

Bids to be let for first four miles of pipeline.

By Russ Pankonin

The Imperial Republican

Upper Republican Natural Resources District (URNRD) board members got their first look at design plans for their stream augmentation project in Dundy County during their regular meeting last Thursday, Nov. 10.

Engineer Chris Miller from Miller & Associates of Kearney outlined the design progress on the project.

The project is devised to keep the district in compliance with a settlement with Kansas over water use in the Republican River Basin.

Thus far, Miller said they have chosen a route for the pipeline that will stretch at least four miles and possibly up to eight.

Miller said the diameter of the pipe will need to be 24 inches to overcome some elevation issues if the pipeline is lengthened to eight miles.

Miller said his team has also run a number of scenarios on where to best locate the well field for the project.

It appears the best location will be on the north end of the 4,000-acre tract purchased by the URNRD earlier this year.

By moving the well field to the north end of the tract, it increases the distance from the Republican River, thus reducing the stream flow depletion factor.

He said it appears that four to five high-efficiency, high-capacity wells could produce the necessary amount of water needed to keep the district in compliance in dry years.

Another factor under consideration focuses on minimizing the impact to neighboring wells outside the tract.

Even by pumping the wells for 365 days continuously, Miller said the drawdown impact on neighboring wells appears to be only 10-20 feet.

The board will have to decide if that's a manageable number.

Presently, the drawdown from wells on the tract ranges from about 80-100 feet during the irrigation season.

With fewer wells pumping, he anticipates the drawdown from the well field will be around 60 feet.

URNRD Manager Jasper Fanning noted that even if the augmentation wells were run solid for two years, it would not pump as much water as is being pumped under the historical crop irrigation.

Miller said it appears four to five wells could be pumped to generate the needed water for compliance purposes.

Once the actual locations are determined, Miller said they will run the compact water model on the areas to be sure it responds as predicted.

Stream Bed or Pipeline?

Miller said the big question still unanswered centers on whether the pipeline will need to be four miles or eight miles.

The initial design calls for carrying the water four miles south and dumping it into a dam above Rock Creek. From there, it would flow down the stream bed to the Rock Creek Hatchery

operated by the Game and Parks Commission.

Miller said Game and Parks expressed concern about the water temperature when it arrives at the hatchery.

If the water is not suitable for use by the hatchery, then the water could be piped all the way down to the spillway at Rock Creek Lake for release into the stream.

Fanning said Game and Parks would like a year-round flow of 1-2 cubic feet per second for the hatchery. That would require running a 1,200 gallon-per-minute well year-round.

Bids to be Let for Pipe

Miller said the designs are far enough along to bid out the pipe for the first four miles. This stretch of pipe will be needed regardless of where the augmentation water is put into the stream.

Board members voted unanimously to have Miller prepare the specifications and go out for bids on the first four-mile stretch.

Miller said they have estimated the cost around \$2.5 million. He said they want to do some work on the irrigation wells this winter to determine which of the existing wells can be used.

Once the pipeline is buried and well field established, a trial run can be conducted next year to determine whether more pipeline will be needed, as well as measuring the affect on the hatchery.