

The Hatchery

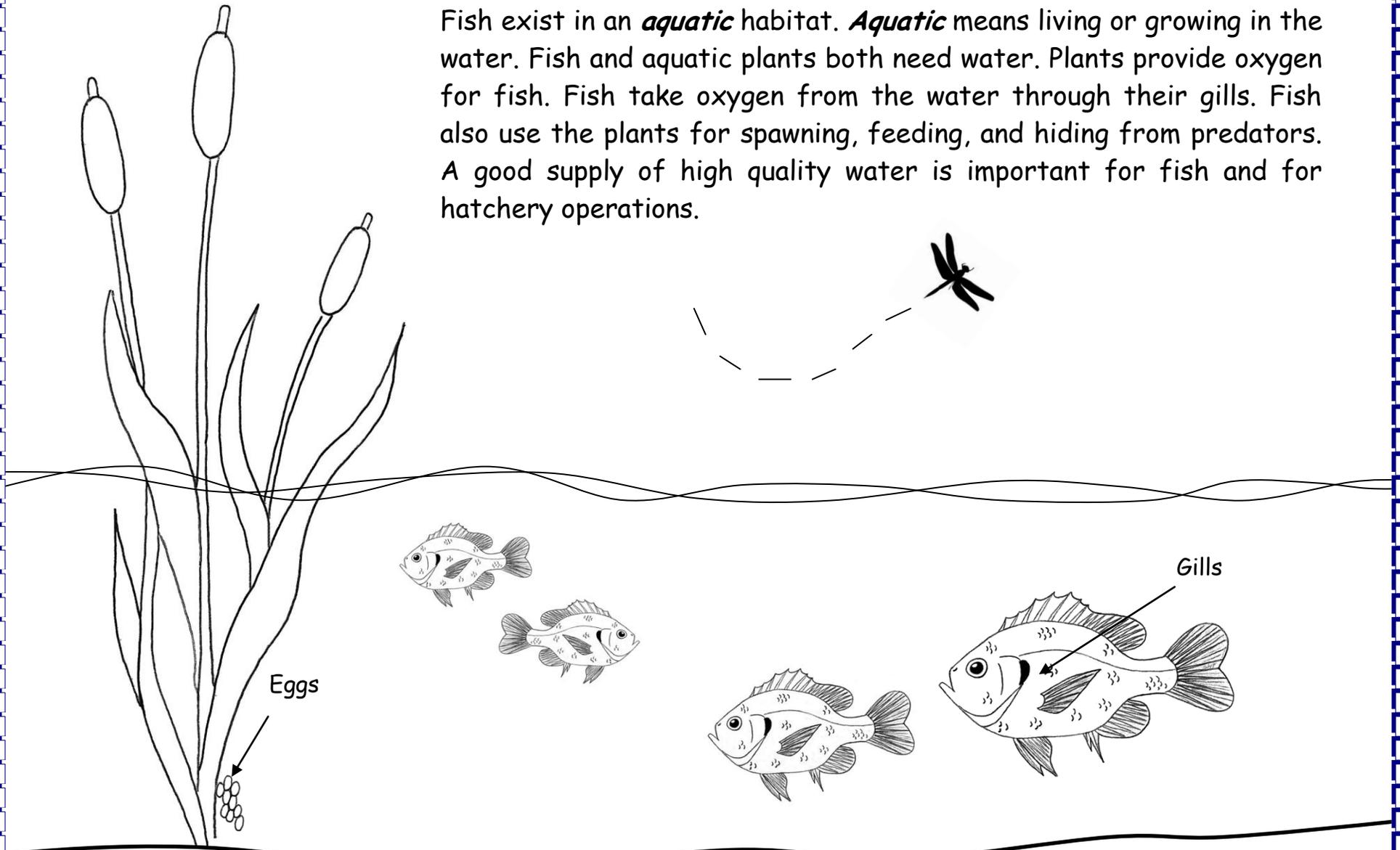
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The Water Cycle



Water and aquatic habitats:

Fish exist in an *aquatic* habitat. *Aquatic* means living or growing in the water. Fish and aquatic plants both need water. Plants provide oxygen for fish. Fish take oxygen from the water through their gills. Fish also use the plants for spawning, feeding, and hiding from predators. A good supply of high quality water is important for fish and for hatchery operations.



Unscramble these words.

HINT: Look at the "Aquatic Habitat" page for clues!



hfsi



ggse



isllg



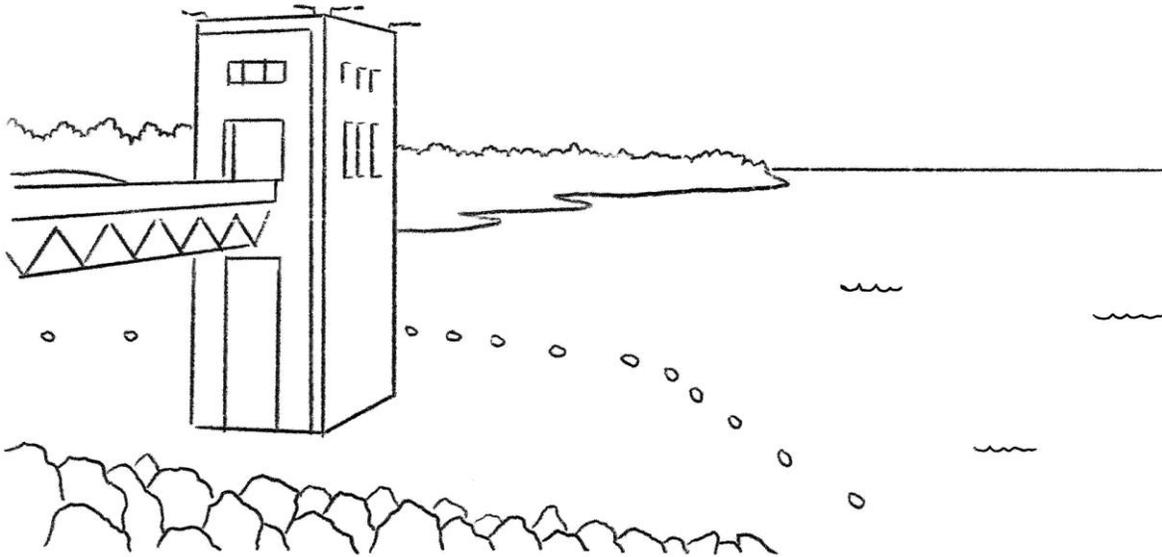
aterw



quatica



Hatchery water:



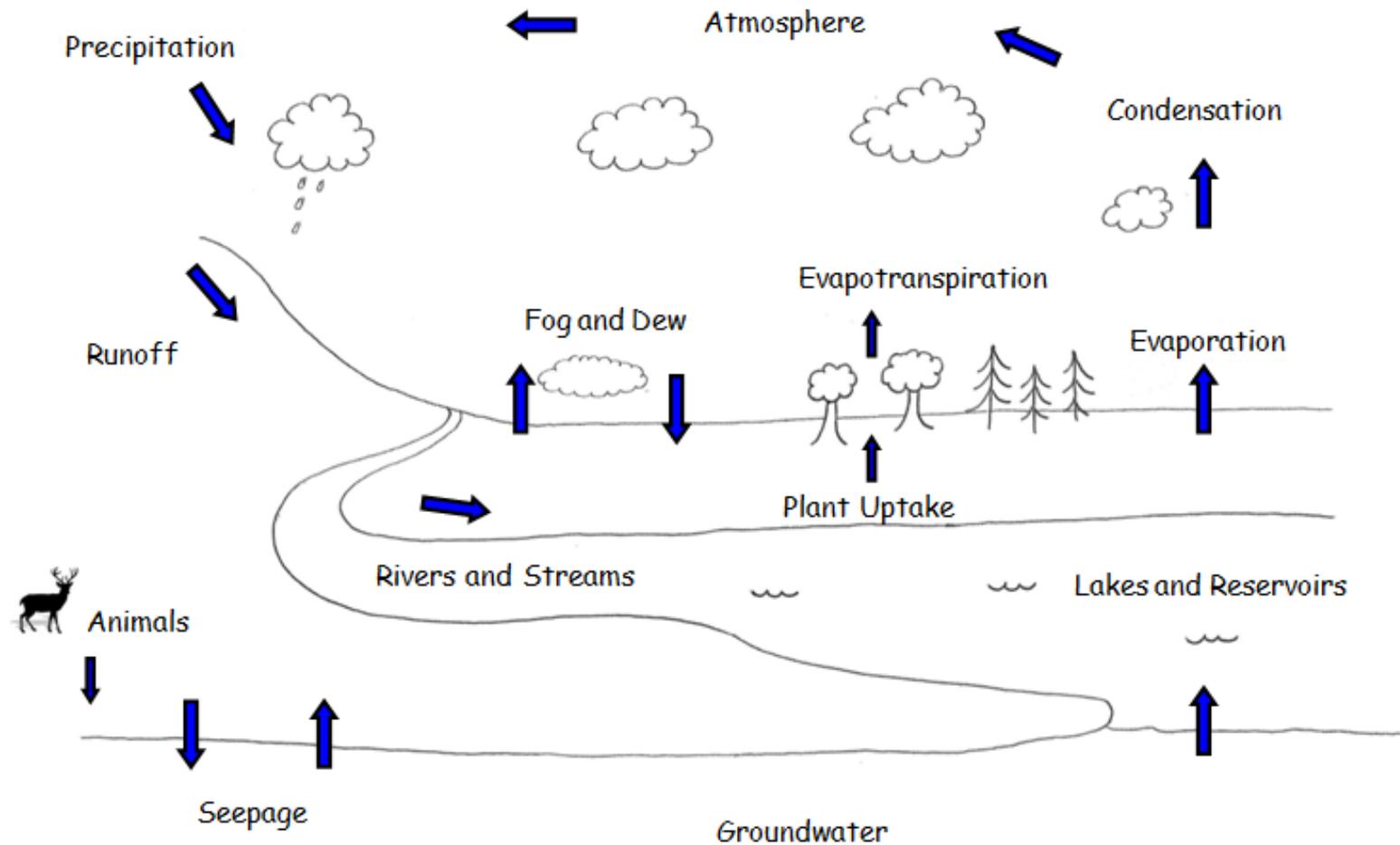
Water for the hatchery is obtained from *groundwater* sources and *Enid Lake*. Fish Hatcheries do not consume water. Instead hatcheries get water, use it, and then safely return it to the water supply. **Up to 500 gallons per minute may be taken from Enid Lake!** The water is pumped through fine mesh screens that are designed to stop fish eggs or small creatures from entering the hatchery water supply.



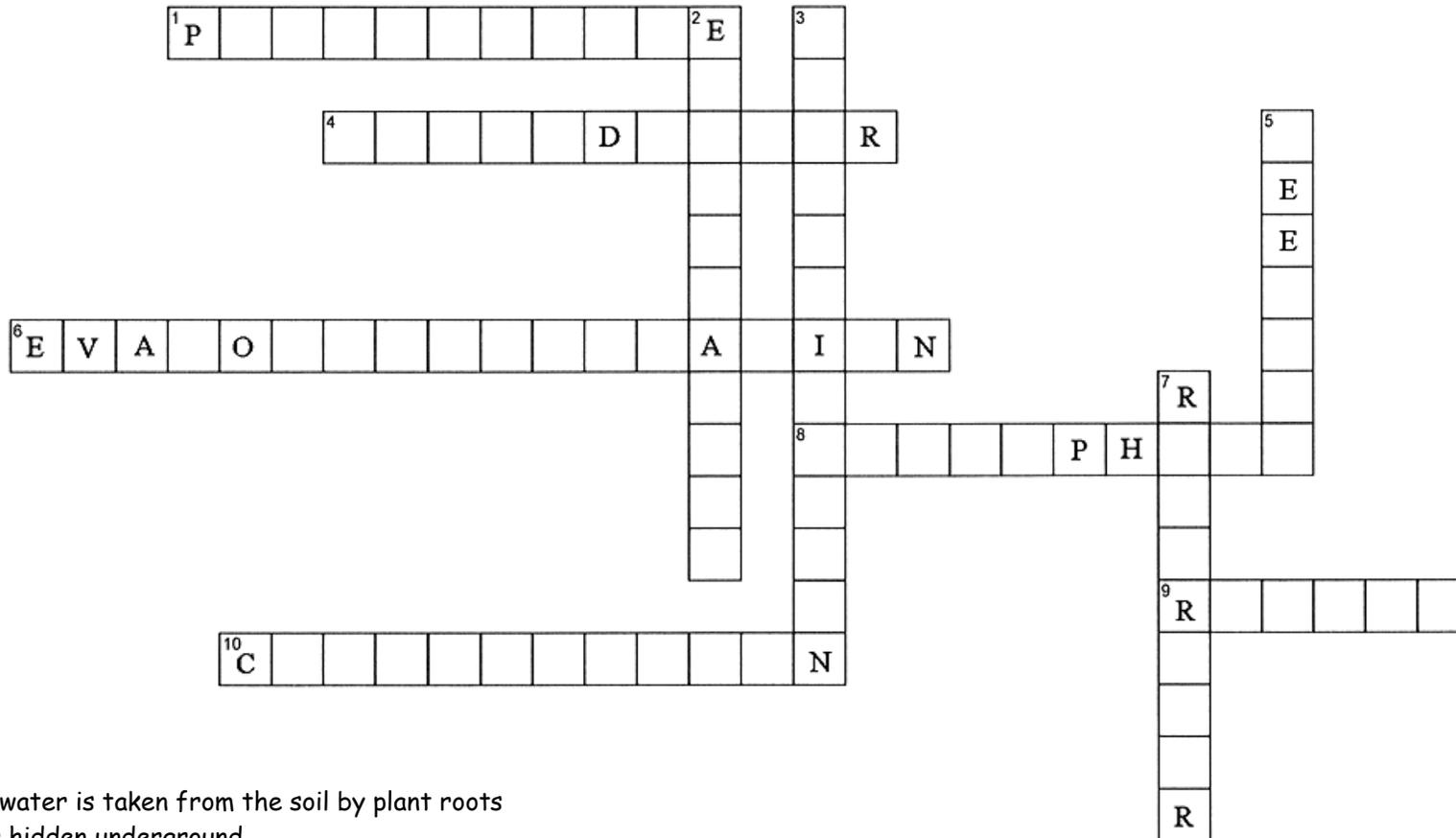
What is groundwater?

Groundwater is water beneath the earth's surface usually in saturated soils or rock. This water filters into water bodies (lakes and rivers) or stays underground. At the hatchery, two wells were dug to get groundwater needed for hatchery operations. **What is a well?** A *well* is a hole or shaft sunk into the earth to obtain groundwater from an aquifer. An *aquifer* is an underground body of water.

Do not worry! We won't drain the lake!
Water is constantly added to a lake through the **water cycle**.



Test your knowledge of the **water cycle!**



ACROSS

- 1 When water is taken from the soil by plant roots
- 4 Water hidden underground
- 6 When water is transferred from the soil to the air through plants
- 8 Gases that surround the Earth
- 9 The draining away of water
- 10 Water that collects on a cold surface when the air is warm

DOWN

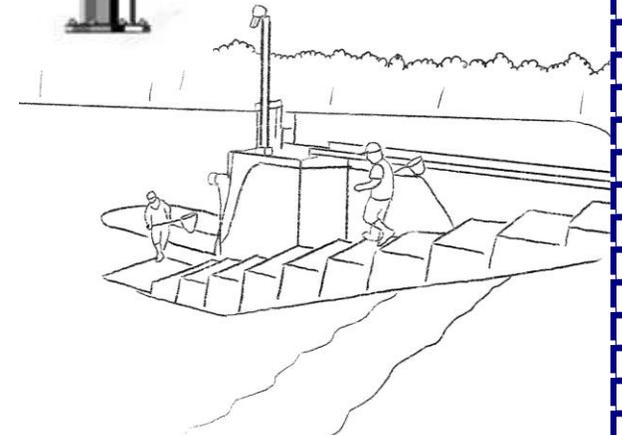
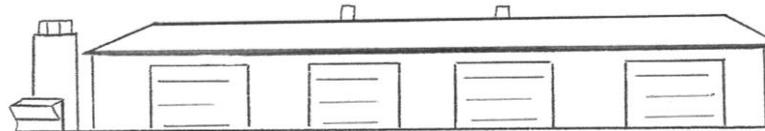
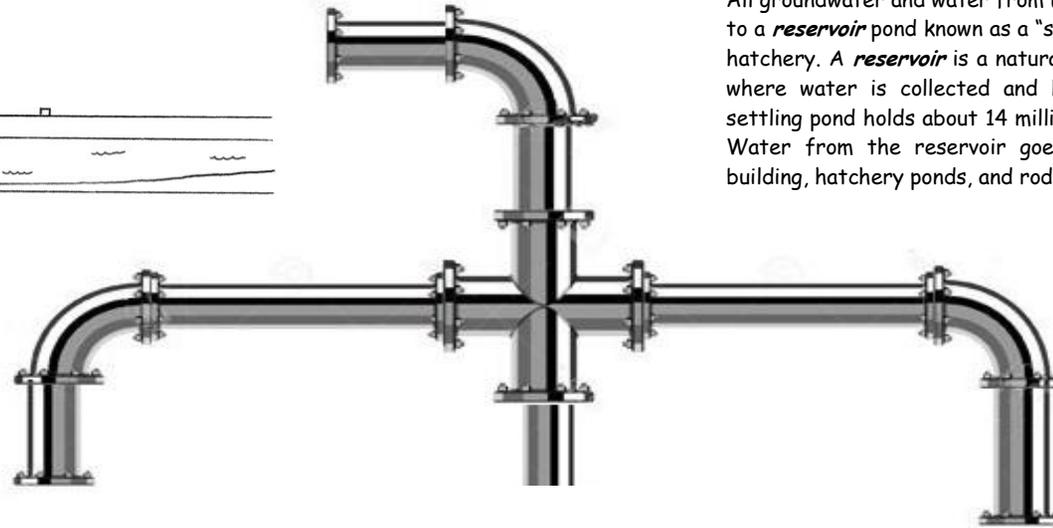
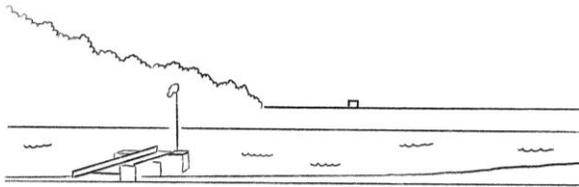
- 2 Turning liquid into vapor
- 3 Water that falls to the ground
- 5 The slow escape of liquid or gas
- 7 A natural or man-made lake



The path of water to the hatchery:

Settling Pond

All groundwater and water from Enid Lake is pumped to a *reservoir* pond known as a "settling pond" at the hatchery. A *reservoir* is a natural or man-made lake where water is collected and kept for use. This settling pond holds about 14 million gallons of water! Water from the reservoir goes to the hatchery building, hatchery ponds, and rodeo pond.



Visitor Center Fishing Pond

Water from the settling pond flows to the rodeo pond, which holds about 1.6 million gallons of water! Fishing rodeos will be held in this pond giving youth the chance to catch catfish.

The Hatchery Building

Water from the settling pond is pumped to the hatchery. The hatchery can pump 800 gallons per minute throughout the building. The hatchery is used to collect, incubate and hatch fish eggs. The hatchery also holds fish harvested from ponds or grows fish to larger sizes in tanks. **Wait!** Water entering the hatchery tank room must be filtered first.

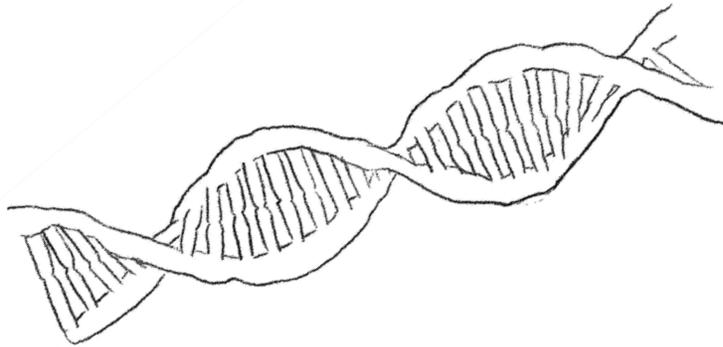
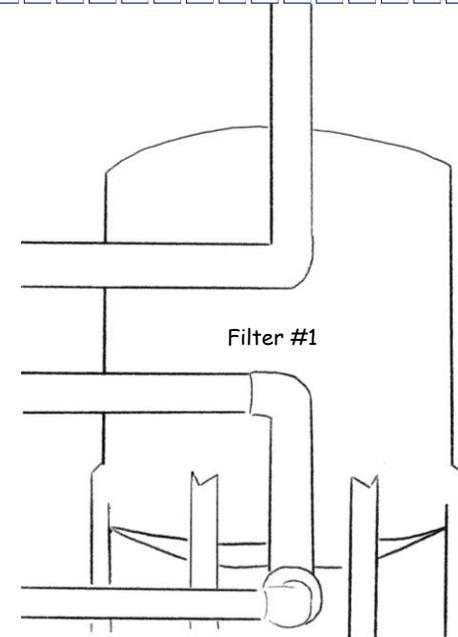
1-Acre Hatchery Ponds

Water from the settling pond flows to the 16, 1-acre hatchery ponds. A 1-acre pond will hold about 1.3 million gallons of water! The ponds are used to hold different species of fish.

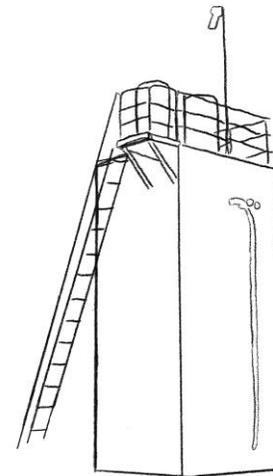
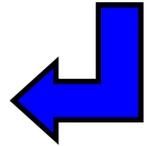
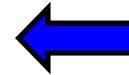


The hatchery filters the water and kills any bacteria:

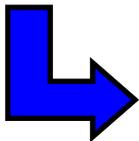
Step 1: At the hatchery, a pump sends the water through a sand filter. The filters are big, metal tanks filled with layers of gravel and sand. As the water passes through the filters any pollution and debris that may be in the water are captured by the sand and gravel resulting in clear water as it exits the filter.



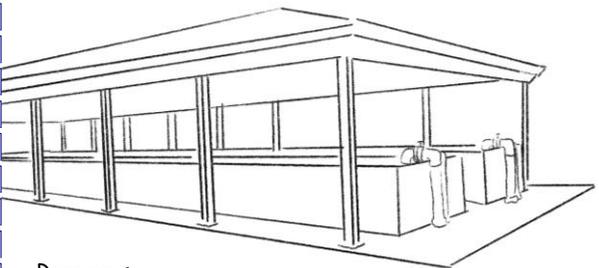
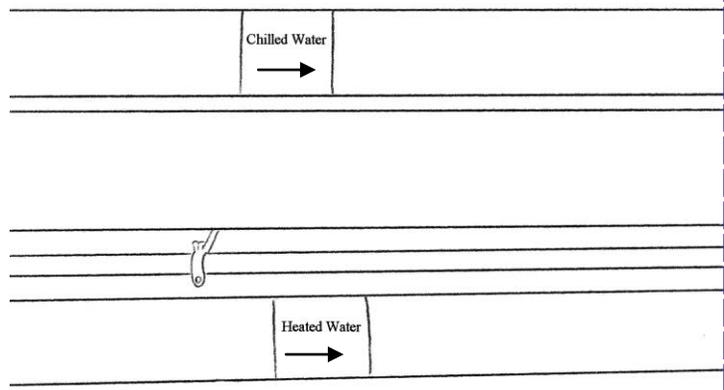
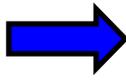
Step 2: Water then passes through a UV light used to disinfect the water. The UV light scrambles the DNA of bacteria and parasites so that they cannot reproduce inside the hatchery.



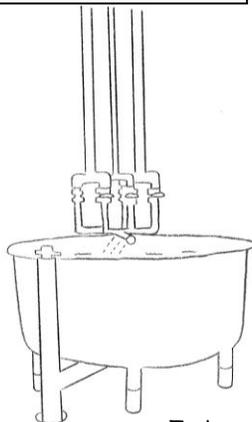
Step 3: Water enters the head tank which is basically a water tower. The head tank holds 800 gallons of water! From there water is sent through pipes to different locations inside the hatchery building.



Step 4: Water can be chilled or heated to provide the hatchery with a variety of water temperatures. There are different pipes for hot and cold water. Some fish species need cool water to lay their eggs; others need warmer water.



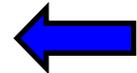
Raceways



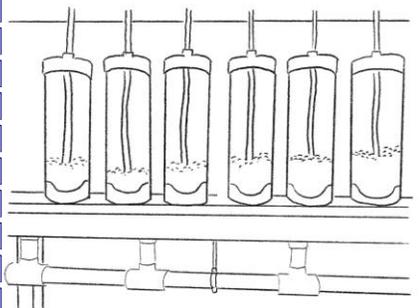
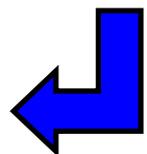
Tanks

Did you know?

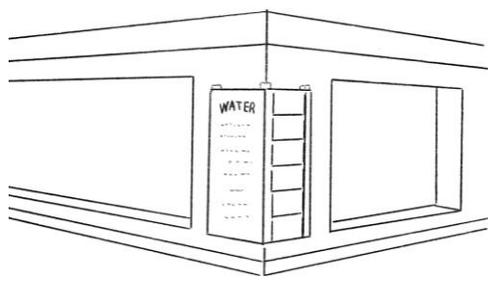
The raceways hold over 19,000 gallons of water each! The aquarium holds 10,000 gallons of water!



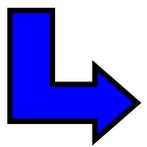
Step 5: Water enters the tank room inside the hatchery and is sent to 40 hatching jars and 36 tanks. Water is also sent to the two 80 ft raceways and aquarium.



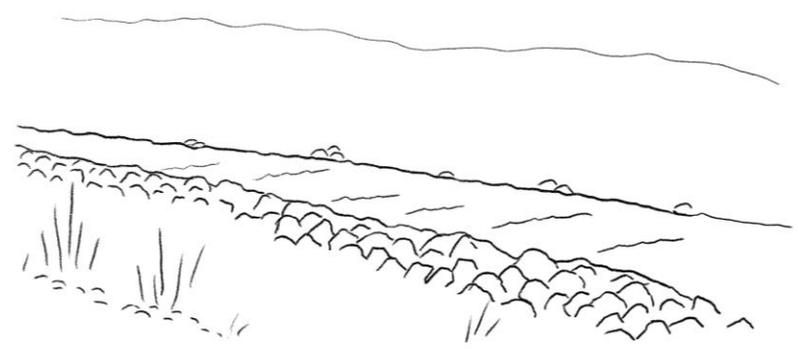
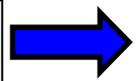
Hatching Jars



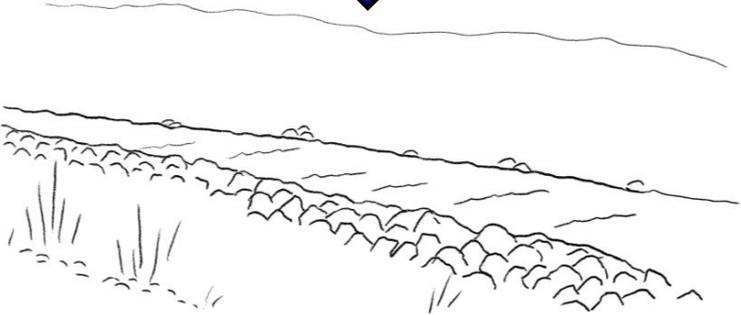
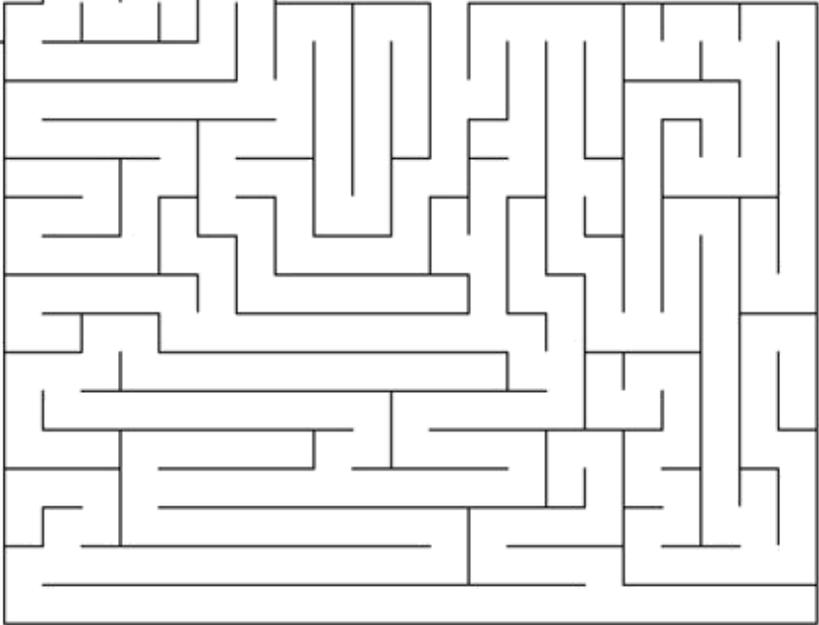
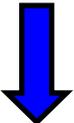
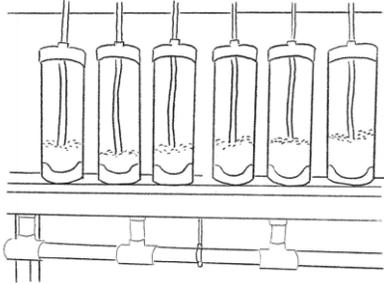
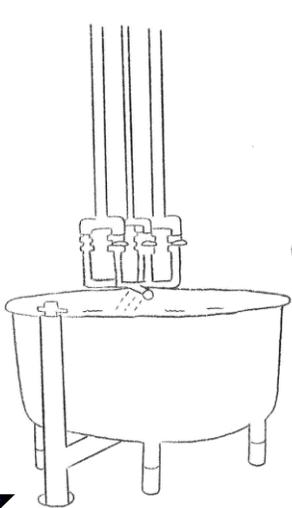
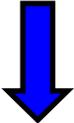
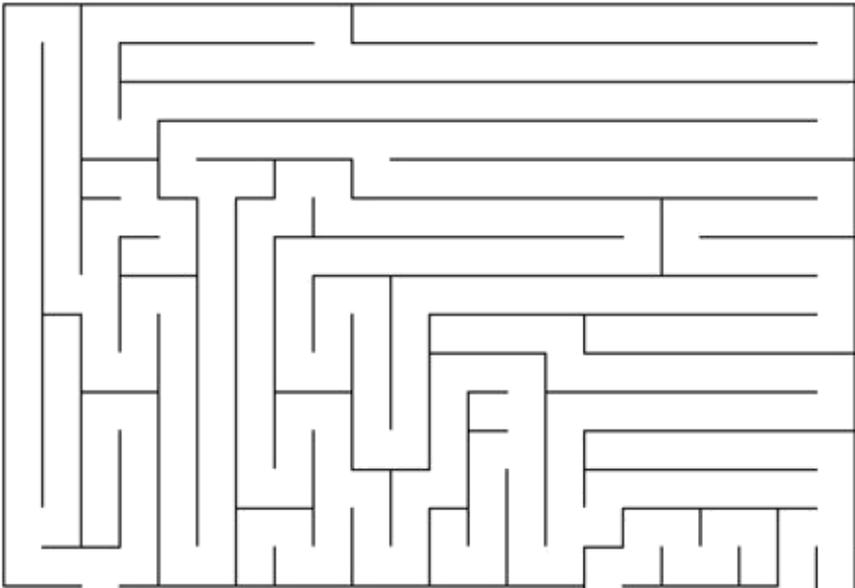
Aquarium



Step 6: Water drained from the hatchery tank room can be used again in the hatchery ponds or is drained into the Yocona River. **So the hatchery is part of the water cycle!**

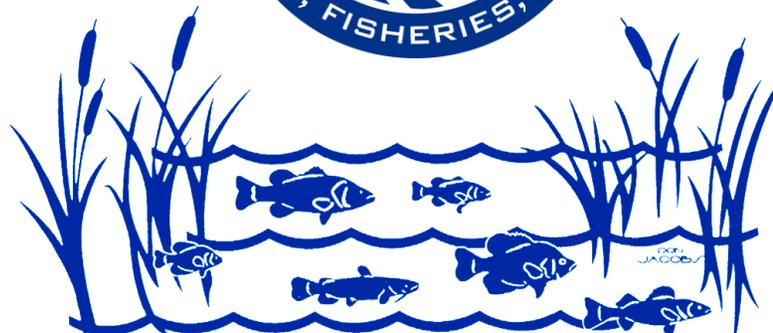


Help the water get from the hatchery tank room to the river!



The North Mississippi Fish Hatchery and Visitor Education Center are owned and operated by the Mississippi Department of Wildlife, Fisheries, and Parks.

For more information visit our website at www.MDWFP.com.



NORTH MISSISSIPPI FISH HATCHERY

