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Role of Gila-San Francisco Decision Support Tool in Special Study Framework (Also known as the AWSA New Mexico Draft Framework)

This document addresses the role of the GSF Decision support tool, developed by the Gila-San Francisco Collaborative Modeling Team, in the current AWSA New Mexico Draft Framework. It is written in accordance to the organization of the Framework document by responding to each individual section. Questions regarding details of GSF Decision Tool and its role should be directed to Vince Tidwell (vctidwe@sandia.gov) or Amy Sun (acsun@sandia.gov)

Section I. b - Purpose:
The purpose of the AWSA Planning Process and the Cooperative Modeling Effort are fully consistent and complimentary to one another.

Section I. c – Scope NM Special Study Level Assessment:
The decision support tool is particularly well suited for an appraisal level assessment. The tool includes the most complete and up to date set of information and data on the basin. The model provides a basin wide view of water supply and demand. The framework will allow inclusion of environmental, demographic, climate, and economic data as the information is generated. It also is designed as a framework for evaluating alternative water supply and demand management scenarios (as options are identified). While some elements lack high spatial detail (due to lack of data), the model is particularly well suited to address "appraisal level" analysis. More importantly, such analysis can be pursued in an open and transparent venue as the model is fully accessible to the professional and laymen alike.

Section II. a. Identify Needs:
The model is designed to provide quantitative information on water needs in the basin both past and future projections. The model addresses uses for municipalities, industry, irrigation, fish and wildlife and mining operation. The data are available on a daily basis disaggregated by nine different river reaches distributed throughout the basin. Population and climate stressors are currently included in the model which may impact future demand (others can easily be added).

Section II. B. Develop Objectives:
As objectives are developed they can be implemented within the model. Specifically, we can evaluate how various strategies impact water supply and demand over time. Additionally their impact on the environment can be assessed, at least at the assessment level.

Section IV Technical Evaluation and Needs Assessment:
The model is a repository of the best and most up to date information on the water resources of the basin. This includes both surface and groundwater supply and current and future water demands. Limited riparian and environmental data are also available in the model. Additional data can be added as it becomes available.

Section V Alternative and Preferred Plan Selection:
The decision support tool provides a transparent and open environment for stakeholders, public, water professionals, and decision makers to explore their options both individually or in a group setting. The model can be configured with the various evaluation criteria that can then be applied equally and consistently across alternatives.

Section VII Deliverable—Final Report:
The model will provide a scientifically defensible framework for organizing, synthesizing, and analyzing complex data. Documentation of assumptions, results, etc. will be part of the final report.