Improving Irrigation Water Use in the Middle Rio Grande Conservancy District using a Decision Support System

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Abstract. Competing water resources in the Middle Rio Grande Valley of New Mexico include irrigated agriculture, interstate and international compact delivery requirements, municipal and industrial growth, and endangered species issues. As the largest user, irrigated agriculture in the Middle Rio Grande Valley has the right to maintain water use, but must do so within broader ecological concerns. As part of ongoing research, a decision support system has been developed that facilitates rotational water delivery for areas in which irrigation water delivery was historically on demand. By reducing diversions the decision support system provides managers with more available water and excess water has been used to provide in-stream flows for the endangered Rio Grande Silvery Minnow. The developed decision support system has been calibrated and validated using field data and will be implemented for the entire MRCGD in the next several years.

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