

**Technical Working Group
Report to
Water Policy Interim Committee**

Background:

The Montana Legislature's Water Policy Interim Committee (WIPC) in their review and evaluation of the proposed *Water Rights Compact Entered into by the Confederated Salish and Kootenai Tribes, the State of Montana and the United States of America* created a Technical Working Group to review and comment certain technical, hydrologic and hydrologic components of this compact and its integral attachment the "Flathead Indian Irrigation Project Water Use Agreement". An April 28, 2014 Memorandum to WPIC by Representatives Nancy Balance and Keith Regier includes a series of questions related to the Compact and the outcomes related to adoption of such a Compact.

The Technical Working Group (TWG) consists of six members that are professionals in the areas of hydrology, geohydrology, irrigation and/or instream flow. John Metesh, Montana Bureau of Mines and Geology, served as chair. Legislative staff helped with meeting process and organization.

Through a series of open public meetings the TWG was provided presentations from the Reserved Water Right Compact Commission staff, representatives of the Confederated Salish & Kootenai Tribes (CSKT), and members of the public. The TWG was also provided access to published and non-published materials provided by the parties to the negotiations, and invited public presenters.

Compact – Future Water Administration & Management

- The Compact defines the settlement agreement and its elements which include,
 - Identification and quantification of tribal water rights (both aboriginal, Federal Reserved Rights and, potentially, tribally held state based rights).
 - priority and quantity of those water rights,
 - Quantification of certain unrecorded tribal rights and ground water developments (Ground water developments appear to be dominated by new exempt from permitting small ground wells.) process for future admeasurement (delivery and enforcement),
 - Processes to define and document future federal reserved rights as they become perfected.
 - Administration and coordination of administration of on reservation water right, both tribal and state based.
 - Agreements of process to allocate water tribal and state based water rights in times of shortage, with special attention to coordination with the Indian Irrigation Project / Flathead Irrigation Project.
- The Compact, negotiated by sovereign governments including the United States, State of Montana and Confederated Salish and Kootenai tribes, has multiple appendices two of which are very significant in the future of water management under the proposed compact. They include:
 - *Unitary Administration and Management Ordinance*
 - *Flathead Indian Irrigation Project Water Use Agreement (WUA)*.

TWG – Defining Working Group's Task

- The TWG generally restricted the scope of its evaluation to topics within their area of expertise.

- The TWG makes no legal evaluations of the Compact or its attachments, although considerable information with respect to legal issues was provided to the TWG.
- The TWG recognizes that the Compact is a negotiated settlement through which the parties to the agreement sought settlement of the Water Rights associated with the tribes and reservation through their representatives.
- TWG recognize that settlements, by their nature, represent a compromise that defines a solution while protecting to the greatest extent the critical and priority, rights, interest or values of all parties. Certain aspects of a federal reserved water right or aboriginal water right may remain undefined by and set aside through this settlement agreement. Further the settlement, like other Montana Tribal Water Right Compacts, includes attributes that may not typically be found in a rigid interpretation of the purposes of the reservation and the quantification of the amount of water needed to fulfill those purposes.
- TWG recognized that there are frequently used processes or procedures that are frequently used in litigation models that are not address and in fact ignored in the CSKT settlement process. This includes identifying practicable irrigable acres and critical data collection review to define instream flow hydrographs that support critical aquatic life habitat requirements.
- TWG's effort to analyze the Compact were focus on the Water Use Agreement with emphasis upon
 - Development and use of a HYDROSS Model including the adequacy of data used in this model and an assessment of two model outputs - the Farm Turnout Allowances and River Diversion Allowances
 - Instream Flow Values in the Compact, and
 - Adaptive Management Concepts.

Purposes of the HYDROSS model.

U.S. Bureau of Reclamations *Hydrologic River Operations Study* model (HYDROSS) is a monthly hydrologic accounting model often used in irrigation system. It simulates the effects of existing proposed water demands on water The model allows the manipulation water demands at various points in the system (nodes) to predict the potential impact on other nodes .

The HYSDROSS model runs, especially those for the areas of the Flathead Indian Reservation east of the Flathead River and associated within and in the vicinity of the Jocko and Mission Irrigation Districts, were used to:

- Model the gross on farm water deliveries or Farm Turnout Allowances (FTAs).
- Estimate the water conserved through operational improvements to existing irrigation distribution system and its management such as reductions in tail-water leaving canals and elimination of non-irrigation season diversion of stock water.
- Evaluate opportunities to improve instream flows through both operational management and future rehabilitation and betterment projects.

The HYDROSS analysis defined for the compact

- River Diversion Allowances (RDAs), which incorporate operational improvements to the irrigation projects, but continue to deliver to the irrigators their existing and historic water supplies and
- Instream flow values (Instream Flow Rights for Wet, Dry and Normal conditions) that replace the current interim instream flows for those streams or stream reaches that are supply and are integrated within the Jocko and Mission Irrigation Districts.

Negotiation Objectives and Physical Conditions that Defined the Analysis and Modeling

- Reserved Water Right Compact Commission's broad objectives are to
 - Protect State base water rights,
 - Define future water supplies for state based future water uses,
 - Define federal water rights – existing and future uses,
 - Define parameters for future management, allocation of rights and administration of water within the federal reservation that considered both federal reserved and state based water rights.
- CSKT expresses both legal and cultural interests in maintaining a fishery and protection of instream flows.
- CSKT expressed desired, through the Compact, to protect and maintain the existing irrigated agriculture.
- CSKT and RWRCC staff both noted that existing irrigation infrastructure and administration were inefficient and in critical need of rehabilitation and modernization.
- The existing water supply conditions, party's interests to maintain existing active irrigation and interest to improve instream flows lead to a focus on improving water use efficiency and resulted in a decision to analyze and model existing water supplies and use.
- Model runs were used to evaluate the opportunities to improve water use and management in such a way as to meet existing irrigation demands but also improve instream flows.
- Interim instream flow water right values were defined in management instituted in 1987 on many streams within the CSKT Reservation.
- Implementation of the interim instream flows and management to those targets limited irrigation diversions, late in the season and in low water periods.
- The need to critically and scientifically define instream flows hydrographs based upon habitat needs was negated by limiting instream flows to the interim instream flows values previously defined and increases water supply developed from water conservation / water management improvements negated
- The effort of defining potentially irrigable acres, which is part and parcel to a non-negotiated quantification of a reserved tribal right, does not appear in the compact or modeling documents. If the water supply for existing irrigated acreage is not sufficient to provide full service water supply to existing levels irrigation and interim instream flow targets there seems to be little gained in an effort define additional areas are technically irrigable under a senior federal reserved water right.
- The settlement agreement and modeling documents generally do not include a technical quantification of the discharge levels required to provide and maintain the full habitat for native fish in many stream reaches. Some technical quantification was used to determine instream flow levels outside of the Flathead Indian Irrigation Projects area of influence.