CONSTRUCTED WETLANDS SYSTEM FOR WASTEWATER TREATMENT OF MUNICIPAL DOG POUND IN LAVELLO

ORIGINAL NEED

The project involves the realization of a constructed wetland that will treat the wastewater of the municipal dog pound of Lavello, hosting about 300 dogs, situated in Finocchiaro locality.

The wastewater were partially clarified by an Imhoff tank and stored in a storage tank, from which they are periodically removed through vacuum truck/sewage suction truck, with considerable management costs; for this reason it was decided to use a sewage plant to be realized on site.

DESCRIPTION

The choice of a system of natural purification was motivated by the high variability of the characteristics of the discharge and the need for a treatment characterized by simplicity and economy of management and maintenance. Since, in addition to the reduction of the organic load and of the bacterial load, one of the principal objectives is the reduction in the quantities of inlet organic nitrogen, so it is considered to be more suitable to the case, the choice of a hybrid system composed of vertical and horizontal subsurface flow system.

LOCATION
Fonocchiaro locality
Municipality of Lavello
Province of Potenza
Italy

COMMITTANT
Municipality of Lavell

NUMBER OF PERSON EQUIVALENT
300 dogs

WASTEWATER TYPOLOGY
Comparable to domestic

PLANT TYPOLOGY
HF + VF + VF

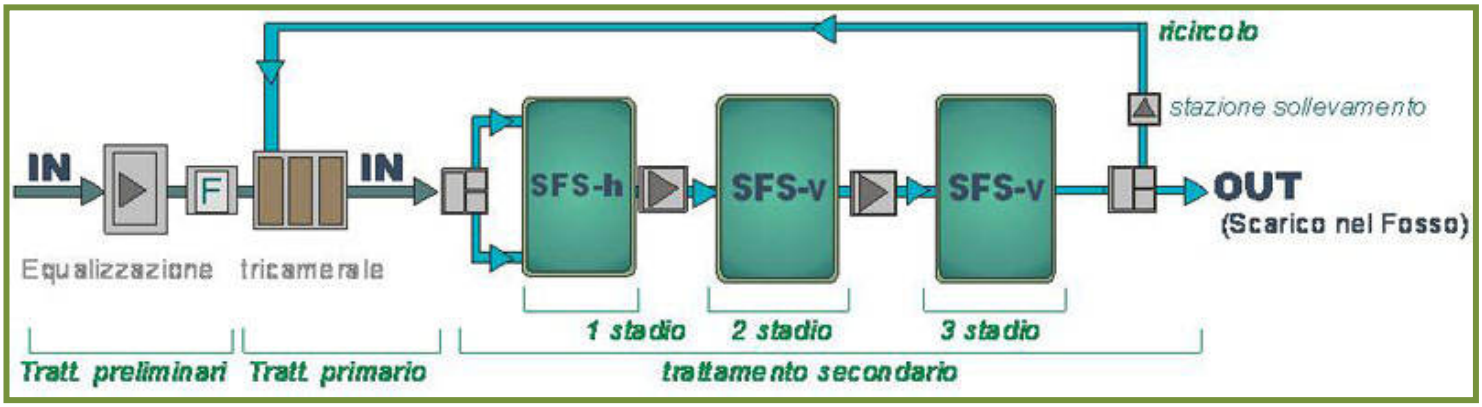
AREA (M^2)
380 (160 + 110 + 110)

YEAR OF REALIZATION
2006

As preliminary treatments are provided an equalization (so as to distribute throughout the day the design flow rate, otherwise concentrated within 4-5 hours), a fine automatic screening (brushes filter, particularly suitable especially for the lock of hair) and a primary treatment of sedimentation through septic tank.

The constructed wetland system turns out to be composed of:

- 1st stage: HF basin, surface area of 160 m^2;
- 2st stage: VF basin, surface area of 110 m^2;
- 3st stage: VF basin, surface area of 110 m^2.



Block scheme of the plant

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