

TITLE:

Process to obtain (implement and maintain) water bodies larger than 15,000 m³ for recreational use with color, transparency and cleanness characteristics similar to swimming pools or tropical seas at low cost.

ABSTRACT

The invention discloses a process to implement and maintain water bodies larger than 15,000 m³ for recreational use, such as lakes or artificial lagoons, with excellent color, transparency and cleanness properties at low cost, which comprises the following steps:

- a.- providing a structure able to contain a large water body larger than 15,000 m³;
- b.- feeding the structure of step (a) with inlet water having iron and manganese levels lower than 1.5 ppm and turbidity lower than 5 NTU;
- c.- measuring water pH, ideally it should be within a range lower than 7.8;
- d.- adding an oxidizing agent to the water contained in the structure of step (a), with which a 600 mV minimal ORP is controlled in water for a minimal period of 4 hours and in maximal cycles of 48 hours;
- e.- adding a flocculating agent in concentrations within 0.02 and 1 ppm with maximal frequencies of 6 days and cleaning the bottom of the structure of step (a) with a suction device to remove precipitated impurities from the bottom of said structure, together with the additional flocculants and;
- f.- generating a displacement of surface water containing impurities and surface oils by means of the injection of inlet water according to step (b), which generates said displacement in such a way to remove said surface water by means of a system for impurities and surface oils removal arranged in the structure of step (a), which together with step (e) replaces traditional filtering.

The present invention also discloses a structure to contain large water bodies comprising a system for the removal of impurities and surface oils by means of skimmers and the suction device to clean said structure.

Figure 10