

Chapter 4-12

Lake Biwa and its Surrounding Rivers

Abstract

Because Shiga Prefecture is surrounded by mountain ranges that mark prefectural borders, almost all of the rainfall in the area drains into Lake Biwa and flows out through the Seta River via the Yodo River to Osaka Bay. There are also rivers in the Kiso River System on the border of Gifu Prefecture and in the Kita River System on the border of Fukui Prefecture, all of which are first class rivers. Thus, none of the rivers in Shiga Prefecture that comply with the river law are second class rivers, with all rivers categorized into either first or provisional classes.

Keywords: Lake Biwa, First class river

1. Overview of Rivers in Shiga Prefecture

The catchment area of Lake Biwa is 3,848 km², covering 46.7% of the total catchment area of the Yodo River basin and 95.8% of the total area of Shiga Prefecture. The catchment area of the Yodo River including the inflows to the Seta River covers 98% of the total area of Shiga Prefecture. With the exceptions of the Fujiko River in the Kiso River System on the border of Gifu Prefecture, the Kita River (or the Amasu River), the Samukaze River and the Muku River in the Kita River System on the border of Fukui Prefecture, the 509 first class rivers that belong to the Yodo River System are located in Shiga Prefecture, 13 of these 509 first class rivers (67 km in total) are directly managed by the national government while 504 rivers (2,254 km in total), including 4 lakes and reservoirs, belong to the designated section. There are 118 first class rivers that flow directly into Lake Biwa.

2. Features of First Class Rivers

The geography of Shiga Prefecture is characterized by a concentric structure that extends across the flat land with Lake Biwa at its center and encompasses the central watershed. Because of this structure, with the exception of the Yasu and Ado Rivers, all the rivers are steep and short with lengths less than 50 km and are prone to flooding and water shortages.

Combined with the geotechnical features of the water source mountain ranges, this topography results in large amounts of sediment being washed down from upstream areas, creating rivers with beds higher than the surrounding ground known as “high-bedded rivers”. Some examples include the Kusatsu, Yanamune, Ane, Takatoki and Momose rivers. In some cases, roads and rivers intersect these high-bedded rivers by means of tunnels or culverts built under the rivers.

Small rivers with lengths less than 5 km (or a surface area of 5 km²) account for about 70% of the 118 first class rivers flowing into Lake Biwa.

Prefectural land utilization and transportation are characterized by a railroad network comprising, for example, the Biwako Line, Kosei Line and Hokuriku Line and arterial roads such as national highways developed within a 5 km radius of the lake around which urban areas have grown. Thus, these small rivers also play an important role as drainage for the prefecture.

Although Lake Biwa is served by many feeder rivers, it has only one outflow: the Seta River. In order to adjust the water level of the lake and prevent flooding downstream in the Uji River-Yodo River catchment area, the Seta River Weir was constructed at the exit of Lake Biwa.

(River Basin Policy Bureau,
Shiga Prefectural Government)

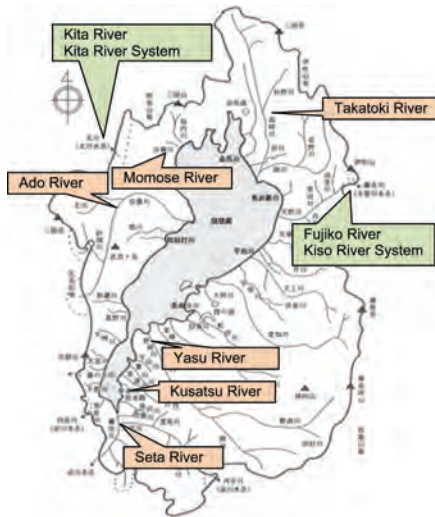


Fig. 4-12-1 Rivers in Shiga Prefecture



Fig. 4-12-2 Seta River weir
(Reference; Ministry of Land, Infrastructure, Transport and Tourism Kinki regional Development Bureau Biwako Office HP)

Table 4-12-1 Total number of rivers in Shiga Prefecture
(River, Port and Bay Record H22.4 River and Port Management Division; Current River Basin Policy Bureau)

First class rivers	509	· 118 rivers drain into Lake Biwa · 505 rivers belong to the Yodo River System	2,321 km	Total length of the river channel and the circumference of lakes and reservoirs
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First Class River: A river or public stream and its water-surface that is of special importance to the national economy and land conservation, designated by the Minister of Land, Infrastructure, Transportation and Tourism.

Designated section: The section of the first class rivers administered by local authorities.