Andover Water Treatment Plant

Virtual Tour

Welcome!

At the Andover Water Treatment Plant, we make water safe to drink for the 33,475 people who live and work in Andover.

Here, you'll learn about the process of treating water and how we get the water out to homes, schools and businesses.

Where does Andover get its water?

If you said Haggetts Pond & the Merrimack River…you're right!

- The primary source of drinking water for Andover is Haggetts Pond.

- The Town's residents, schools and businesses use more water than Haggetts Pond holds, so the supply is supplemented with water from the Merrimack River.

Haggetts Pond – Andover's primary source of drinking water

- Raw, untreated water is brought from the pond into the plant by pumps.
- Water coming into the plant passes through screens to remove things like sticks, leaves and fish.

This photo shows the screen (the red structure on the left)
and the raw water pumps in the background.

- After passing through the screens, water is pumped up to the ozone building.
- Ozone is good at breaking things down, and is mixed with water from the pond to help make it taste better and get rid of some of the naturally-occurring color.

The inside of the ozone building.

Ozone generators are on the right, with nitrogen boost and cooling equipment in the background.

Where do we get the ozone we use to treat water?

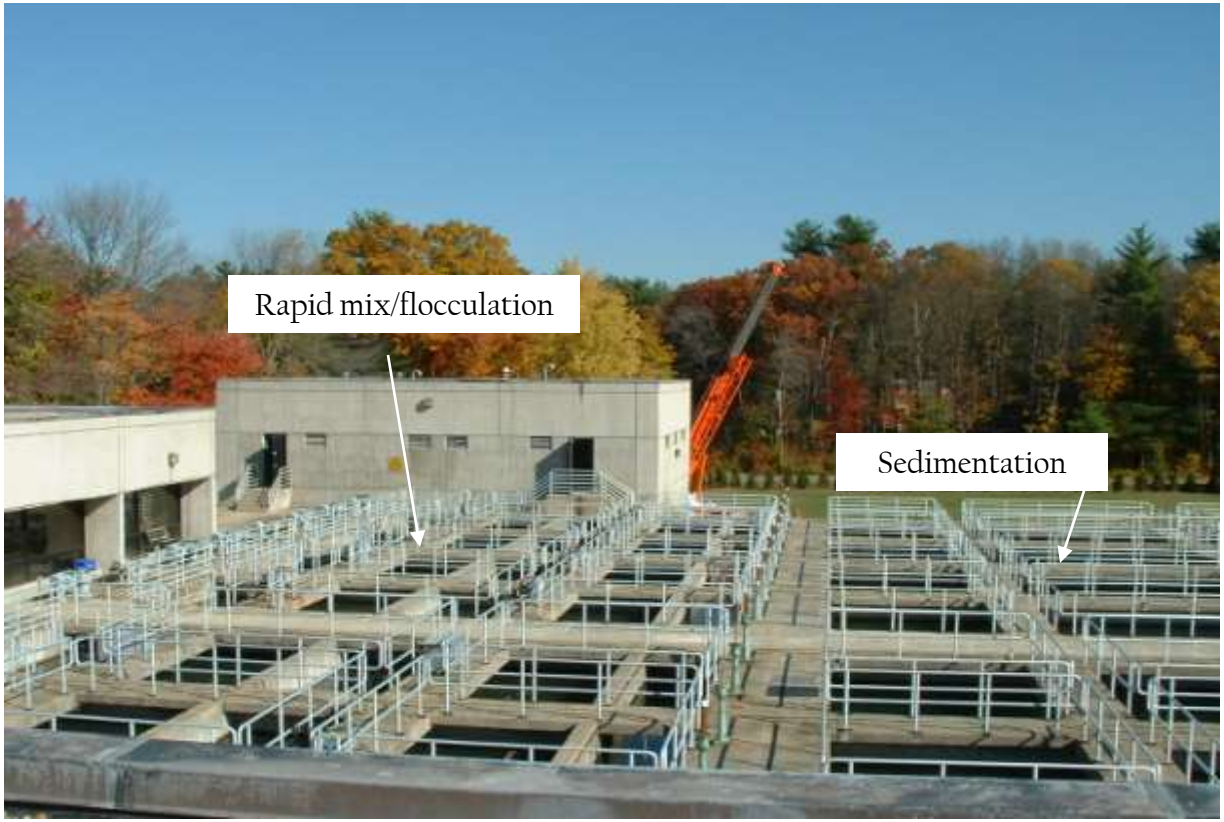
We make the ozone right here at the treatment plant using electricity and liquid oxygen.

All the equipment that you saw in the last photo is used to make ozone from oxygen.

Liquid oxygen storage tank and vaporizers.

Once the water from the pond has been swirled together with ozone, it flows into basins to be mixed with chemicals for further treatment.

These basins are called rapid mix/flocculation and sedimentation basins.



In the rapid mix/flocculation basins, chemicals are mixed with the water at different speeds. The chemicals that were added attach to the contaminants in the water, and the mixing action causes the particles to stick together.

This is a close up of a rapid mix basin.
These are the mixers that stir that water in the basin to help the particles of contaminants stick together.

Because the clusters of contaminants are now heavier, they will sink and settle out in the sedimentation basins where the water is not mixed and moving slower.

After most of the particles have been allowed to settle out, the water flows inside the building to the filters.

Water flows by gravity through the filters to remove any remaining particles.

There are eight filters, each with 48 inches of carbon on top of 6 inches of sand.

After being filtered, the water flows into a clearwell.

In the clearwell, chlorine and fluoride are added to complete the treatment process.

The clearwell is underground at the treatment plant.

Powerful pumps deliver treated water from the plant to the homes, schools, businesses and storage tanks in Andover.

How many miles of underground pipes do you think there are in Andover?

There are 250 miles of underground pipes in Andover!

To make sure that the water we produce is safe and healthy, the treatment plant has a laboratory to perform tests on the water at different stages of treatment.

The chemist at the plant performs tests for things like bacteria, viruses and metals in the water.

We test the water before, during, and after the treatment process...and even after the water leaves the plant and is out in the distribution system to
make sure that Andover water is clean and safe to drink.

Thank you for taking part in the virtual tour of the Andover Water Treatment Plant!