CLAIMS

1. A water filtration unit, comprising:

a housing in the form of a shipping container;

a passive separator in the housing to receive a pressurized source of particulate-heavy water, to separate most of the particulate mass from the water and to output particulate-lean water;

particulate egress means disposed ~~at least partly~~ within the housing to receive, and allow disposal of, the particulate separated from the water;

~~at least one~~a plurality of filtration modules in the housing to each receive the particulate-lean water simultaneously, to filter remaining particulate and contaminants from the particulate-lean water by allowing passage of the water through porous filtration media of each module under gravity; and

at least one outlet conduit coupled to an outlet in a wall of the housing to receive filtered water from the filtration modules and provide the filtered water to a fluid sink outside the housing~~.~~, wherein the filtration modules are configured to be readily replaceable with another filtration module containing fresh or regenerated porous filtration media

2. The filtration unit of claim 1, further comprising a manifold tank to receive the particulate-lean water from the separator and provide the particulate-lean water to the ~~at least one~~ filtration modules, the manifold tank comprising a diffuser plate to spread hydrodynamic load of particulate-lean water entering the manifold tank.

3. The filtration unit of claim 2, further comprising filter module ingress conduits to provide the particulate-lean water from the manifold tank to the ~~at least one~~ filtration modules, wherein the ingress conduits are coupled to a respective ~~at least one~~ filtration module and are readily decoupleable therefrom.

4. The filtration unit of any one of the preceding claims, further comprising flocculent injection means inside the housing to add flocculent to the pressurized source of particulate-heavy water.

5. The filtration unit of claim 4, further comprising treatment chemical injection means inside the housing to add treatment chemicals to the pressurized source of particulate-heavy water to offset changes in pH of the water due to the addition of flocculent so as to generally maintain the pH of the particulate-heavy water.

6. The filtration unit of claim 5, wherein at least one of the flocculent injection means and the treatment chemical injection means is a dosing pump.

7. The filtration unit of any one of claims 4 to 6, further comprising a clarifier disposed between the separator and the ~~at least one~~ filtration module<u>s</u> for receiving the particulate-lean water from the separator to further settle flocs therein and provide particulate-lean water to the ~~at least one~~ filtration module<u>s</u>.

8. The filtration unit of claim 7, wherein the clarifier is a lamella clarifier.

9. The filtration unit of claim 7 or claim 8, further including a weir to receive particulate-lean water from the clarifier and provide the particulate-lean water to the ~~at least one~~ filtration module<u>s</u>.

10. The filtration unit of claim 9, further including a launder to receive particulate-lean water from the weir and provide the particulate-lean water to the ~~at least one~~ filtration module<u>s</u>.

~~11. The filtration unit of any one of the preceding claims, wherein the at least one filtration module comprises a plurality of filtration modules.~~

~~12.~~<u>11.</u> The filtration unit of any one of the preceding claims, wherein the separator is a vortex separator.

~~13.~~<u>12.</u> The filtration unit of ~~any one of~~ claim<u>s</u> 10 ~~to 12~~<u>or claim 11</u>, wherein the separator, the clarifier, the weir and the launder are formed as a processing assembly for installation in the housing as a unit.

~~14. The filtration unit of any one of the preceding claims, wherein the at least one filtration module is configured to be readily replaceable with another at least one filtration module containing fresh or regenerated porous filtration media.~~

~~15. The filtration unit of any one of the preceding claims, wherein the housing comprises a container transportable using standard shipping container transport means.~~

~~16.~~13. The filtration unit of any one of the preceding claims, further comprising a bund floor positioned intermediate the ~~at least one~~ filtration modules and a floor of the housing to channel the filtered water to the at least one outlet conduit.

~~17.~~14. The filtration unit of claim ~~16~~13, wherein the bund floor comprises a series of rollers to facilitate passage of the ~~at least one~~ filtration modules across the bund floor.

~~18.~~15. The filtration unit of any one of the preceding claims, wherein the separator is to separate most particles of the particulate that are greater than about 150 microns in size.

~~19.~~16. A system comprising one or more filtration units according to any one of claims 1 to ~~18~~15, and further comprising a pump to provide the pressurised source of particulate-heavy water to the one or more water filtration units.

~~20.~~17. A method of filtering water using a filtration unit according to any one of claims 1 to ~~18~~15, including the step of adding a flocculent to the particulate-heavy water.