Water supply to the future Seine-Nord Europe Canal, which extends for about 106 km from Compiègne (on the River Oise north of Paris) to the Dunkirk-Scheldt Canal (south of Lille), will use the resources of the catchment area of the rivers Oise and Aisne, to compensate for the permanent losses through seepage and evaporation. The lockage volumes, which will be limited by the water-saving basins systematically incorporated in all the structures, will be entirely recycled by pumping stations.

The maximum supply discharge is therefore 1.2 m³/s. This discharge will only be abstracted if the discharge in the river Oise is above a threshold defined as the sum of the existing QMNY5 (mean monthly low-flow discharge of five-year return period) and the increase in water requirements over the next 30 years (drinking water supply, industrial water, irrigation) throughout the catchment areas of the rivers Oise and Aisne.

Under these conditions, the required discharge would be guaranteed 95% of the time on average. When abstraction from the Oise is impossible, the following measures will be implemented in succession: extraction from the Tarteron valley reservoir (5.2 Mm³), built alongside the summit reach, then abstraction from the Louette valley reservoir (9.1 Mm³), built alongside the first reach down from the summit, finally lowering of the reaches themselves to a level up to 1 m below normal navigation level. This system offers a high level of reliability, and the risk of interruption of navigation is limited to a return period of 65 years.

Construction of the Seine-Nord Europe Canal will also bring modifications to the existing canals of northern France, with impacts on their management. Savings in water consumption may thus be envisaged, and these volumes returned to the natural hydrographic system to improve aquatic life.

SUMMARY