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# PIANO DELLA ROCCA DAM

## Italy, 1984

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### PROJECT CHARACTERISTICS

**Works:** Earthfill dam, bottom outlet tunnel, gate shaft, inlet works, footbridge, and left bank retaining structure

**Purpose:** irrigation and industrial water supply.

#### Dimensions:

- *height:* 43 m
- *embankment. volume:* 1 620 000 m<sup>3</sup>
- *storage:* 32 000 000 m<sup>3</sup>
- *crest length:* 590 m

**Watertightness:** Bituminous concrete on the upstream slope. Twin, cast in place, concrete diaphragms, cut with hydromill.

#### Materials:

- *foundation:* alluvial deposits, flysch;
- *embankment:* well graded alluvium



### PROFESSIONAL SERVICES PERFORMED

Planning and analysis of additional investigations, geotechnical characterisation of foundation soil and of construction materials, planning and assistance for a test embankment, computation and construction drawings, assistance during construction, stability analyses of the reservoir slopes and investigation programme and preliminary design of stabilisation measures.

*Piano della Rocca dam is a homogeneous earthfill located on the Alento River in Campania. The upstream slope is set at 2H/1V and lined with a bituminous concrete facing which ends on the top of a concrete culvert. Twin concrete diaphragms are keyed into the base of the gallery.*

*The crest is 8.6 m wide and is set at el. 125.3 m a.s.l. The downstream slope, set at 1.875H/1V with berms at el. 111.6 and 98.3, is covered with vegetated soil placed over a geotextile separator. A rock toe drain forms a wide berm and collects the slope rainfall as well as the seepage eventually discharged by the horizontal drain. A culvert, 171 m long, crosses the dam connecting the longitudinal culvert to a weir chamber.*

*The bottom outlet tunnel is 530 m long and 5 m in diameter. The gate shaft is 25 m high and 4 m in diameter.*

