaka	17	40	185.4	538	12	61	94.5
Hyogo	93	345	1,685.0	3,514	39	284	312.6
Nara	0	0	0.0	0	6	283	414.1
Wakayama	85	317	1,424.1	2,997	21	79	87.4
Tottori	42	112	398.4	740	33	67	70.9
Shimane	72	157	848.0	1,943	33	124	139.4
Okayama	22	64	269.5	655	16	146	180.4
Hiroshima	47	135	624.0	1,550	38	193	183.5
Yamaguchi	105	428	2,197.2	4,724	123	582	596.3
Tokushima	39	129	430.5	762	35	700	812.7
Kagawa	79	275	1,009.2	1,350	40	120	85.6
Ehime	182	406	1,238.2	2,065	37	96	100.3
Kochi	97	263	1,243.7	2,483	34	173	234.8
Fukuoka	52	146	896.6	1,981	69	318	487.7
Saga	60	174	504.9	741	29	209	196.7
Nagasaki	218	352	1,068.8	2,297	195	296	323.3
Kumamoto	80	144	630.0	1,991	127	908	1,242.3
Ooita	93	211	987.1	1,892	94	567	673.9
Miyazaki	53	234	1,236.0	3,604	20	104	169.7
Kagoshima	160	310	1,760.5	6,950	491	1,238	1,636.8
Okinawa	49	73	350.9	901	14	22	39.5
TOTAL	2,707	6,996	35,811.3	111,231	2,464	13,875	19,717.4

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