

Publications

TR- 407

Evaluating the Economics of Best Management Practices for Tarrant Regional Water District's Eagle Mountain Lake Watershed

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The objective of this assessment was to identify the most cost-effective means of reducing (and/or preventing) total phosphorus (TP) inflows into the Eagle Mountain Lake from a comprehensive set of Best Management Practices (BMPs). Additionally, the reduced total nitrogen (TN), and sediment inflows resulting from adoption of these BMPs was also calculated. To achieve the desired water quality improvements, management consulting engineers indicated that the collective assortment of BMPs needed to reduce TP inflows by approximately 30 percent below current levels. During 2009-2011, Texas AgriLife Extension Service and Texas AgriLife Research scientists, in conjunction with Tarrant Regional Water District (TRWD) managers, NRCS professionals, and others worked to identify a portfolio of BMPs capable of contributing to such reductions. The economics component of this project consisted of integrating

the simulation modeled results of nutrient and sediment inflow dynamics with the associated costs of BMP implementation. This BMP cost analysis provides a basis for the evaluation of a suite of BMPs that could be expected to result in meaningful TP inflow reduction. The final task was to identify the cost-effective combination of BMPs that could be expected to achieve the management target of a 30 percent reduction in TP inflow into the Eagle Mountain Lake over a 50-year project period.

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