CLAIMS

What is claimed is:

1. A method, comprising:

obtaining a first measurement of a first water pressure value at a first water pressure sensor associated a first water main;

obtaining a second measurement of a second water pressure value at a second water pressure sensor associated with a second water main, wherein the first water main and the second water main are within a water supply system;

determining a first adjustment to be made to a valve at a service site served by the first water main, wherein the first adjustment is based at least in part on pressure values comprising:

the first water pressure value measured at the first water pressure sensor; and

the second water pressure value measured at the second water pressure sensor; and

transmitting a signal to cause the first adjustment to be made to the valve to restrict water flow at the service site.

2. The method of claim 1, additionally comprising:

determining a second adjustment to be made to a second valve at a second service site within the water supply system, wherein the second adjustment is based at least in part on the first water pressure value and the second water pressure value; and

transmitting a second signal to cause the second adjustment to be made to the second valve to lessen a restriction to water flow at the second service site.

3. The method of claim 1, additionally comprising:

determining additional adjustments to be made to water valves at each of a plurality of additional water service sites within the water supply system, wherein the additional adjustments are based at least in part on the first water pressure value and the second water pressure value; and

transmitting additional signals to the water valves at each of the plurality of additional water service sites within the water supply system to cause the additional adjustments.

4. The method of claim 3, wherein:

the determining of the additional adjustments is performed at two or more distributed processing sites; and

the transmitting of the additional signals is performed at two or more distributed transmitting sites.

5. The method of claim 1, wherein:

the determining comprises determining first adjustments to be made at each of a first plurality of water service sites having water pressure values greater than a first threshold value; and

the transmitting comprises transmitting signals to water valves at each of the first plurality of water service sites to decrease openings of valves associated with the first plurality of water service sites.

6. The method of claim 5, wherein:

the determining additionally comprises determining second adjustments to be made at each of a second plurality of water service sites having water pressure values less than a second threshold value; and

the transmitting additionally comprises transmitting signals to water valves at each of the second plurality of water service sites to increase openings of valves associated with the second plurality of water service sites.

7. The method of claim 1, wherein determining the first adjustment to be made to the valve is based at least in part on a water main to which the service site is attached.

8. The method of claim 1, wherein the first adjustment reduces the first water pressure value by less than 5 pounds per square inch.

9. The method of claim 1, wherein:

a first group comprises:

a first plurality of valves, including the valve at the service site, associated with a first plurality of service sites, respectively; and

the first water pressure sensor;

a second group comprises:

a second plurality of valves associated with a second plurality of service sites, respectively; and

the second water pressure sensor; and

wherein the method additionally comprises:

transmitting first signals to the first plurality of valves to restrict water flow; and

transmitting second signals to the second plurality of valves to lessen restriction of water flow.

10. The method of claim 1, additionally comprising:

receiving, at a central processing site of the water supply system, the first water pressure value and the second water pressure value; and

determining, at the central processing site of the water supply system, the first adjustment to be made to the valve.

11. A water supply system, comprising:

a first group of devices comprising:

a first water pressure sensor; and

a first valve;

a second group of devices comprising:

a second water pressure sensor; and

a second valve; and

a processor, configured to perform operations comprising:

determining that a first water pressure value obtained from the first water pressure sensor is greater than a first threshold value;

determining that a second water pressure value obtained from the second water pressure sensor is less than a second threshold value; and

adjusting the first valve to decrease water flow.

12. The water supply system as recited in claim 11, wherein the processor is configured to perform further operations comprising:

adjusting the second valve to increase water flow.

13. The water supply system as recited in claim 11, wherein:

the first valve controls flow to a first customer site;

the second valve controls water flow to a second customer site;

the first water pressure sensor measures water pressure within a first water main serving the first customer site; and

the second water pressure sensor measures water pressure within a second water main serving the second customer site.

14. The water supply system as recited in claim 11, wherein the processor is configured to perform further operations comprising:

determining which valve within the water supply system to restrict to divert water to the second valve.

15. The water supply system as recited in claim 11, wherein the processor is configured to perform further operations comprising:

determining which valves within the water supply system to increase restriction and which valves to decrease restriction to result in a decrease in a standard deviation in water pressure values at all valves in the water supply system.

16. One or more computer-readable media storing computer-executable instructions that, when executed by one or more processors, configure a computing device to perform acts comprising:

measuring a water pressure value at each of a plurality of pressure sensors within a water supply system;

calculating an adjustment to be made to a valve at each of a plurality of service sites from among service sites of the water supply system, wherein the adjustment is based at least in part on the water pressure value at one or more of the plurality of pressure sensors within the water supply system; and

transmitting a signal to the valve at each of the plurality of service sites to cause restrictions of water flow at the plurality of service sites.

17. One or more computer-readable media as recited in claim 16, wherein the calculating is performed at a central processing site of the water supply system.

18. One or more computer-readable media as recited in claim 16, wherein the calculating is performed at a plurality of distributed processing sites within the water supply system.

19. One or more computer-readable media as recited in claim 16, wherein the acts further comprise:

responsive to water pressure within an appropriate range of water pressures as measured at the plurality of pressure sensors, resetting the valve at each of the plurality of service sites to a standard setting.

20. One or more computer-readable media as recited in claim 16, wherein the acts further comprise:

calculating a second adjustment to be made to a valve at each of a second plurality of service sites from among service sites within the water supply system, wherein the second adjustment is based at least in part on the water pressure value at one or more of a second plurality of pressure sensors within the water supply system; and

adjusting the valve at each of the second plurality of service sites according to the calculating, wherein the adjusting increases water flow at the plurality of service sites.

CLAIMS

What is claimed is:

1. A method, comprising:

obtaining a first measurement of a first water pressure value at a first water pressure sensor associated with a first water main;

obtaining a second measurement of a second water pressure value at a second water pressure sensor associated with a second water main, wherein the first water main and the second water main are within a water supply system;

determining which valves within the water supply system to increase restriction and which valves to decrease restriction to result in a decrease in a standard deviation in water pressure values at respective service sites in the water supply system, wherein for a valve at a service site served by the first water main the determining comprises:

determining a first adjustment to be made to the valve at the service site served by the first water main, wherein the first adjustment is based at least in part on pressure values comprising:

the first water pressure value measured at the first water pressure sensor; and

the second water pressure value measured at the second water pressure sensor; and

transmitting a signal to cause the first adjustment to be made to the valve to restrict water flow at the service site.

2. The method of claim 1, additionally comprising:

determining a second adjustment to be made to a second valve at a second service site within the water supply system, wherein the second adjustment is based at least in part on the first water pressure value and the second water pressure value; and

transmitting a second signal to cause the second adjustment to be made to the second valve to lessen a restriction to water flow at the second service site.

3. The method of claim 1, additionally comprising:

determining additional adjustments to be made to water valves at each of a plurality of additional water service sites within the water supply system, wherein the additional adjustments are based at least in part on the first water pressure value and the second water pressure value; and

transmitting additional signals to the water valves at each of the plurality of additional water service sites within the water supply system to cause the additional adjustments.

4. The method of claim 3, wherein:

the determining of the additional adjustments is performed at two or more distributed processing sites; and

the transmitting of the additional signals is performed at two or more distributed transmitting sites.

5. The method of claim 1, wherein:

the determining comprises determining first adjustments to be made at each of a first plurality of water service sites having water pressure values greater than a first threshold value; and

the transmitting comprises transmitting signals to water valves at each of the first plurality of water service sites to decrease openings of valves associated with the first plurality of water service sites.

6. The method of claim 5, wherein:

the determining additionally comprises determining second adjustments to be made at each of a second plurality of water service sites having water pressure values less than a second threshold value; and

the transmitting additionally comprises transmitting signals to water valves at each of the second plurality of water service sites to increase openings of valves associated with the second plurality of water service sites.

7. The method of claim 1, wherein the first adjustment reduces the first water pressure value by less than 5 pounds per square inch.

8. The method of claim 1, wherein:

a first group comprises:

a first plurality of valves, including the valve at the service site, associated with a first plurality of service sites, respectively; and

the first water pressure sensor;

a second group comprises:

a second plurality of valves associated with a second plurality of service sites, respectively; and

the second water pressure sensor; and

wherein the method additionally comprises:

transmitting first signals to the first plurality of valves to restrict water flow; and

transmitting second signals to the second plurality of valves to lessen restriction of water flow.

9. The method of claim 1, additionally comprising:

receiving, at a central processing site of the water supply system, the first water pressure value and the second water pressure value; and

determining, at the central processing site of the water supply system, the first adjustment to be made to the valve.

10. A water supply system, comprising:

a first group of devices comprising:

a first water pressure sensor; and

a first valve;

a second group of devices comprising:

a second water pressure sensor; and

a second valve; and

one or more processors, configured to perform operations comprising:

determining which valves within the water supply system to increase restriction and which valves to decrease restriction to result in a decrease in a standard deviation in water pressure values at respective service sites in the water supply system, wherein for the first valve the determining comprises:

determining that a first water pressure value obtained from the first water pressure sensor is greater than a first threshold value;

determining that a second water pressure value obtained from the second water pressure sensor is less than a second threshold value; and

adjusting the first valve to decrease water flow.

11. The water supply system as recited in claim 10, wherein the one or more processors are configured to perform further operations comprising:

adjusting the second valve to increase water flow.

12. The water supply system as recited in claim 10, wherein:

the first valve controls water flow to a first customer site;

the second valve controls water flow to a second customer site;

the first water pressure sensor measures water pressure within a first water main serving the first customer site; and

the second water pressure sensor measures water pressure within a second water main serving the second customer site.

13. The water supply system as recited in claim 10, wherein the one or more processors are configured to perform further operations comprising:

determining which valve within the water supply system to restrict to divert water to the second valve.

14. One or more computer-readable media storing computer-executable instructions that, when executed by one or more processors, configure a computing device to perform acts comprising:

measuring a water pressure value at each of a plurality of pressure sensors within a water supply system;

calculating an adjustment to be made to a valve at each of a plurality of service sites from among service sites of the water supply system, wherein the adjustment is based at least in part on the water pressure value at one or more of the plurality of pressure sensors within the water supply system and wherein the adjustment made to the valve at each of the plurality of service sites results in a decrease in a standard

deviation in water pressure values at respective service sites within the water supply system; and

transmitting a signal to the valve at each of the plurality of service sites to adjust restrictions of water flow at each of the plurality of service sites.

15. One or more computer-readable media as recited in claim 14, wherein the calculating is performed at a central processing site of the water supply system.

16. One or more computer-readable media as recited in claim 14, wherein the calculating is performed at a plurality of distributed processing sites within the water supply system.

17. One or more computer-readable media as recited in claim 14, wherein the acts further comprise:

responsive to water pressure within an appropriate range of water pressures as measured at the plurality of pressure sensors, resetting the valve at each of the plurality of service sites to a standard setting.

18. One or more computer-readable media as recited in claim 14, wherein the acts further comprise:

calculating a second adjustment to be made to a valve at each of a second plurality of service sites from among service sites within the water supply system, wherein the

second adjustment is based at least in part on the water pressure value at one or more of a second plurality of pressure sensors within the water supply system; and

adjusting the valve at each of the second plurality of service sites according to the calculating, wherein the adjusting increases water flow at the plurality of service sites.

19. The method of claim 1, wherein determining which valves within the water supply system comprises:

determining which valves regulating water flow within water mains.

20. The water supply system as recited in claim 10, wherein determining which valves within the water supply system comprises:

determining which valves regulating water flow to individual customers.