DAM OF FUSINO

Visiting Valgrosina, it is impossible not to notice the abundance of water, that runs through the main and lateral valleys and that flows in streams and rivers through ravines and waterfalls!
The artificial reservoir of Fusino, also known as the Valgrosina Dam, is of great landscape impact. It is located at the mouth of the Valgrosina and constitutes the daily regulation storage basin of the Grosio plant.
The Fusino Dam, this is its true toponym, is clearly visible from the locality of the same name, where from the square of the church of the Madonna delle Valli, built in 1966 in place of a chapel of the Madonna del Buon Consiglio, it is possible to observe the imposing wall.
The construction of the dam began in 1958 and the work went into operation two years later.
The reservoir is fed by the Premadio-Val Grosina branch channel, which conveys the swirled waters of the Premadio power plant and the water captured by the Adda and Viola inlets in Premadio, Uzza and other minor outlets. The reservoir also receives the water of the Roasco d'Eita and Roasco di Sacco torrents.
The capacity of this reservoir is approximately 1.2 million m^3 of water, a large value although not among the largest in the Province of Sondrio, an area where the dams are widespread and the production of hydroelectric energy is among the highest in Italy!
The reservoir of Fusino is classified as a "straight, buttress, lightened gravity" dam. Let's see what peculiarity this type of dam has: in general, a gravity dam opposes the thrust of water through its own weight. Those defined as "lightened", like the reservoir of Fusino, unlike massive gravity dams include lightening compartments in the barrage. These dams are therefore characterized by a transversal wall structure consisting of a succession of independent elements called "spurs" or "buttresses", having a triangular transversal profile and placed in contact along the downstream perimeter (sometimes also on the upstream one) to provide support to the retaining wall, suitably spaced from each other.
Spur dams like that of Fusino have been practically abandoned on an international level, although there are some relatively recent examples during the 70s - 80s (for example Haen dams in 1963 and Storfoss in 1982, in Norway). In the Italian context there are examples of this type of works built between the two world wars or in the immediate post-war period. There are 37 dams of this type in Italy (40% with full spurs, 30% with lightened gravity, 30% with vaults/slabs and buttresses or the like). For those who are passionate about hydraulic engineering, this section of the route therefore represents a precious opportunity to observe a type of reservoir that is not widespread!