WHAT IS CLAIMED IS:

1. A water treatment system comprising:

a collection station having a well for collecting a body of waste water received from an inflow main;

a dispersion system that receives a portion of collected waste water from the well, the dispersion system comprising a hydrodynamic mixing chamber and a nozzle, wherein an additive is mixed with a portion of collected water passing through the mixing chamber and wherein the mixed collected waste water and additive is dispersed through the nozzle as a spray to one or more of the surface of the body of waste water and a wall of the well; and

a controller comprising one or more processors configured to monitor the level of waste water in the well and further configured to cause a pump to drive a portion of the waste water from the well through an outflow main when the level of waste water in the well exceeds a threshold level, wherein

the controller is further configured to control a rate of flow of the additive to the mixing chamber.

2. The water treatment system of claim 1, wherein the dispersion system comprises a manifold that provides the portion of collected water and the additive to the mixing chamber.

3. The water treatment system of claim 1, wherein the additive comprises liquid ozone.

4. The water treatment system of claim 3, wherein the controller controls rate of flow of the liquid ozone based on measurements provided by sensors deployed in the well.

5. The water treatment system of claim 4, wherein the measurements include a measurement of residual ozone level in the collected waste water.

6. The water treatment system of claim 4, wherein the measurements include a measurement of sulfide in the collected waste water.

7. The water treatment system of claim 4, wherein the measurements include a measurement of hydrogen sulfide in the well.

8. The water treatment system of claim 1, wherein the controller is configured to control a main treatment system, wherein the main treatment system mixes ozone with waste water in one or more of the inflow and outflow mains.

9. The water treatment system of claim 8, wherein the controller controls rate and frequency of treatment of the wastewater in the one or more mains based on a measurement of sulfide ions in the one or more mains.

10. The water treatment system of claim 8, wherein the controller controls rate and frequency of treatment of the wastewater in the one or more mains based on a measurement of residual ozone in the one or more mains.

11. The water treatment system of claim 8, wherein the controller controls rate and frequency of treatment of the wastewater in the one or more mains based on a measurement of wastewater flow in the one or more mains.

12. The water treatment system of claim 8, wherein the one or more mains includes a force main.

13. The water treatment system of claim 8, wherein the controller controls rate and frequency of treatment of the wastewater in the one or more mains based on a measurement of contaminants measured in the well.

14. A water treatment method comprising the steps of:

measuring a concentration of one or more contaminants in a collection station, the collection station maintaining a body of waste water received from an inflow main;

providing a portion of the waste water to a dispersion system comprising a hydrodynamic mixing chamber and a nozzle;

controlling the flow of an additive to the mixing chamber, wherein the additive operates to neutralize the one or more contaminants;

dispersing a mixture of the waste water and the additive through the nozzle onto one or more of the surface of the body of waste water and a wall of the well; and

evacuating a portion of the body of waste water through an outflow main.

15. The method of claim 14, wherein the flow of the additive is controlled based on a measurement of a level of the one or more contaminants in the well.

16. The method of claim 15, wherein the additive includes ozone.

17. The method of claim 14, further comprising the steps of:

measuring a concentration of at least one contaminant in the outflow main; and

causing a downstream treatment station to mix the additive with the evacuated portion of waste water when the measured concentration of the at least one contaminant exceeds a predetermined threshold concentration.

18. The method of claim 14, wherein the additive comprises ozone, and wherein the outflow main is a force main, and further comprising the steps of:

detecting a flow of waste water in the force main; and

causing a downstream treatment station to introduce ozone to the force main when waste water is flowing in the force main.

19. The method of claim 14, wherein the additive comprises one or more of ozone and oxygen, and further comprising the steps of:

measuring a concentration of at least one contaminant in the well; and

causing an upstream treatment station to pre-treat waste water in the inflow main with the additive based on the measured concentration of the at least one contaminant in the well.

20. A control system for managing waste water treatment, comprising:

a first sensor provided in a well of a collection station, the first sensor monitoring a contaminant level in the well;

a second sensor provided in an outflow main, the second sensor monitoring a contaminant level in the outflow main;

a pump provided in the collection station, wherein the pump operates to evacuate waste water from the well when the volume of waste water in the well exceeds a predetermined threshold volume;

a dispersion assembly deployed within the collection station and adapted to mix a portion of the waste water from the well with ozone received from an ozone generator,

and configured to spray one or more of a wall of the well and a surface of the volume of waste water in the well with a mixture of the ozone and the waste water; and

an outflow main treatment system operable to mix a portion of the waste water from the outflow main with ozone received from the ozone generator and configured to reintroduce the mixed ozone and waste water from the outflow main into the outflow main,

wherein a processor controls the rate at which ozone is provided to the dispersion assembly and to the outflow main treatment system based on measurements of contaminants received from the first and second sensors, and wherein the processor is configurable to maintain the level of contaminants in the well and the outflow main below a desired threshold level.

CLAIMS:

1. An invention not claimed in any divisional application.