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Study looks into perchlorate levels for area aquatic life

By RICHARD L. SMITH *Tribune-Herald staff writer*

Studying fish fillets and life in and around area streams are helping scientists better understand a chemical found at a former McGregor rocket plant.

Members of the public heard speakers from several agencies Monday at Waco High School who are involved in the study of perchlorate. The two-year, \$8 million study in the Leon and Bosque rivers wants to determine the potential effect perchlorate, a substance used in making rockets, has on the environment and humans.

Todd Anderson with the Institute of Environmental and Human Health at Texas Tech University at Lubbock is involved in the study. He said perchlorate was found in aquatic life taken from streams running off the former Naval Weapons Industrial Reserve Plant in McGregor. Those streams are tributaries of both the Leon and Bosque rivers. The Leon River supplies Belton Lake with water. Lake Waco's water comes from the Bosque River. Anderson said both smaller fish and fillets of larger fish were examined.

"We analyzed the heads (of the fish) and that is where the thyroid is. It doesn't really seem to accumulate in the fillet tissue, which is good news for people who might be eating those fish," he said. "I think the really good news is perchlorate hasn't been showing up in a lake or in an intake. It's occasionally in a fillet tissue, but not in high concentrations."

The only known effect perchlorate has on humans is its ability to disrupt thyroid hormone production. The thyroid hormones are crucial to development of the body's organ systems. Perchlorate-contaminated groundwater has been found in high concentrations on the site of the former Navy plant. The Navy intends to clean up the 9,700-acre plant in order to turn the land over to the city of McGregor for use as an industrial park. Perchlorate became a major focus of the cleanup after it was detected in 1998 in Harris Creek, which runs into the South Bosque River. So far, no perchlorate has turned up in any drinking water from either Lake Waco or Belton Lake, environmental officials said.

The Navy has been working on several methods to treat the perchlorate-contaminated groundwater so it can be discharged off-site. Normal water treatment methods such as those used at Lake Waco to treat drinking water does not work on perchlorate.

Mike Meadows of the Brazos River Authority said the Navy has made headway in treatment methods. But all methods are expensive to add on to water treatment systems, he said.

The river authority, Texas Tech and other entities, including environmental consultants Montgomery Watson Harza of Pasadena, Calif., are all involved in the study headed by the U.S. Army Corps of Engineers.

"What we are basically trying to do is to assess the risk associated with perchlorate," said Anderson. "The two main areas we're looking at is who or what are exposed. Also, where do the exposures occur?"

The Texas Tech research team also intends to look at other animals, including birds and mammals around the streams running from the former plant to see how they are affected by perchlorate.

Waco Mayor Linda Ethridge said she remains concerned about perchlorate getting into area streams. But she said the approach taken by the researchers is encouraging.

"I'm hopeful this will get us to where we have a reasonable result," she said. "As you know, we don't have an alternate water supply, so we have to get it solved."

Texas Natural Resource Conservation Commission officials recently announced lowering the interim limit of the amount of perchlorate that may be in drinking water from 18 parts per billion to 4 parts per billion.

