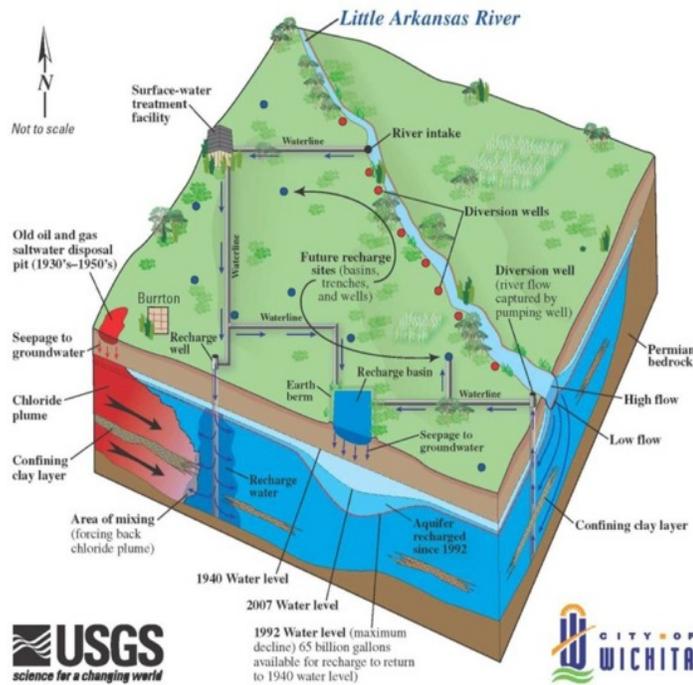


Atrazine Management in the Little Ark Watershed

Program Overview

Atrazine project background

Equus Beds Aquifer—Artificial Recharge Process



The Little Arkansas River flows into the main Arkansas River in Wichita. An estimated 75 to 80 percent of the area is typically farmed, and producers apply **atrazine** on their fields. Atrazine is a common and effective means for preventing broadleaf weeds in sorghum and corn fields, because it dissolves easily in water, and enters the plants through the roots.

The problem is that atrazine can remain in the soil and it is considered "moderately to highly mobile," which means that runoff can transport the herbicide out of the fields where it belongs, and into the area's drinking water. The City of Wichita employs an artificial recharge project, which captures water from high flows from the river and injects it back into the Equus beds for future use. Too much atrazine flowing into the river means that the city must invest additional funds to remove the excess herbicide from the water before returning it to the aquifer.

To combat this, the community developed a Watershed Restoration and Protection Strategy (WRAPS) plan for the Little Arkansas River Watershed. One of the major goals in this plan was to **reduce atrazine herbicide runoff** from corn and grain sorghum fields.

Atrazine Best Management Practices

The goal is to **reduce atrazine herbicide in targeted watershed areas to 3 µg/L**, with no seasonal spikes. To do this, the atrazine reduction program focuses on farmers changing their management practices, not just adding waterways or terraces to mitigate atrazine runoff. To support these changes, the program offers education and training on the benefits of crop rotation and the use of cover crops. All stakeholders, including farmers, pesticide dealers and crop consultants are invited to take part in educational and training activities.

While this program benefits the entire Little Arkansas Watershed, specific areas in sub-watersheds were targeted for rapid implementation of atrazine BMPs. To track the effectiveness of the implemented BMPs, Kansas State University installed a surface water quality monitoring system; a WRAPS representative collects the samples on a scheduled basis and the City of Wichita processes the samples for analysis.

Producers who opt into the program receive a small incentive payment, based on the type of BMP they implement on their fields and how well that specific BMP reduces atrazine runoff.

Atrazine Herbicide Best Management Practices

- Apply atrazine prior to planting
- Apply atrazine in the fall or prior to April 15
- Apply atrazine as a part of a post-emergence premix
- Reduce soil-applied atrazine
- Use split applications of atrazine
- Band apply atrazine at planting
- Use no atrazine
- Incorporate atrazine with 1/2 inch sprinkler irrigation

By the numbers (2006 – 2017)

✓ More than 1100
one-on-one farm visits
to producers

✓ 91 percent
participation in BMP
implementation

✓ \$3.01 per acre
average incentive

✓ An average of 41.4
percent reduction in
atrazine concentrations

✓ Farmers implemented
atrazine BMPs on
218,550 acres of corn

✓ Over 1000
stakeholders trained

Looking to the future

The atrazine management program seeks to be flexible, no matter what the future holds; as economics, growers and conditions change, atrazine management practices must also adapt. This program works to make conversations about atrazine BMPs part of the agricultural conversation, rather than an afterthought. With this in mind, the atrazine BMP program will continue educating growers, pesticide dealers, applicators and other stakeholders, and fostering awareness. Area partnerships, especially with the City of Wichita, are essential to reaching these goals. It is hoped that adoption of atrazine BMPs will continue to rise, which will lead to improved water quality within the watershed.

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